



Green Water Credits - Kenya

Phase II Concluding Workshops

Nairobi / Nyeri (Sept.- Oct. 2011)

by R. Cleveringa (adapted from Travel Report)

Executive Summary

Water for Food is a major element of the Green Economy. The Green Economy is about environmental services, preferably rewarding rural people for providing or stewarding public goods and services. Natural Resource Management is key to these concepts. The Kenya Upper Tana Natural Resources Management project (UTaNRMp) builds up on MKEPP and findings from Green Water Credits IFAD grants, and operationalizes such concepts in a participatory, CDD way on a large scale. Key in the livelihoods of the rural poor in the Upper Tana are well-proven soil & water conservation and enhanced agricultural production and productivity. Green Water Credits, an innovative transfer and community empowerment schedule for environmental services derived from targeted SWC, was developed by ISRIC¹ and partners under IFAD (PTA) grant support with initial generous supplementary funding from SDC. It turns green water (rainfall) into blue water (stream and aquifer water) and hence links farmers to urban consumers of water and power utilities. ISRIC GWC has now produced convincing hard evidence that the approach - with its set of tools and finance mechanisms- can make **THE** difference in people's lives. As such it is fully recognized by IFAD and the Kenyan project partners and embraced as a key delivery vehicle for the Upper Tana project.

In the context of mainstreaming GWC into Upper Tana several contacts to scale up GWC have been undertaken. **The privately operated utility sector is genuinely interested.** KenGen, the energy producer of 80% of Kenya's grid energy, and Nairobi Water have shown keen interest to apply the approach to major sites inside, and possibly beyond, the Upper Tana catchment.

The **innovation** lies basically in linking environmental services and effects **WITH** poverty reduction and rural development. And bringing in new actors, particularly from the public water and power utilities which depend on blue water from the Upper Tana project area.

Two concluding workshops for Phase II of the GWC project in Kenya were held: a first one targeted at the governmental and public sector agencies (in Nairobi), and a second one to inform and seek feedback from WRUAs (in Nyeri).

A first Green Water Credits closing workshop in Nairobi with key SWC stakeholders around the Upper Tana project was attended in which the major findings of the concluded research were presented by ISRIC, ETC, KARI, WRMA, WSTF, IFAD, and others. Most important, the IFAD Country Programme Manager (CPM) and Team Leader of the UTaNRMp design team reiterated that the Upper Tana project had incorporated the Green Water Credits approach

¹ See www.isric.org and www.greenwatercredits.org

and its tools. Several working groups were chaired and a presentation on doing business as unusual was given.

KenGen derives 70% of its hydropower from the Upper Tana catchment and has shown encouraging interest to enter into contractual arrangements with the Water River Users Associations (WRUAs - an umbrella for involved communities) and the Water Services Trust Fund (WSTF - a multi-donor trust fund financing WRUA defined catchment development plans). SWC action in selected critical erosion-prone areas (approx. 20% of total area) will yield 80% of the benefits. These areas will be targeted by KenGen in cooperation with MKEPP/NRMP and consecutively with the Upper Tana project.

Equally important, in a separate session, KenGen Management was briefed on the GWC business case. KenGen is likely to invest USD2,5Bn over the next 5 years in geothermal energy. However, KenGen is planning to stay engaged in hydropower for another 20-30 years as long as GoK doesn't transfer the water from the current (and future) Masinga cascade of reservoirs in the Upper Tana to Greater Nairobi for domestic and industrial water consumption (see section on Nairobi Water below). KenGen Management manifested serious doubts about its ability to engage domestic and international funding for an additional hydropower reservoir on the folds of Mt.Kenya ('Seven Forks') as its Regulator cannot secure sufficiently competitive and commercial tariffs. The New Constitution and its deep decentralization may pose a problem for KenGen as it may need to engage with a multitude of disperse low-capacity entities instead of only WRMA. Following the briefing, KenGen management expressed its interest to engage as early as possible in tripartite agreements with WSTF and such 3-5 WRUAs in the critical areas affecting its hydropower reservoirs. Its objectives include less sedimentation, lower suspended load and improved base flow.

Nairobi Water Company, which already faces a daily shortcoming of 190,000 m³/day (40% over the current supply of 500,000 m³/day) for the 3,5m inhabitants of Nairobi, is also stepping up targeted SWC measures. Both KenGen and Nairobi Water joined the Upper Tana Water Group (UTWG) (initially) led by the Water Services Trust Fund, a major delivery partner for the new Upper Tana project.

The Kenya CPM participated in the UTWG formed as an outcome of the Nyeri closing workshop ably led by WRMA. Further partners included ETC-East Africa and ISRIC/Future Water. UTWG would meet late September to lay down a 2011/2012 road map for policy work involving the Water Sector Technical Group ('donor group') and the Regulator (which sets tariff structures and allows KenGen and Nairobi Water Company to engage in SWC). Furthermore, UTWG will seek to accelerate delivery of WSTF/WRMA support during 2011/2012 to WRUAs in the NRMP Aberdares and MKEPP Mt. Kenya area thus allowing the new Upper Tana project a 'running start'. This 'apprentice year' will also allow KenGen and Nairobi Water Company to intensify their relationship with WRMA and set the stage for continued collaboration.

At field level, the Nyeri workshop was continued by briefing and interacting with 60 representatives of the 24 WRUAs fostered by WRMA and MKEPP from the Mt.Kenya and Upper Tana area. Their major observations include the need for legal empowerment to

sanction offenders of abusive land and water use (particularly encroachment of the protective land strip adjacent to rivers, partitioning of swamps and sand mining from rivers), the abolishment of planting by government agencies and tea and coffee estates of 'unfriendly trees' (i.e. eucalypt) which pump water and lower groundwater and spring levels, and better protection of fields from elephants and freely grazing cattle.

Farmers were very clear on their needs for services from WSTF and WRMA. They expressed their desire for quicker and more transparent services from either. It would seem that the WRMA-led sub-catchment management plans (SCMP) focus overly strongly on the protection of riverine strips and similar issues of public domain. These riverine protection works have a high C/B ratio and farmers convincingly testified that after the works 'when it rains the rivers weren't red anymore, but clear'.

WRUAs informed they were not quite 'conversant' on SWC issues. However, they phrased their concern as 'the soil belongs to the farm, not the river'. SWC in farmer fields has not yet received much attention from WRMA, MoA or other agencies but MKEPP. Presentations that referred to SWC interventions that showed best C/B returns, such as grass strips, tea mulching, banana micro-catchments, zero-tillage coffee, contour ridging and stone lines, had their full attention and interesting discussions as to how farmers can better adopt ensued (2 out of 3 farmers preferred small credits to grants to fund labour and materials).

CLOSING REMARKS DURING GREEN WATER CREDITS WORKSHOP
BY DR. ROMANO KIOME
PERMANENT SECRETARY, MINISTRY OF AGRICULTURE

International Development Agencies representatives, World Soil Information representatives, Parastatal representatives, Government representatives, KARI representatives, ladies and gentlemen.

I am glad to note that the principal stakeholders in the Green Water Credits program are well represented here. It is my greatest hope that farmers will be given the prominence and will play their rightful role in the management of water resources in the basin. It is also my hope that we shall be able to implement a program that will serve as a pilot for other basins in the country and the region at large.

You have been here for the last two days finalizing a program for Green Water Credits for Upper Tana River catchment. You will agree that this is a new technological concept model aimed at reducing runoff, increasing water infiltration and reducing soil moisture evaporation. This therefore increases water held in the soil which is available to plants for evapotranspiration.

Green water management improves (i) rain water use efficiency, hence yield potential, and (ii) at the same time improves green water resources through reduced run-off, thereby causing less flash floods, erosion and water turbidity, and increased groundwater recharge and more stable river base flow. At approximately two-thirds of all water, green water constitutes a very significant potential for addressing land productivity. It is therefore a crucial element of sustainable farming systems. In most sub-Saharan Africa, about 95% of the food is produced from green water alone, with irrigation accounting for a very small fraction of total flow.

Ladies and Gentlemen;

Green Water Credits also addresses Millennium Development Goals as it contributes in reducing by half the population of those living in poverty by 2015, thus strengthening the country's capacity to achieve the stated goals in Vision 2030 and therefore it needs support by all stakeholders.

Ladies and Gentlemen;

Tana Basin is one of the most important basins in Kenya. Upper Tana, the source of Tana River, covers over 3100 km² in 19 districts fully covered and partially another 4 districts. The area has a population of about 5 million people. It is the most important source of hydroelectric power and source of water for Nairobi City and a number of other municipalities. It is also a principal producer of Pishori rice, tea and coffee besides other food crops and livestock. But the basin is also experiencing accelerated erosion and threatens the life of the hydroelectric system through rapid siltation of the reservoirs.

The choice of Upper Tana watershed is therefore a welcome relief. It offers the most comprehensive review at the problems from upstream, middle stream and their impacts downstream, and how upstream users can work with downstream beneficiaries of water resources. This is the important reason why upstream farmers need to be rewarded for their free-of-charge blue water services that benefit the water users downstream.

Ladies and Gentlemen;

Water scarcity is undermining food security, economic development, human welfare and the ecosystems that support habitat, economy and society. Investment has gone into abstraction and delivery of water from streams and groundwater; on the other hand, replenishment at source is neglected, thus decreasing ground water level.

Green Water Credits is proposed as a mechanism to pay rural people for water management activities in the catchment; activities that keep the soil in place, where it is needed; that increases infiltration of rainwater and thus reduces runoff and sedimentation. The water management activities also promote recharge of groundwater, springs and stream base flow. Ultimately, the people who must pay are the downstream beneficiaries of this water. This payment will enable the people in the upstream to provide a good, professional service that safeguards water supplies for everyone.

With those remarks it is therefore my humble honour and pleasure to declare this workshop officially closed.

Thank you.

Mimutes of the meeting held between the Green Water Credits pre-conclusion workshop participants and the Management at KENGEN at STIMA PLAZA on 7th July 2011.

In Attendance:

Simon Ngure	KenGen
Pius Kollikho	Kengen
Rudolf Cleveringa	IFAD
Maria Notley	WSTF
Peter Droogers	Future Water
Sjef Kauffman	GWC Coordinator
Esther Njuguna	KARI

1. Current conservation efforts at Kengen

Payments made by KenGen for environmental management and conservation services:

- Kenya Energy Environmental Programme – Kengen expected to pay Ksh 100million per year (Institutions and structures for this not yet operational)
- Regional development authority – Ksh 65 m to Tana and Athi Rivers development authority and Ksh 45 m to Kerio Valley Development Authority (Payments effected)
- A Levy of Kenya 5 cents/KWT generated, equal to Ksh 280m a year (This payment has not been done so far due to the regulation of tariffs and an opportunity to integrate the cost to the tariff has not arisen)

2. Priority use of water in Kenyan Policy:

- Water consumption
- Irrigation
- Hydropower generation

3. Important proposal likely to influence power generation in future:

Inter-basin water transfer of water from the Tana Basin to the Athi Basin to cater for rising water demand in Nairobi population and the proposed satellite cities around Nairobi city.

- This will influence the amount of water available for hydro power generation which is a 3rd priority
- This would influence the investments that KenGen might put into the conservation and secure a return to the energy sector
- Mechanisms of benefits sharing should between the basins is important.

Special workgroup meeting at Concluding GWC workshop Nyeri, 21 September 2011

Participants

WRMA-HQ	Philip Olum, CEO
WRMA-Tana Embu (Chair)	Boniface Mwaniki, Regional Manager
WSTF	Rosaita Mbukua (representing CEO Jacqueline Musyoki)
KenGen	Pius Kollikho (representing Director Simon Nguri)
Nairobi Water Company	Mbutu Mwaura
IFAD-Kenya Country Program	Sam Eremie, Country Program manager
IFAD-Rome	Rudolph Cleveringa, Technical Assistance Division
ETC-East Africa	Fred Muchena, consultant
ISRIC-GWC	Godert van Lynden and Sjef Kauffman, GWC coordinating team

Immediate follow-up action

Next meeting to discuss in more detail further steps to be taken, who is going to do what and when.

Date: 29 September 2011

Organizer and host: WSTF

Process: Participatory

Reporting: ETC

Key points

The following summaries key from the special meeting and includes some from the discussions of the Concluding workshop sessions:

- Private and public funds are available to improve catchment protection in the Upper Tana by implementing adequate soil and water conservation practices by rainfed land users.
- Private funds will be mobilized from KENGEN and Nairobi Water Company to start up implementation work in two or three selected hotspot catchments.
- Public funds are offered by international sources IFAD and Spain that will be complemented by national funds, which funds are being made operational through the new Upper Tana Natural Resources Management project (UTaNRMP) targeting at all sub-catchments in the Upper Tana that requires catchment protection.
- Implementers are the farmer and livestock keeper communities in the Upper Tana sub-catchments.
- The Water Resources Users Associations (WRUAs) are being the overall coordinating entities that has developed Water Sub-catchment Management Plans that include a catchment protection component.
- The Water Resources Management Authority (WRMA) is being the overarching coordinating, supporting and monitoring entity for the WRUAs.
- The Water Services Trust Fund (WSTF) is being the main channel to distribute Grants to the registered communities in the target sub-catchments.
- Precondition to operationalize both private and public funds in the institutional framework of WSTF and WRMA is that both demonstrate accountability and transparency of the current operations and being able to support the communities and WRUAs in implementing effectively the subcatchment protection plans, which will involve also to coordinate effectively other public and private agriculture agencies that are ready to support farmer communities.
- IFAD conditionalities are (i) Funds channelled to WSTF should not go into a basket fund, (ii) a MoU to be cleared by WSTF and IFAD lawyers, (iii) GoK will be the major actor.

- Bilateral and plenary meetings between the private and public parties are required to work out operational steps for immediate implementation actions in two selected catchments and to the full design of the UTaNRM project.

Minutes of the meeting

Chair

Opened the meeting and asked ISRIC-GWC to introduce the goal of the meeting.

ISRIC-GWC

Main goal of this special meeting is to discuss with key parties (i) the immediate follow-up actions for the new UTaNRM project and (ii) to verify scope for immediate start in a few hotspot sub-catchments, which were identified by WRMA and MKEPP and for which inventories were carried out by ETC over the past 6 months.

IFAD-Rome

The current UTaNRMP design refers to start with the 'mature' WRUAs. The following issues to be addressed:

- WSTF need to engage with WRMA about which WRUAs to start with and other operational aspects. Required is dovetailing of MKEPP with WSTF, and WRMA regional offices (Embu, Meru, lower elevation areas) to intensify contacts with MKEPP and WSTF.
- KENGEN is willing to partner with WRMA & WSTF for the goal of Soil and Water Conservation under the condition that we have a clear concept of key players and what to do.
- KENGEN and WSTF to meet and discuss the cooperation of WRMA and KENGEN of the upscaling of Soil and Water Conservation.
- WRUAs level of accountability need to be verified; WRMA to work on this

Immediate actions:

1. We need a meeting of the key players relevant for UTaNRMP to define the agenda and put cards on the table
2. We need common agreement by key parties to implement the UTaNRM project, e.g. WSTF as the preferred channel for Soil and Water Conservation activities

WSTF

About accountability: we have focused audits for each donor, and we have a Steering Committee

IFAD-Country Program

MKEP project has worked with WRMA, and MKEPP has worked with WRUAs. We look forward in the new project, the UTaNRM project, for a management that needs to look into public investments. There are two financial windows: (i) WSTF for the public good domain, e.g. in Forest and Water resources, (ii) private goods (Forest, Water and Lands) through the project. Some observations on IFAD conditionalities:

- Whatever funds are channelled to WSTF, it should not go into a basket fund
- We need an MoU to be cleared by WSTF and IFAD lawyers
- GoK will be the major actor

We see a great window of opportunity and the time schedule looks as follows:

April 2012 - IFAD Board approval

June 2012 – Agreement signed; from now we start with disbursements

Precondition to start with implementation is that we have the MoUs ready and signed, and the Annual Audit Reports.

IFAD-Rome

This means, we have nearly a year to demonstrate by WSTF and WRMA the acceptance of both to include the new GWC component. Furthermore, should KENGEN be willing to provide funds to start work in, say two or three, critical subcatchments. Director Simon Nguri mentioned in a meeting on 7 September that all lights are blinking to give support, however WSTF and WRMA to give political clout, i.e. that it is capable to handle the stewardship for improved Natural Resources Management. ETC has collated a lot of knowledge that can be used and further exploited to map out the work to be done in these critical subcatchments.

A complication could be the GoK decision to give priority to drinking water for the growing metropolitan Nairobi, for which further interbasin water transfer from the Tana basin to Nairobi is needed. The dimensions and the consequences are not yet very clear.

UTaNRMP has a time line of 8 years, which is enough to demonstrate the benefits of improved land and water management.

Nairobi Water Company

We are interested to become an active participant. Currently we pay to WRMA the statutory Water Fee, which we like to see used for Soil and Water Conservation in our catchments. The CEO has indicated that we can go further than the statutory requirements.

WSTF

Now with all key parties around the table, including the private investors KENGEN and NWC, we propose a follow-up meeting to discuss operational steps, e.g. WRMA to guarantee the Soil and Water Conservation to be made operational by the WRUAs.

IFAD-Country Program: Who to organize this meeting, proposed is WSTF and the following meeting should go for an output document.

Nairobi Water Company: it should be a participatory process

Proposed date: 29th September 10.00 a.m.

ETC: reporting and also distributing the draft minutes of today's meeting

List of Participants**Green Water Credits Workshop, Nairobi (6-7th September, 2011)**

No	Participant Name	Organization	Contact Details		
			Telephone	Email	Address
1.	ERIC RWABIDADI	IFAD	0717732079	R.rwabidadi@ifad.org	UN-GIGIRI
2.	ZAKAYO M. NJARA	WRMA-EMBU	0722465759	njarazak@yahoo.com	
3.	PETER MACHARIA	KARI-KSS	0722539273	kss@iconnect.co.ke	14733-00800 NAIROBI
4.	PATRICK GICHERU	KARI, KABETE	0722465642	cdnarl@iconnect.co.ke	14733-00800 NAIROBI
5.	FRANCIS SHIVONJE	IFDC	0721217450	fshivonje@ifdc.org	30772-00100 NAIROBI
6.	JOHN P. OWINO	IUCN ESARO	0733798259	John.Owino@iucn.org	68200-00200 NAIROBI
7.	JUSTIN P. MURIUKI	MOA	0724991782	muriukis@hotmail.com	41607-00100 NAIROBI
8.	MARIA NOTLEY	WSTF	0701017431	maria.notley@wstf.go.ke	
9.	DAVID YOUNG	IFAD	0704623952	dfyoung@tpg.com	IFAD-Rome
10.	RUDOLF CLEVERINGA	IFAD	+393355946117	r.cleveringa@ifad.org	
11.	GODERT VAN LYNDEN	ISRIC	+31640687139	godert.vanlynden@wur.nl	
12.	JOHAN BOUMA	WAGENINGEN UNIVERSITY		johan.bouma@planet.nl	
13.	FREDRICK MUCHENA	ETC-EA	0722764256	f.muchena@etc-eastafrika.org	
14.	PETER DROOGERS	FUTURE WATER		p.droogers@futurewater.nl	
15.	DAVIES ONDURU	ETC – EA	0733760655	d.onduru@etc-eastafrika.org	
16.	BONIFACE M. KIKUVI	MKEPP	0723305269	bmikuvi@yahoo.com	996, EMBU
17.	GREG OVERTON	TNC	0779157984	goverton@tnc.org	6 MANDERA RD