

CONVENTION ON INTERNATIONAL TRADE IN  
ENDANGERED SPECIES OF WILD FAUNA AND FLORA

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Monitoring the Illegal Killing of Elephants (MIKE)  
Ninth meeting of the Technical Advisory Group  
Nairobi, 6-8 December 2010

**Summary minutes**

**In attendance:**

- Colin Craig, MIKE TAG member, Southern Africa
- Iain Douglas-Hamilton, MIKE TAG member, Eastern Africa
- Moses Kofi Sam, MIKE TAG member, West Africa
- Liz Bennett, MIKE TAG member
- Kenneth Burnham, MIKE TAG member
- Anil Gore, MIKE TAG member
- Simon Hedges, MIKE TAG member
- Holly Dublin, MIKE TAG member
- Hugo Jachmann, MIKE TAG member
- Esmond Bradly Martin, ETIS TAG member
- Tom Milliken, ETIS Director
- Tom De Meulenaer, Coordinator, MIKE Central Coordination Unit (Chair)
- Julian Blanc, Data analyst, MIKE Central Coordination Unit
- Mahaman Sani Massalatchi, MIKE Subregional Support Unit, West Africa
- Martha Bechem, MIKE Subregional Support Unit, Central Africa
- Edison Nuwamanya, MIKE Subregional Support Unit, Eastern Africa
- Tapera Chimuti, MIKE Subregional Support Unit, Southern Africa
- Tony Lynam, MIKE Subregional Support Unit, Southeast Asia
- Louisa Sangalakula, ETIS programme officer
- Margaret Onyango, MIKE Central Coordination Unit
- Claire Mogambi, MIKE Central Coordination Unit
- Diane Skinner, IUCN/SSC African Elephant Specialist Group
- Bob Burn, University of Reading (for agenda item 8)
- Fiona Underwood, University of Reading (for agenda item 8)
- Rob Malpas, consultant ETIS and MIKE (for agenda item 8)

**Absent with apologies:**

- Aster Li Zhang, MIKE TAG member, Southeast Asia
- Raman Sukumar, MIKE TAG member, South Asia
- Martin Tchamba, MIKE TAG member, Central Africa
- Sebastien Luhunu, MIKE Subregional Support Unit, Central Africa

## Strategic and administrative matters

### 1 Adoption of the agenda ..... TAG9 Doc. 1

The MIKE Coordinator opened the ninth meeting of the MIKE Technical Advisory Group (TAG9). He noted the absence with apologies of Martin Tchamba, Aster Li Zang, Raman Sukumar and Sebastien Luhunu, and extended a special welcome to Holy Dublin and Hugo Jachmann who had been unable to participate in the previous meeting of the MIKE Technical Advisory Group (TAG).

The agenda was adopted as presented in document TAG9 Doc.1.

### 2 Adoption of the working programme ..... TAG9 Doc. 2

The document was introduced by the MIKE Central Coordination Unit (MIKE CCU). The TAG adopted the working programme as proposed in document TAG9 Doc. 2. The meeting was reminded that under agenda item 8, the members of the MIKE and ETIS TAGs would be invited to participate in a joint workshop on assessing factors influencing the illegal killing of elephants and the illegal trade in ivory in support of the development of analytical frameworks for MIKE and ETIS. As this workshop was scheduled to take up a full day, only one and a half day were available to address the other items on the agenda.

### 3 Minutes of the 8th meeting of the Technical Advisory Group (TAG8) ..... TAG9 Doc. 3

The document was introduced by the MIKE CCU. The TAG approved the summary minutes of its eight meeting (TAG8, Nairobi, 14-15 December 2009). The MIKE CCU urged TAG members to review draft summary minutes and to consider the actions and recommendations presented therein, particularly those directed to or concerning the TAG members themselves.

For TAG9, summary minutes and a list of agreed action points similar to those produced for the last three TAG meetings would be compiled. They were expected to be circulated to the meeting participants for comments and finalized within a reasonable timeframe, normally not exceeding three months after the meeting took place.

### 4 Progress on the action points agreed to at TAG8..... TAG9 Doc. 4

The MIKE CCU presented document TAG09 Doc.4 and its annex, describing progress until November 2010 on 43 action points adopted at TAG8. While reviewing the implementation of each action point in detail, the TAG generally agreed with what was described in the document. 15 action points had been fully completed; 20 action points were partially completed or on-going, of which several were expected to be discussed or concluded at the present meeting. In the case of 8 action points, no follow-up or execution had been recorded. The TAG noted in particular the following (with numbers referring to the relevant TAG8 agenda items):

- Items 1, 2, 3, 7, 13 and 18: All the action points falling under these items were implemented.
- Item 4: Two actions were completed and the one about covariates would be addressed during the current meeting. The fourth ongoing action point concerning the use of agreed minimum criteria for adding new MIKE sites was commented on and discussed at some length.

The MIKE CCU indicated that at the third African elephant meeting (AEM3; Nairobi, November 2010), **Angola**, **Malawi** and **Sierra Leone** had expressed an interest in joining the MIKE programme, and that the criteria for adding sites as agreed by the TAG at its sixth meeting would be applied for handling these requests. The criteria had also been considered in the selection of new MIKE sites in Ethiopia and Nigeria. The TAG asked that as a matter of clarity, these agreed criteria for designating new MIKE sites be circulated again to all members, to which the MIKE CCU agreed.

The MIKE Subregional Support Officer (SSO) for East Africa explained that **Ethiopia** had asked to join MIKE with two sites, Kefta Shiraro and Babile Elephant Sanctuary. This demand had been supported by the MIKE Subregional Steering Committee for East Africa. The latter site had been visited by the MIKE programme in the summer of 2010, and with support from the German Company for International Cooperation (GIZ, formerly known as GTZ), MIKE capacity

building activities had been initiated. The site was now performing like others in East Africa. **Tanzania** had requested to include Mkomazi National Park as its fifth MIKE site, indicating that it asked MIKE to help build capacity and provide training, but that no technical or material support would be needed from the MIKE programme. Kenya and Tanzania had met and agreed to collaborate on the implementation of a trans-boundary Tsavo/Mkomazi MIKE site. The MIKE CCU clarified that this 'merger' would not affect the country-level analyses of MIKE data from Kenya and Tanzania respectively, and that the information emanating from the two sites would remain split to fit national analyses. The TAG took note of these two new MIKE sites.

The SSO for West Africa commented that in **Nigeria**, authorities had proposed Cross River National Park as a new MIKE site in replacement of the Sambissa MIKE site which had lost its elephant population in recent years. Yankari would be retained as Nigeria's second MIKE site. Moses Kofi San, who had visited Cross River National Park with the SSO, reported that the site had been assessed against the criteria. It was a large forest site adjacent to Korup National Park in Cameroon, with the possibility that elephants moved between Nigeria and Cameroon. The African elephant population was believed to be small (perhaps 100 animals) and a survey considered a high priority. Important gorilla and chimpanzee conservation efforts were ongoing in Cross River, and the infrastructure, Internet coverage and human resource capacity of the site all met the MIKE standards. The TAG agreed that Cross River National Park should replace Sambissa as one of the two MIKE sites in Nigeria.

The SSO for Southern Africa added that **Malawi** had expressed an interest in participating in the MIKE programme. Document TAG06 Doc. 12.3, outlining the criteria for adding new sites, had been provided to the Malawi Department of Wildlife, which was drafting a formal application to the MIKE CCU for the designation of one of its protected areas as its MIKE site.

- Item 5: Two actions were ongoing while two others were to be addressed during the current meeting.

Concerning funding for the MIKE programme until 2013 and beyond, the MIKE Coordinator indicated that the EU Commission seemed interested in providing further funding for MIKE in Africa, and that he had held talks with the EU Directorates of Environment (responsible for CITES policy coordination in the European Union) and Development (which support the MIKE Phase II project in Africa through EU funding for the African, Caribbean and Pacific Group of States).

With regard to the establishment and encouragement of quality standards for MIKE data, Ken Burnham expressed concern about the large number of carcasses for which the cause of death had been recorded as "unknown". He suggested that a quality control mechanism be applied for all information recorded in the field that entered the MIKE database. Iain Douglas-Hamilton agreed that quality controls and external crosschecks of field data were particularly important (in the case of Laikipia-Samburu, data that had been collected by the different stakeholders was then compared for veracity; but such a strict approach could not be applied in many other MIKE sites). It was remarked that for very old carcasses, it was often impossible to establish the exact cause of death. In this context, Holly Dublin and Anil Gore asked whether the SSOs, perhaps assisted by MIKE Site Officers, would be able to categorize or 'rate' the MIKE sites in terms of their overall quality in implementing the programme and meeting the MIKE site criteria, including the reliability of data produced by the MIKE sites. Such a performance evaluation would be for internal management purposes and analysis only, and not for the public domain. The MIKE CCU acknowledged that this could be a valuable exercise. Some TAG members were prepared to review the 'raw' MIKE field data in support of quality controls, but the MIKE CCU warned that this could cause delays in analyses because the TAG only meets once per year.

- Item 6: The MIKE CCU explained that the scientific journal PLOS Biology had been approached for publishing the results of the MIKE analysis of 2010, but that the editors had suggested a publication in PLOS One instead because the driving factors behind the trends in the illegal killing of elephant had not been defined. The MIKE CCU, together with the researchers from Reading University who had conducted the analysis, had written the manuscript for the publication and would be submitting it to PLOS One.

The action point on the establishment of a list of research questions related to PIKE had been implemented, but no input from TAG members had been received. The MIKE CCU reported

that the MIKE-ETIS Research Network, to which this action point was directed, was *de facto* not operational as TAG members had not responded to calls for engagement or participation. Relating to this, Anil Gore suggested that universities in elephant range States could be encouraged to undertake research activities that were relevant to MIKE and ETIS. Small grants would encourage such work. In his experience, one of the difficulties that academic experienced was getting in touch with field workers and obtaining reliable field data to analyze, and the MIKE programme could facilitate this.

- Item 8: The MIKE CCU explained that TRAFFIC had not yet undertaken the specific activities to enhance linkages between MIKE and ETIS that were called for in its contract with the CITES Secretariat. The coordination between the two programmes had focused on the MIKE and ETIS presentations for the 15<sup>th</sup> meeting of the Conference of the Parties (Doha, 2010; CoP15). The ETIS Director also reported on the publication of document CoP15 Inf. 53 which presented the ETIS data for the four African and two Asian subregions that are applied by MIKE. The joint workshop between the MIKE and ETIS TAGs during the current meeting (see agenda item 8) was expected to produce some meaningful progress in this area.

The MIKE CCU recalled that two actions under this item (undertake case studies on: Central Africa's elephants; the number of elephant killed in Africa; time lags between poaching incidents and seizures) had been listed for two consecutive TAG meetings but had failed to spark any interest from the MIKE-ETIS Research Network. It proposed to delete the action points. However, the TAG did not provide clear guidance in this regard. It was therefore assumed that the TAG wanted to maintain the case studies on a list of ETIS-MIKE research questions for reference purposes only.

With regard to the action point concerning opportunities to encourage labs to conduct research on DNA sourcing and ageing of ivory, the MIKE CCU explained that a relevant project was being implemented by the German CITES authorities. The MIKE CCU had invited the researchers to give a presentation at AEM3 (see relevant documents on the CITES website) and this had been positively welcomed by the African elephant range States with promises to collaborate in the collection of geo-referenced ivory samples. Simon Hedges and Holly Dublin commented that the relative merits of the various ivory identification techniques (DNA, isotopes,....) could be looked into by the TAG or be added to the list of ETIS-MIKE research questions. The ETIS Director and Iain Douglas-Hamilton suggested to independently replicate and test the techniques that the University of Washington (Dr. Wasser) had been experimenting with in an attempt to compose a DNA map of African elephants that could match ivory.

- Items 9, 11, 12, 14, 15 and 16: It was explained that the remaining uncompleted action points and progress on others would be discussed during the current meeting.
- Item 10: As the SARF workshop had not yet taken place, little progress could be reported on these action points.
- Item 17: The updating of the MIKE aerial survey standards had not taken place but Colin Craig had reviewed the standards and identified the sections that needed to be improved. The MIKE CCU was asked to remind him again to finalize the work. Iain Douglas-Hamilton and other TAG members recommended that all elephant population surveys be made available to the scientific world for critique and peer review, as well as for quality control. The MIKE CCU Data analyst suggested that what might be needed could be a decision tree to determine which elephant surveys met minimal MIKE standards. Simon Hedges noted that India had established a task force to look into the quality of the country's elephant surveys, which could be helpful in developing such a 'decision tree'.

## 5 Current and long-term objectives of MIKE ..... TAG9 Doc. 5

The MIKE CCU presented document TAG9 Doc. 5, which was subsequently discussed in great detail. The basis of the discussion was the outcome of the 3<sup>rd</sup> African elephant meeting (AEM3, Nairobi, November 2010) concerning the revision of Resolution Conf. 10.10 (Rev. CoP15), and more specifically the recommendations that the African elephant range States had made on future developments for MIKE and ETIS. These were summarized in the document in paragraph 11. Attention was also paid to the important mandates for MIKE that had emanated from CoP15.

Holly Dublin, who had co-chaired AEM3, summarized that the African elephant range States required ETIS for more frequent and better structured interactions at the national level; required a further integration of MIKE and ETIS with enhanced collaboration between the two systems; strongly supported broader MIKE capacity building activities; and wanted MIKE to become a tool that was more relevant for the local and national management of elephants. One of the specific concerns raised by the African elephant range States had been the lack of ownership and transparency in the production of the ETIS analysis for meetings of the Conference of the Parties. African elephant range States wished to review the analytical reports of both MIKE and ETIS before their submission to the CoP.

The ETIS Director expressed concern that peer review of the analytical reports of MIKE and ETIS had no precedence and that this could considerably delay the finalization of these reports, especially when the TAG had already done their part.

Iain Douglas-Hamilton suggested that members of the TAG should be invited to Subregional Steering Committee meetings to ensure that governments that participated in MIKE understood what the problems were that the analysis pinpointed. The MIKE Coordinator clarified that the Subregional Steering Committee meetings early in 2010 in the months preceding CoP15, had specifically been organized to allow African elephant range States to be fully informed about the MIKE analysis for CoP15. But he warned for adding comprehensive and potentially complicated additional rounds of reviews because these could seriously lengthen the process for completing the MIKE analysis, meaning that the analysis itself should start perhaps one or two years before the CoP and not look at recent data.

The TAG recommended that comments from elephant range States on the final MIKE analysis, i.e. which had been reviewed and approved by the TAG, be attached to the report of MIKE to meetings of the Conference of the Parties.

The MIKE Coordinator mentioned that the structural organization under which MIKE now operated probably needed to be reflected in a revision of Resolution Conf. 10.10 (Rev. CoP15). The MIKE Coordinator was requested to group the “wish list” of the range States (as listed in paragraph 11 mentioned above) into themes that could be more usefully discussed by the TAG.

The TAG noted that CoP15 had allocated considerably extended responsibilities to MIKE and ETIS. The TAG was also reminded of other outputs concerning elephants and CITES. The MIKE Coordinator reminded the TAG that in accordance with the existing annotations in Appendix II, the four African elephant range States with a populations in Appendix II were not supposed to submit proposal concerning trade in raw ivory from their populations until 2017 (CoP17 takes place in 2016). All other African elephant range States were allowed to submit such proposals, as had been the case for Tanzanian and Zambia at CoP15. TAG was also informed about the *African elephant action plan* which had been formalized in the sidelines on CoP15, the implementation of which was estimated to cost 100,000,000 USD for the first three years, while three donors had so far pledged 300,000 USD.

## Technical matters

### Analytical issues

- 6 MIKE analytical developments ..... TAG9 Doc. 6

The MIKE CCU introduced document TAG09 Doc. 6, in which its 8 subsections were separately introduced by the MIKE Data analyst and discussed, with explanatory interventions from Ken Burnham.

#### **a. On history of illegal killing, natural mortality and PIKE dilution problems**

The TAG agreed to the proposals suggested in paragraph 5 of document TAG09 Doc 6, and in particular on the desirability of using a multinomial approach in the analysis, but it was suggested that three categories of cause of death, namely legal, illegal and unknown, may be sufficient. The SSOs were instructed to assist in providing information on droughts and other events at the sites which could influence patterns of elephant mortality.

#### **b. On the problem of cause of death “unknown”**

The TAG reiterated that there was a continuing need to ensure improvements in data quality through training and adequate supervision. Efforts should be made to de-politicize poaching in some range States. Ken Burnham explained the possibility of finding a potential fix for the problem of “unknown” carcasses, namely by using an alternative form of PIKE which excludes “unknowns” from the PIKE denominator. This would be attempted in the upcoming analysis for SC61.

**c. On PIKE and the scale of poaching**

PIKE was noted to be a relative index, which does not give the scale of poaching, but it would be possible to weight models by the numbers of elephants at each site, thus giving a more reliable indicator of poaching scale. A weighting scheme was being developed. The TAG agreed that this would be worth exploring.

**d. On the effect of Law Enforcement effort on PIKE**

There seems to be no sites where complete effort data was available across all years in which MIKE has been implemented, and only a small number of sites that have any usable effort data. The time and number of people on patrols was suggested to be a proxy for effort.

**e. On PIKE trends and trends in covariates**

The TAG agreed to the desirability of using time-changing covariates in MIKE analyses, where these are available. It was noted that the ETIS analysis used CPI over time/year, but the MIKE Data analyst suggested that panel analysis, as used in econometric analyses could be used.

**f. On ‘influencing factors’ from the MIKE baseline analysis revisited**

The TAG agreed to the suggestions of revisiting the “influencing factors” of the MIKE baseline and their possible relationships with PIKE.

**g. On subregional trends in PIKE**

The TAG agreed that it would be desirable for the MIKE programme to derive PIKE trends at the subregional level along with global trends.

**h. On PIKE and local governance**

There was a need to explore the use of PAME indices as a measure for local government effectiveness.

Overall, the TAG supported the way forward suggested by the MIKE CCU under each of the 8 headings.

7 Data collection forms ..... TAG9 Doc. 7

The MIKE CCU introduced document TAG09 Doc.7, explaining that at a MIKE workshop on law enforcement and detection effort in November 2009, the minimum data requirements for a robust analysis of MIKE data had been identified. These should be translated into simpler and user-friendly MIKE data collection forms, recognizing the ones that are currently used are far too exhaustive and complex, leading to non-compliance by rangers.

The draft ZPWMA Patrol Data Form that had been produced for the application of MIST in Zimbabwe was given as an example of a greatly simplified reporting document. TAG members and SSOs gave specific recommendations on how to further streamline and improve this form (including: standard map datum issue of WGS 84 for consistency of data collection; include “unknown” option under column 2 page 2 on section regarding ‘illegally killed’; add 2 new columns for ‘illegally killed’ and ‘unknown’; add a field for killing ‘year if known’; add pictures). The TAG agreed that this simplification was an important step forward, and that the model forms should be adapted to meet the needs of individual sites.

8 Assessing factors influencing the illegal killing of elephants and the illegal trade in ivory in support of the development of analytical frameworks for MIKE and ETIS..... TAG9 Doc. 8

This agenda item took the form of a joint workshop for the MIKE and ETIS TAGs facilitated by Rob Malpas, starting in the afternoon of the second days of TAG9. Bob Burn gave an introductory presentation on the development of drivers of elephant poaching and the illicit trade in ivory. A conceptual framework of the chains of custody that were supposed to be involved in the ivory trade was presented for discussion. It was noted that each chain had its own either negative or positive drivers, which could be proximate, intermediate or ultimate in their effect. Elephant carcasses encountered, be it casualties from human wildlife conflict, natural mortality, accidents or poaching, had their own drivers. Bob Burn expected that modelling would establish the causal relationships between the various drivers. Data sources for the drivers were considered. Where such data did not exist, possible proxy/surrogates were identified. The TAG suggested to test whether the proxies correlated well with the desired variable. It was noted that the impact of legal trade in ivory on the illegal trade should also be considered.

During the workshop, each TAG member identified and ranked the 5 most important drivers under the following themes as identified by Rob Malpas:

- Abundance, age and sex structure of the elephant populations
- Number of illegally killed elephants
- Number and size of ivory shipment
- Amount of ivory consumed

During the second day of the workshop, the second level ranking of the 5 drivers identified by each participant was given. Four working groups identified the causal relationship between proximate, intermediate and ultimate drivers, which were presented and discussed in plenary.

Tom Miliken agreed to circulate the full report of the joint workshop to the MIKE and ETIS TAGs for further discussion at their next meetings.

9 Review of alternative methods for reliable elephant population surveys in large forested sites.....TAG9 Doc.9

The MIKE CCU presented document TAG09 Doc. 9, and gave a power point presentation based on work that it had commissioned from George Wittemyer to research possible alternative for the MIKE dung survey methods, developed by Simon Hedges and David Lawson, because these had proven to be impractical in large forest sites in Central Africa. In the course of his literature review, George Wittemyer learned that Simon Hedges and others were undertaking very similar research, but the outcome of that research would not be available in time for the TAG9 meeting. The presentation was therefore followed by a power point presentation from Simon Hedges, presenting his views on techniques to survey elephant populations in large forest sites.

The the options summarized by George Wittemyer included use of acoustic monitoring; refining of the dung decay rainfall model; use of unmanned vehicles or planes with mounted thermal imaging cameras; and a combination of existing transect/ occupancy/DNA identification techniques. The presentation by Simon Hedges focused on existing techniques already approved by the TAG, but also provided a brief summary of a technique currently under development for landscape-level (>20,000 km<sup>2</sup>) surveys. This method consists of occupancy surveys coupled with DNA-based mark recapture surveys at key sites within the landscape, and the analysis of both sources of data in a joint probability framework to yield population estimates at the landscape level.

The TAG members agreed that acoustic monitoring and the use of unmanned flying vehicles (for infrared tracking of elephants) should be shelved for the time being because the limitations of current sensor technology precludes its use in thick forest cover. The TAG also acknowledged that the currently endorsed methods are inappropriate for areas larger than 5,000 km<sup>2</sup>, and thus supported the need to develop practical techniques for larger areas. For areas larger than 20,000 km<sup>2</sup>, the TAG agreed it would need to wait until surveys using that method were completed before it could make a pronouncement. For areas between 5,000 and 20,000 km<sup>2</sup> the TAG felt that a refinement of the rainfall method merited further exploration.

10 Compiling and utilising data on illegal killing from a variety of unofficial sources and the potential for integration with MIKE TAG9 Doc. 10

The MIKE Coordinator introduced document TAG9 Doc. 10. The representative of the IUCN/SSC AfESG explained that the annex to document TAG9 Doc. 10 had been submitted for discussion at AEM3. The AfESG had suggested that data on elephant mortality from areas with continuous monitoring presence could be included in and enrich the MIKE sample. These areas could also benefit from using MIKE standards and MIST for data collection and monitoring. Information on elephant mortality from unofficial sources, such as media reports, expert networks and NGOs, could be considered to complement findings of MIKE analyses, recognizing that these data were biased and geographically unbalanced. The possibility of providing early warnings to site managers was hampered by the slow information flows between sites and more centralized places for broader dispatching, which in turn impeded fast responses. At AEM3, some African elephant range States had expressed some support for these ideas, but had cautioned that proper data verification by the range States remained of utmost importance.

Collin Craig felt that it would be very useful to collate opportunistic reports on poaching in a systematic, orderly fashion and to evaluate and insert such information in a database. While he felt that this would provide useful background, he thought that it would be difficult to integrate such data in the MIKE analysis as currently conceptualized. Ian Douglas-Hamilton supported this view, suggesting that what came out of this collation should be quantified while its reliability should be scored (e.g. similar poaching reports from multiple sources would be more trustworthy than 'one-off' information). The data sourced from this more or less systematic intelligence gathering could in any case be disseminated to the elephant range States, and countries should be encouraged to share intelligence information.

In the context of an 'early warning system', Simon Hedges encouraged the pro-active collection of intelligence from experts operating in sites or at regional levels, because they often simply knew what was going on and when things were getting out of hand. The annual reporting frequency helped MIKE to some extent to be more of an 'early warning' system, but its performance depended entirely on the quality and quantity of the data flows. The TAG recognized that 'early warning' through MIKE could happen if proper and frequent monitoring took place at the site level.

Anil Gore suggested ways to scale informal and formal sources of information, based on analysis of historical data and from known sources.

A task force was established to develop a way forward, comprising of Ian Douglas-Hamilton, Simon Hedges and Liz Bennett.

### Processes and procedural issues

#### 11 Validation of MIKE site sample..... TAG9 Doc. 11

The MIKE Data analyst introduced document TAG9 Doc 11. In response to a request from the TAG, the MIKE CCU had contracted Ken Burnham to construct a new statistical model through which the MIKE site sample could be validated. Ken Burnham explained that he was focusing on the "validation" of the MIKE sites, and not on the "representativeness" of the sites. His initial approach was to look at adding, not dropping sites.

In response, TAG members brought up various suggestions and questions: it might be useful to map elephant range, elephant densities and the location of the different sites; the over-representation of protected areas in the current site sample needs to be addressed; consider how to site-sample contiguous elephant ranges and handling an 'ecosystem' approach; provide definitions for 'sites' vs. elephant 'ranges'; address situations whereby much of the elephant killing is going on outside the formal MIKE site or the patrolled area; evaluate sites that are 'underperforming', are not generating MIKE data or are non-patrolled; elephants could move or become locally extinct, and the MIKE site selection should be able to keep track of these changes.

Ken Burnham pointed out that protected areas were indeed overrepresented in the current MIKE sample but that data from outside these areas (or indeed outside formal MIKE sites) could be used in statistical MIKE analyses as long as it was geo-referenced. 'MIKE sites' were those where data was collected from – therefore, sites should not be selected if no reasonable data collection or patrolling could be guaranteed. As such, MIKE sites did not correspond to elephant 'range'. He would try to develop a framework for extending or adding new MIKE sites, including the criteria that could be used. However, he fully recognized that elephant range States had to decide which

sites should be withheld as they were responsible for guaranteeing a sufficient level of the MIKE activities in these sites.

The TAG was of the view that scientific rigour in site selection and validation should not overly outweigh the preferences of the elephant range States themselves, as well as other practical or political considerations. Overall, ensuring that MIKE sites generated good data was considered more important than addressing the question of “representativeness”. The TAG recognized that local settings in the MIKE site sample changed anyway (and with it their “representativeness” of certain characteristics), and that the growing sample with which MIKE worked made it relatively easy to absorb the continuously changing conditions of the sites and satisfy the requirement of “representativeness”. The MIKE Coordinator confirmed that at AEM3, African elephant range States had unanimously expressed their clear desire to be actively involved in the selection of ‘their’ MIKE sites.

Ken Burnham would take account of these interventions and suggestions in preparing the document that he was writing on the subject.

## 12 Operation of MIKE in African and Asian subregions..... TAG9 Doc. 12

The four SSOs from Africa and one from Southeast Asia gave brief presentations on the activities undertaken since the previous TAG meeting, and highlighted the priorities for 2011 with emphasis on research and technical questions. The TAG felt that the time for discussing the presentations was too short and suggested that they be made early during meetings to enable members to have ample time for reflection and feedback. Commenting on the presentations collectively, a few specific issues were raised.

Elephant survey of the Mount Elgon site, Kenya: KWS rangers claimed that the site held some 260 elephants, which were so closely monitored as to be individually recognized. Simon Hedges nevertheless recommended that a DNA-based survey be undertaken to confirm this estimation.

MIKE in Equatorial Guinea and Mozambique: TAG members were informed that little or no progress has been made regarding the implementation of MIKE in these two African elephant range States, which both experienced major difficulties in complying with MIKE and general CITES obligations. The TAG did not formulate practical recommendations on how to handle these range States, as these operational matters were outside of its remit.

Inveneo computers: The SSOs from Africa reported ongoing problems with the Inveneo computers, particularly the poor quality of the monitors, which seemed to break easily, and the poor performance in terms of speed. The TAG took note of these concerns.

Monte Alén, Equatorial Guinea and Kahuzi Biega, DRC: These two sites were reported to be non-performing: no patrolling was taking place; MIKE data were not collected or received; and the usefulness of continuing to invest time and resources in maintaining these sites was questioned. The SSO asked the TAG what to do with sites like Monte Alén that are not producing data and what political implications it would have to eliminate such sites from the MIKE analysis. However, the TAG did not provide replies as these operational problems were outside of its remit.

Laos: The TAG was informed that Nam Phui was formally replaced by Nakai Nam Theun as the MIKE site for Laos. Nam Phui had been non-performing and had no baseline survey, no carcass data and no LEM data, whereas Nakai Nam Theun did have a baseline survey and WCS was implementing a law enforcement monitoring project, and so that site would be able to produce useable MIKE data in the coming years.

Thailand: The range State had requested MIKE for assistance in the preparation of CoP16 and effectively implementing MIKE. The TAG took note of this request.

## Research issues

## 13 Operation of the MIKE-ETIS research network ..... TAG9 Doc. 13

The MIKE Coordinator introduced document TAG09 Doc. 13. The 25 research questions for MIKE and ETIS that had been teased out at TAG7 were listed in the Annex to this document. For each, he clarified what had (or had not) happened to address the topic. He noted that the research TAG09 Summary minutes - p. 9

questions had served a useful purpose in helping the MIKE CCU to focus on certain activities and develop research contracts, but the list needed renewal and prioritization. He was concerned that the existing progress was largely due to the efforts of the MIKE CCU and related mainly to the research topics that it had put forward. The MIKE-ETIS Research Network had been established by the TAG in 2009 upon proposals from Bob Burn. Its members - i.e. all MIKE and ETIS TAG members - were supposed to take the lead in taking 'their' research questions forward but this had not happened. The Research Network had not generated interest from its proponent nor from the TAG, and had generally remained dysfunctional. With a single exception, none of the TAG member had submitted justifications for the research questions that they had tabled, although all had agreed to do so. The Coordinator suggested that in view of these experiences, the MIKE-ETIS Research Network be abandoned as far as MIKE was concerned (the ETIS TAG could decide what to do with 'its' research questions and the ETIS part of the Research Network envisaged by Bob Burn). He proposed to maintain a list of research questions that were pertinent to MIKE, and to actively promote this with research institutions on an *ad hoc* basis.

Several interventions followed these introductory remarks.

Holly Dublin commented that the overview of what had (not) been accomplished had been helpful, and suggested to distinguish between those questions that could be 'absorbed' by the ongoing developments of MIKE and ETIS, and research questions that should be addressed 'externally'. TAG members also suggested some new research topics they considered worth investigating. These included:

- DNA studies for pinpointing the origins of ivory (Iain Douglas-Hamilton);
- Community information networks and their applicability to elephant conservation (Anil Gore);
- Making MIKE and PIKE data available for national and local statistical analysis and identification of covariates (Anil Gore);
- Elephant meat trade research methodologies (AfESG)
- The use of PIKE for informing on ivory 'production' and 'capture' (Tom Milliken);
- How to collect and analyse ivory price information (Tom Milliken);
- Analytical scenarios for elephant carcasses labelled with an 'unknown' cause of death (Holly Dublin).

The MIKE CCU requested that each be complemented by a paragraph explaining and justifying the suggestion. The MIKE CCU took this opportunity to remind the TAG that of the 25 old research questions, all those that had not been formulated by the MIKE CCU still required basic justifications (i.e. those from TRAFFIC, Bob Burn, Simon Hedges, Colin Craig, Iain Douglas-Hamilton, Holly Dublin, Raman Sukumar, Anil Gore and Hugo Jachmann). It asked the members to submit a one-paragraph rationalization for their old or new proposals before the end of the meeting. All unsubstantiated research questions would be deleted from the list. The TAG agreed to this. One member managed to comply within the allocated timeframe, and one other provided the necessary information after the meeting. Consequently, the list of research questions shrunk considerably.

With regard to the dissemination of the remaining research questions, the TAG suggested to use NGO's, academic networks and online research networks. TAG members were urged to supervise and mentor university students in any of these topics. The MIKE CCU was advised to work with governments on the matter of clearing raw data, and requested to coordinate and animate the promotion of the research questions.

In conclusion, the TAG agreed: for the MIKE CCU to maintain an open, annotated list of research questions (with annotations to be provided by the proponents of the questions); for the MIKE CCU to lead in the dissemination of these research questions and provide updates on their implementation at regular meetings of the TAG; and to dispose of the MIKE part of the "MIKE-ETIS Research Network".

14 Collaboration with the IUCN/SSC AfESG and AsESG ..... TAG9 Doc. 14

The representative of the IUCN/SSC AfESG introduced document TAG9 Doc. 14, and provided updates on progress with the African elephant meat trade study, the provisional results of which had also been presented at AEM3. The participants were reminded that they were all invited to review the available case studies.

The MIKE CCU explained that the MIKE Phase II project for Africa had been extended until 31 December 2011, and that the contracts between the CITES Secretariat and IUCN and TRAFFIC concerning the implementation of this project were equally going to be extended until that date. Holly Dublin pointed out that future contractual arrangements between CITES and IUCN (for MIKE Phase III) would need to focus more on enhanced partnerships and synergies between the Secretariat's MIKE programme and IUCN. She expressed a wish to institutionalize the relationship between the IUCN/SSC AfESG and MIKE, noting that the Specialist Group's membership was generally very supportive of MIKE and ETIS.

As in previous meetings, Simon Hedges repeated that some important stakeholders in Asia, including members of the IUCN/SSC AsESG and WWF, remained largely opposed to MIKE. Regarding South Asia, basic MIKE data could perhaps be obtained from sites where MIST was being deployed.

The Coordinator noted that the global operation of MIKE, its scientific and technical evolution and meeting specific reporting requirements on elephants for CITES, would benefit greatly from strong support from both IUCN Elephant Specialist Groups.

**Conclusion of the meeting**

15 Any Other Business No document

The SSOs provided provisional dates for their respective Subregional Steering Committee meetings in 2011 as follows: Southern Africa: February; East Africa: March; West Africa: April-May; Southeast Asia: first half of the year; Central Africa: second half of the year.

No further business was raised.

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

The next TAG meeting was tentatively fixed for late May or early June. This timing would allow the TAG to review and comment on the analysis that the MIKE CCU was preparing for submission to the CITES Standing Committee at its 61<sup>st</sup> meeting, to be held from 15 to 19 August 2011 in Geneva. The deadline for submission of documents to be considered by the Standing Committee for this meeting was 15 June 2011 (60 days before its beginning). The timing would allow the MIKE CCU to incorporate comments and corrections as necessary.