



**USDA Forest Service
Office of International Programs
Concept Paper**



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To: Kifle Negash, West Yugulle & Gary Alex, USAID Sudan E&I Team
Tom Catterson and Sean White, IRG STEP Program
Walter Knaunsenberger, USAID East Africa

From: Oliver Pierson, Africa Program Coordinator, USDA Forest Service

Cc: Tim Resch, Bureau Environmental Advisor, USAID Africa Bureau
Erik Streed, Natural Resources and Renewable Energy Advisor, USAID EGAT
Mike Chaveas and Alex Moad, International Programs, USDA Forest Service

Re: Scope of Work for Potential USFS Technical Assistance in Southern Sudan

I. Summary

USFS proposes providing technical assistance and training to USAID Sudan, the Government of Southern Sudan's Ministry of Agriculture and Forestry (MAF) and the STEP Program on a number of natural resource management issues beginning in October 2007. Initial technical assistance topics could include training on transparent forest product permitting systems, a training and priority technical assistance needs assessment for the MAF Forest Department, and an analysis of current hydrologic conditions of the Sudd Wetlands / Riparian Ecosystems aimed at developing a set of recommendations and actions to mitigate the potential impacts of road and dike construction. USFS will potentially use our own appropriated funds and USAID Africa Bureau "Mission Support" funds to cover the costs of these interventions. This second draft of the USFS Sudan concept paper contains input from Tom Catterson and Sean White of the STEP Program.

II. Background

The USDA Forest Service (USFS), represented by the Africa Program Coordinator in the International Programs Office, traveled to Southern Sudan in May 2007 to explore opportunities for USFS technical assistance to ongoing USAID-funded natural resource management activities in the region. The objectives of the mission were:

1. To become acquainted with USAID Sudan natural resource management priorities and the general natural resources management context in Southern Sudan.
2. To establish a relationship with the Government of Southern Sudan's (GOSS) Ministry of Agriculture and Forestry (MAF) and the Forestry Directorate (FD).
3. To identify specific areas where USFS could provide value-added technical assistance to support USAID/STEP and build NRM capacity within the GOSS.

Having completed objectives one and two through various meetings with the relevant stakeholders in Juba as well as visits to two teak plantations (Kagelu and Loka) and the Kagelu Forestry Training Center, this document addresses point three and provides some initial ideas for consideration about how the USFS could engage in Southern Sudan.

III. Proposed Areas of Technical Assistance to USAID Sudan Program

Initial discussions between USFS/IP, STEP, and USAID Sudan led to the emergence of two clear themes for USFS/IP to focus on, capacity building and forestry governance. It is clear that in the current context, with Sudan emerging from 22 years of civil war and establishing a new government, capacity building is an essential activity, to enable sound decision-making and management of forest resources. Additionally, with the recent cessation of fighting under the 2005 CPA, a history of poor management of forest resources, and use of timber resources to fund conflict, improving governance in the forest sector is a critical priority, especially if these resources are to make a substantial contribution to sustainable development in Sudan. These two themes can easily be addressed in an integrated manner, with the host of steps needed to manage natural and plantation forests transparently and sustainably providing excellent subjects for technical training and systems design activities. Furthermore, the Kagelu Forestry Training Center (KFTC), with classroom and some lodging facilities combined with a 1000+ hectare teak plantation, provide an excellent facility for training of existing GOSS / FD personnel, as well as students and community members. The possibility of supporting the KFTC to serve as a “Center of Excellence” for pilot forest management activities was also discussed, and should the GOSS / MAF decide to move in this direction, USFS is keen to support the KFTC to play this role. Other subjects of discussion that will be addressed in this section are potential USFS training and policy support on community-based natural resources management (CBNRM) and USFS support to conduct hydrological and biological analyses related to the effects of oil exploration and dike/road construction on the drainage patterns on the eastern margins of the Sudd wetland.

Therefore, specific potential activities for USFS technical assistance are:

1. USFS support to Ongoing Forestry Governance Activities at Teak Plantations
2. Institutional and Technical Capacity Building
3. Potential USFS Analytical Support to Assessments of the Impact of El Sudd Management Actions on the Wetland’s Hydrology and Biology

These are illustrative topics presented initially to USAID Sudan and STEP partners, for input and feedback, with the intent of eventually presenting these ideas to the GOSS / MAF for their consideration. Ideally, these ideas would be presented to the GOSS / MAF initially in writing for their review, which would subsequently be followed by a visit of the USFS Africa Program Coordinator for discussion and work planning, in collaboration with USAID and STEP personnel. However, given the expenses, time needed and clearance challenges for USG personnel in Juba, the USFS may also ask STEP personnel to discuss these ideas with GOSS / MAF personnel and then provide written feedback.

The USFS understands that there are significant logistical challenges associated with USG personnel working in Southern Sudan. Additionally, funding for these activities will have to be identified. Both of these topics will be addressed below in Section III. Finally, for logistical, financial and technical reasons, the USFS intends to “start small” in Sudan, and will aim to conduct a few initial technical assistance missions focused on capacity building and partnership development, after which time USFS support and the utility of our involvement can be evaluated by all actors.

The specific niche that the USFS will seek to fill is one of government to government collaboration for improved natural resources management capacity. As a land management agency responsible for managing over 80 million hectares of forest in the United States, the USFS possesses a strong cadre of forest management practitioners who, based on their experience implementing forest management systems on our national forests, are very well placed to help the MAF/FD design and implement their own systems. The USFS International Programs office will identify those practitioners with appropriate technical and inter-personal skills and mobilize them for this activity.

1. USFS support to ongoing Forestry Governance Activities at Teak Plantations

Context: USFS experience with promoting sustainable forest management in post-conflict areas has shown that while moving quickly to utilize forest resources to create employment and economic growth is important, these activities should only begin when an institutional structure with some regulatory and oversight capacity is in place. Countries that rush to extract forest resources can end up with unfavorable concession or permit agreements, lack of involvement of rural stakeholders in decision-making, and inequitable or corrupt financial management, all of which can contribute to a return to conflict. Southern Sudan contains stands of mature teak, which is a very valuable hardwood species that is in demand on local and international markets. An important development goal for the GOSS should be to develop proper governance systems so that this resource can be utilized in a sustainable and transparent fashion to create employment and generate revenue.

Given Sudan’s history of active government involvement in resource management, there may be a need to support GOSS efforts to promote direct private sector involvement in forest plantation management, although the existence of one concession allocated to the Central Equatoria Teak Company as well as a license to an individual to operate Forestry Workshop #2 show some early evidence of public-private partnerships. As more private actors become interested in Southern Sudan’s teak plantations, the establishment of systems for competitive and transparent allocation of teak harvesting permits, licenses or contracts will be needed, and training of MAF/FD personnel in the implementation and oversight of these systems is of equal importance.

The USAID / STEP program has been working with the MAF/FD to ensure “enactment and operationalization of new timber resource utilization policies, laws and regulations.” The GOSS is nearing completion of a new forest policy that should provide substantial guidance regarding how forest resources should be utilized, and this policy will need to

be disseminated and ultimately applied in the forested regions of Southern Sudan. As the STEP program moves forward with their forestry governance activities focused on the teak plantations, the USFS would like to complement these activities by providing technical assistance and **training** for designing transparent forest products permitting systems that comply with the new forest policy, allow for proper valuation and government revenue capture of the resources at hand, encourage competition amongst interested private sector actors, and ensure sustainable utilization of this resource. The KFTC provides a suitable location for conducting pilot forest management actions and training existing and future MAF/FD and State-level forest service staff.

As this approach will require approval from MAF/FD, such an activity should be described as a training exercise and as an opportunity to consider different approaches based on international best practices. This training will also provide an opportunity for USFS to comment on existing systems in Southern Sudan and on needed modifications.

Overall Objective: Support USAID Sudan Forestry Governance activities by providing training to MAF/FD on transparent forest product permitting systems and their use.

USFS Team: A Timber Sale Administrator and an Inventory / Valuation Expert

Timing: October 2007

Deliverables: A technical report detailing the necessary steps for inventory, valuation, and allocation of forest management permits via a competitive process

Location: Kagelu Forestry Training Center

Actors: KFTC Staff and Students, USAID/STEP, MAF/FD, State-level forest service(s)

Logistical Support to USFS: STEP Program

Funding: All costs covered by USFS, except activity implementation costs (such as local travel, per diem for GOSS/MAF, and other related expenses), to be covered by STEP.

Possible follow-up USFS training / technical assistance activities: If the first mission goes well, and there is interest in additional collaboration, the USFS has identified the following subjects as possible next steps:

- 1. Management Planning:** The design of an overall management plan for a given teak plantation, such as Kagelu, that would compile completed work done by the STEP Program into a comprehensive document that describes the state of the resources, lists information needs, defines acceptable use options, and proposes management actions, such as felling, thinning, replanting, etc for specific forest parcels. The development of a template for forest plantation management plans as well as the completion of one plan for the selected plantation would be the intended deliverables of this support.
- 2. Introduction to CBNRM, Policy and Practices for the African Context:** Given its recent emergence from conflict and efforts to create a new government, the initial priorities of the MAF/FD may be to staff up, develop forest management systems, establish control over forest resources, and encourage public private partnerships to allow forest resources to contribute to revenue generation and employment creation. However, over the last 15 years in many parts of Africa, including in the neighboring countries of Kenya and Uganda, forest management policies have evolved towards

devolving authority from the state towards communities, whereby communities are empowered to engage in regulated access to forest resources as well as direct oversight actions. The USFS has extensive experience both in the US and in Africa in implicating community members in forest management activities. Should the MAF/FD and its partners seek expertise for the development of community forest management policies and strategies, the USFS could provide trainers who could share models from elsewhere in Africa and the US, and facilitate discussion for what could work in the Southern Sudanese context. Additionally, the USFS could orchestrate study tours or technical exchanges between Sudan and other African countries that are further along in using community based approaches to forest management.

2. Institutional and Technical Capacity Building

Context: 22 years of Civil War and the process of forming a new government combine to create substantial challenges in the path of the GOSS as they attempt to initiate sound forest management activities. Managing forest resources sustainably and transparently in any situation is quite complex. The unique context of Southern Sudan, where little is known about the state of the forest resources, land tenure is uncertain, and law enforcement capacity is limited will only compound this complexity. An additional challenge in Southern Sudan is the need to clarify respective roles and responsibilities for state and national-level governments, who currently have differing views on this subject. Finally, due to the impacts of the Civil War, as the MAF/FD and state forest management agencies hire and deploy key personnel, many of the employees will be new to the forest sector and/or new to being involved in an organized, government-led management effort.

Therefore, the need to build forest management capacity of current MAF/FD personnel is perhaps the single greatest forestry sector challenge in front of the GOSS and its partners. This capacity should be built by creating skills-oriented and applied learning opportunities for existing and future FD staff as well as key partners, such as state level forest services, community representatives, and other relevant government agencies. Training and technical assistance activities should focus on both **key institutional development needs**, such as development and implementation of organizational structure, administrative management systems and accounting, as well as **priority forest management actions**, such as inventories, replanting, stand management, and forest use permit allocation procedures. This focus on training will be particularly important as the MAF/FD deploys personnel to the field and initiates targeted forest management actions.

Overall Objective: Build capacity in the MAF/FD to enable sustainable and transparent management of Southern Sudan's forest resources.

USFS Approach: To develop an understanding of the MAF/FD's priority training needs, a USFS plantation forest management expert and an institutional training expert should perform a rapid institutional and technical needs assessment. The assessment will identify training needs as well as other high-impact, short-term interventions to support future MAF/FD field-level management actions. The needs assessment would be carried out with MAF/FD personnel in the lead, supported by the USFS team, to bring about local ownership of the conclusions and identify priority interventions. This activity is

consistent with Objective Two of the MAF/FD's work plan, which calls for planning and implementing a human resources development plan. The USFS team would support the MAF/FD to develop this plan, including defining action items identifying the sequence of training and technical assistance actions, with clear roles and responsibilities identified. These interventions would then be carried out by USFS employees, STEP program experts and other partners in collaboration with MAF/FD counterparts during FY2008. Additionally, in the course of elaborating the training needs assessment, the USFS will seek to provide technical advice on organizational structure and organizational issues that the MAF/FD is struggling with.

Timing: November – December 2007, after the initial training defined in point one is carried out, so that the USFS gains additional experience in Southern Sudan.

Deliverables: A needs assessment / priority training intervention report, documenting key weaknesses and defining capacity building interventions to address them.

Location: Juba, Yei, Kagelu, and other forest management sites, clearance permitting.

Actors: MAF/FD personnel, KFTC personnel, STEP team, other donors or technical partners involved in the forest sector, private sector and communities.

Logistical Support to USFS: STEP team

Funding: All costs covered by USFS, except activity implementation costs (such as local travel, per diem for GOSS/MAF, and other related expenses), to be covered by STEP.

NOTE: As a small element of our support to capacity building efforts, the USFS will donate a series of publications and perhaps equipment to the library at the KFTC. The International Programs Office will work with USAID and STEP to determine the most efficient process to get any materials to KFTC.

3. Potential USFS Analytical Support to Assessments of the Impact of El Sudd Management Actions on the Wetland's Hydrology and Biology

Context: The Sudd Wetlands in southern-central Sudan along the White Nile river are a globally-recognized "hotspot" for biodiversity, containing critical habitat for many endemic and endangered species of flora and fauna, as well as a RAMSAR site, or wetland of global significance. Additionally, these wetlands play a key role in regulating the hydrologic regime of the White Nile River, and millions of downstream residents depend on this surface water for their livelihoods and for industry, such as irrigated agriculture. However, these fragile wetland / riparian areas also contain oil deposits that have the potential to provide significant income to the GOSS and the residents of this area. Additionally, different governments of Sudan at various points of time have initiated activities that either intentionally or unintentionally modify the flow of these wetlands for water supply purposes, such as the incomplete Jonglei Canal and the Bor Road / Dyke project, which while not intended to have an impact on the flood patterns, prevents annual floodwaters and sediment from reaching eastern lands.

The STEP Program, in PM#9, has various contractual obligations to support "Policies and Standards that Incorporate Environmental Best Practices," particularly in the context of major construction / oil exploration activities. Additionally, USAID East Africa is currently reviewing an EIA of the Bor Dyke project that could perhaps benefit from some external peer review or additional hydrological analysis. Based on discussions with

STEP personnel, it appears that the Bor Road / Dike construction project has the potential to impact White Nile River flood patterns, due to changes in surface water drainage systems. The USFS has substantial expertise in watershed management, hydrological modeling on large river systems, and wetland hydrology. Therefore, USFS expertise in the area of hydrological modeling could be of use to support USAID Sudan / STEP program's analysis of the potential impacts of these construction activities on the hydrological regime.

Overall Objective: Assess the current hydrologic conditions of the Sudd Wetlands / Riparian Ecosystems, and using the best available data as well as observations from field visits, develop a set of recommendations and actions to mitigate the potential impacts of road and dike construction activities on this system's hydrological regime and how to monitor the impacts of such construction on the system over time.

NOTE: Without a strong knowledge of what preparatory work has been accomplished and what amount of hydrologic and biologic data is available in digital/static formats, it is difficult to state whether this activity could be completed during one mission.

USFS Team: As mentioned, the complexity of this undertaking will require a team with a diverse set of skills. USFS/IP proposes a three person team, consisting of:

1. A Hydrologist with a strong understanding of large-scale hydrological processes, hydrological modeling and surface water flow disturbance due to construction
2. A Hydro-geologist with direct experience in road construction activities who can look at the degree of hydraulic connection between surface and ground water, and determine the potential impact of construction on the hydrologic regime.
3. A Geographic Information Systems (GIS) expert who can identify key habitat areas at various scales, and compile data on biologic and hydrologic features into a GIS that can be used for planning and mitigation purposes.

Timing: December 2007 or January 2008, 3 week mission (depending on timing of travel to Sudd regions at this time of year). This activity may also require some additional work on mapping / modeling back in the US after the first mission, and as previously stated, may require additional trips to the field.

Deliverables: A report detailing key features of this ecosystem and its hydrology that may be sensitive to impact from road construction, as well as recommendations about key steps to be taken to limit or minimize adverse impacts on this system from said construction. The report should utilize existing USFS Remote Sensing Applications Center satellite imagery to provide Landsat Imagery that will help characterize the hydrology of the Sudd Wetland. The report should also provide information on the Sudd ecosystem's degree of reliance on an undisturbed hydrological regime, flood patterns and how floods could be affected by construction activities that change the drainage pattern. The report should also provide detailed recommendations about what type of monitoring system should be established to collect adequate data for monitoring impact of future alterations, such as this system.

Location: Sudd Wetlands and Juba, Southern Sudan

Actors: USAID, Ministry of Environment, STEP, Oil Companies, GOSS officials

Logistical Support to USFS: STEP Program

Funding: All costs covered by USFS, except activity implementation costs (such as local travel, per diem for GOSS/MAF, and other related expenses), to be covered by STEP.

NOTE: An alternative approach would be for a USFS hydrologist to support the Programmatic Environmental Assessment on Oil Exploration in the Sudd that the STEP Program may be implementing. If STEP / USAID are interested, a USFS hydrologist could support the PEA, and also develop a more detailed SOW for future support in this area during this initial mission. If this option is preferable, STEP should alert USFS to the intended timing of the PEA.

IV. Logistical Considerations

- **Funding:** USFS has funding to initiate technical assistance activities in FY08 as described in sections one and two of this memo. Should additional missions be deemed successful and should all stakeholders support maintaining USFS involvement in Southern Sudan, the USFS would continue to cover salary costs for our experts but would seek to identify additional funding sources to cover travel and per diem costs. These sources could be any of the following:
 - Express Travel Contract managed by Gary Alex
 - STEP Program
 - Direct support from USAID Sudan to USFS via a “buy-in” to the existing Inter-Agency Agreement between USFS and USAID / EGAT
 - Mission Support funding from USAID Africa BureauThese funding sources will be explored as needed upon completion in FY08.

- **Clearance and Local Travel Issues and Use of Retired USFS Personnel:** Given the challenges with obtaining country clearance, housing in Juba, and clearance for local travel in Sudan for USG personnel, the USFS will seek to mobilize recently retired USFS experts for short-term technical assistance assignments in Sudan whenever possible. Although travel for these retired employees would be organized by USFS-IP, they would be under “volunteer” status, traveling on blue passports and should be treated in the same way as contractors are treated. In the event that the best expertise is found in current USFS employees, USFS-IP will try to obtain clearance as we did for Oliver Pierson’s mission. If clearance is not possible, we will then identify the most appropriately-skilled retiree.

- **Modalities for collaboration with USAID STEP Program:** The USFS recognizes that the USAID Sudan Economics and Infrastructure Team has a very high work load. Therefore, to the extent possible, all USFS technical assistance activities will be coordinated directly with USAID STEP program staff, to minimize the support needed from USAID. Each mission will be the subject of a specific Scope of Work, defining objectives, roles and responsibilities, and deliverables, which all stakeholders should approve before the mission begins. Finally, as mentioned in this Concept Paper, USFS support should contribute to existing USAID/STEP program objectives.

V. Other Potential Activities for USFS Technical Assistance

Protected Area Management Planning and Training: USFS has learned that WCS is active in protected area management and wildlife conservation in Sudan. WCS has received funding from the USDA PASA, from US State Department and from the USAID-STEP Program to perform various wildlife management and training activities. As WCS establishes its priorities for protected area management activities in Southern Sudan, it will seek to develop and implement management plans for these areas, and USFS can perhaps play a role to support these efforts in Southern Sudan. The USFS has established a successful partnership with WCS in Gabon and DR Congo through the USAID-funded Central African Regional Program for the Environment. In this partnership, the USFS developed a protected area management plan template for national parks where WCS was the lead USAID-funded conservation actor, and then trained WCS and host-country park service staff in the utilization of this template for elaborating protected area management plans.

In an interesting coincidence, based on the positive results of collaboration between WCS and USFS/IP in Central Africa, Dr. Mike Fay of WCS has recently asked USFS/IP to get involved in Sudan by providing similar protected area management planning support. USFS/IP has extensive experience in developing and implementing management plans for protected and multiple use forest and rangeland areas, both in the US and in Africa, and could easily provide expertise to work with WCS and the GOSS on these issues. But, as our current approach in Sudan is to start small and focus on training and capacity building activities, we will put this type of support on hold initially so we can focus on these other priorities. However, if USAID decides to utilize future biodiversity earmark resources in Sudan for protected area management resources, the USFS would be willing to engage in this area, in partnership with the GOSS, the STEP Program, WCS, or whichever institution has a lead role in this area.