CONVENTION ON INTERNATIONAL TRADE IN
ENDANGERED SPECIES OF WILD FAUNA AND FLORA
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Monitoring the Illegal Killing of Elephants (MIKE)
Twelfth meeting of the Technical Advisory Group
Nairobi, 7-8 April 2014

MINUTES OF THE TWELFTH MEETING OF THE TECHNICAL ADVISORY GROUP

In attendance:

-   Martin Tchamba, TAG member, Central Africa
-   Iain Douglas-Hamilton, TAG member, Eastern Africa
-   Colin Craig, TAG member, Southern Africa
-   Moses Kofi Sam, TAG member, West Africa
-   Li Zhang, TAG member, Southeast Asia
-   Liz Bennett, TAG member
-   Kenneth Burnham, TAG member
-   Simon Hedges, TAG member
-   Hugo Jachmann, TAG member
-   Esmond Bradley Martin, TAG member
-   Bob Burn, University of Reading, ETIS TAG *ex-officio* member
-   Fiona Underwood, University of Reading
-   Tom Milliken, ETIS Director
-   Julian Blanc, Coordinator, MIKE Central Coordination Unit (Chair)
-   Louisa Sangalakula, ETIS Programme Officer
-   Sebastien Luhunu, MIKE Subregional Support Officer, West and Central Africa
-   Martha Bechem, MIKE Deputy Subregional Support Officer, West and Central Africa
-   Tapera Chimuti, MIKE Subregional Support Officer, Eastern and Southern Africa
-   Claire Mogambi, MIKE Central Coordination Unit
-   Diane Skinner, IUCN/SSC African Elephant Specialist Group

Absent with apologies:

-   Holly Dublin, TAG member
-   Raman Sukumar, TAG member, South Asia

Opening of the meeting

The Coordinator opened the 12th meeting of the MIKE Technical Advisory Group (TAG12) by welcoming all participants and noting that the MIKE and ETIS TAGs were being held with separate agenda, but all TAG members were attending both parts of the meeting. He noted apologies had been received from Holly Dublin and Raman Sukumar. He also noted that David Drinkard from the US Embassy and Rob Malpas from CDC would join the meeting for half a day.

1   Adoption of the agenda ....**TAG12 Doc. 1**

The Coordinator invited the TAG to comment on the agenda. There were no comments and the agenda was adopted.

2   Adoption of the working programme ....**TAG12 Doc. 2**

The Coordinator invited the TAG to comment on the working programme. There were no comments and the working programme was adopted.

3   Minutes of the previous meeting ....**TAG12 Doc. 3**

The Coordinator invited the TAG to comment on the minutes of TAG12. There were no comments and the minutes were approved.

4   Progress on the action points agreed to at MIKE TAG12 ....**TAG12 Doc. 4**

The Coordinator introduced and reviewed the action points outlined in document TAG12 Doc.4:

- 14 action points had been <u>completed</u>: 2 of 5 action points under item 4; 2 out of 3 action points under item 5; and all action points under items 7, 8 and 13.

- 6 action points were <u>not done</u>: 3 of 5 action points under item 4; 1 out of 3 action points under item 5; and all action points under items 10 and 16.

The TAG then discussed a number of items and action points in greater detail.

- *Item 4: Progress on the action points agreed to at TAG 10*

    The Coordinator noted that discussion of natural elephant mortality rates would be discussed during TAG12, under agenda items 8 and 9. He also noted that the refined and expanded criteria for MIKE sites would be discussed under agenda item 6.

    Regarding the rainfall method action item, the Coordinator noted that the document on the Boumba Bek rainfall method data and analyses had been circulated to the working group on 28 March 2014. However, he also noted that, with the focus on PIKE, MIKE would no longer be carrying out population surveys, so this was of limited relevance, although could still contribute to the MIKE survey standards. Iain Douglas-Hamilton and Colin Craig noted that population surveys were still critical for interpreting and ground-truthing PIKE information. Colin Craig noted that surveys were not only about abundance information, but also carcasses. He noted that surveys could detect poaching outbreaks quite rapidly. The Coordinator noted that the costs of funding surveys across the MIKE sites were prohibitive. Simon Hedges reminded the TAG about some of the queries on PIKE validation, which would be discussed later in TAG12 under agenda item 9.

    Ken Burnham reminded the TAG that the discussion around site validation had shifted from evaluating whether the sample of MIKE sites was representative of the elephant population to determining whether or not the data coming out of each site was representative of that site. He noted that the sample should ideally be as large as possible. The Coordinator noted that this information would be incorporated into the MIKE analytical framework.

- *Item 5: Revision of MIKE ETIS sections of Resolution Conf. 10.10 (Rev. CoP15) (TAG11 Doc. 5)*

The Coordinator noted that the first two action items had been completed, and that the CITES CoP had adopted a revision of Resolution Conf. 10.10 (Rev. CoP16), which would be discussed under agenda item 5.

The final action item regarding the data access and release policy for ETIS had not been completed, and would be discussed during the ETIS TAG.

- *Item 7: Membership and terms of reference of the TAG (TAG11 Doc. 7)*

The Coordinator noted that this action item had been completed and would be discussed at TAG12 under item 7.

- *Item 8: MIKE analysis for the 62nd meeting of the Standing Committee (TAG11 Doc. 8)*

The Coordinator noted that this item had been completed. The ETIS Director noted that the document for the 62nd meeting of the Standing Committee (SC62), done in collaboration with ETIS and the IUCN elephant Specialist Groups, was the basis for the CITES action plan process. Liz Bennett noted that the document had had great impact, even beyond CITES.

- *Item 10: Validation of PIKE-based inference (TAG11 Doc. 10)*

This action item was not completed, but would be discussed at TAG12 under agenda item 9.

- *Item 13: Revision of the MIKE elephant aerial survey standards (TAG11 Doc. 13)*

All action items were completed. Iain Douglas-Hamilton noted that he was not happy about the way that Total Counts were being implemented, but that this was not the fault of the standards. He also said that standards and guidelines were evolving, and that it was important to maintain consistent methodologies to ensure trend analysis was possible. The Coordinator informed the TAG about the Pan African Elephant Aerial Survey being undertaken by Elephants Without Borders, which had held a planning meeting in Kasane in Botswana, at which a number of TAG members were present. Colin Craig reminded the TAG that where new methods are being introduced, there should be overlap with the old survey method.

Regarding allocation of survey effort, Ken Burnham had sent an email to Colin Craig, although it was not clear if the calculations in the standards had been checked.

ACTION: Colin Craig to find Ken Burnham's email re: allocation of survey effort in survey standards and check that the survey standards are correct.

- *Item 16: Operation of MIKE in African and Asian subregions*

Bob Burn noted that it would be interesting to look at the rainfall and dung decay data from Boumba Bek as it was a very rare occasion where two methods were utilized concurrently. Simon Hedges agreed. Colin Craig asked whether or not the TAG was prepared to change the dung count standards based on the results of the Boumba Bek exercise.

ACTION: The Coordinator to circulate the data to Simon Hedges and Bob Burn, who will analyse and report back to CCU in 3 months with results and recommendation on whether more research was needed or whether the standards would need to be revised.

5   CoP16 outcomes relating to elephants..TAG12 Doc. 5

The Coordinator introduced TAG12 Doc. 5 and invited the ETIS Director to walk the TAG through the CoP16 outcomes, as they related to elephants.

Resolution Conf. 10.10 (Rev. CoP16)

Resolution Conf. 10.10 (Rev. CoP16) incorporated the history of ivory trade controls within CITES, and mandated MIKE and ETIS. It also established the criteria against which legal domestic trade of ivory must comply, regulated the allowed sport hunting of elephants and provided the general framework for addressing trade in elephant specimens under the Convention. The revisions agreed at CoP16 kept the robust integrity of MIKE and ETIS, and also called for compulsory annual reporting of all ivory stockpiles and mandatory forensic examination for large ivory seizures. For the first time, demand reduction was identified as a necessary course of action in end-use markets for ivory.

The TAG spent some time discussing the new annual reporting requirement for ivory stockpiles. The ETIS Director noted that no mechanism for the storage or analysis of these annual reports had been identified. He suggested that the stockpile data could be held as a subsidiary database within ETIS to allow ease of comparison with seizure data. Liz Bennett asked how many countries had reported, but no one had information on this. The Coordinator suggested that the TAG could put some thought into the most appropriate way to deal with this important information in the context of the MIKE and ETIS analyses. Iain Douglas-Hamilton suggested that stockpile data should be circulated more widely. The TAG discussed the potential security risks that might be opened up if stockpile data was entirely open. An overnight working group drafted language to be included in a possible TAG statement which could be included in the joint report to the CITES Standing Committee. The TAG provided feedback on the draft language and the ETIS Director committed to circulating a second draft to the TAG for finalization and approval before the document deadline for the 65th meeting of the Standing Committee (SC65).

The TAG also discussed the mandatory forensic testing for large-scale ivory seizures that is now required by Resolution Conf. 10.10 (Rev. CoP16). The ETIS Director noted that this was a very important innovation and would assist not only with law enforcement and prosecution, but also with understanding trade chains and routes of illegal ivory. He noted that the major focus appeared to be on sourcing, although some labs were interested in ageing. Labs were being set up in Vietnam, Malaysia, Kenya, and there were existing labs in South Africa, Germany and the USA. The MIKE Coordinator noted that ICCWC was setting up Wildlife Incident Support Teams, which so far had been used for the recent seizure in Sri Lanka. The ETIS Director clarified that ETIS informs the CITES Secretariat whenever a seizure of 500kg or more was reported to the system, and keeps a log of all such seizures, which they sent to the Secretariat periodically. To date, ETIS had not received any feedback on any forensic analysis on any of the seizures. Li Zhang noted that the inclusion of this requirement in the Resolution represented real progress, but cautioned that illegal actors changed their strategies in response to such new regulations. David Drinkard suggested that similar standards for drugs within the World Customs Organization could provide a useful guide. The MIKE Coordinator noted that the Secretariat had a mandate from Resolution Conf. 10.10 (Rev. CoP16) and Decision 16.78 to evaluate and advise about the existing forensic laboratories, and that UNODC was beginning some of this work. The TAG identified a number of questions around the mandatory forensic testing: Which labs are certified to do the testing? Who does quality control? Who pays for the testing? How to ensure that a legitimate sampling strategy is carried out for each shipment? An overnight working group drafted a list of possible technical considerations. The MIKE Coordinator committed to talk to the CITES Secretariat to determine progress on activities identified in CITES Decision 16.78 and to share with them the TAG's technical considerations.

The inclusion of demand reduction as a necessary course of action in end-use markets was identified as a significant new move within the CITES context. Finally, the ETIS Director noted that the Resolution now had a much stronger compliance mechanism in 10.10 when Parties failed to implement the Resolution's requirements.

Simon Hedges noted that the Resolution also included increasing recognition of the illegal trade in live elephants.

Iain Douglas-Hamilton suggested that MIKE and ETIS data should be made publically available. The Coordinator clarified the data access rules, as outlined in Resolution Conf. 10.10 (Rev. CoP16). Once PIKE data was published on the CITES website, it was then public access. He agreed that he could circulate the data to the TAG prior to publication, with the understanding that they would not forward it on outside the TAG until it had been published on the CITES website. Detailed carcass data could be made available to contractors under appropriate non-disclosure agreements, as per the Resolution. The ETIS Director noted that discussion of ETIS data access and release would be discussed during the ETIS TAG.

The ETIS Director closed the discussion on Resolution 10.10 (Rev. CoP16) by noting that it would be unlikely for the CITES CoP to open up the Resolution for revision in the near future. The work now would be

focused on the detail, processes, and structures that would make these new data support the decision-making of the CoP going forward.

Standing Committee action plan process

The ETIS Director outlined the action plan process instituted by the Standing Committee at SC63 and SC64 (before and after CoP16). The 8 countries identified at SC62 as being of primary concern with regard to the large-scale ivory trade were requested to prepare one-year action plans to combat the illegal trade in ivory. The reports on the implementation of the action plans would be discussed at SC65, and sanctions were a possibility that the Standing Committee could institute.

Decision 14.78 (Rev. CoP16)

The Coordinator noted that the extension of Decision 14.78 extended the reporting mandate for the IUCN elephant Specialist Groups, MIKE and ETIS, UNEP-WCMC and the African elephant range States to report to meetings of the CITES Standing Committee.

Decision 16.78

Decision 16.78 directed the Secretariat to convene a CITES ivory enforcement task force, involving mostly the first tier countries plus South Africa to work in partnership with ICCWC (CITES, Interpol, WCO, UNODC, World Bank), among other actions.

Decisions 16.79 and 16.80

The ETIS Director noted that Decisions 16.79 and 16.80 reflected significant uptake of ETIS results. These decisions outlined processes for second and third tier countries identified by the ETIS analysis to clarify the implementation of CITES ivory trade control provisions. The Coordinator informed the TAG that the Secretariat would be hiring a consultant to assist with this process.

Decision 16.81

Decision 16.81 outlined the cooperation between CITES and the UNODC on the criminal aspects of the illegal trade in ivory and the illegal killing of elephants.

Decision 16.83

Decision 16.83 outlined a specific requirement for Parties to collect samples from large-scale ivory seizures within 90 days of the seizure. The Decision also included a requirement to sample seizures going back 24 months, if possible.

> **ACTION: The ETIS Director to prepare draft statement on stockpile data and forensic testing of large-scale seizures for approval by the TAG prior to inclusion in the SC65 document and the agenda of the MIKE-ETIS Subgroup.**

> **ACTION: The Coordinator to discuss the TAG's technical considerations on mandatory forensic testing of large-scale seizures with the CITES Secretariat and feed back to the TAG on these discussions.**

6   Long-term implementation of MIKE ....TAG12 Doc. 6

The Coordinator introduced TAG12 Doc. 6. Starting with Asia, he noted that with funding from the French Government, the Asian Nature Conservation Foundation, chaired by Raman Sukumar, had been undertaking an assessment of what it would take to re-start MIKE in South Asia. A proposal for USD 90,000 had been submitted to the USFWS and the Asian Development Bank was willing to entertain a proposal. The IUCN Delhi office seemed positive about partnering with MIKE as IUCN does in Africa. For Southeast Asia, the contract with WCS was continuing until the end of 2014. Funds had not been confirmed beyond 2014, but continued fundraising was being undertaken.

The Coordinator then moved on to discussing the future of MIKE in Africa. He introduced the next phase of MIKE in Africa, funded by the European Commission (EC) under the Minimising the Illegal Killing of Endangered Species (MIKES) project. The overall objective of the project was to reduce the illegal killing of elephants and other CITES-listed flagship species and the illegal trade in their products. The Coordinator noted that this was an expansion of the focus on monitoring to include efforts to minimizing levels of poaching. He also said that the EC was keen to see activities for the Caribbean and Pacific, as the funding was coming from the ACP (African, Caribbean and Pacific) allocation within the European Development Fund (EDF).

The project purpose was to strengthen at site, national, subregional and international levels, the management systems, capacity, information and decision-making processes supporting the protection of elephants and other CITES-listed flagship species and combatting the illegal trade in their products. The project consisted of 5 overall results, which are elaborated further below. The EC contribution to the overall cost was EUR 12,335,000. Additional in-kind contributions from project partners were anticipated. The project was designed for a total of 4.5 years, tentatively starting in June 2014 with a preparation phase to allow for stakeholder consultation and setting up project arrangements and partnerships. The Coordinator also presented the budget breakdown by both objectives and components.

Rob Malpas emphasized that the project design was yet to be finalized and that while the project results were fixed, the EC had been made aware that there needed to be some flexibility in the activities.

Result 1 - MIKE sites are generating regular and reliable information on the status and threats to elephants and other flagship species and on key benchmarks of law enforcement and management effort, in order to support decision making on appropriate management, protection and enforcement needs.

Result 1 was built on a number of lessons from previous phases of MIKE implementation in Africa, such as the need for law enforcement benchmarks and PIKE validation. Improved management application of monitoring systems was needed. The roles of the SSUs would be revised. The MIKE implementation monitoring system (MIMS) would combine PIKE data, law enforcement benchmarks, and measures of activities at each site and for each SSU. It was hoped that MIMS would help manage the project.

Key results under result 1 activities were: develop improved ranger-based monitoring tools and systems, including the introduction of the SMART system where appropriate; provide technical, capacity building and essential material support as appropriate to existing participating MIKE sites and countries; develop benchmarks of law enforcement and management effort for participating MIKE sites and provide training in their application; and carry out regular assessments of benchmarks and indicators as part of the MIKES Implementation Monitoring System (MIMS).

The project identified potential criteria for partner site selection as: existence of viable and sub-regionally significant elephant population; existence of law enforcement patrols; and reporting rates to MIKE. The project also identified potential criteria for species selection as: flagship/umbrella megafauna; threatened by poaching and illegal international trade; and detectable by LE patrols without sophisticated equipment or expertise. It was anticipated that the focus would be on rhino, elephants and great apes, with the non-elephant species being addressed under results 2 and 3.

Robert Malpas then made a few final key points about result 1. He noted in particular the budget constraints for this result, which would require working through partners. Mapping of partner action at the site level would be required. Provision of MIKES support would be rationalised based on site importance and need (and sites with no elephants would not be prioritized). MIST would be progressively replaced by SMART at suitable sites.

Simon Hedges noted that the wording of the result implied that MIKES would be looking at status of these species, even though MIKE would no longer be undertaking population surveys. The Coordinator responded that PIKE can provide some information on upward or downward trends. Iain Douglas-Hamilton congratulated the team on securing the funding, and noted that there needed to be independent verification of a scientific nature. He would like to see feedback systems where independent researchers could look at these data. He noted that this was critical because there may be an impulse to falsify PIKE if it is the only measure for law enforcement groups to monitor success. Bob Burn supported these comments and cautioned against adopting one admirably simple measure because of its simplicity. He reminded the TAG that the population surveys had originally been included not only to monitor the status of the elephant population, but also to triangulate information coming from ranger-based monitoring. Simon Hedges agreed

that PIKE validation was very important, as well as monitoring data collection in the field and any potential biases. Ken Burnham supported the concept of PIKE, but cautioned that the quality of the data would always be the main concern. Diane Skinner noted that it would be helpful to know the type of analytical linkages that would be helpful between the African Elephant Database and the PIKE data. It was generally agreed that PIKE validation work was important and must be continued into the MIKES project. The coordinator pointed out that this would be addressed under agenda item 9.

The TAG discussed effort data. Hugo Jachmann posed the question of how to come up with some sort of catch per effort that could be used across multiple sites to come up with a trend analysis. Ken Burnham suggested that it might be possible to have a trend at the site level, and then to combine that information across sites. Bob Burn agreed that it might be possible to do that. The topic was postponed for discussion under agenda item 11.

Finally, with regard to the mapping exercise contemplated under result 1, Simon Hedges noted that the United For Wildlife partnership was mapping elephant and rhino projects against elephant and rhino range, and said that UfW would be happy to collaborate on this with MIKE to prevent duplication of effort.

Result 2 - Law enforcement, adaptive management and monitoring systems, protocols and capacity are strengthened in high priority protected areas selected on the basis of their critical importance for protection of elephant or other flagship species and the severity of threats

Result 2 was built on a number of lessons from previous phases of MIKE implementation in Africa. It had not been feasible to strengthen both human and financial resources across all participating sites and range States, and therefore a more focused approach was needed to target MIKE's capacity building activities. The European Commission had also requested that MIKES should work to reduce poaching, rather than only monitoring it.

Result 2 would therefore have the following key activities: develop and support the establishment of systems for improving the relevance of ranger-based monitoring (RBM) to adaptive protected area management; develop or revise protected area management plans for selected target sites; provide technical, operational and material support for the strengthening of existing law enforcement and adaptive management systems and capacity at target sites; develop protected area law enforcement capacity to respond to major current and emerging target species poaching hotspots; develop and support initiatives designed to strengthen law enforcement collaboration between neighbouring local communities, local authorities and protected area management; and develop mechanisms for sharing of intelligence information between target sites concerning illegal killing of elephants and other flagship species. These activities would be focused on 8 sites. Two senior technical advisers would be recruited. Each would be based in one of the pilot sites and have a responsibility over an additional 3 sites. The potential criteria for these sites would be: significance of target species population(s); scale of poaching threats; feasibility of having a positive impact; receptiveness of host range State; availability of suitable and willing partners; and sub-regional representation. The sites would not necessarily have to be existing MIKE sites with a PIKE data set. Rob Malpas noted that this part of the project would be implemented with partners. The potential criteria for these site-level partners would be: permanent physical presence at site by qualified personnel; involvement in PA management and law enforcement operations; proven track record of good relations with host government; commitment to regularly compile and transmit data following MIKES standards; willingness to subject data to government approval; and willingness to undergo random data audits. Rob Malpas clarified that the funding available for result 2 was limited, with the funding for each site only at USD 115,000 per year.

Key points for consideration under result 2 were: the implications of triage strategy and potential need to gain buy-in from range States and MIKE-ETIS Subgroup of the Standing Committee; establishment of triage criteria and implementation of selection process; mechanism of working through partners and establishing implementation agreements; employment of Chief Technical Advisers – who should do this and what are the implications; any constraints on CITES support for law enforcement initiatives at the site level; potential for "mini-inter-agency collaboration mechanisms" at site level; and potential for support for forensic activities.

Colin Craig noted that by investing in a particular site, there was a risk that governments may focus on that site to the detriment of other key populations. Liz Bennett noted that the partner-mapping would therefore be critical to ensure that the main sites are being covered. David Drinkard reminded the TAG that donor coordination groups in these countries could assist in these issues.

Iain Douglas-Hamilton asked whether the community-based approach would be important and the Coordinator replied that it would be used where appropriate.

Bob Burn acknowledged that this was a large step forward, but asked whether the TAG had the correct expertise for such an expansion of activities. The Coordinator had discussed this issue with the CITES Secretariat. The TAG was mandated under Resolution Conf. 10.10 (Rev. CoP16) with a specific mandate over elephants. MIKES should be conceived as a short-term project under the longer-term programme. The parts of MIKES that specifically talked to the MIKE mandate were results 1 and 4 and the MIKE CCU would seek advice from the MIKE-ETIS Subgroup of the Standing Committee as to the extent to which the TAG should be involved in other parts of the MIKES project.

Result 3 – National and subregional-level information, decision-making and inter-agency collaboration systems aimed at protecting elephants and other flagship species and combating the illegal trade in their products are developed and strengthened

Result 3 was built on a number of lessons from previous phases of MIKE implementation in Africa. In particular, it had been noted that range States needed to take greater responsibility for MIKE implementation, and that the role of the sub-regional steering committees needed to be strengthened.

Key activities under result 3 were identified: work with national wildlife agencies to gain buy-in for the development and implementation of law enforcement and management effort benchmarks; provide support to focal country protected area institutions in the implementation of biodiversity monitoring systems; support the implementation of national wildlife crime and illegal trade intelligence initiatives according to the ICCWC Toolkit framework; support national and subregional wildlife crime and illegal trade initiatives, including the potential establishment of interagency enforcement collaboration initiatives; and facilitate subregional collaboration in conservation of flagship species and law enforcement through the MIKES Subregional Steering Committees.

Rob Malpas noted that result 3 needed a significant amount of work to target where MIKES could add value, and what type of expertise might be needed. The Coordinator clarified that result 3 activities would be focused on just four countries and the intention was to align them with the sites identified under result 2.

The Coordinator noted the key points for consideration under result 3: implementation of ICCWC Toolkits in selected MIKES focal countries (in collaboration with UNODC/World Bank); establishment of inter-agency collaboration initiatives (in collaboration with UNODC or Interpol); whether and how MIKES could support WENS; relationship with CITES national ivory action plans; strengthening of the role of the sub-regional steering committees; MIKE country reports; and the concept of packaging MIKES support for focal countries.

Hugo Jachmann cautioned that the activities outlined under result 3 could be very complex for a 4-year project. He reminded the TAG that MIKE had been re-strategized several times. The Coordinator responded that the intention was to identify gaps and leverage partnerships and Rob Malpas reminded the TAG of the built-in preparation phase.

Result 4 - International awareness, cooperation, and action in the conservation and protection of elephants and other flagship species are strengthened, including the establishment of an emergency response mechanism to assist sites experiencing sudden law enforcement crises

Result 4 was built on a number of lessons from previous phases of MIKE implementation in Africa, such as the need for MIKES partnership agreements and the need to put in place a Standard Analytical and Reporting Framework, linked to the work of ETIS and AfESG.

Key activities under result 4 were: further develop methodologies for analysing ranger-based monitoring data; compile, analyse and disseminate biodiversity and threats information to CITES and others; provide support to ETIS for building and consolidating systems and capacity for monitoring trade in elephant products; provide support to AfESG in monitoring elephant population status, trends and threats; design a framework for the implementation of the MIKES Emergency Response Mechanism (MERM), and carry out MERM initiatives according to the identified response criteria; and develop and implement the MIKES Partnership as a mechanism for coordinating law enforcement, adaptive management and monitoring activities supported by MIKES. For the MERM, draft criteria for emergency responses were identified as reliable intelligence of imminent organized poaching incursion or reliable evidence of ongoing or recent organized poaching incursion, evidence of remaining population of target species, willingness of host

government to facilitate evaluation and follow up missions, and availability of local counterparts to manage emergency funds.

Iain Douglas-Hamilton noted that other emergency funding mechanisms were in place and that it would be important to coordinate with them. Liz Bennett queried whether or not willing government was a good criterion, as in many cases poaching incidents are as a result of government breaking down. David Drinkard queried whether there were links between humanitarian crises and poaching and suggested using the FEWS NET (Famine Early Warning System Network) to predict poaching. A discussion ensued surrounding the infant mortality covariate used in the MIKE analysis and the links between conflict and impacts on protected areas.

Liz Bennett queried the relationships with the governments under the MIKES project, noting that MIKE has a very specific mandate and relationship with the governments. The Coordinator responded that the MIKES project would be presented to the MIKE-ETIS Subgroup of the Standing Committee and the Subregional Steering Committees for their input and buy-in.

Result 5 – Law enforcement, adaptive management and monitoring systems, protocols and capacity building approaches supported by MIKES are piloted in selected protected area sites in the Caribbean and Pacific regions, to determine their usefulness and replicability in these regions

The key activities under result 5 were: identify appropriate protected area sites for implementing pilot MIKES activities and establish collaboration agreements with the relevant protected area authorities and partner organisations; develop and implement practical and effective protected area monitoring and adaptive management systems at pilot sites, incorporating lessons learnt and best practice solutions; and establish communication mechanisms between participating sites in the ACP region for exchange of lessons learnt and best practices.

The ETIS Director suggested that TRAFFIC and the IUCN/SSC Marine Turtle Specialist Group should be consulted. Liz Bennett cautioned that a lot of the trade for those species was national rather than international. The Coordinator responded that there was evidence of international trade in marine turtles in some areas, and that in any case the focus of the Result was to pilot LEM systems with a view to reducing illegal offtake, even if it did not involve illegal international trade.

> **ACTION: Simon Hedges to help coordinate the mapping exercise with the United For Wildlife mapping project on conservation activities.**

7   Membership and Terms of Reference of the TAG...TAG12 Doc. 7

The Coordinator introduced TAG12 Doc. 7. He noted that since CoP16 and the revision of Resolution Conf. 10.10 (Rev. CoP16), the formation of the TAG now rested with the MIKE-ETIS Subgroup of the Standing Committee. Other than that, the terms of reference for the TAG had not changed. The Coordinator invited comments from the TAG about how to do the rotation, particularly in light of this change.

Simon Hedges asked whether, in the context of MIKES, the TAG would need to bring in additional expertise, including on other species and on law enforcement. The Coordinator responded that the MIKE-ETIS Subgroup of the Standing Committee would be asked their opinion how they would like TAG to engage in the MIKES project.

Diane Skinner shared Holly Dublin's comments. She noted that in recent years, the CCU has effectively filled gaps and needs with consultancies that were stimulating good output. She also noted that there is an inescapable and inherent value in retaining members who have been involved with the evolution of MIKE over time. She suggested that the CCU consider changing the structure, perhaps with a much smaller core group meeting virtually at very regular intervals, and bringing in the specialized expertise as needed. These virtual meetings could be used to target specific questions being worked on or research being conducted by consultants or TAG Members. Such meetings worked very effectively if they were well prepared in advance, tightly-focused and well-chaired. The Coordinator said that he would prefer to set up working groups for specific issues, although these had not worked very well in the past, potentially hampered by capacity of the CCU. He also reminded the TAG that the possibility existed for co-option of members. Liz Bennett suggested the co-option of members for law enforcement and other species.

Liz Bennett noted that in addition to the permanent membership of the Chairs of the IUCN elephant Specialist Groups, the continuity of the statisticians (Ken Burnham, Bob Burn and Fiona Underwood) is critical. She suggested that these could be permanent co-opted members.

Colin Craig indicated his intention to stand down from the TAG, noting that the programme content no longer required his expertise. He suggested that he could be co-opted as necessary. The Coordinator noted that the Southern Africa Subregional Steering Committee meeting would be held later in 2014 and that the matter would be considered then.

Louisa Sangalakula reminded the TAG about previous conversations about including an economist in the TAG.

> **ACTION ITEM: The Coordinator and the ETIS Director to agree on the revisions in the TOR to be put before SC65 as well as to work on identifying vacancy gaps and recommending new members.**

Technical matters

Analytical issues

8   MIKE analysis for the 65th Meeting of the Standing Committee (SC65).............................TAG12 Doc. 8

The Coordinator introduced TAG12 Doc. 8. He noted that the plan for SC65 was to have an updated trend and covariate analysis on what was presented to the African Elephant Summit and invited the TAG to comment on the analysis.

Ken Burnham noted that there had been a statistically significant increase from 2010 to 2011. PIKE levels appear to be going down from 2011 to 2013, but the decline had not yet been tested for statistical significance. Colin Craig noted that a decline did not match with what was being seen on the ground – he referred to at least two sites where poaching had been getting worse with time. It was pointed out that the recorded decline was on average, and not necessarily at every site. It was agreed that the evidence of a real decline between 2011 and 2013 would be assessed formally by Ken Burnham.

Colin Craig questioned the justification for the 'red line of sustainability', or the PIKE level of 0.5, above which elephant populations are assumed to be in decline. The Coordinator clarified that, based on a number of explicit assumptions, George Wittemyer at Colorado State University had estimated the PIKE level above which net population declines would result was slightly over 0.5, and that Ken Burnham had proposed 0.5 as a rule of thumb — when half of elephants found dead were illegally killed there is cause for concern. Colin Craig and Iain Douglas-Hamilton agreed that it would be worthwhile to interrogate those assumptions more closely. The Coordinator indicated that this issue would be discussed further under agenda item 9, but also agreed to tone down the language in the analysis about the 'limit of sustainability' and rather indicate that a PIKE value of 0.5 indicates that there is likely a problem.

Iain Douglas-Hamilton queried on the methodology of estimated marginal means (least squared means). Ken Burnham explained that least squares means is a method of calculating means when sample sizes in different groups are unequal and when there is more than one effect. In the context of PIKE trends, site and country (and year) are used for subregional trends, and country and subregion for continental trends.

Bob Burn cautioned that careful wording is required when using proxy variables so as to make it clear. Ken Burnham responded that the analysis was designed to find a model that could be applied to sites without data. The analysis was not claiming that these variables had a causal relationship with PIKE, but at least provided a predictive model. He said that perhaps the language needed to be clearer on this issue, depending on the audience.

Liz Bennett found the use of mammoth ivory price data an interesting and useful proxy variable. She noted that going forward, the relationship might change due to a number of reasons: global warming may allow mammoth ivory prices to drop and further undercut elephant ivory; and as consumers are educated about the plight of elephants, they might switch to mammoth ivory. Esmond Bradley Martin noted that the declared export prices tend to be lower than the real prices, potentially because the mammoth ivory was generally undervalued for tax reasons. The Coordinator agreed to compare price data with Esmond before the SC65

document was finalized. Fiona Underwood suggested that it would be wise to keep the household consumption variable on the backburner in case the mammoth ivory relationship changed in the future. The Coordinator clarified that the entire suite of variables was maintained and tested in each analysis. Simon Hedges warned that some elephant ivory was being sold fraudulently as mammoth ivory, which may impact the use of mammoth ivory retail price data, as opposed to import price data. Esmond Bradley Martin agreed that elephant ivory was occasionally sold as mammoth ivory, but usually in streetside outlets. Liz Bennett noted that some of the demand reduction campaigns are campaigning against all ivory due to this lookalike challenge. In general the TAG was in agreement with including the mammoth ivory price covariate in the analysis.

Iain Douglas-Hamilton asked whether data for the price of elephant ivory was available. The Coordinator noted that these data were very hard to access due to the illegality of the trade, but that if a time series of legal market price data for raw ivory became available, it would be a very important variable to test in MIKE analyses. The ETIS Director clarified that TRAFFIC had been trying to access price data from the legal ivory market in China. TRAFFIC had been able to get some indicator information through verbal communications, but not representing a full time series. The data suggest that there was a 'scarcity' in supply and that the ivory that comes through the legal system was equivalent to one month's work. Enforcement of the internal trade controls in China appeared to have been strengthened in recent months, with a number of manufacturers and retailers having lost their licenses.

Simon Hedges expressed particular interest in the question about consumer motivation – whether ivory is a luxury good (Veblen), a speculative investment, or whether consumers were buying a bangle or two here or there. The Coordinator referred to Yufang Gao's research that indicated that speculative investment was likely a large part of the trade. Fiona Underwood expressed interest in the Veblen good comparison, but thought that further detailed work was needed and offered to take a first attempt at it. The TAG agreed that the SC65 document could mention the Veblen concept, but detailed analysis could not be presented in the document at this time.

The Coordinator then presented some preliminary results of Bayesian hierarchical modelling of PIKE and covariates, being done in collaboration with Colin Beale from the University of York. The initial results indicated, while the trends and covariates identified were similar to those obtained using generalized linear models, the scale of prediction differed when using hierarchical Bayesian models. A simple interpolation of elephant populations estimates was conducted, the results of which were consistent with those of the hierarchical models. This interpolation suggested a peak in elephant populations in 2006, followed by a decline thereafter.

Bob Burn cautioned on the use of the Deviance Information Criterion (DIC) for model selection in a Bayesian hierarchical framework. In the PLOS paper, DIC was used as a guide to model selection, but the variables to be included were selected on the basis of posterior distributions.

Fiona Underwood suggested that it may be more useful to present the relative rather than mean poaching rate. Colin Craig questioned the impact of the estimate of natural mortality rate (set at 3% in the analyses) on the underlying model from PIKE to overall mortality. He suggested that 3% may be an overestimate, and that as result the estimate of numbers killed could be also overestimated by up to threefold. Iain Douglas-Hamilton suggested that the model should be run using different levels of natural mortality. Hugo Jachmann expressed concern about the population trend information used in the model. A number of action items were identified, listed below. The TAG was interested to see this work continue, but not yet put forward into public analyses.

> **ACTION ITEM – The Coordinator and Ken Burnham to determine whether 2011 to 2013 decline is significant before the finalization of the SC65 document.**
>
> **ACTION ITEM: The Coordinator to send mammoth ivory export data from China and Hong Kong to Esmond Bradley Martin.**
>
> **ACTION ITEM – Fiona Underwood to look at the data on mammoth ivory for exploration of Veblen goods demand curve.**
>
> **ACTION ITEM – The Coordinator to share the R code for the Bayesian hierarchical model with Bob Burn and Fiona Underwood for review and identification of possible problems.**

ACTION ITEM – The Coordinator to continue with work on the Bayesian hierarchical model, with particular attention to the population trends used, and keep the TAG informed.

Research issues

9   Validation of PIKE-based inference ....**TAG12 Doc. 9**

The Coordinator introduced TAG12 Doc. 9. He noted that funds from the MIKES project could be used to help with validation of PIKE-based inference. Colin Craig asked whether the PIKE validation work done by Hugo Jachmann had included a comparison between PIKE and natural mortality at the site-level. Hugo responded that it had not.

The Coordinator noted that one of the main biases was likely due to differences in detection probability between natural and illegal deaths, particularly in forest sites, where carcass detection is often prompted by intelligence information or poacher trails. Hugo Jachmann made reference to Ken Burnham's previous statement that the problem was not one of statistics, but rather of subject matter. The data from three sites (Ziama, Okapi and Virunga) were likely to have carcass clusters. With low patrolling rates and low budgets, carcass clusters were likely all illegally killed, and therefore PIKE was likely to be 1. At low carcass numbers, PIKE was unreliable for site-level inference. In other areas, PIKE could be unreliable due to other factors. Ken Burnham suggested that work could be done both in the field and on existing data sets. Simon Hedges suggested an obvious piece of work would be to extend the work Hugo Jachmann did into larger, more complex sites. Iain Douglas-Hamilton suggested that the Northern Rangelands Trust would be a good landscape for testing and that questions could be worked into Festus Ihwagi's doctoral work.

Colin Craig referred to an issue he had previously raised by email, namely the possibility of aggregate PIKE being around 0.5 due largely to sites reporting PIKE values of zero or one. Ken Burnham responded that such a situation could arise with small elephant populations with small number of carcasses. The Coordinator referred to the histograms that had been circulated, which showed that the aggregate data were not dominated by PIKE values of zero or one. He added that, while in sites with few elephants values of zero or one were indeed more prevalent, they represented a minority of data points. He stated the MIKE programme's preference not to throw away any data, as such data become more valuable when aggregated at the subregional or continental levels. Ken Burnham suggested that looking at subsets of data with good sample size could help indicate whether there is a problem with the overall trend.

Colin Craig questioned the impact on PIKE of rangers guessing as to the cause of death and whether data could be audited in any way to see whether cause of death classifications are correct. The Coordinator responded that MIKES will allow for some level of audit. Colin Craig noted that in some places, such as Niassa, actual carcass estimates from aerial surveys were available. Therefore it might be possible to evaluate whether PIKE was consistent with the calculated loss rate from another data source.

Simon Hedges raised a query about larger populations with age structure skewed to younger populations, therefore reducing the level of natural mortality. Colin Craig asked again about the relationship between natural mortality and PIKE. He questioned whether the assumption was that both the illegally killed carcass and the natural carcass had been dead for the same amount of time. He cautioned that in some cases, natural deaths had been accumulating over five years, while poached carcasses were all recent. He suggested that it may be worthwhile to look at such patterns within the MIKE data. Questioning again the use of 3% for the rate of natural mortality to estimate absolute poaching rates, he said that in his experience, natural mortality rates were probably less than 1%. This was based on aerial survey data sets for areas with low levels of poaching, where a carcass ratio of under 5% was usually observed. If carcasses persisted on the ground for five years, then that would indicate an adult mortality rate of less than 1% in those populations. The Coordinator clarified that the figure of 3% was based on demographic studies at Kruger and Amboseli and Samburu, among others. George Wittemyer at Colorado State University had calculated an average of 3% from such studies, but that included juvenile mortality. Colin Craig noted that juvenile mortality was not part of PIKE and so it should be discounted.

Bob Burn suggested that the retrospective method for dung counts could be adapted to estimate carcass decay rates, and therefore carcass density. Simon Hedges responded that it would be difficult to find adequate samples of fresh carcasses in the forest. Martin Tchamba suggested that game hunting areas in forest zones could provide such fresh carcasses, although meat was often removed from the carcasses in these areas.

An overnight working group (Simon Hedges Fiona Underwood, Bob Burn, Colin Craig, Hugo Jachmann, and Ken Burnham) defined a set of steps to be taken towards setting up studies on PIKE validation. It was agreed that the question about natural mortality would start in this working group and then spin off as needed. The working group agreed on the following steps to be taken over the next year by the same group of people. The first three months would be taken up with identifying and compiling the various PIKE validation issues that had arisen in various discussions, studies and workshops. This list would include short narratives describing the challenge or issue, as well as provide some definitional clarification. This list would then be circulated to the full TAG for their feedback and for prioritization. It was anticipated that process would take one month. Then the remainder of the year would be used to assess the practicality of solving each problem, compiling available datasets, suggesting analyses and/or problems, and identifying potential collaborators and sites.

> **ACTION ITEM: Working group consisting of Simon Hedges (Chair), Fiona Underwood, Bob Burn, Colin Craig, Hugo Jachmann, and Ken Burnham to prepare advice to the CCU on natural mortality and PIKE validation issues, as per the process agreed at TAG12.**

10 Analysis of the illegal ivory supply chain ....**TAG12 Doc. 12**

The Coordinator introduced TAG 12 Doc. 12 and invited the TAG to comment. Ken Burnham suggested that now that MIKE could produce a decent estimate of total poaching, and therefore the total amount of ivory that was entering the illegal trade chain, and ETIS could give the total amount of illegal ivory seized, it may be possible to determine the probability of seizure. Fiona Underwood noted that during the Darwin project, a lot of attention was paid to thinking about the trade chain and trying to understand the drivers of the trade. Bob Burn said that a holistic, integrated model is very challenging in particular due to unknown time delays and the confounding factor of stockpiles, both formal and informal. Therefore it would be important to understand the objectives and/or questions before embarking on this exercise. The ETIS Director reminded the TAG that one of the purposes of MIKE and ETIS was to relate changes in the trend to CITES decision-making, and that required a holistic look at the entire trade chain.

The Coordinator suggested that the workshop could be used to identify what questions these datasets can or could answer, as well as those questions it could never answer. The ETIS Director noted that data existed within the law enforcement and research community, and it would be helpful to articulate those questions. Bob Burn suggested that the Bayesian use of expert judgments, combined with hard data, could be useful in this context. Ken Burnham agreed that may be appropriate for the cryptic system under examination.

Diane Skinner provided an update to the TAG on the various economic studies that were under development, including that of the World Bank, WCS, Stop Ivory, Chatham House (DEFRA), and the concept note that had been put together by the AfESG, MIKE and ETIS. The TAG agreed that such studies were useful and that the joint analytical work being proposed would feed into such studies.

<u>Processes and operational issues</u>

11 Development of law enforcement benchmarks for MIKE ....**TAG12 Doc. 11**

The Coordinator introduced TAG12 Doc.11 and invited Rob Malpas to provide an update on the work that he was doing with Frankfurt Zoological Society (FZS) and the relevance of this work to the MIKES project. Rob Malpas outlined the work with FZS to identify the key features of what works and doesn't work in terms of law enforcement, from ranger patrols through to national-level initiatives. A variety of sources were referenced to try to understand some of these key factors, including the Hugo Jachmann law enforcement book and the ICCWC toolkit. They also used broader standards such as the Conservation Assured Tiger Standards and the Management Effectiveness Tracking Tool (METT), although the focus was on key pillars of site and national level law enforcement. The nex step of the FZS project would be an online survey, and they would be interested in doing that survey jointly with the MIKE programme. For the MIKES project, the focus would be on identifying a pragmatic set of indicators relevant to the specific context of the MIKE programme. David Drinkard suggested that it would not only be at the site level, but overall capacity, such as the number of prosecutors needed. Bob Burn queried the survey approach for the FZS project, asking whether it was about the perception of what was successful, as opposed to an objective measure of success.

Bob Burn also reminded the TAG that these issues were discussed, with law enforcement professionals, at the 1997 MIKE design meeting. Iain Douglas-Hamilton noted that many MIKE sites are very complex and it

would be necessary to stratify within sites. Bob Burn noted that even simple budget and capacity data were very difficult to access. The Coordinator agreed, but also expressed some cautious optimism about the possibility of accessing some of these data under the new MIKES partnerships. Iain Douglas-Hamilton suggested that it would be more feasible for each MIKE site to have a different set of law enforcement measures that could be measured over time, along the lines of what Bob Burn and Ken Burnham had discussed earlier in the meeting.

Rob Malpas noted that, as with the ivory action plans under the CITES process, there should be more pressure on participating sites to be accountable to a standard of law enforcement. Some basic measures or benchmarks would be necessary for this. Iain Douglas-Hamilton agreed and noted that some data were available, and that NGOs could play a role in collecting and collating such data. Diane Skinner asked whether the MIKE programme could accept information directly from NGOs or would it have to come through the government. The Coordinator clarified that data could be generated by NGOs, but it would have to be transmitted through government channels.

The ETIS Director reminded the TAG that the original ETIS data collection form had a section on outcomes of trials. It had been removed from the form because less than 1% of the cases had such information. TRAFFIC was trying to track this issue, particularly on rhino horn cases, but finding many challenges – to the extent of needing a full-time staff dedicated to tracking individual court cases. However, he noted that for key countries, such information was important.

The Coordinator suggested that once a set of benchmarks was devised, part of the reporting to the Standing Committee would be the analysis of available responses, which would highlight countries that fail to respond. Ken Burnham cautioned that there was not one unique cloud of factors corresponding to good law enforcement, but that concern may be allayed if the intention was to use it for the purpose of accountability rather than analysis. Fiona Underwood agreed with Holly Dublin's written comments that there was a significant amount of work going on in the law enforcement community and that care should be taken to avoid reinventing the wheel. Bob Burn noted that for law enforcement effectiveness, some proxies such as the Corruption Perception Index might be appropriate.

The TAG agreed to set up an email discussion group on law enforcement benchmarks.

> **ACTION ITEM: Email discussion group on law enforcement benchmarks to be formed: Hugo Jachmann (Chair), Holly Dublin, Moses Kofi Sam, Martin Tchamba, Rob Malpas, Fiona Underwood, SSOs**

12 Operation of MIKE in African and Asian subregions..*no document*

The Coordinator invited the SSOs to provide updates on the operation of MIKE in the African subregions.

Central and West Africa

Sebastien Luhunu, the Subregional Support Officer for Central and West Africa, provided an update on activities in that subregion.

An initial status and needs assessment of the ranger based monitoring systems of all participating sites was carried out to enable the selection of sites for further activities and training. Ranger based data collection (RBDC) training and refreshers were carried out in these sites. Eighty six people were trained in Boumba Bek, Fazao, Ziama, W Niger, and Marahoue. MIST basic user training and refreshers were also carried out in a number of sites. Twenty six park staff were trained in Boumba Bek, Fazao, Mole and Kakum. The SSO noted that where MIST was being used, there had been a noticeable improvement in management at the site level.

Under MIKE 3.0, the West and Central Africa Office had committed to launching SMART in at least one site. A number of possible sites were identified for this launch. In Sapo, there were communication challenges with the site and national office, and at the site level, there was very little capacity to carry out patrols, or to maintain a computerized monitoring system. In the WAP complex (W Benin, W Burkina Faso, W Niger) and Pendjari sites, training was completed, and the harmonized database was in the process of being finalized by the PAPE project coordinator in consultation with site managers. In Nazinga, Waza, Mole and Kakum, the training had been completed, and the databases were in place, although the Ghana sites were awaiting

official adoption by the Wildlife Division. In Mole and Kakum, site officers found SMART more user-friendly than MIST.

Bob Burn asked about the ease of importing MIST data into SMART. The Coordinator responded that it is a possible but complex process. Unfortunately, there is no automated way to transfer the data because both MIST and SMART have customizable data models, and in essence all relevant fields in the MIST data model need to be mapped to the SMART data model. Nevertheless, progress was being made to simplify that process as far as possible. The Deputy Subregional Support Officer for Central and Wers, noted that they had also provided SMART training in two non-MIKE sites: Bouba Ndjidah and Sena Oura in Chad. These data would likely be available to MIKE. The Coordinator noted that under MIKES, Bouba Ndjidah could be added as a MIKE partner site if a suitable partner exists on site that is willing and able to compile data without financial support from the programme.

The Central and West African SSU staff had participated in several relevant meetings, including: Experts meeting in preparation for the meeting of Ministers of ECCAS on the Extreme Contingency Plan for combating poaching in the northern area of Central Africa (Cameroon, Chad and Central Africa Republic) in Yaounde; UEMOA technical committee meeting for WAPO/PAPE in Cotonou; BIOPAMA launch in Dakar; COMIFAC meetings on PAPECALF in Brazzaville and Douala; joint activity planning for the WAPO complex in Ouagadougou; discussion of MIKE activities in Yankari with WCS and Nigerian Director of Forestry in Abuja; and the African Elephant Summit in Gaborone. The Subregional Steering Committee meeting for West Africa was held and the Central African meeting would be held in the second half of 2014.

Finally, the SSO reported that the data from the 2012 survey of Boumba Bek had been shared with Fiona Maisels of WCS who had agreed to assist with re-analysis and reporting. The raw data from the Boumba Bek survey were also sent to the CCU. The SSO asked for the TAG's assistance in looking at the results from the Boumba Bek survey and committed to circulating the draft report to the TAG for comments once received from Fiona Maisels. The Coordinator noted that from preliminary analysis on the Boumba Bek data, the elephant estimate for the entire area was 2,000 with an estimate of about 1,200 for the core area. The SSO added that the reanalysed data yielded a smaller but comparable estimate, due to the fact that old dung piles had been eliminated from the data in the reanalysis.

> **ACTION ITEM: The West and Central Africa SSO to circulate the draft Boumba Bek report from Maisels for comments once available.**

Eastern and Southern Africa

Tapera Chimuti, the Subregional Support Officer for Eastern and Southern Africa, provided an update on the operation of MIKE in the region. He had devised a set of ranger-based monitoring (RBM) benchmarks, for field data collection, data management and data analysis and use for adaptive management.

The questions for field data collection were: Is there a formally approved data collection system in place? (Which system is in use: MOMS, MIST, SMART, Other); Are sufficient field rangers trained in LEM/RBDC techniques?; Are manuals for standard operating procedures in place?; Are RBM data collection forms effectively used in all patrols?; Are GPS units effectively used in all patrols?; Are patrols carried out on a regular basis?; Do patrols cover the entire site annually?; Are rangers recording appropriate elephant carcass information?; Are regular meetings for addressing challenges done at site?; and Does the site have an adequate budget for patrolling?

For data management, the questions were: Is the back-end data management system in place?; Are relevant and sufficient staff trained in management of the system?; Is there good continuity in data management staff?; Are there adequate dedicated computers available for the data management system requirements?; Is there an adequate power supply for the data management computers?; Is backstopping for data management system operation available at site and/or national level?; Is data regularly and accurately captured into the data management system?; Is location data directly downloaded into the data management system?; Are data quality control and validation routinely and effectively carried out?; Are electronic and paper data records effectively archived?; Is there an effective mechanism for onward transmission of data?; Is monitoring data being regularly and effectively transmitted to the national level?; and Is monitoring data being effectively managed at the national level?

For data analysis and utilization for adaptive management, the questions were: Are there policies and procedures in place to facilitate use of monitoring reports in adaptive management?; Are relevant and

sufficient staff trained in the application of monitoring reports in adaptive management?; Is the site able to generate customised reports addressing key site management issues/needs?; Is there evidence that the reports are being used to guide site management?; Are NGOs and other external parties positively reinforcing the monitoring systems and use in adaptive management?

The SSO then shared the spreadsheets where he was tracking the scores for each site on all of these questions. Scores were reviewed and revised with each site visit. He intended to share these scores at Subregional Steering Committee meetings. He had been able to target his activities towards particular sites based on the first two sets of questions. Fiona Underwood noted that some of the questions were subjective, and asked about definitions, and whether the quantitative data behind the scores were available. The SSO clarified that there was backup information for most of the scores for each site. The Coordinator noted that this was very useful, but given the level of detail being recorded, was concerned about the potentially large burden on the SSU. Fiona Underwood asked whether there were standard operating procedures, and whether it was done in Central and West Africa as well. The data were collected in Central and West Africa, but not clear whether using the same questions, assumptions, and definitions. The TAG agreed that this would be useful information for the law enforcement benchmarks group.

The SSO also reported on efforts to enhance field data collection and data management systems. In Chewore and Nyaminyami, the SMART database was introduced and configured, and field data collection forms were modified to align with the SMART data model. In Akagera, Babile, Ruaha-Rungwa, Rukwa-Katavi, the field data collection forms were modified to align with SMART, and training provided in using these forms. In Kasungu, training in ranger-based data collection was conducted, the SMART database was introduced and configured, and the field data collection forms were modified based on the authority's information needs and the SMART data model. In Caprivi, Chobe and Magoe, the carcass forms were refined, new carcass forensic training materials were introduced, and registers for compiling carcass records were designed. Initial feedback on SMART forms was that they were much less confusing than MIST forms.

Finally, the SSO reported that the Subregional Steering Committee had met in Eastern Africa in May 2013.

> **ACTION ITEM – SSOs to send information on ranger-based monitoring benchmarks to the law enforcement benchmarks email discussion group.**

Conclusion of the meeting

13 **Any Other Business** ....*No document*

The Coordinator invited the TAG to note any other business.

Iain Douglas-Hamilton requested access to PIKE data at more frequent intervals during the year. The Coordinator responded that he would be happy to provide the PIKE dataset to the TAG as long as the TAG commits not to share those data until they were published on the CITES website. Once the data were on the CITES website, the Coordinator committed to putting the PIKE data onto Github for public access. Iain Douglas-Hamilton noted that the quicker the data can be made available to the Parties, the quicker the world can see it.

> **ACTION ITEM – The Coordinator to share the PIKE data with the TAG as the datasets are ready (with the assurance that the TAG will not share them until they are up on the CITES website). Once the reports are published on the CITES website, the Coordinator will make the PIKE data available on Github for wider dissemination.**

14 **Determination of the time and venue of the next TAG meeting** ....*No document*

The Coordinator noted that, with the funds available from the MIKES project, the TAG would revert to an annual meeting schedule. The likely venue would be Nairobi, although Harare would also be considered as an option.