**CITES MIKE PROGRAMME**

**MINUTES OF THE 5th TECHNICAL ADVISORY GROUP (TAG) MEETING**

**HELD IN NAIROBI, KENYA, ON THE 4th and 5th JULY 2006**

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| In Attendance : | Iain Douglas-Hamilton, TAG member for E. Africa<br>Colin Craig, TAG member for S. Africa<br>Moses Kofi-Sam, TAG member for W. Africa<br>Raman Sukumar, TAG member for S. Asia<br>Aster Li Zhang, TAG member for S.E. Asia<br>Holly T. Dublin, TAG Specialist member<br>Anil Gore, TAG Specialist member<br>Bob Burn, co-opted TAG member<br><br>Jim Armstrong, Deputy Secretary General, CITES<br>Nigel Hunter, MIKE Director and Chair of the Meeting<br>Edison Nuwamanya, MIKE Support Officer for E. Africa<br>Sebastien Luhunu, MIKE Support Officer for C. Africa<br>David Lawson, MIKE Support Office for Southeast Asia<br>Arun Venkataraman, MIKE Support Officer for South Asia |
| Absent with Apologies : | Sani Massalatchi, MIKE Support Officer for W. Africa<br>Hugo Jachmann, TAG Specialist member<br>Richard F. W. Barnes, TAG Specialist member<br>Kenneth P. Burnham, TAG Specialist member<br>Martin Tchamba, TAG member for C. Africa<br>Geoffrey Howard, IUCN EARO Programme Coordinator |
| Invitees: | Julian Blanc, AED Manager, AfESG |
| Rapporteur : | Linda Yeo, MIKE Programme Support |

## 1. Introduction of new TAG members and Agenda

The TAG noted that this meeting was convened by the Director as an extraordinary meeting to discuss and agree on the methods to the analysis of the MIKE baseline data required in line with the baseline definitions approved by the 49th meeting of the Standing Committee.

The meeting was also an opportunity for the CITES Secretariat to appraise the TAG on the new institutional arrangements for MIKE implementation under Phase II of the EC funding, and for the Director to highlight issues that would need TAG attention under Phase II.

The absence in apologies were noted. The newly appointed TAG members Professors Anil Gore and Aster Li Zhang were duly welcomed.

The agenda was adopted with the inclusion of the following items:

(i) Review of action items arising from the last TAG meeting held in November 2003;

(ii) Modifications to the MIKE Aerial Survey Standards; and

(iii) Outgoing MIKE Director's overview of the programme.

## 2. Baseline Methods

### 2.1 Deadline for baseline report

The first deadline for the report on the MIKE baseline is August 3, by which time this report must be ready for circulation in three languages. Since some sites would not be ready for inclusion in the first report, a second deadline of end September would be required for a revised report to be tabled at the Standing Committee meeting on October, 2 - 6.

### 2.2 Methodology for Analysis

Bob Burn of the University of Reading, Statistical Services Centre, gave a presentation on the *methods of analysis* of a test set of dataset from 9 East African sites as a vehicle for developing and testing the preliminary analysis methods for the complete dataset for all 45 sites and 18 sites in Africa and Asia respectively.

### 2.3 Methodology

For the present method of analysis, the TAG noted that a list of site characteristics have been compiled by the Director and SSOs which are referred to as *site attributes* or *influencing factors* to fulfill the requirement (c) of the baseline definition which asked for a descriptive report on the patterns of influencing factors. The fact that the scoring of these attributes were done by SSOs giving their 'expert judgment' should be explained carefully in the methodology section of the analysis and should be termed as *potential influencing factors*. There was a question if the subset array or whole array of *site attributes* should be used in the analysis.

As the number of *potential influencing factors* is large, the TAG noted that the grouping of these *site attributes* using an *a priori* thematic grouping of attributes or alternatively, a statistical approach such as *variable clustering* (Harrell, 2006; Sarle 1990) has yet to be decided. Mr Burn will provide feedback with an improved clustering analysis when the greater set of data is in hand. It was noted that negatively correlated attributes must be defined to the layman.

The TAG noted the test results of approaches for analyzing the factors influencing illegal killing using the patrol data sets. Poisson regression, accounting for over-dispersion, was used to model the numbers of carcasses found by patrols in each month. Then the proportion of carcasses that resulted from illegal killing was modelled, using logistic regression. In addition to LEM effort, other variables can be anticipated *a priori* to influence carcass counts such as *Area, elephant population density, Year*. And a table presenting these factors was agreed to be more meaningful for the report to the Standing Committee compared to a descriptive approach. It was emphasized by Mr Burn that the tentative conclusions were based on limited amount of data available at that stage. Further modelling approaches that would be

attempted when more data became available, were outlined by Mr Burn. Density of law enforcement staff was suggested by Dr Dublin as a factor to consider.

There was concern raised by Dr Douglas-Hamilton over anomalies in the analysis of patrol effort affecting mortality arising from the lack of spatial info of the patrol routes to verify if random sampling has been done within the site. The degree of motivation to find poached carcasses may differ if it is a routine patrol or a call-out or in response to intelligence reports. In Southeast Asia, for example patrols in Malaysia are always done on vehicle in response to a call-out, not on foot. Such attributes need to be captured spatially for proper analysis.

The TAG noted that although carcass ratios are specifically included in the MIKE aerial survey standards for the purpose of inclusion in the MIKE analytical model, it would not be feasible to include them in the preliminary baseline analysis at this stage as it would be restricted solely to savannah sites and could not be consistently applied throughout all sites, thereby possibly leading to confusion in the baseline analysis. Dr Dublin suggested that the carcass ratios should be extracted from the IUCN SSC African Elephant Database for future analytical purposes. [Action : MIKE Coordinator, Blanc]

The Deputy Secretary General (DSG) clarified that in the light that the baseline report is a preliminary analysis to fulfill a political process and not a technical process, it is best to keep it as straightforward as possible. It was important to see the analysis of the MIKE baseline data as a continuous work-in-progress due to the nature of the data collection.

The nature of the data required and methodology for analyses for the baseline was discussed at length. The issue of choice of effort measures will need to be revisited constantly as extensive data are analysed progressively. The quantum of datum required to obtain a model of analysis is an iterative process and feedback is required continuously from the domain experts to decide on the matter of forced inclusion or exclusion of variables.

## 2.4 Smoothing Models

The TAG reconvened the next day after Mr Burn had the opportunity to explore further his analytical modelling with additional data from the Eastern African sites. A model was presented that smoothes out noise in the data to yield an adjusted estimate of the proportion of illegally killed elephants. A similar approach at the individual patrol level should become possible in the future.

It was noted that, in certain sites, there is no correlation between levels of effort and carcass detection. This type of situation increasingly raises questions as to whether patrolling is the most appropriate method for detecting carcasses. The model also assumes that sampling will be consistent across sites, and this is probably an unrealistic assumption in many cases. It was suggested that multi-level modelling may be more appropriate and would be explored. It was noted that this analysis still would not answer Dr Douglas-Hamilton's concern over anomalies arising from lack of spatial information.

Following the discussions, it was agreed that when complete datasets become available to Mr. Burn, he would be in a better position to take into account the discussions and decide on a final analysis to be used and this would be circulated to the TAG via email for final review comments before presenting to the CITES Standing Committee in October. [Burn, TAG]

## 3. Update on MIKE Arrangements for Phase II

### 3.1 CITES Secretariat and UNEP arrangements

The DSG next gave a report on the funding status of the MIKE Programme and changes in the institutional arrangements of the MIKE Central Coordinating Unit (CCU) and Sub-regional Support Units (SSUs).

The MIKE programme's Phase I has been implemented from November 2001 to April 2004 with the principal assistance of EC funding. Subsequent to April 2004, the programme has carried on under bridging fund arrangements from various countries and the Secretariat's Trust Fund which has now ended on March 2006 when the new funding was approved by the EC for the next 5 years. During this interim period while waiting for the EC funding agreement to be signed, the CITES Secretariat has put together US$480,000 as interim funding to kick-start Phase II of MIKE implementation through till September 2006.

Under the new EC funding, the CCU will be accommodated within the offices of UNEP's Division of Environmental Conventions in Nairobi, Gigiri while full range of administrative and financial services will be provided by the Division of Administrative Services of UNON. The recruitment of a new MIKE Coordinator (L-5) and Data Analyst (L-3) is now underway and will be appointed by UNEP upon recommendations of the CITES Secretariat on a full time basis for the duration of the project. Two support staff (general service category) will be recruited by UNON.

### 3.2 IUCN and Subregional Support Unit (SSU) arrangements

The MIKE programme is an important CITES programme. Its implementation remains the responsibility of the CITES Standing Committee and the Secretariat through the MIKE Coordinator and the MIKE Subregional Support Officers (SSOs). The SSOs are located in six subregions (Central Africa, East Africa, Southern Africa, West Africa, South Asia, South East Asia) to oversee and coordinate the programme implementation under the auspices of range State Sub-regional Steering Committees.

The negotiation for an overarching MoU is currently underway between the CITES Secretariat and the IUCN – World Conservation Union for the latter to assist with the placement and logistical support for the SSUs to be located in their regional offices in the six subregions throughout Africa and Asia.

The SSOs will be contracted by IUCN and placed within the line management and supervision of the MIKE Coordinator. In line with the recent EC evaluation report, both the Central and West Africa SSUs shall be staffed by two SSOs, to sustain an adequate frequency of site visits. In addition, it will be necessary to provide some administrative and financial management support to each SSU. Where the IUCN has no regional office as in the case of Asia where their only office is in Bangkok, there will be an agreement with their Regional Director to have an outpost for the placement of the SSU.

The IUCN which has enjoyed the participation and benefit of being involved in the MIKE process in Africa and will now do the same for Asia, not only see the MIKE programme as a technically proficient programme which enhances the understanding of elephants in both continents, but also as adaptable to other species in which IUCN is engaged. The close relationship currently enjoyed between the MIKE programme and the IUCN SSC Elephant Specialist Groups should also continue.

## 3.3 TAG Programme

Under the terms of appointment, the TAG noted that their nomination will be renewed for a further 2 years commencing January 2006 to January 2008. The TAG gave thanks to Dr Richard Barnes who retired from the TAG to concentrate on his family. Any nomination for Dr Barnes' replacement would be made to the CITES Sub-group for confirmation.

Under the new EC funding, one of the main activities is that the TAG shall meet on a regular basis every 6 months and to undertake work in between meetings in regards to the following ongoing issues. The TAG programme outlined below would be handed over to the new MIKE Coordinator and be given emphasis as initial activities under the new funding phase. The Director recommended that the use of task forces/working groups as subsets of the TAG be considered for handling these issues.

### 1. Measuring Effort and Alternative Carcass Detection Methods

The experience to date suggests that the reliance on patrols as a carcass detection method only suits some site circumstances. Patrols in forest situations are a case in point where detection is very limited. Some sites don't undertake any patrols. It is clear there is need to develop alternative carcass detection methods that can be used in non-patrol situations or biased patrol situations. These alternative methods would still require a measure of effort to be calculated, but how best to achieve that measure was still very uncertain. It would therefore be important for the TAG to address these two related issues. It was suggested that MIKE should touch base with the Rhino Specialist Group (Tony Conway) for a cross fertilization of ideas and techniques to yield fresh insights on the effort to measure effort in non-patrol situations. [Action – MIKE Coordinator]

### 2. Evolving Population Surveys

The evolution of population survey methodologies suitable to the Asian MIKE sites will continue to be a priority. In this regard, recent surveys were conducted in India which compares ground sample approaches (traditionally used in India) with new methodologies such as Dung Count line transect methods. The results need to be reviewed by the TAG. In this regard a report is being compiled [Action : Venkataraman]. In areas of low elephant density/numbers, the use of the DNA dung surveys is seen as increasingly relevant.

It is possible that survey standards for DNA dung survey analysis may need to be developed. A protocol for collecting and processing dung samples is under discussion with Ken Burnham (TAG member), Lori Eggert of the Smithsonian Institute and others trialing such work in S.E. Asia in particular. It will be important to include relevant persons in other sub-regions, e.g. Dr S. Nyakaana at the Makerere University Institute of Environment and Natural Resources in Uganda [Action – MIKE Coordinator]

### 3. Understanding Population Dynamics

Detecting carcasses did not in itself assist estimating the extent of illegal killing as part of the total mortality. Knowing something about the birth/death dynamics in any given population would help provide a context for a possible assessment of the scale involved. Several members

of the TAG felt that such information had been published and that the starting point should be a literature search

4. Early Warning Mechanisms

Whilst the MIKE programme was intended to help relate illegal killing to factors influencing such an activity, there was general agreement that it would add value to MIKE If it could use its monitoring routines to provide an early warning system, as the earlier any surge in illegal killing could be highlighted the better. The following suggestions were provided as some measures that could be useful in any early warning system:

- Feedback from ETIS on trade dynamics
- Aerial Survey carcass ratios >7%
- Increase in proportion of recent to old carcasses
- Decrease in male to female ratios
- Increase in proportion of illegally killed carcasses
- Influx of new elephants into sites
- Changes in distribution patterns
- Disappearance of known individuals where Individual registration exists

5. Standard Analytical and Reporting Framework

It was a strong recommendation of the 2004 MIKE evaluation report that a standard analytical and reporting framework still needed to be developed. That recommendation has been incorporated into the new EC funding in order to facilitate achieving such a framework, that would then allow MIKE information to be produced on an annual basis, at different geographical levels. In this context, the baseline requirement should be seen as a starting point, but nevertheless still useful in suggesting gaps, biases and improvements.

It was also recognized that introducing a spatial dimension to the reporting was very important. On the linkage between the MIKE database and ArcGIS, the Director reported that the software for this has been developed by a GIS specialist for both the English and French version of the database. The software automates the link and creates a geodatabase in ArcGIS containing the following layers: patrol waypoints, patrol route, illegal activities observed by patrols and carcasses (patrol and non-patrol). The patrol route is created by connecting patrol waypoints. However, the linkage has encountered problems in the French version and the lack of funding during the bridging period has not made it possible to smooth out the other technical glitches. It is envisaged that the obstacles to the integration of the MIKE database to ArcGIS9 would be resolved under the new funding phase and its eventual completion would allow for displaying of patrol data and patrol routes, carcass locations (patrol and non-patrol), measurement of patrol effort spatially and the spatial analysis of covariates to support spatial modelling of population survey and LEM data.

It would also be important to consider how to improve and maintain quality control of the data and its analysis. As part of this process, reviewing the data being collected, monitoring protocols, etc. would reveal what was essential and what could be dropped. Any simplification tended to improve quality control. It was re-inforced that the MIKE Data C-ordinator would benefit from having a working Group to support the data quality processes.

The above TAG programme would be handed over to the new MIKE Coordinator and be given emphasis as initial activities under the new phase.

## 4. Any Other Business

### 4.1 Aerial Survey Standards

Dr Craig requested agreement for a couple of editorial changes to the MIKE aerial survey standards. This was agreed and the revised version would be submitted to the Director, so that he could arrange the replacement of the current version on the MIKE website. [Action : Craig, Hunter]

### 4.2 Matters Arising

Noting that this meeting was an extraordinary TAG meeting to consider the baseline approach, nevertheless, the TAG took the opportunity to go through the list of action items arising out of the last TAG meeting held in December 2003. The Chair noted that some of the action items would have been dealt with under the main agenda.

4.2.1 Survey Effort & Power

The Director will restart his liaison with TAG members on the preparation of a draft statement clarifying the relationship of power, effort, covariance and time for consideration by the TAG. [Action : Hunter, Burn, Sukumar, Craig, Gore]

4.2.2 Measuring Information Network Effort

It was recommended at previous TAG meetings that further research was needed on the use of proxy measures of information network effort for capturing information in sites where routine patrols are not active. It was recommended that the research on proxy measures by Dr Douglas-Hamilton be continued and that a paper be tabled in time for deliberation under the TAG programme as outlined above. [Action : Douglas-Hamilton]

4.2.3 Digital mapping of MIKE sites

The Director reported that the aim to complete the digital mapping of all MIKE sites in Africa, and clarification of boundaries of sites had been achieved.

4.2.4 MIKE and ETIS Sub-TAGs

The Director would follow-up on the exact scope of the terms ‘co-opted’ and ‘ex-officio’ TAG members. [Action : Hunter]

The CVs of the new TAG members, Gore, Bennett and Zhang would be circulated to the TAG for information. [Action : Yeo]

4.2.5 Early Warning Indicators from Carcass Data

This action should be picked up under the TAG programme outlined above.

4.2.6 Measuring LEM Effort

This action should be picked up under the TAG programme outlined above.

4.2.7 Genstat 6.0/7

Burn gave his feedback on statistical extensions to Genstat and linkages to programmes such as DISTANCE, ArcGIS and ArcView 9 series. Genstat were already considering the linkage to the DISTANCE, and would ideally like to take on board the linkage to ArcGIS but this is a huge undertaking for the firm. There are statistical extensions done to Genstat 8 pertaining to ecological diversity/habitats.

4.2.8 Population survey approaches

Dung Count Survey Manual

The manual has been completed and approved by TAG. The current document still needs to be broken down into a standards document and a training manual.

Retrospective estimation of Dung Decay rates

There was discussion on the Retrospective estimation of Dung Decay rates (Laing, *et al.*2003) which aims to derive animal density from dung density through an estimation of the mean time to decay of dung piles present at the time of the survey. This model has been prescribed in the MIKE Dung Survey Standards and put to use in the forest surveys in West Africa and is currently being conducted in Southeast Asia at the Malaysian MIKE sites.

However, the approach had not yet been included in the Central African forest surveys.

The Director reported his discussions with Wildlife Conservation Society (WCS) on the way forward for conducting future forest surveys in Central Africa under the new funding phase. It was agreed that a planning meeting between MIKE SSO and WCS would be targeted around October 2006 to obtain a coherent survey plan, including the consistent use of the retrospective method.

Under the new funding phase, as far as MIKE funded forest surveys goes, the plan is to have Central and West Africa to appoint a second SSO who will have forest survey experience. The Wildlife Directors of Central Africa have been asked to consider the long term institutional sustainability issues for forest surveys and whilst this has huge implication on the funding, it was agreed that forest surveys and coordination will be beefed up as a capacity building measure at the wildlife division level, possibly contributing to a sub-regional level of field teams, instead of being led by NGOs. Where possible, the MIKE SSU for Central Africa will assist in hosting the survey planning meeting and run the forest surveys in both Central and West African subregions with technical assistance from the WCS. [MIKE Coordinator, SSOs]

Classification of MIKE sites (Population/Area) in SEA

This was ongoing awaiting the results of current survey work.

Prof Sukumar flagged that for the purpose of analysis, ecologically speaking, there are only 9 sites in South Asia instead of 10 in view of the fact that it is the same elephant population share the habitats in Wayanad and Mysore. However other influencing

factors could vary as the two sites, whilst adjacent, had different administrative regimes

4.2.9 New Technology

The MIKE Coordinator will have to initiate a new mechanism to keep the TAG abreast of new technologies and evaluate their usefulness to the programme's monitoring aims.

Discussion on the Ivory detectors using electro-magnetic field took place and it was decided that MIKE should liaise with TRAFFIC re contacting the British firm as a next step to see if any synergy could be made between the ETIS monitoring aims and this new technology. [MIKE Coordinator]

4.2.10 MIKE Forms

The existing Carcass forms have been revisited and revisions for improvement of data on elephant mortality and HEC factors have been adopted.

## 5.0 Way Forward for MIKE

The TAG members who acknowledge that this would be the last meeting convened and presided by the current Director invited him to give the members the benefit of his vision for the way forward for the programme in the next phase based on his experience in steering the MIKE implementation, since its initiation in November 2001 and having regard to the difficult past 2 years' bridging fund period.

The Director began by suggesting that the programme, given time and resources, will prove its worth, but felt there was a need to broaden its scope to other species, so that the monitoring would be relevant to a wider audience. It was encouraging that their was real evidence of continued growing support for the MIKE approach. Given some of the suspicion and antagonism about the programme in the early days, MIKE has slowly gained institutional support from range States and other conservation entities. For instance WCS Thailand uses the MIKE programme training manual modules in their in-country programme activities. They have also requested the MIKE database to be widened to include other species for monitoring. Increasingly, requests have been made to apply the same survey and law enforcement monitoring work in non-MIKE sites. Project Elephant in India has thrown its support behind the MIKE programme and similar programmes such as Project Tiger has approached the MIKE SSO for South Asia to see if the methodology on survey and law enforcement monitoring work would work on their tiger monitoring sites.

That said, it was disappointing that the bridging fund period lasted for 2 years. This has caused the programme to lose its momentum in the capacity building activities that have been built up on the MIKE sites in the first 3 years. It has also impacted on the related activities such as the TAG work. However it was a pleasant surprise that despite this severe curtailing in SSO support and site visits, Much of the monitoring routines had kept going.

The high turnover of staff at the MIKE sites continues to plague the training and motivation level of the officials participating in the MIKE monitoring programme. It is therefore necessary to get the MIKE training module embedded in the regular staff training programmes of the wildlife divisions. Other problems such as computer management and data flow from site to national officers and then to SSOs continue to present their difficulties. The ability to provide

analytical tools at site levels and quality control of data collection will continue to improve the motivation of site officers and flow of data. The lack of the Data Analyst/Coordinator has also hampered the MIKE analytical process, however the imminent recruitment of this position will benefit the programme and allow for a stronger interaction by the TAG in the analytical process. Technically MIKE has had a sound start, but the emerging experience has highlighted the need to have a wider array of technical approaches as highlighted above.

There is a need to strive for a quicker pace for elephant population census in the sub-regions, if the 2-3 year cycle of surveys is to be achieved. The funding for population surveys is the biggest institutional issue as few wildlife departments have their own survey units, particularly in Central and West Africa. There needs to be a way to build these regular surveys into their recurrent budgets. However the next 5 years should see MIKE data collection operate as a routine undertaken by the wildlife departments and constantly reiterated as a departmental process.

The costs of maintaining the MIKE CCU and SSUs will be a challenge for the CITES Secretariat. The Secretariat needs to get, if at all possible, the CCU and SSU staff embedded as part of the Secretariat and covered by contributions from the parties. The parties would feel more inclined to provide this support if the programme was not restricted to elephants

Putting aside CoP decisions on trade, the MIKE data which is being collected is of value, irrespective of CITES. The information will help site managers and country departments to better manage their elephant populations. This is understood and appreciated by most range States, though the Director still has the perception that some Southern African countries see MIKE as part of an imposed condition, rather than having value in its own right. MIKE would definitely benefit in being given a 2 -3 year period of time to produce reports and analysis under its own initiative rather than being driven as a condition of a sale

The Director feels that the current institutional arrangement has been good but there would be a need by the Secretariat to monitor the effectiveness of the CCU within the UNEP system that was now being introduced as a change. The new MIKE Coordinator should endeavour to strengthen the relationship and commitment of the various Sub-regional Steering Committees to the MIKE programme, and to get them involved through their regional representatives in the reporting of MIKE progress to the CITES Standing Committee.

Whilst MIKE was now reasonably well funded for the next 5 years, the funding situation in Asia was much more fragile, particularly S.E. Asia. That said, India was in the strongest position to continue with MIKE without external support, having already made significant contributions from their own resources.

In conclusion, the Director hoped that he was leaving at atime when MIKE does have a foundation that can be built on. He thought it was also good to have a new CCU team with fresh energy and different strengths and weaknesses. However he wanted to end by giving real credit to the unstinting support and loyalty of the SSOs and MIKE staff over the difficult two year bridging fund period.

The DSG as well as the TAG members gave a vote of thanks to the Director for his leadership and fair-minded qualities. He has skillfully guided what is an operational programme under the CITES Convention for the first time, with the depth and given the programme the strength to alleviate the initial skepticism that was present at the start of its implementation. They support the call for MIKE to evolve into a wider context and wish him the very best in his retirement.

**ABBREVIATIONS**

| | |
|---|---|
| CCU | Central Coordinating Unit |
| CoP | Conference of the Parties of CITES |
| DSG | Deputy Secretary-General |
| EC | European Community |
| ETIS | Elephant Trade Information System |
| LEM | Law enforcement monitoring |
| SSO(s) | Sub-regional Support Officer(s) |
| SSU(s) | Sub-regional Support Unit(s) |
| TAG | Technical Advisory Group |

**Action Plan**
**(on issues relating to TAG meeting, Nairobi, 4 – 5 July 2006)**

| Action Points | | Action By |
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| **2.0 Baseline Report** | | |
| 2.3 | Carcass Ratios<br>Carcass ratios to be extracted from the IUCN SSC African Elephant Database for future analytical purposes. | MIKE Coordinator, Blanc |
| **3.0 Update on MIKE Arrangements for Phase II** | | |
| 3.3.1 | Measuring Effort and Alternative Carcass Detection Methods<br>It was suggested that MIKE should touch base with the Rhino Specialist Group (Tony Conway) for a cross fertilization of ideas and techniques to yield fresh insights on the effort to measure effort in non-patrol situations. | MIKE Coordinator |
| 3.3.2 | Evolving Population Surveys<br>Develop protocol for collecting and processing dung samples with institutions such as Smithsonian Institute and other sub-regional institutes such as Makerere University Institute of Environment and Natural Resources in Uganda | MIKE Coordinator |
| 3.3.5 | Standard Analytical and Reporting Framework<br>Set up a Working Group to support the improvement and maintenance of quality control of the data and its analysis. | MIKE Coordinator |
| **4.0 Any Other Business** | | |
| 4.1 | Aerial Survey Standards<br>Editorial changes by Dr Craig to the MIKE aerial survey standards to be submitted to Director for replacement of current version on the MIKE website. | Craig, Hunter |
| 4.2.1 | Survey Effort &Power<br>The Director to restart his liaison with TAG members on the preparation of a draft statement clarifying the relationship of power, effort, covariance and time for consideration by the TAG | Hunter, Burn, Sukumar, Craig, Gore |
| 4.2.2 | Measuring Information Network Effort<br>The research on proxy measures by Dr Douglas-Hamilton be continued and that a paper be tabled in time for deliberation for the TAG. | Douglas-Hamilton |
| 4.2.4 | MIKE and ETIS Sub-TAGs<br>Director to follow up on the exact scope of the terms 'co-opted' and 'ex-officio' TAG members. | Hunter |
| 4.2.9 | New Technology<br>MIKE Coordinator to initiate a new mechanism to keep the TAG abreast of new technologies and evaluate their usefulness to the programme's monitoring aims. | MIKECoordinator |