

SUGGESTIONS FOR CADA  
FORESTRY AND FUELWOOD PRODUCTION INITIATIVES  
IN AN AFRICAN COUNTRY

AN ILLUSTRATIVE MODEL

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SUGGESTIONS FOR CADA FORESTRY AND FUELWOOD PRODUCTION  
INITIATIVES IN AN AFRICAN COUNTRY:  
AN ILLUSTRATIVE MODEL

Introduction

If governments decide to move in the direction of increased support for accelerated forestry and fuelwood production programs in Africa, the following illustrative program and project options provide opportunities through which CADA members could coordinate their efforts for increased effectiveness in any given country.

The model is intended to represent a hypothetical sub-Saharan country whose government has requested further assistance in the forestry sector. Possible actions are divided into two phases:

- I. Initial CADA review and coordinating measures; and
- II. Program and project options.

It may be noted that successful CADA efforts in any one African country, West or East, could provide more than simply a model for additional CADA action in another: By demonstrating the increased momentum which could come from more closely concerted and accelerated efforts, such an initiative could stimulate indigenous African national planning and action in other sub-Saharan countries, leading to improved national forest management and other land use planning, as well as for accelerated programs for fuelwood production and supply.

For purposes of this exercise, the hypothetical country has been called AFRICANA.

I. INITIAL CADA REVIEW AND COORDINATING MEASURES

Program planning and forestry technician representatives from CADA resident missions in AFRICANA and their African counterparts will form an ad hoc coordinating group responsible for the following initial inventory and review tasks:

1. Review with Africana government planners current and proposed national forestry and fuelwood production programs.
2. Inventory current and proposed CADA member donor assistance projects and other activities.
3. Review with other donors their current and proposed assistance.
4. Screen the combined African national and donor activities against the following program prerequisites as a first cut at identifying project areas for special CADA attention:
  - \* African government commitment to increased priority for forestry and fuelwood production program within their own national economic and social development programs.
  - \* Expanded manpower and training, improved in content and institutional capability.
  - \* Improved management of natural forests and woodlands for fuelwood production as well as for other purposes.
  - \* Early planning for larger scale fuelwood plantations, especially to meet urban needs.
  - \* Decentralized seedling supply and extension services, to enlist voluntary efforts at the village and household level and to serve individual needs.
  - \* More effective methods of fuelwood use and development of alternative energy supplies.
  - \* Up-to-date knowledge of existing land use and land use potential on which to base agricultural, forest and fuelwood, and urban planning decisions, and to provide baseline data for popular education and extension programs.

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Note: See hypothetical assumed base data sheet attached as Annex A for summary examples.

## II. PROGRAM AND PROJECT OPTIONS

Once initial inventory and screening is completed, CADA members may, singly or jointly, elect one or more of the following options, presumably in order to speed up achievement of a given program prerequisite for which inadequate resources are currently provided. For example, a review of Africana's overall forestry and fuelwood program may show that combined current and proposed national and donor assistance appears adequate in the area of expanded manpower and training, but seedling nurseries are too far distant from their source of use for full effectiveness. Hence, CADA donors may choose to begin with a project designed to increase the volume of seedlings available through decentralized seed and seedling supply services.

The following list of options is organized in terms of the program prerequisites, identified on page 2 above, believed to be essential for any successful program.

### 1. Enhanced Africana government commitment

While Africana officials have declared their commitment to a greatly strengthened forestry and fuelwood production effort, as noted in the hypothetical base data (Annex A) only two per cent of the national budget devoted to departmental support is allocated to this sector.

- \* CADA members could use the occasion of the next donor review of Africana's development needs and progress to encourage Africanian officials responsible for overall development programs to give substantially enhanced priority to expanded forestry and fuelwood supply programs, specifically to increase the amount of domestic funding and manpower assigned to the forestry sector.

### 2. Expanded forestry manpower and improved training

Under the hypothetical donor program assumed for Africana, the IBRD, together with associated donors, has already financed a major project to strengthen the Forestry Administration, including its training facilities.

- \* CADA members may wish to offer to collaborate with the IBRD in a second phase of this project, including the financing of the local costs for salaries

for the expanded manpower complement which will be required.

- \* CADA members may, on review of current training programs, consider additional effort is needed beyond that now planned by the IBRD for a second phase and could begin now to plan with Africanian officials for support to such an enhanced training effort.

### 3. Improved management of national forests

Although several donors are now engaged in projects seeking to improve Africana's capacity to manage its natural forests, none of these projects are now directed at improved management for the explicit purpose of salvaging the culs or coppicing for organized fuelwood supply.

- \* CADA forestry technicians could review and revise their existing forestry management assistance programs to include pilot projects specifically intended for increased fuelwood supply.
- \* CADA members may wish to sponsor a workshop on methods for managing natural forests for increased fuelwood supply, drawing on the experience of neighboring or other governments whose programs have proved successful.

### 4. Planning for larger scale fuelwood plantations

- \* CADA members currently engaged in land use planning assistance could, in the course of their land use project discussions, suggest that Africanian officials consider at an early stage earmarking, say, 150,000 hectares of nationally controlled or controllable land for future fuelwood planting programs. This is only half the volume estimated to be needed to meet Africanian fuelwood needs from sustained yield by the year 2000, but it could help Africanian officials to begin to think of future forestry planning as a land-use management effort, rather than as a national forest custodian task.

Several donors are already engaged in natural resource mapping and monitoring in Africana. However, very little of the results are yet available in a form which provides up-to-date information on which reliable multi-sectoral land use decisions can be made.

Completion of land use maps and their wide distribution maps throughout Africana's government agencies concerned with

inter-sectoral development planning decisions could serve to focus the attention of high-level officials on the need for early decisions and large-scale allocation of land for fuelwood plantations. It would not insure such decisions, but it would fill a major information gap and it could eliminate an excellent (and valid) excuse for not making them.

- \* CADA governments could offer to complete updated countrywide land use maps, using satellite and other air-based photography already available to complete presently unmapped areas in sufficient detail to identify urban areas, present agricultural production sites and forests and woodlands now extant. The objective would be to provide a land use tool to assist Africanian officials to make early decisions on identifying and earmarking larger areas of land for future fuelwood plantations. (See additional discussion in Annex B.)

If Africana officials decide to move swiftly to undertake substantially expanded fuelwood planting programs, CADA members ought to be prepared to offer additional funding for the accelerated effort. For example:

- \* CADA members could be prepared to provide, through their respective bi-lateral programs and in collaboration with the IBRD, up to \$7,500,000 over the next five years to finance fuelwood planting and related projects in Africana, as subsequently programmed and approved for financing. (This would represent half of the estimated external aid financing target for the 15,000 hectares proposed by the IBRD's renewable energy task force for an accelerated five year planting program in Africana. If equally divided among CADA donors, which would not necessarily be the case, this would require the commitment by each CADA donor of only \$1,250,000 for expanded fuelwood supply programs over the next five years.)

##### 5. Decentralized seedling services

The review of existing and proposed efforts in Africana's forestry programs has shown that a major gap still remains in the supply and delivery of seeds and seedlings in Africana. Without waiting for the basic strengthening of the overall administrative capability of the Forestry Administration, CADA members could offer to add decentralized seedling production and distribution programs to all village-level PVO, Peace Corps

and other similar government or private volunteer agency projects, which are now included in each member's respective bilateral programs. Such assistance should include the initial and recurring local costs for training and hiring Africanian personnel and other logistical support needed to permit continuous operation of the resultant seedling programs through five years.

A CADA initiative accelerating the volume and availability of seedlings as part of other on-going programs could be carried out in several different ways, at the option of CADA members, individually or collectively.

- \* CADA members with current or prior experience in decentralized seedling distribution programs in Africana can amend existing project agreements with voluntary agencies and national forestry departments to add seedling production and distribution services programmed in ways each donor has found most successful.
- \* CADA members lacking current or prior experience may solicit CADA or other donor expertise in costing and programming the additional services.
- \* CADA members singly or collectively may request the voluntary agencies currently financed in their respective bilateral programs to prepare project assistance requests covering decentralized seedling production and distribution services, as the primary basis for determining volume and total costs that will be involved.
- \* CADA sponsored Africanian country training workshops for Africanian and foreign program personnel could be developed and jointly financed if members considered it desirable.

## 6. Forestry and fuelwood conservation project

Although two donors are already involved in projects designed to improve the efficiency of fuelwood use through improved wood stoves, there has not yet been any systematic effort in Africana to involve women in either the design or the carrying out of a national forestry and fuelwood conservation program.

- \* A regional training workshop for extension workers to involve women in fuelwood production and methods of conserving firewood use is taking place in another African country November 29 to December 14, 1980.

Depending on the results and conclusions of this workshop, CADA members could offer to sponsor a national women's forestry and fuelwood conservation program in Africana. The resultant national program could provide an opportunity to develop a model women's forestry and fuelwood extension program which could be adapted for other sub-Saharan countries.

- \* CADA members may wish to review existing efforts to promote improved wood stoves in Africana to be sure (a) that the savings claimed reflect tests based on the experience of African women in their own cooking environments rather than by Peace Corps volunteers or in technical laboratories; and (b) that adequate attention is being given to the introduction of improved wood stoves in urban areas. For urban users, design and acceptability criteria may be significantly different from rural tastes and constraints and faster diffusion may be possible.

#### 7. Land use map reproduction services

The land use maps which it is suggested CADA members may wish to offer Africana as an aid in making tentative decisions on fuelwood plantation sites will be designed for land use experts.

There is an additional need for multiple copies of traditional topographic maps, showing existing urban, agricultural, range land, woodland and forest land use, for use in schools, village councils, district training centers, and general agricultural and forestry extension work.

- \* CADA members may wish to explore with their Africana counterparts a land use map reproduction service designed to augment any Africanan national forestry and fuelwood supply and conservation campaign.

Decentralized seedling distribution programs, efficiently managed, can by themselves serve as nationwide education and extension campaigns simply by meeting current felt needs at the village level and by involving the general public broadly in the planting of a wide variety of trees.

A national information and promotion campaign to supplement, but not substitute for, such an action program can

reinforce the educational impact of other action programs. In such a campaign a generous supply of national and local Africanian land use maps in color, made widely available to the local populace through their educational, cooperative and extension services, could be decisive in making a national campaign effective and in promoting local voluntary efforts nationwide.

(Hypothetical Summary Basic Data)

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AFRICANA

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Assumed Population

1980:	7 million
Estimated 2000:	12 million
of which urban:	4 million
rural:	8 million

Assumed National Program

Forestry Department Financing:	2 percent national budget
Manpower available:	200 technicians; 30 professionals
No. seedling nurseries:	20
Area of natural forest:	3,500,000 hectares
Fuelwood potentially available from natural forests:	1,000,000 m <sup>3</sup> (or 25 percent of estimated fuelwood demand in Year 2000.)
Fuelwood plantations	
Extant in 1980:	1,000 hectares
Current annual planting:	1,500 hectares
Annual planting needed:	15,000 hectares
Total needed by 2000:	300,000 hectares
IBRD five-year program:	15,000 hectares

Assumed Current CADA Member assistance in forestry

BELGIUM	Funding of experts for national forestry planning
CANADA	Species and yield trials for irrigated forest plantations and other research on savannah timber species; aid to natural resources mapping (with other donors)
FRANCE	Fuelwood plantations in urban areas (with other donors); assistance to forestry extension service centers; aid to natural resources mapping (with other donors)

continued

Assumed Current CADA Member assistance (continued)

GERMANY	Reforestation in northern region; pilot village woodlots; range restoration and management
USA	Village wood lots; forest management and other technical assistance to Africana's forestry training center; aid to natural resources mapping (with other donors)
UK	Study of improved wood and charcoal stoves

Assumed other donor involvement

World Bank	Major forestry project, primary emphasis on strengthening Africana's Forest Administra- tion; pilot project in improved forestry management to produce fuelwood; rainfed tree plantations; pilot rural woodlots
Switzerland	Village wood lots
Netherlands	Village wood lots
FAO/UNDP	technical assistance to Forestry Administration

### LAND USE MAP REPRODUCTION SERVICES

The illustrative options summarized in this paper suggested that donors offer to provide updated land use maps for two purposes, one: as a land use planning tool to assist in early identification and earmarking of large areas of land for future fuelwood plantations, particularly to meet urban demand; and two: as an adjunct to extension work and national promotion campaigns to raise public awareness on the importance of increased fuelwood supply and conservation efforts.

To meet the first need, donors could offer to supply rather traditional land use maps, in color conforming to usual topographical characteristics, updated as to forest, woodland, agricultural, range land and urban use by such remote sensing and other photographic data as already exists. These would vary in detail for the grid (For "Africana" one may assume 1:250,000 for a map of national scale ). Such maps would provide land classification in gross detail, but sufficient to assist in preliminary earmarking of sites adequate in scale for fuelwood production needs as estimated through the year 2000, and sited sufficiently remote from urban and agricultural areas to prevent their preemption for future expanded urban and agricultural use. These maps could also serve for such aspects of a national campaign relying on raising local awareness on national development issues.

Once Africana officials have tentatively selected such areas, CADA members should offer to provide the best available additional details, covering climate and soil conditions for the specific locations

tentatively chosen. This additional detail could permit an assessment of the actual fuelwood production potential, based on any given choice of land or mix of species tentatively selected for the particular land sites identified.

Inclusion of climate and soil detail on the initial maps would unduly overload the visual effect and make it unreadable except by experts; nor is such detail necessary as a planning tool to assist in initial identification of tentative sites for the referenced fuelwood plantation lands.

Modifications in the maps to permit them to make maximum contribution to a national promotional and educational campaign would depend on the views and assessments of the Africanian officials involved. There is a great deal of merit in providing quite localized maps at sub district levels in areas where community interest may respond to such additional visual aids.