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Your Ref:

Director General
World Agroforestry Centre
P.O. Box 30677 – 00100
NAIROBI

Attn: Claudette Disii
Senior Administrative Assistant
Office of the Director General

RE: CONTRACT AGREEMENT BETWEEN KARI AND THE WORLD AGROFORESTRY CENTRE UNDER WKIEMP

We received the above contract agreement and it has been countersigned by KARI. I am therefore forwarding one duly signed copy for your records and necessary action.

I take this opportunity to thank you and look forward to continued collaboration between KARI and ICRAF.

Jane W. Wamuongo (PhD)
Assistant Director, Land Water Management
For: DIRECTOR - KARI

Kenya Agricultural Research Institute

Western Kenya Integrated Ecosystem Management Project (WKIEMP)
Project ID: P072981

2005/2006 Work plan and Budget

Contract Agreement between KARI and World Agroforestry Centre (ICRAF) for the backstopping of WKIEMP by ICRAF.

January 2006

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1 Background

The Kenya Agricultural Research Institute (KARI) and the World Agroforestry Centre (ICRAF) have been collaborating for many years. A Memorandum of Understanding (MoU) between the two institutes was signed in August 1989 and has been in force ever since. It is within the framework of this MoU that KARI has collaborated with ICRAF on the following projects:

1. National Agroforestry Research Programme funded by SIDA and implemented at KARI's regional research centre in Embu.
2. Soil fertility recapitalization and replenishment pilot project, funded by various donors, including EU, Rockefeller foundation, the government of the Netherlands, implemented at the KEFRI centre at Maseno and the KARI regional research centres at Kakamega and Kisii.
3. Strategic soil fertility recapitalization research project, funded by the World Bank through KARI's NARP II project, implemented in Western Kenya.
4. The African Highlands Initiative implemented at KARI regional research centre Embu and the KEFRI centre at Maseno and supported be various donors.
5. Investigations to establish the magnitude of potassium deficiencies in Kenya with a view of developing appropriate soil fertility management recommendations to combat potassium related constraints to crop production. This project was implemented at the National Agricultural Research Laboratories and supported by the EU under the Agriculture/Livestock Research Support Programme Phase II
6. Short term consultancy on the improvement of laboratory services at NARL with practical recommendations and outputs on soil critical nutrient levels to be used in developing crop specific fertilizer recommendations, also implemented with the support from the EU under ARSP II

In addition, KARI has collaborated with ICRAF on an ad hoc basis on various activities such as: (i) Soil Fertility Initiative, which is a sub-Saharan Africa initiative aiming at promoting improved soil fertility management; (ii) training of several KARI scientists using ICRAF facilities and expertise; and (iii) offering joint courses, in which clients i.e. NGO's extension staff and farmers are trained on various technologies. These joint activities have been very successful and have generated a range of technologies, which have been widely adopted by farmers.

A new project; Western Kenya Integrated Ecosystem Management Project (WKIEMP) has been initiated with support from the World Bank for implementation. The project, which became effective in July 2005, seeks to improve the productivity and sustainability of land use systems in selected watersheds in the Nzoia, Yala and Nyando river basins through adoption of an integrated ecosystem management approach. In order to achieve this the project will: (i) support on-and off-farm conservation strategies; and (ii) improve the capacity of local communities and institutions to identify, formulate and implement integrated ecosystem management

activities (including both on-and off-farm land use planning) capturing local global environmental benefits. The project based in Kisumu would achieve its objectives through a community driven development process whereby communities would decide on resources for infrastructure investments, technical assistance and implementation of ecosystem management activities.

KARI has collaborated with ICRAF in the generation of baseline information used in the Project Appraisal Document (PAD). KARI is therefore requesting ICRAF to further continue this backstopping in the 2005/2006 Work plan with the specific objectives of building capacity of KARI scientists, other local institutions, and communities to manage carbon assets including the establishment of a system to monitor and evaluate the biophysical impact of project activities, particularly the impact on net carbon absorption.

It has also been realized that ICRAF is already undertaking on-farm experiments involving Participatory Action Plans (PAPs) by farmers at several sites within the target river basins. KARI has therefore requested ICRAF to provide additional backstopping of this activity within the framework of WKIEMP.

2. Objectives

The main objectives of this backstopping are to assist KARI to:

a) Establish interventions that mitigate land degradation
b) Evaluate and document the potential of different tree species to sequester carbon on degraded land
c) Evaluate options for river bank protection
d) Establish interventions that sequester carbon on agricultural systems
e) Establish PAP intervention plots at several sites
f) Establish a system for monitoring and evaluating changes in carbon stocks.
g) Build capacity of KARI staff, other local institutions and communities to actively undertake monitoring and evaluation of changes in carbon stocks.

3. Activities and Time schedule

3.1 Activities and inputs

The timeframe for implementation of the activities to meet the above objectives will be as shown in Table 1.
Specifically the backstopping will support the following activities:

I. Develop a manual for the methods of measuring and monitoring carbon stocks
II. Develop a manual for the methods of measuring non CO_2 Green House Gases

III. Train KARI Scientists on methods of measuring carbon stocks including data collection, laboratory procedures, monitoring and statistical analysis
IV. Train KARI Scientists on measurements of non CO_2 Green House Gases including data collection, laboratory procedures, monitoring and statistical analysis
V. Establish and document training needs of various institutions in Western Kenya on carbon trade
VI. Establish village tree nurseries to support Agro forestry
VII. Establish and implement species screening trials
VIII. Increase tree cover on severely degraded sites
IX. Establish and document the status of the environment in the initial 4 blocks including satellite, biophysical and socio-economic baseline data
X. Develop a manual for the project Monitoring and Evaluation (M & E) procedures
XI. Provide hands on training to KARI scientists on M & E procedures

The input needed from ICRAF will be 26 person months of scientist time.

3.2 Time schedule

Table 1: Timeframe

	2005		2006	
	Quarter			
Activity	***3***	***4***	***1***	***2***
I Develop a manual for the methods of measuring and monitoring carbon stocks	X	X	X	X
II Develop a manual for the methods of measuring non CO_2 Green House Gases	X	X	X	X
111 Train KARI Scientists on methods of measuring carbon stocks including data collection, laboratory procedures, monitoring and statistical analysis	X	X	X	X
1V Train KARI Scientists on measurements of non CO_2 Green House Gases including data collection, laboratory procedures, monitoring and statistical analysis			X	X
V Establish and document training needs of various institutions in Western Kenya on carbon trade	X	X	X	
VI Establish village tree nurseries to support Agro forestry	X	X	X	X

VII Establish and implement species screening trials	X	X	X	X
VII Increase tree cover on severely degraded sites	X	X	X	X
IX Establish and document the status of the environment in the initial 4 blocks including satellite, biophysical and socio-economic baseline data	X	X	X	X
X Develop a manual for the project Monitoring and Evaluation (M & E) procedures	X	X	X	X
XI Provide hands on training to KARI scientists on M & E procedures			X	X

The detailed work plan for the activities as agreed upon during planning meetings between KARI staff and ICRAF is attached in Annex 1.

This work plan will become effective with the endorsement of the annual work plan and cost estimate of WKIEMP for 2005/2006 but not before 1 July 2005.

4. Cost Estimate

The cost estimate for the activities outlined above are indicated in Table 2 and cover only activities to be funded under the WKIEMP 2005/2006 Work plan.

Table 2: Cost estimate

Component	Item	Cost US$	
1.2: Enhanced capacity for carbon financing (Interventions to mitigate land degradation, potential of trees to sequester carbon, options for river bank protection, interventions to sequester carbon on agricultural land)	Technical Assistance	-	66,500
	Equipment	24,100	-
2.0: Technical Backstopping (Establishment of PAP intervention plots (trees stocking plots)	Field trials	-	24,000
	Technical assistance	-	37,500
3.0 M&E (Improved capacity for monitoring carbon stocks and a net-net accounting of GHC accumulation)	Technical assistance	-	104,300
	Equipment	107,800	-
Total		**131,900**	**232,300**

174, 225

5. Reporting

ICRAF shall provide the following reports to KARI, which amongst others shall serve KARI as the basis for the preparation of consolidated project reports to the World Bank:

1) All socio-economic and biophysical baseline reports initially on 2 blocks on target river basins (Nyando, Yala, and Nzoia).
2) A manual for the methods of measuring and monitoring carbon stocks
3) A manual for the methods of measuring non CO_2
4) Report on training needs of various institutions in Western Kenya on carbon trade
5) A manual for the project Monitoring and Evaluation (M & E) procedures
6) Detailed sub proposals giving problem statements, rationale, materials and methods and expected outputs for each of the sub-objectives listed in section 2 above.
7) Quarterly reports to give detailed insight on the progress of the sub-projects being executed as proposed in (ii) above. Each quarter report must be received by KARI latest the last day of the quarter to allow timely reporting by KARI to the World Bank
8) Annual reports covering a calendar year of the project (latest one month after the end of the calendar year being reported)
9) A Final report covering the entire project duration (before the formal end date of the project) giving the results, conclusions and recommendations for each of the sub-projects proposed in (ii).
10) Any other materials e.g., bulletins, manuals, posters being outputs of the sub-projects.

NB: All reports and developed packages have to be submitted to KARI as hard copy (three copies) and as electronic file.

6. Publication of results

a) Both KARI and ICRAF shall not publish any information related to the project being contracted without informing the other institution well in advance before the material is submitted for publication with a view of giving an opportunity to the other institution to participate.

b) After publication, each institute shall provide the other institution with at least three copies of such publications and shall subsequently supply as many copies as the other institution may reasonably request.

7. Publicity

In case of communication to the press including press releases, both KARI and ICRAF shall inform the other institution in writing within a reasonable time to

allow participation. In such media releases both parties shall endeavor to portray both institutions as partners in the implementation.

8. **Payments**

Upon signature of this work plan by both parties, payments will be made to ICRAF in accordance with the World Bank accounting procedures. The first payment to ICRAF will be a quarterly allocation as provide in this work plan, with the next allocation being made the next quarter after accounting for the first disbursement. The Payments for subsequent work plans will be made upon submission of satisfactory reports by ICRAF to KARI.

9. Equipment

ICRAF shall provide KARI with specifications for equipment and justification for single sourcing after which KARI shall prepare the bidding documents as per laid down GoK and World Bank procurement regulations. KARI shall purchase the equipment after obtaining the necessary clearances from the World Bank and hand over the equipment to ICRAF. The equipment purchased by under this agreement shall revert to KARI at the end of the project.

Signed on behalf of the Kenya Agricultural Research Institute (KARI)

Director KARI

Date: 13 Feb 2006

Signed on behalf of the World Agroforestry Centre (ICRAF)

Director General ICRAF

Date: 1 Feb 2006

9. Annex 1

Component 1.2: Enhanced capacity for developing carbon finance proposals.

Activity	Indicators	Means of Verification (MoVs)	TIMEFRAME												Respon sible	Partners	Resources required	Rema rks
			2005						2006									
			J	A	S	O	N	D	J	F	M	A	M	J	J				
1.2 Develop capacity for carbon finance administration and market development																		
1.2.1 Train 1 KARI scientists on Carbon Stocks	1 PhD by end of project period	PhD Thesis													Walsh *Shepher d*	Universiti es	Staff time	
1.2.2 Train 1 KARI scientist on non $C0_2$ GHG	1 PhD by end of project period	PhD Thesis													Walsh Verchot	Universiti es	Staff time Student stipend Uni. fees	
1.2.3 Study on Western Kenya Institution s on carbon trade	Institutional status and capacity building needs identified by February 2006	Report													Walsh Verchot Shepher d Awiti	NALEP	Staff time Transport Lab. costs	
1.2.4 Develop procedures for measurem ent and monitoring of carbon stocks	Field measurement and analysis manuals ready by June 2006	Manuals Progress report													Walsh *Shepher d*	Universiti es	Staff time	
1.2.5 Build capacity for carbon and	Two students complete their PhD studies by	PhD thesis													Walsh Verchot	Universiti es	Staff time Student stipend	Subje ct to fundin

non-CO_2 GHG accounting	2010																	Uni. fees	g and acceptance of proposal
1.2.6 Hands-on training on carbon and non-CO_2 GHG data collection, laboratory procedures analysis, monitoring and statistical interpretation.	Training programme started by Dec 2005 No. of KARI and other staff trained	Training progress report														Walsh Verchot Shepherd Awiti	NALEP KEFRI KARI/ICRAF	Staff time Transport Lab. costs	Concurrent with M&E training activities (see Component 3)

Component 2: Scaling up and financing IEM interventions.

Activity	Indicators	MoV	TIMEFRAME												Respo nsible	Partner s	Resourc es required	Rem arks
			2005						2006									
			J	A	S	O	N	D	J	F	M	A	M	J	J					
2.1 Develop village nurseries to support Agroforestry	No. of new nurseries established No. and types of seedlings produced.	Field reports Project Progress reports (quarterly and annually)														Awiti FOs	KEFRI NALEP VI Agrofore stry	Staff time Transport Seedling and nursery materials Casual labour	
2.2 Establish species screening trials	No. of geo-referenced reps. No. tree seedlings planted	Progress reports														Walsh Awiti FOs	KEFRI	Staff time Transport Seedling s & nursery materials	
2.3 Increase tree cover on severely degraded sites	Area protected and/or no. of seedlings planted	Progress reports														Awiti Walsh FOs	NALEP	Staff time Transport Seedling s & nursery materials Casual labor costs	

Component 3: Establishing a monitoring and evaluation system.

Activity	Indicators	MoV	TIMEFRAME													Responsible	Partners	Resources required	Remarks
			2005						2006										
			J	A	S	O	N	D	J	F	M	A	M	J	J				
3.1 Establish the status of environment in the 4 blocks																			
3.1.1 Process satellite data	satellite images for the 4 blocks available by Dec 2005 and analyzed by June 2006	o Image archive o GIS databases Ground sampling plans														Awiti Walsh Awiti	KARI NALEP	o Quick Bird satellite images o Staff time	Actual acquisition subject to cloud cover
3.1.2 Establish a biophysical baseline	Baselines available by: *Katuk-odeyo and Yala by Dec 2005* *Londiani and Nandi by June 2006*	GIS database Report Website														Walsh *Awiti* *Shepherd* *FO's* *PC*	NALEP NEMA	Staff time Transport Laboratory costs o Casual labor costs	- Analysis timeline subject to image acquisition. 1 month per block (concurrent with socio economic surveys)

3.1.3 Develop an integrated pest management plan	A plan developed by Dec 2005 for first two blocks and June 2006 for the other two blocks	IPM plan documents														Consultant costs	PC	Starting Oct – June 2006	
3.1.5 Establish socio-economic baseline survey	Socio-economic baseline available by: *Katuk-odeyo and Yala by Dec 2005* *Londiani and Nandi by June 2006*	Progress report available by Jan 2006 and Technical report by June 2006 GIS database														Walsh *Awiti Shepherd FOs M&E socio-economics*	NALEP	Staff time Casual labour Transport	1 month per block concurrent with biophysical surveys.
3.2 Establish a monitoring system for greenhouse gases (GHG)																			
3.2.1 Install and calibrate Equipment for measuring non CO_2 GHG's	Equipment in place and functioning by April 2006	Kisumu laboratory facilities operational														Verchot 3 months Consultant	KARI	o Staff time o Consultancy costs o Equipment costs Laboratory costs	Single sourcing owing to nature of equipment
3.2.2 Develop manual for project M&E procedures	Manuals ready by June 2006	Quality M&E manuals Websites														Walsh *Verchot Shepherd Awiti*	KARI NALEP	Staff time o	

														PCO			
3.3.3 Hands-on training on M&E procedures	# of persons trained and certified	Training reports Project progress report												Walsh *Verchot* *Shepherd* *Awiti* *PCO* *FOs*	KARI	Staff time Transport Lab. costs	Concurrent with carbon accounting training activities (see Component 1.2)