



THE PROGRAMME AGAINST AFRICAN TRYPANOSOMIASIS

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12th MEETING OF THE PROGRAMME COMMITTEE

REPORT

Antwerp, Belgium

8-9 May 2008

**Food and Agriculture Organization of the United Nations
African Union / Inter-African Bureau for Animal Resources
International Atomic Energy Agency of the United Nations
World Health Organization of the United Nations**

Acronyms

AAT	Animal African Trypanosomiasis
AfDB	African Development Bank
AFRA	African Regional Co-operative Agreement for Research, Development and Training related to nuclear science and technology
AW-IPM	Area-Wide Insect Pest Management
AU	African Union
CATT	Card Agglutination Test for Trypanosomiasis
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CIRDES	Centre International de Recherche-Développement sur l'Élevage en Zone Subhumide
COCTU	Coordinating Office for the Control of Trypanosomiasis in Uganda
CRP	Coordinated Research Projects
DB	Data Base
FAO	Food and Agriculture Organization of the United Nations
FAO/IAEA	Joint FAO/IAEA Division of Nuclear Applications in Food and Agriculture
GEF	Global Environment Facility
GIS	Geographic Information System
GPS	Global Positioning System
HAT	Human African Trypanosomiasis
IAEA	International Atomic Energy Agency
ICIPE	International Centre of Insect Physiology and Ecology
IFAD	International Fund for Agricultural Development
IFAH	International Federation for Animal Health
IGAD-LPI	Inter-Governmental Authority on Development-Livestock Policy Initiative
IRD	Institut de recherche pour le développement
ISCTRC	International Scientific Council for Trypanosomiasis Research and Control
ITM	Institute of Tropical Medicine
ILRI	International Livestock Research Institute
LPS	Livestock-oriented production systems
m-AECT	mini-anion-exchange centrifugation technique
MoU	Memorandum of Understanding
OIE	World organisation for animal health
PAAT	Programme against African Trypanosomiasis
PAAT-PC	Programme against African Trypanosomiasis-Programme Committee
PAG	PAAT Advisory Group Coordinators
PATTEC	Pan-African Tsetse and Trypanosomiasis Eradication Campaign
PPLPI	Pro-Poor Livestock Policy Initiative
RDC	Regional Designated Centres
QC/QA	Quality Control/Quality Assurance
SADC	Southern Africa Development Community
SAT	Sequential Aerosol Technique
SIT	Sterile Insect Technique
STEP	Southern Rift Valley Tsetse Eradication Project
TCP	Technical cooperation project
T&T	Tsetse and Trypanosomiasis
UEMOA	Union Economique et Monétaire Ouest Africaine
UNIDO	United Nations Industrial Development Organization
UNTFHS	United Nations Trust Fund for Human Security
WHO	World Health Organization

Foreword

The twelfth meeting of the Programme against African Trypanosomiasis (PAAT) Programme Committee (PC) was convened at Prince Leopold Institute of Tropical Medicine (ITM), Antwerp, Belgium, 8-9 May 2008. The meeting focused on (i) achievements of PAAT mandated organizations (i.e. Food and Agriculture Organization of the United Nations (FAO), African Union / Inter-African Bureau for Animal Resources of the Organization for African Unity (AU-IBAR), International Atomic Energy Agency of the United Nations (IAEA), World Health Organization of the United Nations (WHO)) and AU - Pan-African Tsetse and Trypanosomiasis Eradication Campaign (PATTEC), (ii) implementation of the African Development Bank (AfDB)-PATTEC supported tsetse and trypanosomiasis (T&T) interventions in six sub-Saharan countries (Burkina Faso, Ghana, Mali in West Africa and Ethiopia, Kenya, Uganda in East Africa).

Mr Raffaele Mattioli, convenor of the meeting, introduced Mr Stanny Geerts who, on behalf of the director of ITM, Mr Bruno Gryseels, welcomed the participants to Antwerp and opened the meeting.

Mr A.A. Ilemobade, PAAT Chairperson, joined Mr Geerts to welcome the participants. Mr Ilemobade mentioned the main issues of the meeting, including the progress of the ongoing AfDB-supported projects against T&T in six countries in East and West Africa, the PAAT Information System (PAAT-IS) and the issue of networking, the new developments and challenges ahead of International Trypanotolerance Centre (ITC) in The Gambia and the role of PAAT in the context of food security. On this last subject, PAAT Chairperson stressed the concern that surrounds the issue of food security throughout the world today. Various causes, among which climate change, have brought rising food costs and food shortages in many countries, especially poor African countries, thus aggravating the poverty situation. The presence of T&T has been a long-standing cause of food insecurity, which African Heads of State and Governments acknowledged in their resolution of 2001. With climate change, the situation is becoming increasingly grave. It is the goal of PAAT and of all PAAT stakeholders to ensure that this is minimized by sensible and concerted action. Mr Ilemobade finally emphasized how efforts are being made to maximize the impact of PAAT activities on the Millennium Development Goals (MDG).

Apologies were received from Ms Pamela Olet from Kenya and Mr Charles Mahama from Ghana who could not attend the meeting.

The meeting was chaired by Mr A.A. Ilemobade. FAO provided secretarial assistance. The meeting's Agenda and list of participants are included in the annexes. Representatives of the private sector were present in order to facilitate solution of issues related to field operations.

1. MINUTES OF THE LAST MEETING

- 1.1. The report and recommendations of the 11th PAAT-PC meeting were taken as read and, after further deliberation, adopted.

2. SUMMARY OF THE 12th PAAT-PROGRAMME COMMITTEE MEETING OUTCOMES

- 2.1. Representatives of FAO, IAEA, WHO and AU-IBAR reported on progress, priorities and planned activities.
- 2.2. **FAO/PAAT – R.C. Mattioli**

FAO/PAAT activities and progress in the implementation of recommendations since the 11th PAAT-PC meeting were presented.

As regards coordination of the AfDB-funded projects, FAO/PAAT participated in the “Regional meeting of National Coordinators”, convened by IAEA, July 2007. The meeting acknowledged the role of PAAT and its Information System (PAAT-IS) in creating, harmonizing and sharing technical and scientific knowledge within the community of people concerned with T&T. More details on the latest developments of the PAAT-IS are given in section 2.6.

FAO/PAAT announced the signing of the Memorandum of Understanding (MoU) between FAO and the International Federation for Animal Health (IFAH) on Quality Control/Quality Assurance (QC/QA) of trypanocides. FAO committed itself to enlarge the MoU to anthelmintic, antibiotics, insecticides and acaricides. FAO approached the World organisation for animal health (OIE) and the *Union Economique et Monétaire Ouest Africaine* (UEMOA) to stimulate interest in this FAO-IFAH initiative and partnership.

In the field of capacity building, training has been provided to staff of the Southern Rift Valley Tsetse Eradication Project in Ethiopia (STEP) within the framework of the Ethiopian Government IAEA/FAO joint project GCP/ETH/072/UNJ (funded by the United Nations Trust Fund for Human Security (UNTFHS)/Japanese Government). Furthermore, in March 2008 experts met at the Joint FAO/IAEA Division to elaborate detailed programme of a Geographic Information Systems (GIS) training course for tsetse control personnel. The foreseen period to hold the course is the first quarter of 2009. Lastly, FAO/IAEA joint Division continues to provide regular training in tsetse mass rearing and matters related to the Sterile Insect Technique (SIT).

2.3. Progress report from AU-IBAR – Ahmed el Sawalhy

Mr Ahmed el Sawalhy reminded participants of the mandate of the AU-IBAR, whose activities focus on the component of animal resources with a view towards freeing Africa from hunger and poverty by 2015.

The International Scientific Council for Trypanosomiasis Research and Control (ISCTRC) is IBAR’s statutory organ that focuses on African trypanosomiasis. IBAR’s representative reported on the outcomes of the 32nd Executive

Committee and the 29th Conference of ISCTRC that were held in Angola, Luanda, on 30 September and 1-5 October respectively. 105 papers were accepted and included in the programme of the conference, which was attended by over 200 participants, coming from 27 out of 37 T&T affected countries, as well as from non-African countries. Fifteen international institutions were also represented.

The Executive Committee appointed six new regional country members and included one representative of the AfDB for the first time. The main issues discussed were the institutionalization and legal status of ISCTRC, implementation of the Consultancy report on the Strengthening of the Council and the possibility of raising funds from membership and sponsorship of the private sector. The Committee also resolved to address the difficulties faced by ITC in the Gambia by strengthening it as a regional institution.

Proposed future activities of the ISCTRC Secretariat include (i) announcement of the date of the 33rd Executive Committee meeting to be held immediately after the PAAT PAG meeting (ii) promotion of the events for the 60th anniversary of ISCTRC to be held in Addis Ababa in 2009 (iii) re-introduction of training of middle level manpower for T&T control (iv) initiation of a workshop of research institutions and field workers to review current control tools and identify gaps in knowledge (v) development of a medium and long term strategic plan for ISCTRC following the review by PAAT Chairperson.

2.4. **Progress report from IAEA – U. Feldmann**

The Agency contributes to international efforts against T&T with three major mechanisms: a) assistance to ‘normative’ activities; b) research and methods development; and c) technical cooperation.

Guidelines aimed at standardizing and harmonizing methodologies and procedures were presented. (i) Standard operating procedures for mass-rearing of tsetse flies (ii) FAO/IAEA Guidelines for the collection of entomological baseline data for tsetse Area-Wide Integrated Pest Management (AW-IPM) (iii) Guidelines to assessing the feasibility of creating T&T-free zones (iv) Guidelines for declaring areas free of tsetse flies and tsetse-transmitted animal trypanosomiasis.

In-house research is carried out at the FAO/IAEA Laboratory in Seibersdorf, focusing on (i) Automated sexing of late-stage tsetse pupae (near infra-red scanning) (ii) Alternatives to use of gamma rays for blood diet decontamination (UV irradiation) (iii) alternatives to the use of gamma irradiation for reproductive sterilisation of male tsetse for use in SIT Operations (a Prototype X-ray machine is under testing to develop standards) (iv) Semi-automated holding and feeding of in tsetse mass-production. Research is also carried out through Coordinated Research Projects (CRPs). Three CRPs relevant to the T&T problem are currently in progress: (i) Improved and harmonized quality control for expanded tsetse production, sterilization and field application; (ii) Improving SIT for tsetse flies through research on their symbionts and pathogens; (iii) Applying GIS and population genetics for managing livestock insect pests.

At present, Joint FAO/IAEA Division is active in one regional Technical Cooperation Project (TCP) and 7 national TCPs, namely in Ethiopia, Botswana, Burkina Faso, Kenya, Mali, Senegal, South Africa, Uganda, United Republic of Tanzania. Within these TCPs, FAO/IAEA focuses on the SIT package and strictly adheres to a phased, conditional approach.

The meeting was also informed about the uncertain fate of the Joint FAO/IAEA Division, resulting from a recommendation of the Independent External Evaluation (IEE) of FAO, stating that FAO should “cease to resource this joint work”. This may affect the Agency’s T&T research and methods development and technical backstopping of tsetse Technical Cooperation projects in Member States.

2.5. Progress report from WHO – P. Simarro

WHO reported on human African trypanosomiasis (HAT) surveillance and control programme.

WHO provides support to affected countries in relation to diagnosis and treatment, logistic support and capacity building. In 2007, 260 staff have been trained on diagnosis and treatment; over 2 million ‘Card Agglutination Test for Trypanosomiasis’ (CATT) reagents and accessories have been distributed in collaboration with ITM, as well as 2 000 m-AECT (mini-anion-exchange centrifugation technique) for diagnosis. Approximately 100 000 vials of drugs for treatment have distributed from warehouse to patient. Fourteen countries have received support for outreach activities. WHO stressed that the number of new cases of HAT reported has continued to decrease also in the last years, reaching the lower value of the last ten years.

In collaboration with other partners, WHO has set up a project to clarify the status of trypanosomiasis in Swaziland. HAT is listed in WHO records to be endemic in Swaziland but no cases have been reported in decades. Preliminary results show that the entomological data collection has detected *Glossina austeni* in the Northern East part of the country near the Mozambique border.

In collaboration with the AfDB-funded project in Ghana, WHO carried out an HAT survey in the Upper West Region. Within this project 32 health staff have been trained, including clinicians and laboratory technicians, technical assistance has been provided by 2 HAT experts, logistic support has been given through the provision of diagnostic reagents, equipment, vehicles, fuel, etc. Forty villages have been studied and over 10 000 people tested. No cases have been detected.

In the framework of PAAT, WHO and FAO are also active in the mapping of HAT. Field data collated by WHO from HAT National control programmes, Non-Governmental Organizations (NGOs) and historical files are being harmonized and entered in a geographical database with a view towards updating disease distribution maps, estimates of population at risk and burden of the disease. More information on this activity is in section 2.7.

2.6. **Developments of the PAAT Information System – G. Cecchi**

Activities, studies and publications of the PAAT-IS were presented by Mr Cecchi.

The new PAAT-IS structure and functionalities were developed with the support of the International Fund for Agricultural Development (IFAD) and they were presented to the international community concerned with T&T at the 29th Meeting of ISCTRC, that was held in Luanda, Angola, October 2007. The communication given at the meeting resulted in a paper entitled ‘Creating, harmonizing and sharing the information: the role of the PAAT and its IS’, that will be published in the meeting’s proceedings. A study on the relationship between vegetation and tsetse fly at different spatial scales is to be published shortly in the PAAT Technical and Scientific (T&S) Series with the title ‘Standardizing land cover mapping for tsetse and trypanosomiasis decision making’. The main outcomes of this study are also described in the paper ‘Land cover and tsetse fly distributions in sub-Saharan Africa’ that has been accepted for publication by *Medical and Veterinary Entomology*. Standardization and sharing of geographical data and metadata that is carried out within PAAT-IS are described in ‘The role of FAO GeoNetwork in a multinational development programme: the case of the PAAT’, that has been published by the journal of the Open Source Geospatial foundation (OSGeo).

A new issue of the PAAT T&S Series will be devoted to geospatial analysis. The paper, tentatively entitled ‘GIS datasets and methods for an environmental approach to African trypanosomiasis’ will include a review of state-of-the-art geospatial datasets that are available in the public domain, as well as a few case studies. This publication aims at promoting the use of GIS datasets and techniques for improved decision making.

PAAT-IS is also contributing to the joint Livestock Policy Initiative (LPI)/PAAT study “Mapping the benefits of tsetse and trypanosomiasis removal in the IGAD region”. In particular, PAAT-IS is assembling a map of livestock-oriented production systems (LPS) in the IGAD region by means of the livelihood data generated in the framework of the Household Economy Approach. More information on this activity is in section 2.8.

2.7. **Mapping human African trypanosomiasis in sub-Saharan Africa – G. Cecchi, M. Paone**

Mr. Cecchi and Mr. Paone jointly presented rationale, methodology and preliminary results of the WHO/FAO collaboration to map the distribution of the disease at continental level.

Over the last ten years WHO has collated a large amount of spatially-explicit epidemiological data, whose accuracy allows to envisage the production of a harmonized, unified database (DB) of human trypanosomiasis in sub-Saharan Africa. This DB will also form the basis for the Atlas of HAT. The methodology for geo-referencing HAT data takes advantage of public domain databases of named locations, which are combined with epidemiological reports to pin down the exact position of survey villages. If available in the reports,

coordinates acquired with GPS (Global Positioning System) devices are checked and imported in the database.

Approximately 23,000 HAT cases have been analyzed and entered in the database to date. Cases refer to 4 200 different geographical entities, out of which approximately 3 000 have been geo-positioned at village level. Data that have been analysed so far come from ten countries (Angola, Cameroon, Central Africa Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Sudan and Uganda) and span from 1985 to 2007.

The DB of HAT will greatly enhance our knowledge of the global distribution of HAT, as well as allowing to update previous estimates of population at risk and burden of the disease. It will also provide crucial information to better target interventions with a view to eliminating HAT as a public health problem.

2.8. **Progress report of the IGAD/LPI-PAAT study: mapping the benefits of tsetse and trypanosomiasis in Eastern African region – A. Shaw**

The purpose of the IGAD LPI is to strengthen the capacity in IGAD countries (Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, and Uganda), other regional organizations and stakeholders to formulate and implement livestock sector and related policies that sustainably reduce food insecurity and poverty.

The present study draws on a concept developed and tested for West Africa and it provides a GIS-based tool for decision-making and prioritisation in T&T control. By means of financial maps this tool adds an economic dimension to GIS-assisted decision making. The model is based on (i) cattle production systems map (ii) 20-year herd and output projection (iii) cattle spatial expansion and/or modifications of production systems. The main model output is a map of money benefits over 20 years.

At the present stage, considerable progress has been made in defining and mapping LPS. Valuable information concerning the spatial distribution of pastoral, agropastoral and mixed-farming systems in the IGAD region has been collected by different institutions in the framework of the Household Economy Approach. Livelihood maps are available at country-level for Djibouti, Kenya, Somalia and Uganda, as well as for some regions of Eritrea, Ethiopia and Sudan. Harmonization of these datasets will ultimately result in a regional map of LPS, which will also include information of the use of oxen, commercial and semi-commercial dairying and ranching. This product will be matched against independent maps of production systems, which are based on climate and other environmental datasets with a view to gaining insight into the relationship between livelihood options and environmental factors.

The next steps of this study will concentrate on (i) completing the map of LPS and the remaining baseline herd models, (ii) investigating the extent to which cattle production systems would change in the future (e.g. through movements into new areas, intensification, etc.) (iii) combining cattle population, LPS and tsetse maps (iv) calculating losses per head of cattle over 20 years in each production system (v) producing the money maps.

2.9. **Presentation of the questionnaire “Regional Designated Centres for training relevant to addressing the T&T problem” – U. Feldmann**

Regional Designated Centres (RDC) should meet the needs for training relevant to addressing the T&T problem by making optimal use of the limited resources, avoiding duplication and assuring quality and sustainability. The African Regional Co-operative Agreement for Research, Development and Training related to nuclear science and technology (AFRA) established guidelines for identification and impartial review of candidate RDCs. As concerns the problem of training on T&T, a questionnaire aiming at identifying a limited number of RDCs and at generating information for assessing candidate centres was developed. Nine topics are proposed in the questionnaire: project management, epidemiology of livestock diseases, diagnosis of livestock diseases, T&T control, tsetse mass rearing, agricultural and livestock socio-economics, natural resources management, remote sensing and GIS, HAT diagnosis, epidemiology and control. Assessment of questionnaires and candidate institutions will be based on objectives of training programme offered, detailed curriculum, deployment of human resources, institution’s infrastructure and internal quality assurance system. Feedback to the questionnaire was obtained from FAO and WHO. AU-PATTEC was informed about the initiative.

The next phase of this activity will include: submission of application to National Coordinator of AFRA and subsequent transmission to IAEA, technical assessment of applications by technical working group, pre-selection of RDCs, auditing of pre-selected RDCs and nomination of RDCs, appointment of RDCs. The process has been scheduled to be completed by September 2008.

2.10. **Flowchart on the guidelines to assessing the feasibility of creating tsetse and trypanosomiasis-free zones – U. Feldmann.**

The T&T problem is complex and the decision of acting or not acting on the problem has a broad range of implications for various sectors. Planners, decision makers and implementers are charged with high responsibilities that embrace politics, finance, public health, livestock and agricultural rural development, sustainability of natural resources. The proposed guidelines try to provide assistance to address all relevant components, avoid setbacks, decide responsibly on use of resources and generate basis for approaching donors.

The guidelines are based on the phased, conditional approach, which is reflected in the flow-chart by five different levels of activity: (i) policy and strategy development, long-term commitment, management structures (ii) baseline data collection (iii) technical feasibility assessment (iv) capacity building and pre-operational work (v) operational implementation of AW-IPM measures to create a T&T free zone.

2.11. **Ethiopia: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – T. Alemu**

The report concentrated on the status of the STEP project, for which AfDB loan and grant are complementary to the ongoing efforts. The project area meets the

criteria for technical feasibility set by PAAT, especially with regard to the area's high agricultural potential and the presence of important natural barriers to reinvasion.

AAT is by far the most important problem for Ethiopia, but HAT surveillance should be encouraged particularly in the border areas with the Sudan. Within the project area expanded and intensified mixed farming are possible, especially provided that draft oxen be available. The AfDB and UNTFHS funding will allow to further support the land use and land tenure component of the project, especially in the present context of evolving practices.

Since the inception of STEP the Ethiopian government was committed to integrate SIT with the support of IAEA. Proper need assessment was made to integrate SIT for tsetse eradication. Capacity building was undertaken and infrastructure was developed. A modern insectary was established and the new facility is now ready for mass rearing, as the colony performance has been stable since last year.

Issues that currently deserve attention are the delay in finalizing the feasibility study for the possible use of the Sequential Aerosol Technique (SAT), problems arising to operate in the NechSar National Park, lack of professional and support staff in critical areas, lack of standard insectary operating procedures, enforcement of strict bio-security to avoid unwanted circumstances on the fly performance and irradiation source.

Future plans include continuing tsetse suppression in agreement with AW-IPM concept, enhancing the tsetse colony buildup and mass rearing, starting the baseline data collection in the remaining blocks, enhancing the monitoring, data analysis and reporting.

2.12. Uganda: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – L. Semakula

Uganda is presently implementing the feasibility phase for the project ‘Creation of sustainable tsetse and trypanosomiasis free areas in east and West Africa - Uganda component’.

The ongoing feasibility phase includes the baseline data collection (entomological, parasitological, socio-economic, and environmental), refurbishment and equipping of the tsetse mass rearing facility at Tororo, the establishment of a tsetse seed colony and training of technical staff. Awareness on programme activities is being created through workshops; in addition to this, the National Steering committee and Parliamentary committee on agriculture have been sensitized on the T&T subject. A national team was formed to carry out the feasibility assessment; a team of 20 Entomologists has been identified to work with the consulting firm which will undertake the baseline data collection.

GIS, satellite imagery and tsetse prediction maps are being used to assess the isolation of the target tsetse population and for demarcation of intervention zones. 46 sites for tsetse population genetic studies have been identified with the

assistance of IAEA. A detailed action plan has been developed and work will initiate in May 2008. Computers and satellite imagery for this activity were received from IAEA.

As to fund mobilization, additional resources have been received through a TCP from IAEA, which has also provided funds for training 20 entomologists who will be involved in baseline data collection.

2.13. **Quality Control/Quality Assurance of trypanocidal drugs. F. van Gool**

In the last ten years numerous papers were published indicating resistance of Trypanosomes to trypanocidal drugs. However, in the vast majority of cases investigation on the type and brand of the trypanocidal drug that was used revealed that the drug was of poor quality and even in some cases an altogether fake drug.

To tackle the problem of poor quality and fake trypanocidal drugs circulating in the African market a MoU was signed between FAO and IFAH. The aims of the MoU are (i) to develop reliable methods to control the quality of Trypanocidal drugs (ii) to create two chemical-analytical laboratories in Africa (one in West Africa and one in East Africa) to control drugs circulating in the different countries. One of the provisions of the MoU is that stakeholders involved in the use of trypanocidal drugs can send samples to these independent laboratories for quality control. Also, samples can be sent to the representatives of the FAO and IFAH to be analysed by the University of Strathclyde (UK) which is the reference laboratory for the control of Trypanocidal Drugs.

The IFAH representative also encouraged stakeholders to make optimal use of the published literature concerning the quality of trypanocidal drugs.

2.14. **Burkina Faso: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – I. Sidibe.**

The AfDB funded project in Burkina Faso benefits from the collaboration with various national institutions that are in charge of land use, land occupation, environmental impact assessment, HAT, information and sensitization of communities. Following the phased, conditional approach it has been decided to initially carry out interventions over an area of approximately 40 000km² of the total intervention area (100 000km²). The project area has a high potential for crop production and livestock development; the zone is at the northern limit of the tsetse distribution and it is therefore suitable for suppression and elimination activities, especially during the dry season from October to May. Furthermore, human interventions are developing natural barriers through the expansion of cotton cultivation and pesticide utilisation.

In the first block of the project area baseline data collection has been carried out for entomological, parasitological, socio-economic, environmental and land use data. A geo-database has been assembled to centralize and store all geo-spatial information that have being used along with satellite images to select sampling sites for the entomological survey. Data collection recently started also on block

2, also with a view to finding possible natural barriers to reinvasion or potential sites for placing artificial barriers.

A study is assessing the feasibility of applying SAT for tsetse fly suppression for the creation of T&T-free areas in East and West Africa. The outcome of this study should tell whether SAT is to be used in the agro-ecological setting of Burkina Faso. It is possible that traps, targets, and pour-on formulations could suffice to eliminate tsetse from block 1. In view of a possible utilization of the SIT technique, efforts are being made to improve the capacity of the insectary at the *Centre International de Recherche-Développement sur l'Élevage en Zone Subhumide* (CIRDES), while a new building is being planned.

As regards HAT, assessment is in progress in the project areas in collaboration with the *Institut de recherche pour le développement* (IRD) and CIRDES with different support. Other research activities are focusing on population genetics of tsetse, especially in the context of degradation and fragmentation of habitats

2.15. Mali: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – A. Djiteye.

With the financial support of the AfDB and the Government of Mali, the project aims at eliminating the T&T problem from an area of approximately 37 000 km² (17 000 km² in the Niger basin and 28 000 km² in the Bani basin).

The baseline data collection concerns tsetse fly distribution and population dynamics, animal and human trypanosomiasis prevalence, socio-economic studies, environmental survey and monitoring. Sensitization and raising of community awareness has been pursued through regional meetings and communal workshops. Farmers' organizations have been involved through the creation of T&T control brigades in approximately 190 villages; an average 5 sergeants per village have been trained in traps impregnation with deltamethrin, traps installation and surveillance. Significant reduction of tsetse densities in the intervention areas has been achieved.

2.16. Presentation of the tsetse and trypanosomiasis Research and Development programme and activities, including training opportunities, at ITM – S. Geerts and collaborators

ITM concentrates on three research themes: (i) vector-parasite interaction, to understand the factors determining the infection rate of tsetse (ii) host-parasite interaction, to explore factors affecting the impact of infection (iii) the vector-host/environment interaction, to clarify the effect of a changing environment on the epidemiology and impact of AAT. Research is also carried out at ITM on trypanocidal drug resistance, in particular on the development and validation of molecular techniques for the detection of drug-resistant trypanosomes.

ITM is the FAO reference centre for “Livestock trypanosomiasis: parasite management and diagnosis”. ITM's training offer includes an MSc in Tropical Animal Health, a web-based MSc in Tropical Veterinary Medicine (managed in collaboration with the University of Pretoria, the Regional Training Programme

for the Southern African Development Community (SADC) Region, and various PhD programmes.

2.17. The International Trypanotolerance Centre (ITC): new developments and challenges ahead – S. Geerts

In his report, Mr. Geerts stated that ITC was founded in 1982 by an act of Gambian Parliament and it initially focused on research, multiplication and dissemination of the trypanotolerant N'Dama cattle in Africa. The present focus is on increasing livestock productivity and utilisation in the West African region through optimal and sustainable exploitation of the genetic resistance of indigenous breeds of livestock. ITC's partners are the National Agricultural Research Services (NARSs) of The Gambia, Senegal, Guinea, Guinea Bissau, Sierra Leone, Liberia, ILRI and CIRDES. ITC assets include the HQ in Banjul, two field stations, laboratories, training facilities, administration, social facilities, residential area, animal facilities and herds/flocks.

Due to lack of core funding, ITC had faced recurrent problems to pay staff, with the result that most international staff members left and the DG was replaced by an interim management committee. The Executive Committee of Council that was held in March 2008 concluded that restructuring of ITC was necessary and various options for future were discussed based on four available reports. The option preferred by the Gambian Government was for ITC to become a Gambian livestock research institute while AU-IBAR preferred ITC to become a regional livestock research centre. The possibility of a merger between ITC and either CIRDES or ILRI has been explored but it appeared that ILRI was divesting itself of field sites and CIRDES was not interested in a merger in the short term.

Council of ITC, which decides autonomously, wanted to maintain regional status of ITC, while the Gambian Government, which owns the land and buildings of ITC, preferred ITC to become a national institute. The International Community that has made considerable investments in ITC aims at safeguarding the nucleus herds. Therefore a compromise is urgently needed.

The new AfDB-Global Environment Facility (GEF) project "Sustainable management of endemic ruminant livestock in West Africa" (2008-2018) has ITC as executing agency for AfDB. With its 42 million US\$ budget it provides a unique opportunity for the future of ITC.

3. CLOSING

Mr Ilemobade, Chairman of PAAT, heartily thanked all participants for their contributions. Thereafter, he declared the meeting closed. Mr Mattioli reminded members that the next PAAT PAG meeting will be held in Kampala, Uganda, while the next PAAT PC meeting is proposed to be held in Bratislava, Slovak Republic.

4. **RECOMMENDATIONS**

The following recommendations were discussed and agreed to:

- A. On the recent agreement between FAO and IFAH on the Control of Veterinary Drugs, PAAT welcomes the signing of the Memorandum of Understanding (MoU) between FAO and IFAH on Quality Control/Quality Assurance (QC/QA), especially of trypanocides. The meeting **recommends** that:
- Awareness be raised of the services provided by reference laboratories accredited to QC of trypanocides. To this end, a section of the TTI is to be devoted to the subject.
- Action:** PAAT, PATTEC, involved countries.
- B. Reinvansion of reclaimed areas: The meeting notes that the issue of reinvansion is still a major concern to all the PATTEC countries. Therefore, the meeting reiterates **recommendations** made in previous PAAT meetings that:
- The risk of reinvansion be comprehensively assessed (e.g. at the time of baseline entomological surveys) and that measures be put in place aimed at minimizing this risk in a sustainable manner.
- Action:** PATTEC, involved countries.
- C. Acknowledging the importance of the on-going HAT mapping exercise, the meeting **recommends** that:
- Data on HAT occurrence be timely submitted to WHO.
- Action:** involved countries.
- D. Tsetse fly in Swaziland. In view of the recent findings in Swaziland, where flies were discovered although thought to be absent, the meeting **recommends** that:
- South Africa and Mozambique should consider involving Swaziland in their regional eradication project.
- Action:** PATTEC, involved countries.
- E. Cooperation between countries benefiting from AfDB loan and WHO on HAT. Following the example set by the recent collaboration between WHO and the AfDB-funded tsetse elimination project in Ghana, the meeting **recommends** that:
- Countries presently involved in baseline data collection should contact WHO for support on HAT assessment.
- Action:** involved countries, PATTEC, WHO.
- F. Land cover classification and sharing of GIS data and metadata. In consideration of the standardization activities carried out by PAAT (e.g. in the field of land cover classification, sharing of GIS data and metadata, etc.), the meeting **recommends** that:
- Efforts be made to adopt the international standards promoted by PAAT.
- Action:** involved countries, PATTEC.

- G. The International Trypanotolerance Centre (ITC), The Gambia. PAAT recognises the invaluable role that The Gambia has played in hosting and promoting the activities against tsetse-transmitted trypanosomiasis over the past 3 decades through the establishment of ITC. It appreciates the difficulties ITC has had in recent years in obtaining core funding and the support needed to carry out its mandate. Despite these difficulties, however, ITC continues to be recognised as a regional centre of excellence, with active and productive work with NARS in its core countries: The Gambia, Guinea, Guinea Bissau and Senegal. In this context, PAAT greatly welcomes the new project “Sustainable management of endemic ruminant livestock in West Africa”, which provides for funding and research. The international community has also invested substantial resources in the ITC’s selectively bred herds which constitute an irreplaceable international asset that must be conserved so that their unique genetic resources can continue to be made available to the whole region. PAAT therefore supports recent efforts by AU/ISCTRC and others and hopes that a satisfactory regional solution can be found which ensures their continued support.
- H. Regional Development Centres (RDC). A questionnaire was developed by the FAO/IAEA Joint Division, aimed at (i) identifying a limited number of RDC for training in the field of Tsetse and Trypanosomosis (ii) generating information for subsequent assessment of candidate centres. The meeting **recommends** that:
- Feedback and suggestions be provided by all the recipients of the questionnaire.
- Action:** PAAT, PATTEC, involved countries.
- I. Flowchart on feasibility of creating tsetse and trypanosomiasis-free zones. The meeting recognizes the usefulness of the flowchart for assessing the feasibility of creating tsetse and trypanosomiasis-free zones, which may consider the use of SIT, when and where environmentally and technically appropriate. The meeting **recommends**:
- To simplify the layout as developed to facilitate the interpretation and utilization of the flowchart.
- Action:** FAO/IAEA Joint Division.
- J. The meeting recognizes the role of PAAT as a body for technical review and eventual advocacy for T&T project proposals to be submitted to potential donors. The meeting **urges** member countries that:
- Project proposals dealing with T&T and related matters be presented at PAAT PC and PAG meetings for assistance in technical review and subsequent support for advocacy.
- Action:** PATTEC, involved countries.
- K. Standardization of fabrics and other equipment used in Tsetse control. Considering the normative role of PAAT and its harmonization function in relation to T&T control techniques, the meeting **recommends**:
- To explore the possibility to standardize and define quality control assurance methodologies for fabrics and other equipment used for constructing targets, screens, traps, etc..
- Action:** PAAT.

- L. Socio-economic and environmental impact assessment. The meeting recognizes the importance of socio-economic and environmental issues/impact related to T&T intervention programmes and acknowledges the work of International Livestock Research Institute (ILRI) on these aspects. The meeting **recommends** that:
- A limited number of key parameters are identified, which can be consistently collected in a cost-effective manner, to be used as indicators of the socio-economic and environmental impact of T&T interventions.
- Action:** ILRI, PAAT.
- M. Need for flexibility in budget management of AfDB funds by countries implementing T&T interventions. The six countries (Burkina Faso, Ethiopia, Ghana, Kenya, Mali, Uganda) receiving AfDB loans and grants for T&T interventions expressed their concern about a certain lack of flexibility in adaptive budget management. This does not allow a rapid shift in budget resources to respond to changed field situations and unforeseen events. The meeting **recommends**:
- To bring this matter to the attention of the AfDB during the forthcoming mid-term review of the respective national AfDB T&T intervention projects.
- Action:** PATTEC, PAAT, involved countries.
- N. Review of PAAT and its structures. Members expressed the need for a review of PAAT and its structures after 10 years of operation. This is meant to further strengthen PAAT and ensure its continued relevance in the challenging field of T&T interventions. Members **recommend** that
- Rather than have an external review panel that may be costly, that this be done in-house.
- Action:** PAAT Secretariat.

12th Meeting of the PAAT Programme Committee

8-9 May 2008

Prince Leopold Institute of Tropical Medicine

Antwerp, Belgium

Thursday, 8 May

08:30 – 09:00

Registration

09:00 - 09:30

Opening address – S. Geerts and B. Griessels

Introduction and objectives of the meeting – A.A. Ilemobade

09:30 – 10:40

Adoption of report of 11th PAAT Programme Committee meeting and actions taken on the recommendations, including FAO/PAAT activities – A.A. Ilemobade, R.C. Mattioli

10:40 – 11:00

Coffee break

11:00 – 11:30

Progress report from AU-IBAR – A. El Sawahly

11:30 – 11:50

Progress report from IAEA – U. Feldmann

11:50 – 12:10

Progress report from WHO – P. Simarro

12:10 – 12:30

Development of the PAAT Information System – G. Cecchi

12:30 – 13:00

Mapping human African trypanosomiasis in sub-Saharan Africa: a WHO/FAO collaboration in the framework of PAAT – G. Cecchi, M. Paone

13:00 – 14:30

Lunch break

14:30 – 15:30

Progress report of the IGAD/LPI-PAAT study: mapping the benefits of tsetse and animal trypanosomiasis interventions in Eastern African region – A. Shaw

15:30 – 15:40

Presentation of the questionnaire “Regional Designated Centres (RDCs) for training relevant to addressing the tsetse and trypanosomiasis problem” – U. Feldmann

15:40 – 15:50

The phased feasibility approach flow chart for tsetse and trypanosomiasis intervention – U. Feldmann

15:50 – 16:15
Coffee break

16:15 – 17:00

Ethiopia: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – T. Alemu

17:00 – 17:30

Uganda: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – L. Semeakula

17:30 – 18:00

Discussion – A.A. Ilemobade, moderator

18:00 – 20:00
Gathering together

Friday, 9 May

09:00 – 09:30

Private Sector Presentations:

- IFAH on Quality Control/Quality Assurance of Trypanocides – F. Van Gool
- Vestergaard Frandsen on tsetse fabrics – S. Nikolajsen
- Tsetse Fly Control Appropriate Applications – F. O’Shea

09:30 – 10:30

Burkina Faso: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” - I. Sidibe

10:30 – 11:00
Coffee break

11:00 – 11:50

Mali: Review and assessment of AfDB funded project on status implementation in relation to the proposed “phased feasibility flow chart” – A. Djiteye

11:50 – 12:30

Discussion – S. Geerts, moderator

12:30 – 14:00
Lunch break

14:00 – 15:00

Presentation of the tsetse and trypanosomiasis Research and Development programme and activities, including training opportunities, at ITM – S. Geerts and collaborators

15:00 – 15:40

The International Trypanotolerance Centre (ITC): new developments and challenges ahead – S. Geerts

15:40 – 16:00
Coffee break

16:00 – 16:20

Discussion on “Information services needed by PAAT partners/stakeholders, and role and function of the PAAT Information System” – R.C. Mattioli, G. Cecchi presenting and A.A. Ilemobade moderating

16:20 – 17:00

Discussion on role and function of the Panel of PAAT Advisory Group Coordinators and PAAT Programme Committee – R.C. Mattioli presenting and A.A. Ilemobade moderating

17:00 – 18:30

Round table discussion and AOB – A.A. Ilemobade, moderator

Conclusions and recommendations

Next meeting, closing.

12th Meeting of the PAAT Programme Committee**8-9 May 2008****Prince Leopold Institute of Tropical Medicine
Antwerp, Belgium***List of Participants*

Temesgen Alemu
National Project Coordinator
Southern Rift Valley of Ethiopia Tsetse
Eradication Project
Ethiopian Science and Technology Commission
P.O. Box 19917
Addis Ababa, Ethiopia
Email: temesgen_alemu@yahoo.com

Marleen Boelaert
Professor
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: mboelaert@itg.be

Giuliano Cecchi
Consultant for PAAT-Information System
Animal Health Service
FAO
Viale delle Terme di Caracalla
00100 Rome, Italy
Email: giuliano.cecchi@fao.org

Filip Claes
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: fclaes@itg.be

Gerard Cuny
Director
Unité Mixte de Recherche 177
IRD-CIRAD
TA A 17/64
Campus de Baillarguet
34398 Montpellier, France
Email : gerard.cuny@mpl.ird.fr

Redgi De Deken
DVM
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: rddeken@itg.be

Vincent Delespaux
Post Doc
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: vdelespaux@itg.be

Aligui Djiteye
National PATTEC and PAAT Coordinator
P.O. Box 2195, Sotuba
Bamako, Mali
Tel: +223 224 01 43
Email: ajiteye01@yahoo.com

Ahmed Abdou Ali El Sawalhy
Chief Animal Health Officer
Acting Director
AU/IBAR
P.O. Box 3078-0100
Nairobi, Kenya
Email: ahmed.elsawalhy@au-ibar.org

Udo Feldmann
Entomologist
Insect Pest Control Section
Joint FAO/IAEA Division
Waggramerstrasse 5
P.O. Box 100
Vienna, Austria
Tel: +43 1 2600 21629
Email: u.feldmann@iaea.org

Stanny Geerts
Professor
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: sgeerts@itg.be

Albert A. Ilemobade
PAAT Chairman
P.O. Box 1308
Akure, Ondo State 342001, Nigeria
Email: albert.ilemobade@urfoundation.org
aailemobade@yahoo.com

Veerle Lejon
Doctor
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: vlejon@itg.be

Raffaele Mattioli
Animal Health Officer
Animal Health Service
FAO
Viale delle Terme di Caracalla
00153 Rome, Italy
Email: raffaele.mattioli@fao.org

Simone Nikolajsen
Product Manager
Vestergaard-Frandsen S.A.
Chemin de Messidor 5-7
1006 Lausanne, Switzerland
Email: sn@vestergaard-frandsen.com

Frank O'Shea
Managing Director
Appropriate Applications Ltd.
41 Priory Gardens
Berkhamsted, HP4 2DS, England
Email: frankoshea@gmail.com

Kgosietsile Phillemon-Motsu
Deputy Director of Veterinary Services
Department of Veterinary Services
Private Bag 0032
Gaborone, Botswana
Email: kphillemon-motsu@gov.bw

Antonio Rota
Senior Technical Adviser
Livestock and Farming Systems
IFAD
Via del Serafico 107
00142 Rome, Italy
Email: a.rota@ifad.org

Lawrence Semakula
Executive Director
Coordinating Office for Control of
Trypanosomosis in Uganda (COCTU)
P.O. Box 16345
Wandegeya, Kampala, Uganda
Email: coctu.maaif@yahoo.com
ldmsemakula@yahoo.com

Alexandra Shaw,
Consultant Economist
AP Consultants
Upper Cottage Abbotts Ann
Andover, SP117BA, United Kingdom
Email: alex@apconsultants.co.uk

Issa Sidibe
Scientific Director of CIRDES
PATTEC National Coordinator of Burkina Faso
CIRDES
01 B.P. 454
Bobo-Dioulasso, Burkina Faso
Email: sambo@fasonet.bf

Pere Simarro
Manager HAT Control and Surveillance
Programme
WHO
20 Avenue Appia
1211 Geneva 27, Switzerland
Email: simarrop@who.int

Massimo Paone
Engineer-GIS Consultant
FAO
Viale delle Terme di Caracalla
00153 Rome, Italy
Email: m.paone@tiscali.it

Peter van den Bossche
Professor
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: pvdbossche@itg.be

Frans van Gool,
Director Technical Services
Merial International
61 avenue Tony Garnier
69007 Lyon
Email: frans.van-gool@merial.com

Lies Van Nieuwenhove
PHD
Institute of Tropical Medicine (ITM)
Nationalestraat 155
2000 Antwerp, Belgium
Email: lunieuwenhove@itg.be

Simon Nieuwenhove
Doctor
Streeklaan 32
3060 Bertem, Belgium
Email: svn30s@yahoo.com

12th Meeting of the PAAT Programme Committee

8-9 May 2008

ITM

Antwerp, Belgium

List of Documents

1. Report of the 11th PAAT-Programme Committee meeting, 24-25 April 2007, Geneva, Switzerland.
2. Brochure “On target against poverty: The Programme against African Trypanosomiasis 1997 - 2007”
3. Standardizing land cover mapping for tsetse and trypanosomiasis decision making. *Programme Against African Trypanosomiasis Technical and Scientific Series* 8. FAO. Cecchi G., Mattioli R.C., Slingenbergh J., de la Rocque S., Feldmann U. (2008). Available at: <http://www.fao.org/docrep/010/i0215e/i0215e00.htm>
4. GIS datasets and methods for an environmental approach to African trypanosomiasis PAAT-Information System. *Programme Against African Trypanosomiasis Technical and Scientific Series*. FAO. Cecchi G., Mattioli R.C. (Eds.). (draft).
5. Eliminating Human African Trypanosomiasis: Where Do We Stand and What Comes Next. *PLoS Medicine* 5(2): 174-180. Simarro PP, Jannin J, Cattand P (2008). Available at: <http://dx.doi.org/10.1371/journal.pmed.0050055>
6. Creating, harmonizing and sharing the information: the role of the Programme Against African Trypanosomiasis (PAAT) and its Information System. *29th Meeting of the International Scientific Council for Trypanosomiasis Research and Control (ISCTRC)*. Luanda, Angola, 1-5/10/2007. Cecchi G, Mattioli RC. (in press).
7. Networking for empowering African partners in the fight against Tsetse and Trypanosomiasis the Programme Against African Trypanosomiasis (PAAT). Presentation delivered at the *29th Meeting of the International Scientific Council for Trypanosomiasis Research and Control (ISCTRC)*. Luanda, Angola, 1-5/10/2007. Mattioli RC.
8. The role of FAO GeoNetwork in a multinational development programme: the case of the Programme against African Trypanosomiasis. *OSGeo Journal* 2: 20-24. Cecchi G, Mattioli RC, (2007). Available at: http://www.osgeo.org/files/journal/v2/en-us/final_pdfs/OSGeoJournal_vol2_FAO_geonet.pdf
9. GeoNetwork dans un Programme de Développement Multinational : le cas du Programme de Lutte contre la Trypanosomose Africaine. *Journal de l'OSGeo* 2. Cecchi G, Mattioli RC, (2007). Available at: http://svn.osgeo.org/osgeo/journal/volume_2/fr/final_pdfs/OSGeoJournal_vol2_fr_MapWindow.pdf
10. Matching land cover and tsetse habitat. Poster presented at *GisVet 2007*. Copenhagen, Denmark. 22-24/8/2007. Cecchi G, Mattioli RC, Slingenbergh J, de la Rocque S. Available at: http://www.gisvet.org/Documents/GisVet07/Poster/Cecchi_et_al_GISVET07.pdf
11. Tsetse and Trypanosomiasis Information Bulletin. Volume 30, part 1. 2007.
12. Tsetse and Trypanosomiasis Information Bulletin. Volume 30, part 2. 2007.