



Forestry Support Program

A Technical Assistance Program for AID's
Forestry Development Activities

Report on the
Workshop for Strengthening Forestry
Research in Kenya

George Armstrong

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I. Background and Introduction

During January, 1983 USAID officials met with representatives of the University of Nairobi and the Kenya Department of Forestry to discuss forestry research networking and training needs in Kenya and throughout East Africa. A three-part plan was devised to address these needs.

As a first step, a short course/workshop was planned. It was to be funded in part by S&T/FNR through the Forestry Support Program. Its specific aims were:

- 1) to assist Kenya to prepare an effective forest research program emphasizing coordination between government and non-government organizations;
- 2) to bring regional African Energy Program (AEP) scientists together to participate in the workshop, and to encourage similar activities in their own countries;
- 3) to encourage expansion of the effort into an East African regional research network for conducting studies suited to recognized needs.

As preparation for the workshop began, investigation of Kenya's forestry-oriented research activities revealed ongoing programs in a surprisingly wide range of fields including energy utilization, agroforestry, range management, fish and wildlife habitat improvement, soil conservation, watershed management, forest based industrial development and recreation.

Many more agencies, both public and private, were involved in the work than anyone had suspected. Furthermore, communication and cooperation among these many organizations were not sufficiently developed to permit regional research collaboration without additional preparatory work.^{1/}

Accordingly, the initial focus was shifted from regional (East African) research program planning and development to national (Kenyan) research program planning and development. The idea was that if the Kenyan research community could develop and apply techniques for more effective communication and cooperation, these same techniques could be applied first within other East African countries and then, later, among them.

A workshop was scheduled for late fall, 1983 to begin the process of improving forestry research efficiency. It was designed primarily to:

- 1) bring together for the first time representatives of all forestry-oriented organizations in Kenya having a research interest;
- 2) encourage high levels of cooperation and collaboration among them;
- 3) work out additional means for increasing research efficiency both within and among members of the forestry community;

The consultant was assigned to:

- A) implement the workshop in collaboration with the Government of Kenya, USAID/Kenya and USAID/REDSO/EA officials;

^{1/} See Armstrong, G. R. "Report on the Plan for a Workshop for Strengthening Forestry Research in Kenya" USDA/OICD, July 1983.

- B) prepare a paper for presentation at the workshop and for inclusion in the proceedings on "Factors Involved in Priority Setting and How to Use Them"; and
- C) establish mechanisms for the publication and distribution of the proceedings of the workshop and implementation of workshop recommendations.

Work was to begin on or about October 24 and to terminate on or about November 20, the workshop being tentatively scheduled for the five days October 24-28.

II. Program of Accomplishment

A. Workshop Implementation

Planning and preparations for the workshop had been placed in the hands of a strong organizing and coordinating committee. Its members included:

- Dr. J.A. Odera, Director of the Forestry Research Dept. KARI
- Dr. Fred Owino, Chairman of the Forestry Dept., University of Nairobi
- Mr. G.K. Mburathi, Chief Executive, Permanent Presidential Commission on Soil Conservation and Afforestation
- Dr. F.J. Wangati, Deputy Secretary, National Council for Science and Technology
- Mr. A.H. Chavangi, Conservator, Forest Department, Ministry of Environment and Natural Resources

Under their able leadership and direction, the workshop was convened at Eldoret, Kenya on Monday 31 October and continued until noon Friday, 4 November. Participants numbered 57, with attendance remaining above 90% throughout the conference. From a structural viewpoint, there were five parts to the workshop program (see Appendix A). In addition to opening and closing ceremonies, which included strong supporting comments by representatives of two ministries and USAID/Kenya, there were position papers by forestry-oriented organizations, invited papers, and several working sessions in which participants identified problem conditions which reduce Kenyan research efficiency and delineated effective ways of dealing such conditions.

Although these outcomes will be presented in detail in the proceedings of the workshop, they merit brief description here.

Position Papers were presented by about 20 forestry-oriented organizations, both government and non-government. These brief papers sketched out organizational aims and responsibilities in forestry and closely allied fields, and identified both research needs and current research activities. Agencies not represented at the conference have since been asked to prepare similar papers for inclusion in the proceedings. The total number of organizations in Kenya having a forestry research orientation is probably close to thirty.

Invited Papers given at the conference numbered fourteen. Two others that were planned may appear in the proceedings. The papers focused on three topics: current needs for forestry research as seen by various publics; how research and action agencies have organized and planned to meet these needs; and some of the major factors that need to be addressed in order to strengthen and improve the effectiveness of both the research itself and the application of research findings.

All but three of the invited papers were prepared by Kenyan research scientists. Papers by non-Kenyans included:
"ICRAF: Its Role and Techniques of Research Program Selection"
by B. Lundgren and J.B. Raintree
"Setting Priorities for Regional and National Research Programs"
by Roger Bay, Director, Pacific Southwest Forest and Range Experiment Station, USDA Forest Service
"Guidelines for Effective Evaluation of Forestry Research Programs"
by George Armstrong, Consulting Forest Economist USAID

This last paper was prepared at the special request of the organizing committee in place of the paper on priority setting originally specified. It is included as Appendix B of this report and will appear in the proceedings.

Workshop Recommendations A key activity of the workshop, in keeping with its theme, "Strengthening Forestry Research in Kenya" was the hammering out of recommendations for improvement by four working groups which involved all participants. The procedures involved in achieving the objective have been described in the "Proceedings". Over a 3-day period, the working groups considered problem situations faced by the research community; considered alternative means of alleviating those problems; and finalised their work by recommending specific courses of action leading to improvement. In all, over 20 recommendations were made and sanctioned by the assembly.

In anticipation of this outcome, a post-workshop committee had been created. Under the chairmanship of Dr. F.J. Wangati, this committee has addressed itself to the need for implementation of the recommendations. The consultant has collaborated with the committee in devising an implementation plan for each recommendation. In every case a responsible party has been identified, a line of action outlined, and a time schedule defined. The committee will monitor progress on these plans during 1984. Although the plans are still subject to change, a tentative outline and schedule has been developed (see Appendix C).

B. Publication and Distribution of Proceedings

Publication and distribution of the proceedings has been an important part of the workshop plan. A post-workshop committee chaired by Dr. Wangati, is responsible for the proceedings. The consultant has acted as editor, laying out a design for the work, editing the 34 papers, developing a foreword, prefaces and other required materials, and working with the committee in the development of helpful appendices, including not only a list of participants but also Kenya's first Directory of Forestry Research Organizations and Personnel. The consultant will continue to work with the committee as needed to conclude the job. The proceedings are expected to be off the press by late February, 1984. Plans are for 250 copies to be printed, and for distribution to include other East African countries, donor organizations and other development oriented groups as well as a wide range of agencies and organizations inside Kenya.

C. Retrospect and Prospect

Looked at in retrospect, the workshop was a success. The strengthening theme and the integration approach were appealing both to local practitioners and to development agencies. Above all, people in diverse fields were getting together, finding that they shared similar problems, and realizing that by acting in concert they could make some real progress in tackling those problems. The program was perhaps too full, but due to the excellent and unflagging efforts of the chairman, and the strong support he elicited from his committee and staff, the workshop stayed very close to schedule throughout the five days.

Interest ran high. As the FAO observer put it, "Participants have participated!" And the Secretary reports that he is still receiving letters of congratulation from those who attended. In brief, most of the interested and affected publics (including researchers, administrators, clients, extension workers, cabinet ministers, donors and those with coordinative responsibility) felt that they gained something from it.

The payoffs should continue well into the future. The publication of the proceedings will not only provide a reasonably comprehensive view of the status of forestry-oriented research in Kenya, but also will serve to establish a timetable for its improvement. The "Directory of Research Organizations and Personnel", which is planned for inclusion in the appendices hopefully will prove to be of broad utility.

In addition to the above, a second workshop has been requested by several agencies of the Government of Kenya to address a critical issue in resource allocation and simultaneously to sustain the momentum achieved in the first workshop. The theme is to be "Setting Research Priorities" and the hoped-for outcome will be harmonization of research aims and programs both within and among the many organizations now working in forestry-related fields.

The consultant has drafted a tentative plan for this workshop which, if held in April or May 1984, can serve also as a checkpoint for progress on the recommendations made in the first workshop. The plan is outlined in Appendix D. It aims to bring together not only those who participated in the first conference but also a representative group of clients whose needs the research community is really trying to meet, as well as observers from other East African countries who may wish to apply a similar approach at home. In this way, the aims of the original plan for forestry research networking in East Africa will have been approached in two easy steps, the second building upon the first and both of them applicable in other countries.

On the farther horizon, a sub-committee of Kenya's newly formed Forestry Research Advisory Committee, the structure of which the consultant discussed fully with the committee, will consider and plan during 1984 a National Forestry Research Conference to be held early in 1985. This conference should serve to perpetuate the feeling of unity gained in the two workshops, and by adroit selection of themes can address important issues from the multipurpose point of view at subsequent sessions held at regular intervals.

Finally, it should be pointed out that the USAID Mission in Kenya has offered encouragement in several ways. Mission personnel administered funds for the first workshop and Mr. Dwight Walker, Agricultural Officer, represented the Mission at the meetings. His very encouraging comments included mention of ongoing and planned projects in management, technology and natural resource protection and management that give promise of helpful support for forestry-oriented activities well into the future. The consultant was assured in further conversations, after the workshop, that applications for management training for Kenya's forest managers, under the agricultural management project, would be favorably considered. And the Mission has given informal acceptance to the idea of a follow-up workshop on priority setting. Such acceptance has been influenced, at least in part, by the high levels of capability and motivation demonstrated by the Kenyan organizing and follow-up committees, and by other members of Kenya's research community.

APPENDICES

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WORKSHOP ON STRENGTHENING FORESTRY RESEARCH IN KENYA

SIRIKWA HOTEL

1ST-4TH NOVEMBER, 1983

WORKSHOP PROGRAMME

<u>DAY & DATE</u>	<u>A C T I V I T Y</u>	<u>T I M E</u>
MONDAY 31-10-83	Depart Nairobi	1100 Hrs
	Arrive at Conference Venue (Sirikwa Hotel) (Registration and Installation)	1700-2000 Hrs.
	Dinner	2000-2130 Hrs.
TUESDAY 1/11/83	Breakfast	0700-0830 Hrs
	<u>General Plenary Session 1</u>	
	Introductory speeches by:- D. Walker (U.S.A.I.D.) J.A. Odera (K.A.R.I.) G.K. Mburathi (P.P.C.S.C.A.)	0830-0920 Hrs.
	The role of forestry in national development of Kenya - O. Mburu	0920-1100 Hrs.
	Morning Break	1000-1020 Hrs.
	Agency review (Position papers) 10 minutes presentation & 5 minutes discussion for each	1020-1320 Hrs
	Lunch break	1320-1430 Hrs.
	<u>General Plenary Session 2</u>	
	Analysis of current forestry research activity in Kenya - F. Owino	1430-1510 Hrs.
	Planning and implementation of forestry research: The Ministry of Environment and Natural Resources Viewpoint.- F.M. Wanyeki	1510-1550 Hrs.
	Afternoon Break	1550-1610 Hrs.

<u>DAY & DATE</u>	<u>ACTIVITY</u>	<u>TIME</u>
WEDNESDAY 2/11/85	Forestry and Agricultural Research Planning and implementation - N.C.S.T. Film Strip Dinner	1610-1650 Hrs. 1700-1730 Hrs. 1830-2130 Hrs.
	Breakfast	0700-0830 Hrs.
	<u>General Plenary Session 3</u> (current and future research needs)	
	Forestry research needs at the grass root level - Mr. H. Chavangi	0830-0910 Hrs.
	National goals and the role of forestry research in the new 5-year development plan - Otieno-Owade	0910-0950 Hrs.
	Opening ceremony - Hon.E.T. Mwarunga	0950-1030 Hrs.
	Response from U.S.A.I.D.	1030-1040 Hrs.
	Morning Break	1040-1100 Hrs.
	Analysis of resource development trends in Kenya and their potential effects on research choices - F. Wangati	1140-1220 Hrs.
	Factors involved in priority setting and their utilization in the development of effective national forestry research programme - R. Bay	1140-1220 Hrs.
	Lunch Break	1220-1330 Hrs.
	<u>Working Group Session 1</u>	1330-1530 Hrs.
	Afternoon Break	1530-1600 Hrs.
	<u>Special Plenary Session 1</u> (working groups presentations)	1600-1730 Hrs.
	Cocktails	1800-2000 Hrs.
	Dinner	2000-2130 Hrs.

<u>DAY & DATE</u>	<u>A C T I V I T Y</u>	<u>T I M E</u>
FRIDAY 4/11/83	Breakfast	0700-0830 Hrs
	<u>Special Plenary Session 3</u> (Resolutions and recommendations)	0830-1000 Hrs.
	Morning Break	1000-1020 Hrs.
	Closing Address: Hon. M. Saina Assistant Minister for Agriculture	1020-1100 Hrs.
	Depart for Nairobi	1130 Hrs.

<u>DAY & DATE</u>	<u>A C T I V I T Y</u>	<u>T I M E</u>
THURSDAY 3/11/83	Breakfast	0700-0830 Hrs.
	<u>General Plenary Session 4</u> (Research Strengthening)	
	Factors affecting the motivation of research personnel - B. Majisu	0830-0910 Hrs.
	Guidelines for effective monitoring and evaluation of forestry research programmes - G.R. Armstrong	0910-0950 Hrs.
	The potential role of the University in strengthening forestry research in Kenya - W. Mathu	0950-1030 Hrs.
	Morning break	1030-1050 Hrs.
	Models for effective forestry extension programmes and the role of non-governmental agencies afforestation tasks - D.M. Kamweti	1050-1150 Hrs.
	Mechanisms for effective dissemination of research findings to various users - T. Olembo	1130-1210 Hrs.
	Some major opportunities for strengthening forestry research in Kenya - J.A. Odera	1210-1250 Hrs.
	Lunch	1250-1400 Hrs.
	<u>Working Group Session 2</u>	1400-1600 Hrs.
	Afternoon Break	1600-1630 Hrs.
	<u>Special Plenary Session 2</u> (Working group presentations)	1630-1730 Hrs.
	Films strips	1740-1830 Hrs.
	Workshop Dinner	1800-2000 Hrs.
Drafting of recommendations from working groups (Chairman and Rapporteurs)	2030-2130 Hrs.	

**Guidelines
for
Effective Evaluation
of
Forestry Research Programs**

G. R. ARMSTRONG

OCTOBER 1983

Guidelines for Effective Evaluation of Forestry Research Programs

G. R. Armstrong

Evaluation of a research program represents a search for efficiency. Fundamentally, one seeks to determine whether the expensive, often scarce, specialized human and physical resources employed are being used to good purpose to meet specified goals. To do this, one must first decide what constitutes good purpose, and whether there are other resource combinations that could more effectively meet that purpose.

Who should make such an evaluation? Those who will profit most from it are the research director and his staff. The wiser ones will perform such evaluations themselves, so that when others from outside the institution come to review its activities the research director will be able to explain and justify institutional actions, define institutional needs and demonstrate institutional contributions easily and effectively, without hesitation.

The process of evaluation and the process of research program development are closely linked. If the program is intelligently constructed, the evaluation will reflect it. Both the director and the evaluator will find that they have asked similar questions: what are the goals; what are the feasible ways of meeting them; which among these feasible alternatives are the best paths to follow; how do realized payoffs from the research compare with expected payoffs; if there are differences what are the root causes; and how can the program be revised to generate larger future payoffs. Such questions may look easy to answer. They are not. Each merits some additional consideration.

What are the goals?

The basic goal of a research institution is not to conduct research or even to complete research projects. Whether public or private, general or specialized, basic or applied, the goal of the institution is to help meet the needs of its constituents through research. For public research institutions, a common and highly acceptable general goal is to help improve national welfare. Such improvement may be expressed in terms of rising incomes or employment, reductions in cost of living, or better quality of goods and services. It is knowledge of the special needs of clients that helps place emphasis on one or more of these values. The requirements of urbanites are not like those of rural residents; those of nomadic herdsmen not like those of valley farmers. So the first task of any research group is to look outside the organization, find out who its constituents are, and work hard to get to identify and understand their needs and problems.

This external orientation is essential. It establishes the research not as an end in itself but as a means to an end. It provides a view of research as a service rather than as a product. And by directing attention to needs, it sets the stage for the next question, "by what logical paths can such needs be met through research?"

What Are the Feasible Alternatives?

Theoretically, the research possibilities for improving welfare are infinite. But many options are immediately ruled out by the special and often limiting needs and characteristics of the institution, or its publics, or the physical, social, political, scientific and economic environment within which it operates. Here in Kenya, for example, guidelines and recommendations by government and by private constituents currently include requests for special attention to forestry problems of the arid and semi-arid zones, to forest establishment and replenishment rather than to management and development of existing forests, to farm forestry as opposed to industrial forestry, and to the relationships between forestry activity and soil protection, water supply and other environmental conditions. Thus, large sets of options are given emphasis and others, temporarily at least, given a lower priority.

Important internal constraints that affect choice of research topics, at least for the short run, typically include the institutional mandate; the numbers, types of specialization, education, experience and personal motivations of staff; the kinds of capital resources available to the institute; current commitments and program responsibilities inherited from the past; and the prospective budget.

Environmental constraints may include such diverse items as geographic location of the research facility, predicted government expenditure patterns, current and planned activities of other research organizations, government rules regarding land ownership, local attitudes toward the utility of forest cover, and heavy grazing pressures.

In the last analysis, every aspect of the institutional environment makes its impact on the choice of options. Research personnel cannot hope to monitor them all. What they can do is to carefully review expressed needs and interests, both national and regional, with particular attention to how and why those needs might be changing; assess their own abilities to conduct research of various kinds; and monitor major changes in the scientific, economic, social, legal and political atmosphere so as to anticipate at least some of the factors that promise to realign research options.

What are the Best Paths to Follow?

Even at this stage of development, the potential research programs lacks specificity. Though the field of activity has been narrowed down by reference to external and internal limitations and preferences, the options are still numerous. Somehow, priorities have to be established among them.

To illustrate the selection procedure, let us assume that the mandate of our institution, as set forth in its charter, is to conduct fuelwood-oriented research, and that government has suggested strongly that research efforts be concentrated in the semi-arid zone. We have polled the forestry needs of publics in that area and find that fuelwood scarcity is creating three kinds of problems: prices are rising in the towns; low income groups are more strongly affected than higher income groups because everyone needs fuel for cooking and heating and there are no ready substitutes; and in the rural areas more and more time and effort is consumed in gathering because fuelwood supplies must be found further and further away. Expectations are that these problems will get worse because the nearby forests are being depleted faster than they are growing; patterns of fuel use are not expected to change materially in the near future; and populations are rising.

A summary review of population distribution in the semi-arid areas reveals that population is concentrated for the most part in two large towns and is expected to rise most rapidly there. We reason that the greatest short term public benefit will accrue if we can, through research, devise methods to bring the fuelwood price down in these two towns (or even to keep it from rising). We suspect that the techniques we work out may be applied later in other areas with similar success. At this point in our deliberations we have finally developed a specific goal that can be expressed in welfare terms: to prevent fuelwood costs from rising in towns X and Y.

Next it is necessary to examine the various paths by which such a particular goal can be met. The easiest way to visualize the alternatives is to chart them, as in Figure 1. This is a staff function, and may require a lot of time and debate because the options are rarely immediately evident. The important thing is not to omit any major alternatives.

In this case, we know from our elementary economics that price is a function of demand and supply. Price reduction therefore entails either a reduction in demand or an increase in supply or both. To reduce the demand, what might we do? Figure 1 shows that one option is to develop substitutes. Another is to increase the heating and cooking value per ton so people will use less wood than before. Are there other options? Probably not. At least none come readily to mind. To increase the heating and cooking value per ton we can name further options. We can squeeze more value into the wood (by increasing its quality), or we can squeeze more value out of the

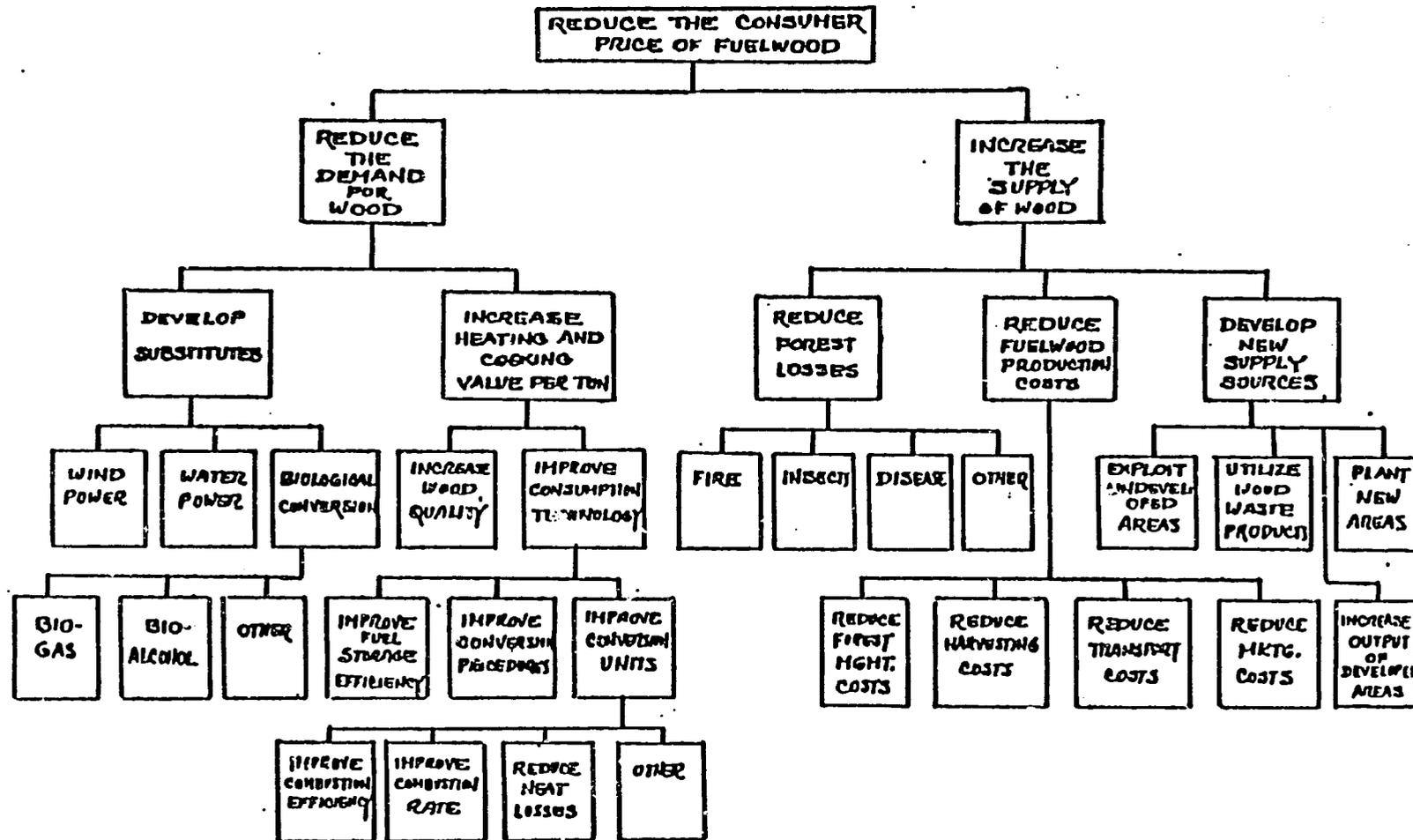


FIG.1 PARTIAL CHECKLIST OF OPTIONS FOR REDUCING THE CONSUMER PRICE OF FUELWOOD

wood (by improving the consumption technology). The diagram shows that in this way we can move from the general welfare goal to very specific, relatively narrow activities. All we have to do is continue to break down the foregoing element into components.

This kind of general outline provides the key to selection of priority research areas. Much of what has been said at this conference has dealt with priority determination between and among institutions. Here, we are dealing with priority selection primarily at the project level. Although it continues to be something of an art, some scientific tools can be borrowed from the fields of economics and decision theory to weigh the alternatives.

What the research director and his staff must do is to compare the costs and time expenditures expected in following a particular research path with the risks of failure and potential payoffs. In our example, staff specialists may have to estimate whether greater net research payoffs (i.e., greater price reductions) lie with the development of efficient wood fuel cookers or, say, with the development of wood alcohol plants. To do this, they must call upon their research experience to determine what technical approach or approaches are most viable; to judge how long it will take to get results; to estimate what resource inputs will be required; and to predict both the chances of ending up in a blind alley (e.g., alcohol yields from available species are too low for the process to be economically feasible) and the potential payoffs of success (i.e., the probable effects on local fuel availability and price).

Such estimates as these are typically made by the research director and a small group of senior staff. They are typically subjective and often highly speculative. This does not sound like a solid foundation for the establishment of program plans or decisions to go ahead with particular projects, but there is still another step which, if carried out faithfully, tends to repair errors of judgement.

Measure Performance

We have noted that the decision to attack a particular research problem in a particular way rests on several estimates:

1. How long the job will take.
2. What inputs (men, money, materials) will be required.
3. The risks of failure (usually in percentage terms) together with recognition of possible reasons for failure.
4. The expected payoff in welfare terms.
5. Who will be affected.

As the project progresses, by establishing recognized benchmarks it is possible to measure how realistic those estimates were. Such feedback very often has a negative aspect. Projects fall behind schedule, more resources are required than were originally planned for, experiments fail. Researchers understandably don't like to draw attention to such outcomes, particularly if they feel such results will be misinterpreted because the wrong rules are being used in measuring success. But when such information is used constructively it can improve program efficiency tremendously. It provides early warning of the need for adjustment in program. It highlights opportunities for control of both internal and external factors. And it serves to improve staff skills at estimating input needs and the real time required to get certain types of jobs done.

What one does during this stage is to ask not only whether the job took longer than expected, or required more or less man hours, or paid off more or less than expected, but why these things happened. Sometimes it takes quite a bit of digging to understand why. But the experience gained in this way, over a period of time, generates ability to make increasingly better estimates and to reap more certain returns from the research program.

What are the High Points of the Process?

In this very brief review, we have seen that development of an effective research program depends first on understanding and agreement regarding whose needs are to be met and on thorough, careful study of what those client needs really are. Programs dominated by the special interests of staff members are quite likely to be inefficient and often off target. Adopting an external viewpoint, and visualizing research as a service to others is a powerful stride toward introducing relevance and immediacy into research activities and reducing the isolationist, ivory-tower attitude that can come creeping in to obscure the relationship between what happens in the laboratory and what one's countrymen need in the way of forest goods and services.

The second step is to identify the major routes that the institution can follow in attempting to meet such needs. Like a good ship captain, the research director examines the strengths and weaknesses of his vessel and crew, the various types of perils and obstacles that they might encounter while trying to reach accepted objectives, and heeds the guidelines and directives that are provided by authorities above him. These, taken in combination, provide the basis for selecting certain routes for closer examination and for abandoning others.

The third major step is to select among the more promising research alternatives those that the institute feels will best meet the goals. This difficult step depends heavily on informed estimates

by professional staff and administrators. It is a kind of subjective cost-benefit analysis performed before the work begins. It is critical, because it is on the basis of those estimates that major program decisions are made.

Finally there is feedback gained by monitoring the progress of projects that together make up the program. This periodic review of job schedules, input requirements, risk and payoff is of critical value in reallocating institutional resources and in otherwise adjusting the program to accommodate for change. In this step it is necessary to ask not only how reality compares with expectations but also why there is a difference and how this knowledge can be used to advantage in adjusting or redesigning the program?

There is one last point to be made. The ultimate utility of any research program rests in its application. Unless there is concrete evidence of increased welfare, the research program cannot pretend to be efficient. The last important step in research is always in seeing that the results are used.

Now we have come full circle, from recognition of the welfare goal to its partial satisfaction by means of a series of logical steps that a research director and his staff will want to take in order to increase their efficiency and contribution. Those outside the institution who have monitoring or coordinative roles can do no better than to follow through these same steps in close consultation with the director and staff, and to examine the logic of the ways in which they are being handled.

There are certain characteristics of the system that merit further comment. It is complex. First attempts to use it are apt to fall short of the mark. It takes several years of diligent effort to learn how to carry out the several steps effectively. It is self correcting. Because the feedback loop provides for adjustment to changes in the system, the program is constantly open for improvement. It is broadening. Researchers using the system are encouraged to look outside their own field and institution for many of the forces that modify and guide their actions and decisions. In this way, the linkages between diverse events become more clear. The rationale for cooperative action is easier to understand and to endorse. It is protective. Those who work through the several steps are really creating a healthy justification for what they are doing. Critics are forced to abandon arbitrariness and to voice their objections on logical grounds, if they can. Furthermore, new staff are provided with a clear picture of goals, objectives and procedures that will guide them along lines congruent with institutional needs.

I hope you find such a system worthy of adoption. It comes highly recommended by those who have tried it.

Appendix C

A Summary Of Plans
for Implementing
Workshop Recommendation

PROBLEM	END OF 1983	FIRST QUARTER OF 1984	SECOND QUARTER OF 1984	THIRD QUARTER OF 1984	FOURTH QUARTER OF 1984	FIRST QUARTER 1985
II-2		(A)	FORESTRY RESEARCH ADVISORY COMMITTEE IS FORMED (A) AND OUTLINES ITS RESPONSIBILITIES BEFORE END OF FEBRUARY, 1984			
II-3		(A)	(B)	CONSERVATOR FOR INFORMATION AND EXTENSION MEETS (WITH REP. OF PROGRAM AND A SPEECH TO PLAN FIRST EDITION OF FORESTRY RESEARCH NEWSLETTER FOR PUBLICATION BY APRIL 1984 (B)		
II-5-7		(A)	(B)	MST APPLS TO MINISTRY OF AGRIC. (A) FOR REAPPOINTMENT OF KARI BOLAD, AND FRD/KARI APPOINTS SMALL INTERNAL COMMITTEE TO REACH OPTIONS FOR IN-HOUSE ACTION (B)		
III-1-7		(A)	CONSERVATOR FOR INFORMATION AND EXTENSION, IN CONSULTATION WITH A. SPEICH, CALLS INTERAGENCY WORKING SESSION OF EXTENSION PERSONNEL TO DISCUSS MEANS OF STRENGTHENING EXTENSION SERVICES - (SERVISE END 1 ST QUARTER 1984. (A)			
IV-3		(A)	MST PREPARES COMPREHENSIVE DIRECTORY OF FORESTRY RESEARCH ORGANIZATIONS AND PERSONNEL FOR COMPLETION DURING SECOND QUARTER OF 1984.			
I-5, IV-1		(A)	FRD/KARI SOLICITS FORESTRY RESEARCH ORGANIZATIONS FOR CURRENT INFO ON ACTIVITIES, DATA ARE REVIEWED AND FILED AND STANDARD DATA SHEETS COMPLETED BY 2 ND QTR BY (A)			NEXT UPDATE SCHEDULED FOR 1 ST QTR. 1985
II-5		← PROSCA ACCEPTS CONTINUING RESPONSIBILITY TO FACILITATE INFORMATION TRANSFER ON REQUEST →				
II-6		← CONTINUOUS MONITORING BY AGENCY MANAGERS TO REDUCE PERSONAL DIFFERENCES BOTH INTER-AGENCY AND INTER-AGENCY →				
II-1		(A)	FRD/MAR, FOREST SERVICE AND UNIVERSITY ESTABLISH JOINT COMMITTEE TO INVESTIGATE SHWT TO INDEPENDENT INSTITUTE STATUS (A) AND REPORT FINDINGS IN 4 TH QTR.			
I-10, IV-7		(A)	MINISTRY RESPONSIBLE FOR FORESTRY AND MINISTRY OF FINANCE AND PLANNING DEVELOP PROCEDURE FOR, AND AGREEMENT ON, REGULAR MEETINGS WITH DONORS (A) BY MID-FEB. 1984 AND SCHEDULE NATIO MEETINGS ON OR BEFORE 1 JULY			
I-1-3 I-7 II-1 IV-4		(A)	POST-WORKSHOP COMMITTEE ORGANIZES FOR SECOND WORKSHOP "SETTING RESEARCH PRIORITIES" ON OR ABOUT APRIL, 1984.			
I-8		(A)	FRD/MAR DISTRIB. TO RESEARCH ORGS. GUIDELINES FOR PROJECT REVIEW (A)	(B)	FRD/KARI DISTRIB. TO RESEARCH ORGS. GUIDELINES FOR PROGRAM REVIEW (B)	
II-2		← FORESTRY RESEARCH ADVISORY COMMITTEE RECEIVES, ASSESSES AND ENDORS PROPOSALS FOR PROJECT AND PROGRAM CHANGES ON A CONTINUING BASIS →				
I-4		← FORESTRY RESEARCH ADVISORY COMMITTEE RECEIVES, ASSESSES AND RESPONDS TO CHANGES IN RESEARCH PRIORITIES OF ORGANIZATIONS AND AGENCIES →				
I-6		← FORESTRY RESEARCH ADVISORY COMMITTEE APPOINTS SUB-COMMITTEE TO PLAN FOR NATIONAL FORESTRY RESEARCH CONFERENCE BY MARCH 1985 →				

A TENTATIVE PLAN FOR A WORKSHOP

"SETTING NATIONAL FORESTRY RESEARCH PRIORITIES IN KENYA"

G. R. ARMSTRONG

NOVEMBER 1983

In early November 1983, a national workshop "Strengthening Forestry Research in Kenya" was convened. Research workers from forestry-oriented agencies and groups throughout the country were brought together, many for the first time. The work of their organizations was described and its aggregate impact assessed; several major factors affecting research such as current resource trends, personnel motivation and extension programs were discussed; and four working groups examined in detail: (a) forestry research program development; (b) forestry research management; (c) application of forestry research results; and (d) interagency coordination.

The working groups considered the factors reducing research effectiveness in each of these areas, and reviewed mechanisms and techniques for overcoming them. The conference terminated with a set of committee recommendations calling upon specific organizations to develop and use appropriate methods to eliminate research inefficiencies.

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Among the recommendations, three dealt with the need to identify and develop national priorities. ^{1/} Such priorities were to serve as the base upon which strong agency programs might be developed, and which Kenya's National Council for Science and Technology and the Forestry Research Advisory Committee might employ in steering forestry-oriented research activities.

The recommended mechanism to be used in developing such a priority list was to be a workshop wherein participating agencies would consider both their own and national priorities. The following plan respects this recommendation, and is congruent with earlier plans for a conference on priorities determination. It outlines a 3-day workshop (two full days plus two half days) designed to teach participants how to set priorities by logical as well as intuitive means, and permits the development of priority lists on an agency-wide, region-wide, subject-matter-wide and national basis.

^{1/} See proceedings, recommendations 1.1, 1.2, 4.4

Workshop Outline

First day

- | | |
|---|-----------|
| 1. Leave Nairobi about 1 p.m. Travel to KARI campus | 1300-1400 |
| 2. Walking tour of KARI: review of facilities, discussions
with specialists, laboratory demonstrations, etc. | 1400-1700 |
| 3. Travel to out-of-town hotel which will serve as the
conference center | 1700-1830 |
| 4. Registration and dinner | 1830-2030 |

Second day

- | | |
|---|-----------|
| 1. Breakfast | 0700-0830 |
| 2. Introductory remarks, including purpose of the workshop, etc. | 0830-0900 |
| 3. Report on progress in implementing recommendations of the
first workshop | 0900-0945 |
| 4.A. "East Africa's Development Needs and Their Implications
for Forestry Research" (prepared paper) | 0945-1045 |
| B. Prepared comments by representative from Tanzania | 1045-1115 |
| C. Break | 1115-1130 |
| D. Prepared comments by representative from Uganda | 1130-1200 |
| E. Prepared comments by representative of Kenya | 1200-1230 |
| F. Floor discussion of presentations | 1230-1300 |
| 5. Lunch | 1300-1430 |

- 6.A. Divide into groups by major interest (and use) areas
(e.g., agroforestry, range management, energy utilization, forest based industry, fish and wildlife management, recreation and aesthetics, soil and water conservation, ecological development).
- B. Each working group outlines major researchable activities within its area of interest (e.g., species selection, propagation, establishment, management, protection, harvesting, conversion, utilization).
- C. Major research needs within each activity area are discussed from the point of view of responsible research agencies.
- D. Major research needs are discussed from the point of view of clients (e.g., farmers, industrialists, ministries).
- E. Major research needs are discussed from the point of view of donors.
- F. Stated needs of the various interest groups are categorized within activity areas outlined in 6B. Differences of opinion and attitude are discussed, explained and where possible, reconciled.

6A-F

1430-1745

(Tea served at 1600 - Groups break as convenient)

7. Dinner 1900-2030

Third Day

1. Breakfast 0700-0830
2. Joint seminar "What Makes a Problem High Priority" 0830-1100
3. Break 1100-1115

4. Re-form into groups
 - A. Consider missing needs, giving attention to areas in which little or no research has been called for, and types of research (e.g., economic, forecasting and planning) not often included in current research programs. Add to list of research needs.
 - B. Evaluate and prioritize research needs on basis of recognized criteria, using techniques outlined in the seminar. 1115-1330
5. Lunch 1330-1445
6. Joint meeting. Groups report to the assembly the results of their deliberations 1445-1515
7. Break 1615-1630
8. Using techniques for evaluation of research priorities, a discussion leader guides the assembly in identifying top priority items among research areas and prepares a comprehensive national priority list (e.g., high, medium and low priority) 1630-1830
9. Banquet 1930-

Fourth Day

1. Breakfast 0700-0900
2. Prepared statement on national forestry research priorities is read to the assembly for correction and ratification 0900-1000
3. "How to Organize to Meet the Needs" (prepared paper) 1000-1100
4. Assembly discussion of the problems research groups face in responding to identified needs, and ways of overcoming those problems. This discussion to be taped. 1100-1200

5. The guiding role of the "Forestry Research Advisory Committee" is announced. Agencies are asked to report to the committee, within a month or two, their individual programs of planned research for the years 1984-85, and changes in emphasis they wish to make over the next 5 years. The committee will respond to receipt of these plans by actively encouraging and arranging for joint research and other forms of cooperation; helping to find support for research strengthening activities such as staff training and otherwise facilitating movement toward higher priority research topics in Kenya's ongoing programs. 1200-1230
6. Workshop is adjourned 1230

Discussion

Early conversation with the organizing committee for the first workshop suggests that out-of-town location is important to the success of any workshop involving Nairobi-based government employees. A stop at KARI will permit many to see for the first time the largest forestry research operation in Kenya.

The formal part of the program opens with a prepared paper on "East Africa's Development Needs and their Implications for Forestry Research". This approach has the triple advantage of placing emphasis on major goals, encouraging input by extranational invitees at an early stage in the meeting, and pointing up differences and similarities of needs within the region.

The afternoon of the second day provides opportunity for participants to group themselves by subject-matter interest, and to identify priority needs within each interest area. Invitees attending these group meetings should include representatives of client groups, responsible agencies and international agencies at the minimum. To develop groups of workable size it may be desirable to amalgamate some, e.g., agroforestry and range management, or social uses such as soil and water conservation, wildlife management and aesthetic and recreational uses. Complex groups like Forestry Research/KARI may wish to have representatives at several sessions simultaneously. Individual donor organizations, by contrast, may want to provide position papers reflecting their views on research needs within separate areas that can be incorporated into group thinking.

A central goal of group leaders will be to get various interest groups (research users, donors, researchers) to express their own views on what the major needs are, and through roundtable discussion to generate understanding as to why they think the way they do.

The seminar on "What Makes a Problem High Priority" is in my opinion a critical part of the workshop. Its focus is not on what is high priority and what isn't but, rather, on what criteria we use in making priority decisions. It helps each to understand better why the other fellow's set of priorities may be different from his own.

The seminar probably could be handled best by drawing from the audience ideas about how they, individually, decide priorities, and then showing how the factors they take into account can be united to make a comprehensive analysis. A working paper could be drafted before the conference, modified in the light of what went on at the seminar, and distributed to conferees at the afternoon session. It could serve as a helpful guide for priority decision making not only during the rest of the workshop, but also within the many agencies during the months following.

There are certain kinds of research needs that probably will be overlooked by the several groups. Certainly they have been overlooked in Kenya so far. I refer to the need for forecasting studies, trend analyses, economic studies and other bases for timely and effective planning. Chairmen will have to be prepared to raise questions about the need for work in these and other important areas. Perhaps someone from the Ministry of Planning might prepare a short (3-page) paper discussing the need for some of these kinds of research (for discussion leaders to use in the meetings).

Once a list of recognized needs is in hand, priorities can be set. The chairmen will want to ask speakers to justify their opinions, hopefully using the basic criteria or alternative techniques discussed at the seminar. With some compromises, each group should be able to prepare a priority list within its field.

The afternoon of the third day begins with a report from each group on priority subjects. It may even be possible, between 1300 and 1630, to prepare a typed draft of the evaluations for distribution to participants. In late afternoon, a discussion leader would draw from the group its assessments of overall, national priorities. Perhaps this could be done best by dividing arbitrarily into groups of 15 or so, allocating an hour for discussion within groups, and then comparing results and trying to reconcile differences. The end result should be a comprehensive priority list (at least in terms of high, medium and low) that can be forwarded to NCST and PPCSCA, and to other relevant government agencies, as the joint findings of the workshop.

Some areas will not be represented among the higher priority items. This should be understood to be only the result of current emphasis and not a reflection on the significance of the work in the long run. Someone at the conference should point this out. Agencies may otherwise try to get into the "top ten" in the hope that additional government funding may become available. Hopefully the size and mix of the audience will keep this from happening.

It is one thing to identify what the top priority items are. It is quite another to launch an effective research attack on them. Before the workshop adjourns it will be important to give at least preliminary consideration to the kinds of action that will be needed to shift program emphasis toward high priority topics. Then, researchers can go home and revise and update their program plans in view of prior commitments, personnel capabilities, areas of specialized strength, growth potentials and the like.

Their planned programs may require dropping or curtailing some on-going activities and taking on others. Such plans can be forwarded to the Forestry Research Advisory Committee for harmonization, and time scheduling and joint

planning discussions. Groups like Londiani and Egerton Colleges, KREMU and others can be drawn into the research stream more effectively. Plans might be made for periodic research forums that will bring together periodically those having similar research interests as a means of augmenting opportunities for collaboration.

Timetable

The initial workshop "Strengthening Forestry Research in Kenya" was held during the first week in November. It is estimated that about 12 weeks will elapse before a proceedings can be published and distributed. Time will be required for appropriate action to be taken on the recommendations made. This second workshop on "Setting National Priorities" can serve a dual purpose. In addition to deliberating priorities, it can serve as a forum for review of progress made in implementing the recommendations (see item 3, Day 2).

A reasonable delay between workshops would therefore appear to be 12 weeks for distribution of proceedings and recommendations, and an extra 2-3 months for action on them. This is a total of 5 to 6 months, and to maintain a sense of urgency and purpose, the shorter period is probably better.

This plan would place the workshop in early to mid April, and hopefully not later than early May. The cost would be extremely modest. A tentative budget was prepared by the consultant and delivered in early December to Mr. J. Seyler, Resident Forestry Advisor, Nairobi, for consideration by the Kenya Mission.