SMART

Regional Technical Training Workshop – East Africa

4th – 8th May 2013

Impala Hotel, Arusha, Tanzania

Training Report

Prepared by WCS on behalf of African Biodiversity Collaborative Group (ABCG)

WILDLIFE CONSERVATION SOCIETY

AFRICAN WILDLIFE FOUNDATION

NC ZOO

Report prepared by

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AWF

Acknowledgements

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Introduction

A regional SMART technical training was conducted at the Impala Hotel in Arusha, Tanzania between the 4th and 8th May, 2013. The training was aimed at SMART Administrators and Trainers operating across East and Southern Africa. This was the first regional SMART training in East Africa. The training focused on SMART 1.0.5 and had six primary objectives:

- Introduce functionality of SMART 1.0.5
- Train national SMART focal points in how to use SMART
- Help focal points communicate effectively about SMART to implementing partners in home country/program
- Begin to build up a regional SMART community in East/Southern Africa
- Set up a SMART database for each of the participating pilot sites
- Introduce future features including mobile data collection, intelligence and planning modules

Trainers and Participants

A total of 29 participants representing nine countries (Uganda, Tanzania, Kenya, Mozambique, Madagascar, Rwanda, South Sudan, Nigeria and Democratic Republic of Congo) attended the training over 5 days (see **Annexe I**). These participants consisted of both Government and NGO technical advisors, trainers and GIS specialists operating in and directly supporting LEM in protected areas. Of these 29 participants, 5 were from AWF, 1 from Frankfurt Zoological Society, 2 from the Honeyguide Foundation, Tanzania, 11 from WCS, 1 from the School of Field Studies, Tanzania, 3 from the Kenya Wildlife Service (KWS), 1 from Madagascar National Parks (MNP), 2 from TANAPA (Tanzania), 2 from TAWIRI (Tanzania) and 1 from Uganda Wildlife Authority (UWA). Four regional trainers conducted the training (Emma Stokes, Ruth Starkey and Deo Kujirakwinja from WCS and Richard Bergl from North Carolina Zoo) all of whom had participated at the first SMART Training of Trainers workshop in South Africa in September 2012.

Workshop Format

The workshop followed a similar format used in the first Training of Trainers workshop in South Africa in September 2012 and modified from the regional SMART Training workshop held in Gabon in March 2013.

Based on feedback from the first regional Africa ABCG SMART training in Gabon in March, 2013 we divided the workshop up into two sessions (see agenda in **Annexe II**). In the first session participants were introduced to each of the SMART modules. An updated Training of Trainers manual was provided for SMART 1.0.5 accounting for new software features (planning and intelligence modules) since the public release of SMART 1.0 in February 2013. Local examples and an East African demonstration dataset were used in order to localize the training. Training on each module consisted of an overview in plenary and then a classroom exercise that enabled each participant to work individually through the step-by-step guidelines in the manual using the supporting files, with

trainers circulating the room to provide assistance. Training was interactive in that participants were able to raise questions as they worked through the exercise. Each module concluded with a de-briefing in plenary and a summary of questions/problems encountered. Modules covered were 1. Conservation Areas; 2. Map navigation; 3. Patrols and data entry; 4. Queries and Analysis; 5. Reports; 6. Planning and Intelligence; 7. Data model management and 8. Database administration. All training modules and support files can be accessed from our SMART website under Resources [link].

In the second session, we outlined practical steps to implementing and using SMART at the site – including how to set up an adaptive management approach to get the most out of SMART for improving law enforcement. During this session participants were able to apply the knowledge gained during the first half of the workshop to their own site and set up their own conservation area. To enable this we had requested specific data from each of the participants ahead of time (including GIS files, GPS data and lists of rangers) to use for this purpose.

During the training Richard Bergl also introduced participants to mobile data collection using hand-held devices. This new functionality will be added to SMART as part of its 2.0 release in December 2013. Participants were able to further explore these devices during a half-day field trip to Arusha National Park.

All software bugs reported during the workshop were directly added to Assembla (https://www.assembla.com/spaces/smart-cs/wiki). Furthermore, a comprehensive list of feedback, clarifications and requests for new features raised by participants was submitted to Refractions and the SMART Partnership. These have been added to Assembla and assigned to the relevant SMART release (1.1 or 2.0).

Results of workshop questionnaire

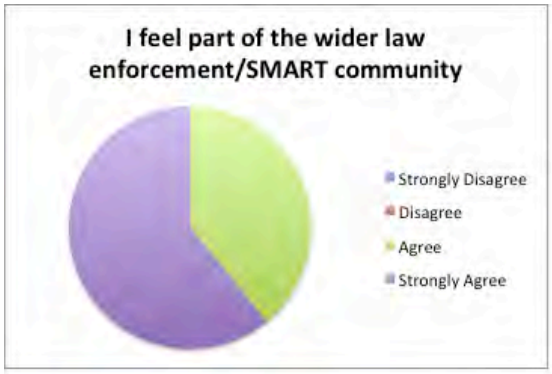
A questionnaire was circulated to all participants at the end of the training (see **Annexe III**). A total of 23 completed questionnaires were received. The results of the questionnaire are summarized in the following pages. Overall, both the training and SMART were well received: 100% of respondents agreed that they would be able to use the knowledge and skills they had gained during the workshop. 94% of respondents with prior knowledge or experience of other LEM systems considered SMART an improvement over existing tools.

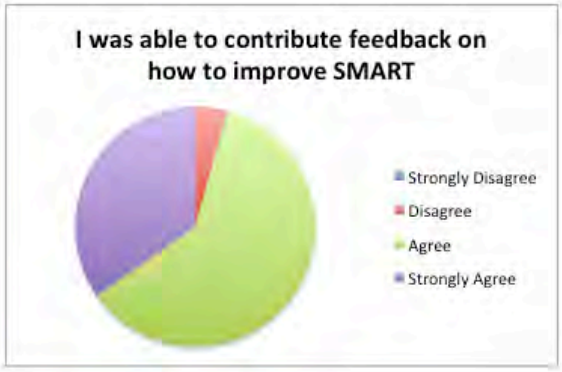
Recommendations for SMART implementation in East Africa

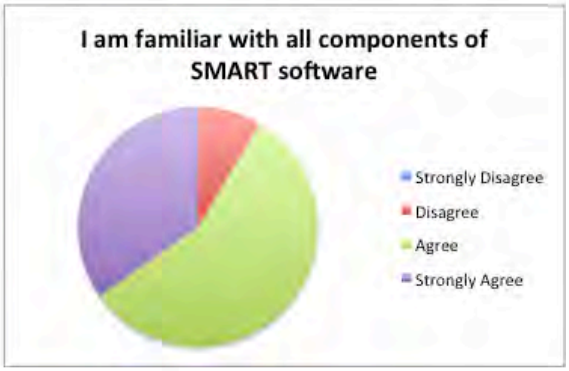
- A process of ongoing follow-up and site-level technical support was emphasized throughout the workshop as being necessary for effective site implementation. It was agreed that a) the SMART Partners should coordinate closely on providing site-level / national-level technical follow-up missions to provide additional training and mentoring to sites – particularly in setting up the database; and b) FAQ/Community forum should be established on the SMART website to enable participants to share problems, experiences and lessons learned. This will be discussed through the SMART Steering Committee. This was something also raised at the Gabon workshop in March 2013 and something we will be putting in place through our new communications and website strategy.
- More generally, the two regional workshops in Africa hosted under ABCG succeeded in introducing SMART to a broad audience of end-users and in disseminating the value of standardized LEM tools in improving law enforcement and adaptive management. These workshops have also trained a cadre of national-level technical focal points in a number of different countries. The second phase of SMART roll-out across Africa protected areas must now maximize these workshops through a clear strategy for national/site level technical support, quality control and evaluation. Such a strategy must provide for a) ongoing technical support and coordination at the national level, b) management –level training in order to get the most out of the results for improving law enforcement; c) ensuring sustainability and regional-level adoption of the process through mainstreaming SMART and LEM into national and institutional-level processes and d) disseminating best practices from as wide a field of implementation as possible. The process for putting such a strategy in place will be included in the next SMART Partner Steering Committee meeting in early 2014 and its implementation will form part of our Year 2 ABCG workplan.
- A number of aspects relating to improvements in SMART functionality were highlighted by participants. Of these, cross conservation area analysis, Cybertracker support and French

translation will all be incorporated for Version 2.0. Upload of various legacy data types (in *.csv) format is something we are actively looking into as part of a broader commitment on conversion of MIST databases to SMART. Finally, the ability to integrate other types of database (e.g. MySQL) is being discussed as part of a future upgrade to the SMART platform.

Course Objectives

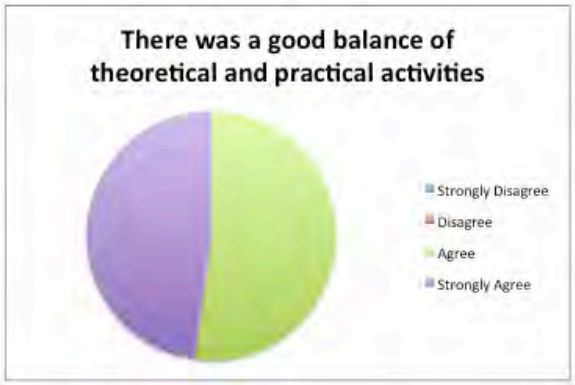


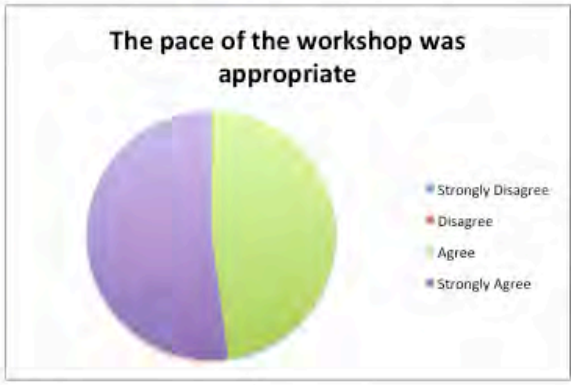




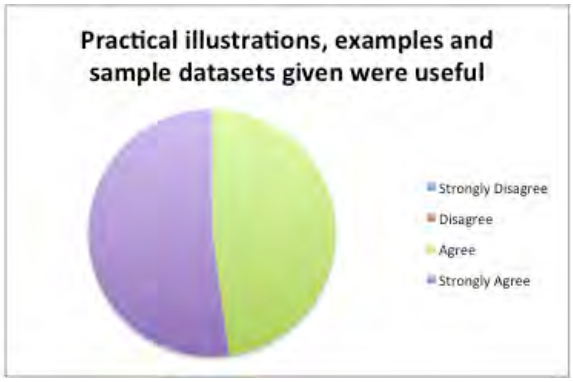
A. The SMART Approach

B. Training approach and content



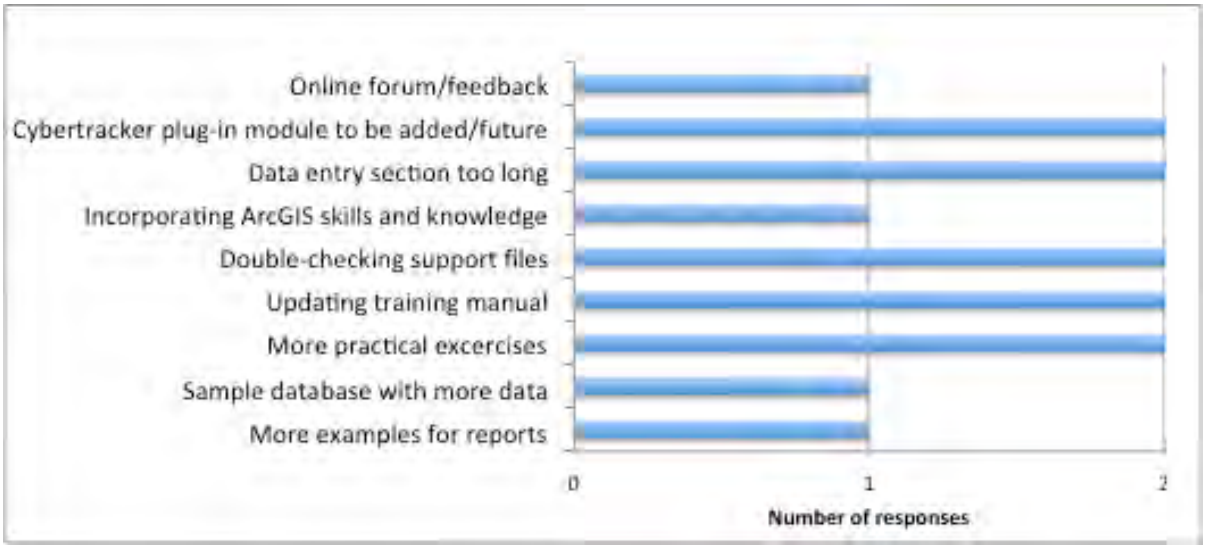


C. Training materials

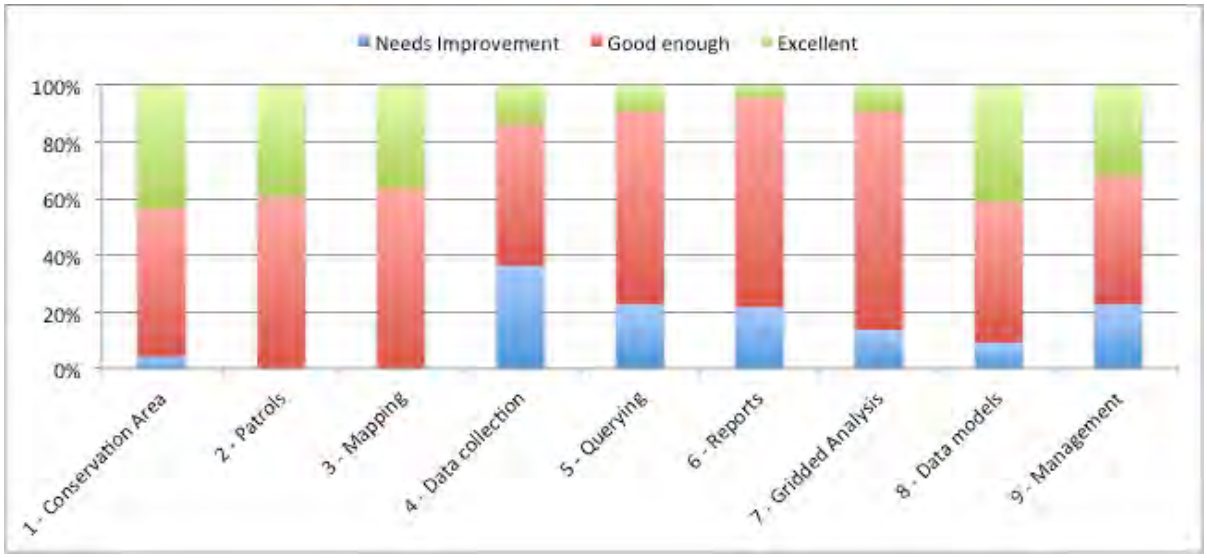


D. Overall

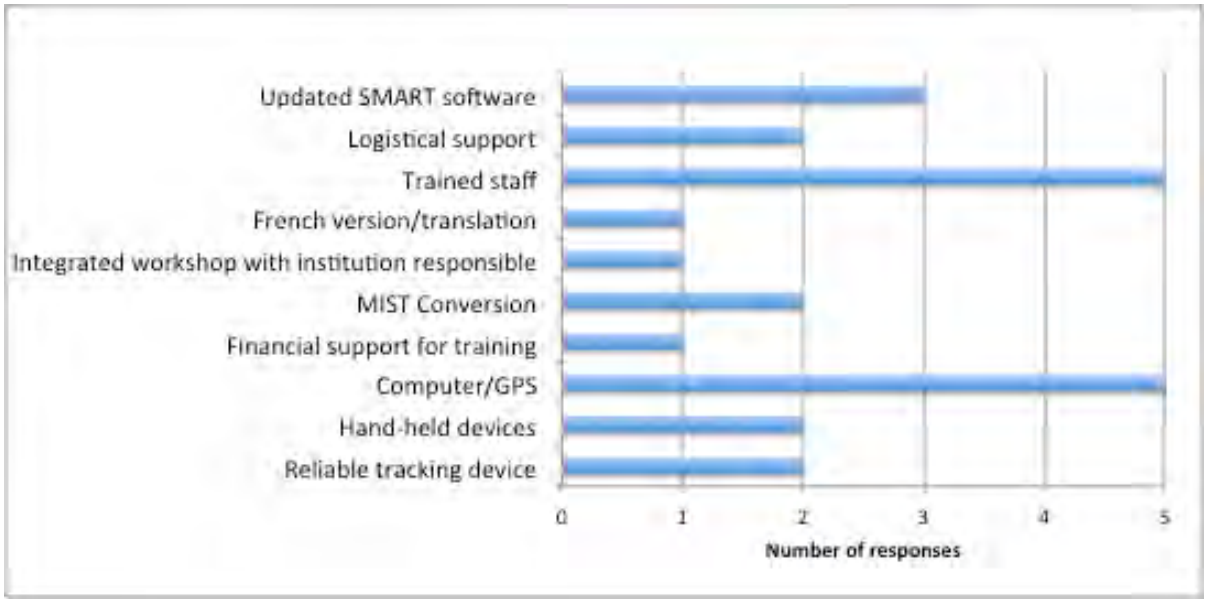
2. What improvements could be made to the training?



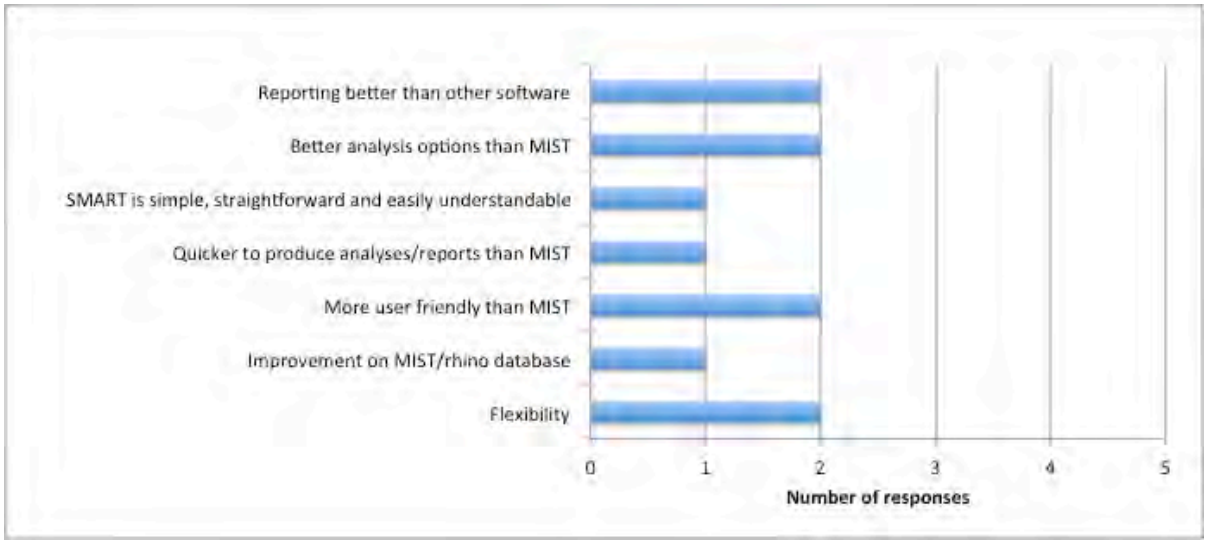
3. How does you rate the following components in SMART?



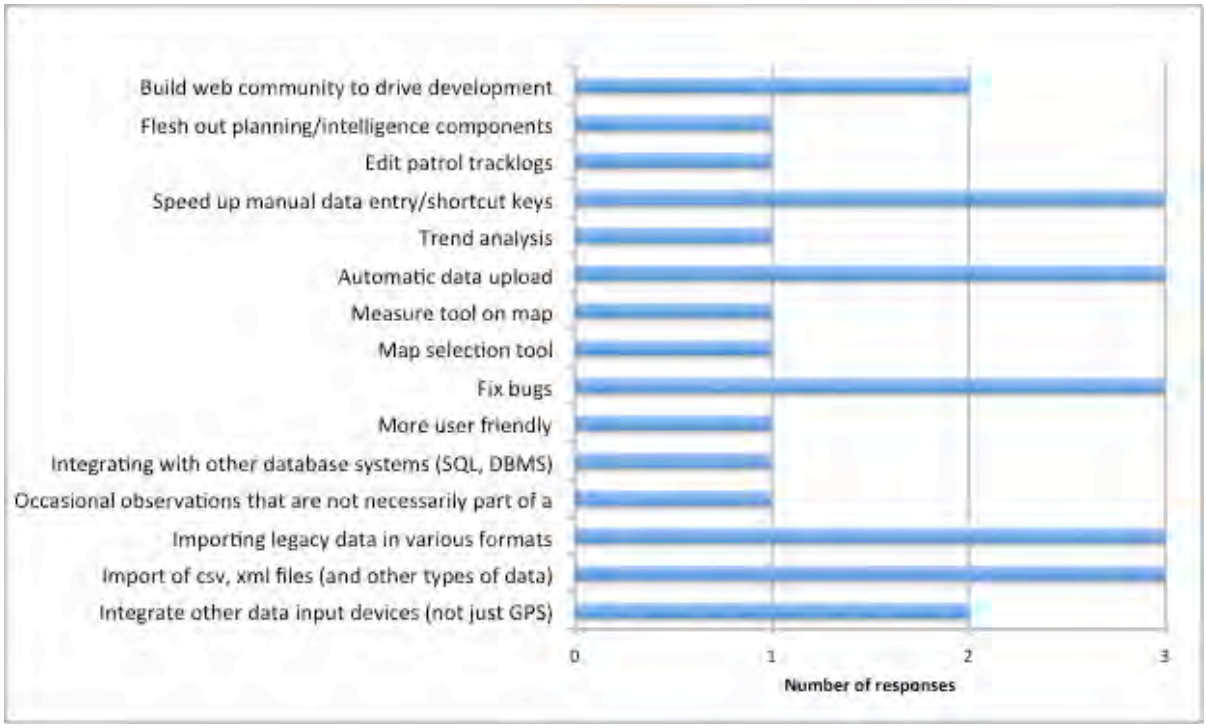
4. What resources do you need to implement SMART at your site?



5. How does SMART compare to other LEM tools?



6. How could SMART be improved?



Annexe I: List of participants

Name	Agency	Site	Country
David Williams	AWF	Washington DC	USA
Gerson S. Mollel	AWF	AWF Community	Kenya
Irene Muthuka	AWF	Nairobi GIS Support	Kenya
Nathan Gichohi	AWF	Namanga	Kenya
Andrew Fowler	AWF	Maringa Lopori Wamba Landscape	DRC
Henry Brink	FZS	Selous Game Reserve	Tanzania
Howard Frederick	Honeyguide Fndn	Enduimet WMA	Tanzania
Lasima Nzao	Honeyguide Fndn	Enduimet WMA	Tanzania
Stephen Ndambuki	KWS	Kenya	Kenya
Lekishon Kenana	KWS	Kenya	Kenya
Richard Chepkwony	KWS	Senior Warden/Amboseli	Kenya
RAHARINJANAHARY Dimby	MNP	National	Madagascar
Rich Bergl	North Carolina Zoo	Trainer	USA
Dr. Bernard Kissui	SFS	School for Field Studies	Tanzania
Gladys Ng'umbi	TANAPA	Arusha National park	Tanzania
Wilson F. Maanga	TANAPA	Kilimanjaro National Park	Tanzania
Machoke Mwita	TAWIRI	National	Tanzania
Hamza Kija	TAWIRI	National	Tanzania
Andrew Plumptre	WCS	Regional (Albertine Rift)	Uganda
Rogasian Mtana	WCS	Ruaha-Katavi	Tanzania
Sophy Machaga	WCS	Southern Highlands	Tanzania
Paul Peter Awol	WCS	Bandingilo National Park	South Sudan
Michael Lopidia	WCS	Boma National Park	South Sudan
Charles Tiba	WCS	National/GIS support	South Sudan
Felix Mulindahabi	WCS	Nyungwe National Park	Rwanda
Francis Okeke	WCS	Yankari Game Reserve	Nigeria
Nachamada Geoffrey	WCS	Yankari Game Reserve	Nigeria
Thomas Prin	WCS	Niassa Reserve	Mozambique
Aristide Andrianarimisa	WCS	Masoala National Park	Madagascar
Emma Stokes	WCS	Trainer	Regional
Ruth Starkey	WCS	Trainer	Gabon
Deo Kujirakwinja	WCS	Trainer	DRC
Margaret Driciru	UWA	Queen Elizabeth National Park	Uganda

Annexe II: Workshop Agenda

Regional SMART Technical Training Workshop

4 – 8 May 2013

Impala Hotel, Arusha, Tanzania

Workshop agenda

Prepared by WCS on behalf of African Biodiversity Collaborative Group (ABCG),

Friday, 3 May	**PARTICIPANTS ARRIVE**	**Arusha**

Saturday, 4 May	**Welcome and introduction to SMART**	**Arusha**
7 :00	***Breakfast***	
8 :30 – 10 :00	Welcome notes, introductions, overview of workshop objectives Introduction and demonstration of SMART as an LEM tool	
10 :00-10 :30	***Coffee Break***	
10 :30-12 :00	Installation of SMART on computers and introduction to training manual Module 1: Setting up a conservation area Module 2: Map navigation	
12:00 – 13 :00	***Lunch***	
13 :00 – 15 :00	Module 3: Patrols and data entry	
15:00 – 15:30	***Coffee Break***	
15 :30 – 16 :45	Data collection protocols	
18 :00	***Dinner***	

Sunday, 5 May	**Patrol data: collection, entry, analysis and reporting**	**Arusha**
7:00	***Breakfast***	
8:30 – 10:00	*Field exercise: GPS Data collection and management for multi-leg patrols*	
10:00 – 10:30	***Coffee Break***	
10:30 – 12:00	**Module 4:** Patrol data analysis : queries and summaries	
12:00 – 13:00	***Lunch***	
13:00 – 15:00	**Module 4:** Patrol data analysis cont.	
15 :00 – 15 :30	***Coffee Break***	
15 :30 – 16 :45	**Module 5:** Creating patrol reports	
18:00	***Dinner***	

Monday, 6 May	**Data management**	**Arusha**
7:00	***Breakfast***	
8:30 – 10:00	**Module 6:** Planning and intelligence **Module 7:** Data model management	
10 :00 – 10 :30	***Coffee Break***	
10:30 – 12:00	**Module 8:** Database administration	
12:00 – 13 :00	***Lunch***	
13 :00 – 18:00	*Field trip (TBC)*	
19 :00	***Dinner***	

Tuesday 7 May	**Setting up SMART in your own site**	**Arusha**
7:00	***Breakfast***	
8:30 – 10:00	Defining data needs and customizing data models	
10:00 – 10:30	***Coffee Break***	
10:30 – 12:00	Defining patrol parameters and site boundaries	
12:00 – 13 :00	***Lunch***	
13 :00 – 15 :00	Defining and customizing data analysis and reporting requirements	
15:00 – 15:30	***Coffee Break***	
15:30 – 16:45	Data analysis and reporting requirements cont.	
18:00	***Dinner***	

Wednesday 8 May	***Getting the most out of SMART for patrol management***	***Arusha***
7 :00	***Breakfast***	
8:15 – 10:00	Using LEM to improve management: lessons learned from *Gabon, DR Congo, Uganda, Nigeria*	
10:00 – 10:30	***Coffee Break***	
10:30 – 12:00	'5 questions you need to ask before starting SMART implementation'	
	Take home points for ensuring success and sustainability of LEM at your site	
12:00 – 13 :00	***Lunch***	
13 :00 – 15 :00	Evaluations and Next Steps	
16 :00	***Closing ceremony***	
18 :00	***SMART banquet!***	

Thursday, 9 May	**PARTICIPANTS DEPART**

Annexe III: Workshop Evaluation Questionnaire

AFRICA REGIONAL TRAINING COURSE

Arusha, Tanzania: 4 – 8 May, 2013

POST-WORKSHOP EVALUATION

Please circle only ONE number on each line.

	SD = Strongly Disagree D = Disagree A = Agree SA = Strongly Agree=				
A	**Course Objectives**	**SD**	**D**	**A**	**SA**
1.	The objectives of the training course (listed below) were achieved.				
a.	I feel part of the wider law enforcement monitoring community / SMART network.	SD	D	A	SA
b.	I was able to contribute feedback on how to improve SMART.	SD	D	A	SA
c.	I am familiar with all components of the SMART software.	SD	D	A	SA
d.	I am able to train other users to perform tasks. (e.g. train data entry users, high level users)	SD	D	A	SA
e.	I referred to the Technical Training Manual as a resource.	SD	D	A	SA
B	**SMART Approach**				
2.	The SMART approach to law enforcement monitoring is relevant and useful to my conservation site.	SD	D	A	SA
3.	SMART is an improvement over other law enforcement monitoring tools (you may leave this blank if you are not familiar with any other LEM tools).	SD	D	A	SA
C	**Training Approach and Content**				
4.	The training presented and communicated ideas, concepts, and information clearly.	SD	D	A	SA
5.	Questions raised during the workshop were adequately answered.	SD	D	A	SA
6.	The training approach encouraged questions and participation.	SD	D	A	SA
7.	There was a good balance of theoretical and practical activities.	SD	D	A	SA
8.	There was good interaction between the training team and participants.	SD	D	A	SA
9.	The pace of the workshop was appropriate.	SD	D	A	SA
10.	The duration of the workshop was appropriate.	SD	D	A	SA

D	**Training Materials**				
11.	The Technical Training Manual was relevant and useful.	SD	D	A	SA
12.	Practical illustrations, examples, and sample datasets given were useful.	SD	D	A	SA
E	**Overall**				
13.	I can apply the knowledge and skills learnt in the course to my work.	SD	D	A	SA

14. How could we improve the training?

……

15. What is your role in using SMART software:

a. data entry b. analyst c. manager d. administrative user e. trainer

f. other, please specify: ……

16. How do you rate the following components of SMART software:

	Needs Improvements	**Good Enough**	**Excellent**
Module 1 – Configuring a Conservation Area			
Module 2 – Patrols			
Module 3 – Map Navigation			
Module 4 – Data Collection			
Module 5 – Queries and Summaries			
Module 6 – Reports			
Module 7 – Gridded Analysis			
Module 8 – Data Model Management			
Module 9 – Administrative Tasks			

17. What resources do you need to implement SMART at your site?

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18. How does SMART compare with other law enforcement monitoring tools?

……

19. How could SMART be improved?

……

20. Additional comments:

……

Optional:

Name: …… Email address:
……

Department/Agency: ……..

Thank you very much!