



THE PROGRAMME AGAINST AFRICAN TRYPANOSOMIASIS

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10th MEETING OF THE PROGRAMME COMMITTEE

REPORT

Florence, Italy

26 – 27 April 2006

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

Acronyms

AAT	Animal African Trypanosomiasis
AfDB	African Development Bank
ALIVE	African Livestock
ARPPIS	African Regional Postgraduate Programme in Insect Science
AW-IPM	Area-Wide Insect Pest Management
AU	African Union
CIRAD-EMVT	Centre de Coopération Internationale en Recherche Agronomique pour le Développement - Elevage et Médecine Vétérinaire Tropicale (French Agricultural Research Centre for International Development-Animal Production and Veterinary Medicine)
CIRDES	Centre International de Recherche-Développement sur l'Elevage en Zone Subhumide
COCTU	Coordinating Office for the Control of Trypanosomiasis in Uganda
ELAT	Tsetse Eradication School Burkina Faso
FAO	Food and Agriculture Organization of the United Nations
FAO/IAEA	Joint FAO/IAEA Division of Nuclear Applications in Food and Agriculture
FITCA	Farming in Tsetse Controlled Areas of Eastern Africa
GEF	Global Environment Facility
GIS	Geographic Information System
GPS	Global Positioning System
HAT	Human African Trypanosomiasis
IAEA	International Atomic Energy Agency
IAO	Istituto Agronomico per l'Oltremare (Overseas Agronomic Institute)
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 (Research Institute for Development)
ISCTRC	International Scientific Council for Trypanosomiasis Research and Control
ITC	Insecticide-Treated Cattle
ITC	International Trypanotolerance Centre
ITM	Institute of Tropical Medicine
ILRI	International Livestock Research Institute
KARI-TRC	Kenya Agricultural Research Institute-Trypanosomiasis Research Centre
MDG	Millennium development Goals
NASA	National Aeronautics and Space Administration
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
PCMU	Project Coordination and Management Unit
PPLPI	Pro-Poor Livestock Policy Initiative
PPP	People's Participation Programs
PRSP	Poverty Reduction Strategy Paper
R&D	Research and Development
RDC	République Démocratique du Congo (Democratic Republic of Congo)
RS	Remote Sensing
SARD	Sustainable Agricultural and Rural Development
SAT	Sequential Aerosol Technique
SIT	Sterile Insect Technique
SLM	Sustainable Land Management
STEP	Southern Tsetse Eradication Project
T&T	Tsetse and Trypanosomiasis
ULV	Ultra Low Volume
UNIDO	United Nations Industrial Development Organization
USDA	United States Department of Agriculture
WHO	World Health Organization
WHO/TDR	World Health Organization/Special Programme for Research and Training in Tropical Diseases

Foreword

The tenth meeting of the PAAT Programme Committee was convened at the Istituto Agronomico per l'Oltremare (IAO, Overseas Agronomic Institute), Florence, Italy, 26-27 April 2006. The meeting focused on (i) achievements of PAAT mandated organizations (i.e. FAO, IAEA, WHO, AU-IBAR) and AU-PATTEC, (ii) implementation of AfDB-PATTEC supported T&T intervention in six sub-Saharan countries (Burkina Faso, Ghana, Mali in West Africa and Ethiopia, Kenya, Uganda in East Africa), (iii) activities in Tsetse and Trypanosomiasis (T&T) Research and Development by PAAT research partners (CIRAD, ICIPE, ILRI, ITM) (iv) new and potential PAAT partnerships (IFAH, UNIDO, World Bank, FAO/IGAD-LPI)

The meeting was officially opened by Dr A. Perlini, IAO Director General, who on behalf of IAO warmly welcomed the participants to Florence to work on the problems posed by T&T, which affect both human and livestock health and sustainable agricultural development in a substantial portion of Africa. Mr. A. Scappini, Livestock Officer, presented an overview of IAO activities with focus on livestock agriculture projects.

An introduction to PAAT and the objectives of the meeting were presented in the opening address of the PAAT chairman, Prof. A. Ilemobade. He reminded that in 2006 PAAT celebrates the 10th anniversary of its founding when the idea of a global, international alliance aiming at clarifying the problem of tsetse and trypanosomiasis was mooted at a conference in Brussels, Belgium. The progress made by PAAT in ten years was impressive and internationally acknowledged. Also, it was recalled the support that PAAT continuously provides to the African countries affected by the T&T problem and to the PATTEC initiative.

Mr. R. Mattioli welcomed the group on behalf of FAO/PAAT Secretariat. He thanked the Italian Government and the IAO for hosting the meeting. He also welcomed the renovated interest in PAAT shown by other FAO initiatives/projects (IGAD and PPLPI projects are examples) and more generally by the United Nations system, with UNIDO and IFAD participating in the meeting and actively supporting PAAT actions. The contribution and participation of the private sector, i.e. the International Federation for Animal Health (IFAH), to PAAT events and activities and the financial assistance of the Japanese Government to the joint Ethiopian Government/IAEA/FAO project on T&T intervention in the SRV of Ethiopia are further recognitions of the work of PAAT. The advanced PAAT-PATTEC harmonisation and the fact that T&T intervention is now placed in the broader context of SARD were considered instrumental in creating a positive, collaborative and attractive environment for donors and other potential stakeholders.

Apologies were received from Prof. Peter Holmes and Dr. Charles Mahama who could not attend the meeting.

The meeting was chaired by Prof. A.A. Ilemobade. FAO provided secretarial assistance. The meeting's Agenda and list of participants are included in the annexes.

1. MINUTES OF THE LAST MEETING

- 1.1. The report and recommendations of the 9th PAAT-PC meeting were revised and adopted.

2. SUMMARY OF THE 10th PAAT-PROGRAMME COMMITTEE MEETING OUTCOME

- 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 on the implementation of recommendations since the 9th PAAT-PC meeting were presented.

The recommendation to apply the PAAT-PATTEC criteria in the selection of intervention areas was re-emphasised at the PAAT Advisory Group Coordinators meeting, Addis Ababa, September 2005 and at the workshop “Improving decision support for T&T intervention in Uganda”. FAO/IAEA/WHO/PAAT developed a document which included terms of reference for an “Assistance Formulation Team” for livestock-agriculture and human health in T&T intervention areas under the current six national AfDB-AU/PATTEC initiative.

The problem of human resources development was duly addressed by PAAT mandated organizations. WHO organized an international course on African Trypanosomiasis in Tunisia (10 - 28 October 2005) and trained staff from Ministries of Health and Veterinary Services Departments on HAT control methods. IAEA convened a FAO/IAEA regional training course on “Standardized baseline data collection for area-wide tsetse and trypanosomiasis management”, Nairobi (13 March – 7 April 2006). In the period between the 9th and the 10th meeting of the PAAT-PC, i.e. May 2005 – April 2006, IAEA funded 54 person-month fellowships for collaborators from seven T&T affected countries. Within the project “Strengthening the PAAT-Information System (IS)” (funded by IFAD), FAO/PAAT assessed training needs and requirements of national technical staff and the development of human resources with respect to Information System management and GIS. In this regard, missions were undertaken in Burkina Faso, Ghana, Mali, Ethiopia, Kenya and Uganda.

In relation to the recommendation to establish standardized guidelines and procedures for field and laboratory operations, the importance of available manuals and technical papers was stressed. Work is in progress to produce guidelines for declaring areas free of tsetse flies and transmitted trypanosomiasis, and to develop a new tool guiding in the economic decision process for field T&T interventions (“Mapping the benefits”). A paper dealing in particular with SIT was published under the title “Potential impact of tsetse fly control involving the sterile insect technique” in “Sterile Insect Technique – Principles and management in area-wide integrated pest management” (Eds V.A. Dyck, J. Hendrichs, A.S. Robinson), Springer, The Netherlands, pp. 701-

723. Consultants were recruited to draft the “FAO/IAEA Guidelines for conducting baseline tsetse surveys for area-wide integrated pest management programmes”.

As regards the recommendation that concerned the involvement of other stakeholders in the management of other diseases and constraints to SARD, the most interesting partnerships concern IFAH, UNIDO and the World Bank (the latter, under the umbrella of the ALIVE initiative). Within FAO, it was mentioned the new collaboration between PAAT and IGAD-LPI (Inter-Governmental Authority on Development-Livestock Policy Initiative) project.

An economic analysis of tsetse suppression techniques, including SAT, has been performed and modelled in a paper dealing with costs of alternative tsetse control approaches in Uganda. The paper is authored by A. Shaw for the FAO/PPLPI project, with the contribution of FAO/PAAT. The option to use SAT has also been considered in the joint Ethiopian Government-FAO/IAEA project for T&T intervention and related SARD approved by the Government of Japan and in the FAO/PAAT and FAO/IGAD-LPI project proposal submitted for funding to the Wellcome Trust to develop “A new decision support tool for policy and advocacy: mapping and analysing both estimated costs and potential benefits of T&T control in the Greater Horn of Africa”.

2.3. IAEA – U. Feldmann

Mr Feldmann outlined IAEA’s activities since the last PAAT-PC meeting.

In relation to the recommendation to establish standardized guidelines and procedures for field and laboratory operations, it was mentioned the work in progress for the production of “Guidelines for declaring areas free of tsetse and tsetse transmitted trypanosomiasis”. Further guidelines to member countries for the identification the optimal location of mass-rearing units has been produced along with a spreadsheet that assists to define the room size and the associated budget. An international conference on “Area-wide control of insect pests” was held in May 2005 in Vienna; the conference was attended by more than 400 participants. In October 2005, a representative of the Joint FAO/IAEA Division attended the PATTEC regional meeting (Nairobi, Kenya).

Mr. Feldmann then outlined what the phased approach to area-wide tsetse control consists of and emphasised the need for both commitment and a national policy/strategy for T&T intervention in member countries. He also stressed that baseline data are needed to decide on the best approach to deal with tsetse flies, human and animal trypanosomiasis. He reminded the importance of linking agricultural development to the removal of T&T, the importance of capacity building and international assistance. Although SIT remains a major tool for tsetse elimination, it may not be needed in all scenarios. With regard to the production of tsetse sterile males, substantial action and planning are needed to overcome the shortage of sterile flies. At the meeting for national coordinators in Vienna in December 2005, an effort was made by means of a questionnaire to assess the status and progress of national efforts against the tsetse and trypanosomiasis problem in PATTEC ‘phase-1’ Member States. It was obvious

that – along the phased and conditional planning and implementation approach – several aspects/issues remain to be addressed by Member States in the different phases (i.e. (i) policy and strategy establishment; (ii) feasibility assessment; (iii) capacity building and pre-operational activities; and (iv) operational intervention). Representatives of the national PATTEC projects were also asked to identify topics where the three mandated UN agencies (FAO, IAEA and WHO) may provide assistance. The discussions at the meeting revealed that – besides the new “FAO/IAEA Guidelines for standardized entomological baseline data collection” – there are several technical fields where similar manuals and guidelines will be needed. A joint effort by the PAAT community and other partners will be needed to develop these manuals and guidelines. Along this process the informational already available in the existing FAO tsetse control manuals will be instrumental to generate the required updated manuals and guidelines.

2.4. WHO – P. Simarro

WHO reported on the support provided to countries involved in the AfDB funded PATTEC initiative, including training activities. The audience was also informed on WHO contribution to recent PAAT publications and on the latest update on HAT epidemiology.

WHO is working on better integrating HAT as a component of the AfDB-PATTEC initiative in national projects (e.g. by means of the production of a plan of action for Ministry of Health (MoH) participation in the AfDB-PATTEC project in Ghana). Screening activities for HAT detection have been carried out in several affected areas; capacity building has been addressed through service and formal training. In this regard, one of the most important initiatives has been the “IV International course on African trypanosomoses”, 10 – 28 October 2005 (Tunisia), attended by 16 participants from HAT endemic countries. WHO contributed to the upcoming “Mapping the benefits of tsetse & trypanosomiasis intervention” and to “Linking sustainable human and animal African trypanosomiasis control with rural development strategies”.

The epidemiology of HAT was outlined with respect to the degree of surveillance at national level and to the average number of cases for the period 1990-2004. The countries have been grouped in five classes according to the number of cases per year: 1 - reporting no cases (no surveillance activities implemented), 2 - reporting no cases (surveillance activities implemented), 3 - reporting less than 50 cases, 4 - reporting between 50 and 1500 cases, 5 – reporting more than 1500 cases. Cases and countries have also been classified on the basis of the pathogenic agent, being either *Trypanosoma brucei gambiense* or *rodhesiense*. Each class requires a different intervention strategy. The three countries reporting more than 1500 cases per year (Angola, RDC and Sudan) account for approximately 85 percent of the total number of registered cases. At continental level, a constant decline in the number of cases has been observed during the last years. This positive trend has been associated to increased disease surveillance and control performed by WHO. WHO pointed out that both the 11th Meeting of the PAAT Advisory Group Coordinators (PAG) (21 -22 September 2005, Addis Ababa, Ethiopia) and the 28th ISCTRC Conference (26 –

30 September, 2005, Addis Ababa) encouraged WHO to consider HAT as a disease candidate for elimination.

In future, WHO work will further concentrate on: (i) increasing the awareness among decision makers with a view to removing sleeping sickness from its neglected list, (ii) advocating and developing people's participation programmes (PPP) in order to raise the needed funds, (iii) encouraging and coordinating research for new diagnostic and treatment tools, (iv) providing access to diagnosis and treatment to affected populations, and (v) increasing control activities. Finally, WHO expressed its view that a better coordination between AAT - HAT components within national PATTEC initiatives is needed.

2.5. AU/IBAR – S. Haile-Mariam

The AU/IBAR representative, Mr Solomon Haile-Mariam, presented the apologies of the IBAR Director, Mr Modibo Traoré, for not having been able to attend. In his intervention, Mr Haile-Mariam summarized the recommendations of the 28th ISCTRC Conference (25 - 30 September 2005, Addis Ababa, Ethiopia).

In the official declaration, the ISCTRC Conference called upon the 37 AU member states affected by T&T to implement the PATTEC Project by 2015 side by side with the Global programme for HIV/AIDS and Malaria.

Concerning recommendations, the most relevant are:

- Strengthening the ISCTRC Secretariat through the appointment of a full time secretary, provision of adequate resources and training;
- For the national PATTEC projects, each participating country should make feasibility studies, address the problem of capacity building and put in place efficient management structure before embarking in any field operation;
- With respects to HAT, WHO is encouraged to launch a programme to eliminate sleeping sickness, to introduce control strategies and to support countries in their efforts to update their epidemiological status. R&D groups are urged to look into new diagnostic tools and drugs;
- Further development of standard manuals and field guides (for example on area wide suppression) are needed. Standardized procedure for entomological and veterinary monitoring and subsequent analysis should be formulated and applied at the field level;
- PATTEC should urgently coordinate the assessment of training needs for mid-level and senior staff. PATTEC should also assist the preparation of national and regional action plans for T&T;
- WHO/TDR is encouraged to mobilize resources to address the potential problem of merger of *T. b. gambiense* and *T. b. rhodensiense* in Uganda;
- As regards vector control, gaps should be filled in data collection; the application of integrated technologies needs be pursued. The possible contribution of community participation should be further investigated;
- Environmental issues in T&T interventions should be properly addressed in order to ensure sustainable agriculture and rural development.

Standardized methodologies for environmental monitoring and impact assessment should be developed and made available to all countries.

2.6. **FAO/PAAT-Information System – G. Cecchi**

Mr Cecchi reported on the activities carried out in the framework of “Strengthening the Information System of the Programme Against African Trypanosomiasis (PAAT)” (IFAD-funded project).

The on-line accessibility to PAAT information has been increased. The layout of available tsetse distribution maps have been improved, additional maps have been created and made available, GIS datasets and relevant standard metadata have been published on PAAT web-site and uploaded in the FAO Geospatial portal (GeoNetwork). The PAAT web site has been fully revised; new pages concerning the disease, vectors, parasite, hosts, remote sensing, land use, environment and donors have been created and incorporated into the web site.

Coordination missions have been made to PAAT Secretariat partners (WHO, IAEA, AU-IBAR), PAAT scientific partners (CIRAD, France; CIRDES, Burkina Faso; ICIPE and ILRI, Kenya; ITM, Belgium) and to the six countries (Burkina Faso, Ethiopia, Ghana, Kenya, Mali, Uganda) implementing the phase one of the AfDB-PATTEC initiative. The visits contributed to accelerate the process of harmonization of the respective web-sites and Information Systems and the collection of further GIS datasets. In particular, the visits to the T&T affected countries allowed to assess the strengths and weaknesses in national GIS and Information Systems capacity, the main fragility presently being the management of entomological data.

With respect to the collection of baseline datasets for planning and implementing T&T control activities, PAAT-IS proposed the adoption of the FAO/UNEP Land Cover Classification System (LCCS) as a tool to standardise land cover mapping exercises carried out in the context of the alleviation of the African trypanosomiasis problem. Land cover datasets are essential in planning and monitoring T&T interventions but maps available at national level are not necessarily conceived for the needs of the T&T problem and are often produced using heterogeneous classification systems.

To demonstrate the potential of LCCS, present and future land cover maps compliant with LCCS were illustrated. In particular, one first attempted customisation of the Africover map of Uganda was presented. It is believed that the use of LCCS can foster regional coordination and increase the possibility of using standard land cover products within T&T intervention projects.

Future activities, within the IFAD-supported project, will include additional coordination visits to PAAT scientific partners (CTVM - Edinburgh University and Glasgow University, UK), the production of a CD-ROM with the updated PAAT web site and GIS resources and the provision of a tool-kit (on-line and on CD-ROM) for training of e-conference moderators.

Issues to be tackled by possible future activities were identified as:

- to update predictive maps of tsetse absence/presence and abundance (e.g. by using entomological datasets collected in a consistent manner by countries benefiting from AfDB financial support);
- to produce standard land cover maps for T&T (either through adaptation of existing standard multipurpose datasets or producing new ones);
- to support human resource development through training on GIS, Remote Sensing and DBMS (Data Base Management Systems);
- to backstop efforts at national level to develop environmental monitoring procedures (land use change, biodiversity, etc...) and guidelines for land use planning and natural resources management (at both national or local level).

2.7. AU-PATTEC – J. Kabayo

The representative of the PATTEC Coordination Office reported on plans and progress in the implementation of the PATTEC initiative. A brief reminder was given regarding the main features of the PATTEC initiative (decision of the African Heads of State, principles of the “Plan of action”, activities of the “PATTEC Coordination Office”, nature of PATTEC projects).

The current status and the roadmap for the activities of the PATTEC initiative were presented. With the support of the AfDB, the first phase of multi-national tsetse eradication projects has already been initiated involving Burkina Faso, Ghana and Mali in West Africa and in Ethiopia, Kenya and Uganda in East Africa. In the tsetse belt of Angola, Botswana, Namibia and Zambia, the project implementation is due to start in May 2006. In June 2007 five more multinational projects should commence (they should tackle transboundary areas in Rwanda and Tanzania, in Benin, Togo, Niger and Nigeria, in Chad, Central African Republic, Cameroon and Nigeria, in Sudan and Ethiopia and in Senegal, Mali and Guinea).

PATTEC indicated the expected support and assistance to its action to come from PAAT members and partners. WHO is requested to continue providing surveys, diagnosis and treatment of sleeping sickness in PATTEC project areas; technical support in tsetse mass-rearing, sterilisation and release is expected from the Joint FAO/IAEA Division, while FAO should assure technical support in project development, land cover monitoring and land use planning. Donors are required to provide financial contributions while regional and international research institutions are requested to support operational research, capacity building, project development and evaluation.

2.8. FAO / Pro-Poor Livestock Policy Initiative - T. Robinson

Mr Robinson presented the IGAD (Inter-Governmental Authority on Development) Livestock Policy Initiative (LPI) project and its contribution to the planning of trypanosomiasis interventions in the Horn of Africa.

The IGAD - LPI project aims at strengthening capacity in member states (Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, Uganda), regional

organizations and other stakeholders to formulate and implement livestock sector and related policies that sustainably reduce food insecurity and poverty.

In the context of trypanosomiasis control, two important policy issues concern where to control and how to control. Mr Robinson described the activities of a project on the “Spatial targeting of trypanosomiasis control”, carried out in Uganda in collaboration with COCTU (Coordinating Office for the Control of Trypanosomiasis in Uganda) and the International Livestock Research Institute (ILRI) (jointly funded by the Pro-Poor Livestock Policy Initiative (PPLPI) and the International Fund for Agricultural Development (IFAD)). The methodology selected is based on multi-criteria evaluation and it is aimed at generating priority maps for the control of animal trypanosomiasis in the context of the poverty alleviation. In a GIS environment, several layers are combined and factors are weighted to identify priority areas for intervention. The input layers used are livestock density, human population density, crop cover, length of vegetation growing period, density of poor livestock keepers and trypanosomiasis risk index. In the future, more layers could be added to the analysis: sleeping sickness data, modelled poverty data, land cover maps, market accessibility and livestock production systems. Weights are assigned to indexes through pairwise comparisons. In the workshops held in Uganda, the trypanosomiasis risk index, as compared with other indexes, was identified as the single most important criterion in the identification of priority areas for intervention, followed by the index of density of poor livestock keepers.

Future steps will concern the development of a multi-objective approach and include a whole set of other determinants, i.e. district-level importance of trypanosomiasis, sleeping sickness risk, willingness to pay (potential benefits), terrain, livestock-wild host ratios, tsetse species associations, degree of isolation of tsetse populations, re-invasion risk, land planning and environmental issues.

2.9. **FAO / IGAD LPI – A. Shaw**

Ms Alexandra Shaw presented the results of the work carried out under the PPLPI: “Comparable costing for alternative tsetse control options: examples from Uganda”.

The core of the presentation concerned the costing of different vector control strategies for Uganda. Of the many possible approaches to dealing with the vector the following were considered: bait technology with insecticide (in this case with traps), bait technology using insecticide-treated cattle (ITC), aerial spraying using fixed wing aircraft and the sequential aerosol technique (SAT) (5 cycles spraying), the use of the sterile insect technique (SIT) after suppression of the fly population by one of the above means. Due to the uncertainties related to the isolation of tsetse populations in Uganda, like in many other countries, both scenarios, i.e. isolated and non-isolated populations, have been studied.

In the case of isolated population, the less expensive option to achieve eradication was estimated to be ITC technique, with an average US\$ 250 per sq km of tsetse infestation; very close values, around US\$ 550 per sq km, were estimated for traps and SAT. If SIT is used, either alone or following

suppression with others techniques, costs rise up to an average of US\$ 1100 per sq km.

In the case of non-isolated populations, two options for dealing with reinvasion pressure were evaluated:

- intensification of control measures used for clearing tsetse;
- barriers, based on the less expensive technologies (traps in savannah fly areas, alternatively ITC).

In the first scenario, using ITC and traps, the cost per sq km increases by 11 percent, with the use of SAT it increases by nearly 40 percent, while for SIT the cost grows dramatically and it can be in the magnitude of 500 percent (more than US\$ 5000 per sq km).

In the second and more realistic scenario, barriers can be used to halt reinvasion. In the study presented, barriers are assumed to be kept in place for 3 years and they contribute between 15 percent and 30 percent to the programme cost. In this scenario, the cost of dealing with non isolated population seems lower. It should be mentioned that the estimated costs consider:

- barriers to be kept in place for 3 years only;
- barriers assumed to be successful;
- re-invasion pressure hypothesized to be exerted only from one side of the area.

The study provides technical options for the elimination of the T&T at various costs and takes also into account sensitivity analysis to contingencies, logistic and field operations.

Further analysis is needed to refine some prices and adjust operational costs (e.g. costs of the use of aircrafts, to which SAT and SIT can be very sensitive) and for sensitivity analysis. In addition, it should be considered that the efficacy of tsetse intervention techniques is affected by habitats, fly species and scale of intervention, which in turn impacts the overall cost.

2.10. AfDB-supported T&T intervention: country reports

Reports on countries benefiting from AfDB support for T&T intervention were presented by representatives of Burkina Faso, Ethiopia, Kenya, Mali and Uganda (representative from Ghana absent with apologies).

Implementation of AfDB-PATTEC supported T&T intervention in Ethiopia – T. Alemu

The Southern Tsetse Eradication Project (STEP) covers an area of around 25 000 sq km in the Southern Rift Valley in Ethiopia. The project started in 1997 and its impact on livestock, as perceived by the beneficiaries, includes reduced mortality and abortion, improved livestock body condition and increased animal production. STEP total cost was estimated to be US\$ 43.8 million, but the resources available at initial stage were sufficient for the first phase only (about

US\$ 8.9 million). Additional funding was provided by the AfDB as part of the regional PATTEC initiative, with the launching workshop scheduled for 16-17 May 2006 in Awassa. Major components of the AfDB project are tsetse suppression and elimination, capacity building, sustainable land management, project coordination and management. For the application of the SIT component of STEP, fly mass rearing and irradiation facility was established. The fly population of the insectary recently faced problems of unknown origin. However, since January 2006 the colony size has been increasing. Additional funds for STEP are expected from the Japanese Government through the United Nations Trust Fund for Human Security for a total budget of US\$ 1.76 million.

Major challenges for the future are: improvement of the tsetse mass production, sterile male release, availability of skilled expert team to monitor and guide the application of Area-wide Insect Pest management (AW-IPM), including SAT, manpower development, increased efficiency of the management and use of structure more focused to operational SIT-based AW programme. Matter of discussion was the presence of inaccessible field sites (approximately 20 percent of project area), in which SAT may be used. Issues also to be addressed by STEP to properly operate are: the establishment of an appropriate data management and information system for prompt day-to-day decision making and the identification of partner institutions that can provide assistance in land use management and address environmental issues.

In future, STEP will continue tsetse suppression in agreement with the area-wide concept, expand the tsetse colony, extend baseline data collection on the whole project area and establish a structured monitoring system. The project will also strengthen human resource capacity in the fields of GIS, project management and insectary management.

Implementation of AfDB-PATTEC supported T&T intervention in Burkina Faso – I. Sidibe

The AfDB and the Government of Burkina Faso are finalizing the administrative procedure for the initiation of the AfDB supported project in the country. Request for the first disbursement has been submitted. The ongoing activities related to T&T are supported by the country itself.

Four main components are embodied in the AfDB funded project. The “suppression and eradication” component includes community involvement, baseline data collection and processing, tsetse mass-rearing and serial release of sterile males. The “capacity building” component will focus on the creation of an integrated data information system, the rehabilitation of sub-regional training facilities and the reinforcement of national and regional capacities. The “sustainable land management” component concerns land use planning and institutional strengthening, aimed to guide the agricultural intensification and expansion. Last, the “project coordination and management” component will establish a system for information exchange and coordination between the national Project Coordination and Management Units (PCMU), PATTEC “Focal Points” in each country and the AU/PATTEC Office in Addis Ababa, Ethiopia.

Implementation of AfDB-PATTEC supported T& T intervention in Mali – E. Coulibaly

The tsetse infested area in Mali covers 240 000 sq km (out of a total country area of 1 241 000 sq km). Since 2001, Mali and Burkina Faso have been collaborating in joint T&T intervention activities, with financial and technical assistance provided by IAEA. In Mali, the objective of the project is the elimination of tsetse from an area of 40 000 sq km around Bamako in the northern Niger River basin; the project foresees the use of SIT. Significant success has been achieved in tsetse suppression using the community based approach.

In February 2005, the loan agreement with the AfDB was signed. Within the AfDB project, elimination of flies over an initial project area of 8.000 sq km will be attempted through the release of sterile males. After tsetse survey, suppression will also be expanded on an area of approximately 32 000 sq km.

Implementation of AfDB-PATTEC supported T&T intervention in Kenya – P. Olet

In Kenya there is a close association between the presence of tsetse and high levels of poverty. Eight tsetse species are present in 92 000 sq km. They are spread across three belts: Lake Victoria Basin, Lake Bogoria Basin and Meru-Mwea. Lake Victoria basin is within the first zone that will be targeted; all five districts in this region were also included in the FITCA (Farming in Tsetse Controlled Areas) project, which ended in 2004. There is evidence that flies are recovering in the areas previously targeted by FITCA; the new AfDB funded project will take up control activities over those areas in order to guarantee continuity of intervention.

The first disbursement from AfDB was in April 2006. A Project Coordination and Management Unit (PCMU) and members of the National Steering Committee have been identified. Procurement of equipment (e.g. targets, trypanocides, pesticides, GPS receivers and microscopes) has been approved.

For the full implementation of the AfDB funded project, Kenya has requested assistance from PAAT mandated organisations and stakeholders for a range of programme activities: procurement of GIS software and hardware, creation of a centralized database, training on data processing and analysis (GPS/GIS/Remote sensing), identification of priority areas of intervention, formulation of a national strategy for T&T intervention. Assistance is also needed in the fields of fly production and release, and for collection of baseline data in the Lambwe Valley.

Implementation of AfDB-PATTEC Supported T&T Intervention in Uganda – L. Semakula

In February 2006, the AfDB and the Ugandan Government officially launched the project in South East Uganda. The request for an initial advance of the grant was approved in April 2006, while the loan disbursement had to be revised according to specific categories (the request was officially re-submitted in April

2006). A Contracts Committee to undertake procurement of goods and services has been established and is due to start its work in May 2006. In March 2006, the National PATTEC coordinator participated in a planning workshop in Kigali, Rwanda, to finalize a regional project proposal on eradication of T&T in the Kagera region of Rwanda and Tanzania.

With respect to capacity building, Ugandan staff participated in a course on baseline data collection organised by IAEA in Nairobi in March 2006; further training activities (i.e. GIS) have also been planned for 2006.

General discussion

During the round-table discussion, the initial attention concentrated on the comparative costs of tsetse control options. The presented analysis is based on a model, which assumes that all compared control options will eventually result in the complete removal of the target tsetse species. The model aims at illustrating how tsetse elimination can be achieved using various techniques implying variations of costs, with SIT as the most expensive one. Both, the necessity of the SIT in all circumstances for tsetse elimination, as well as the applicability of such a model for the complex decision making on practical tsetse control options were questioned.

Kenya was congratulated for taking in due consideration the previous FITCA experience in the implementation of the new AfDB project. This approach, learning from past experience, was recommended to other countries. A matter of concern was the little attention devoted to bio-technology applied to T&T, tsetse biology, diagnosis and environmental issues. It was recommended to include these activities into the AfDB funded projects.

Another neglected aspect was the development of the rural communities and, with it, the final objective of assisting rural populations through education and development activities.

Concerning HAT, the audience was reminded that control activities are ongoing in some endemic countries (e.g. Guinea and Côte d'Ivoire) and were emphasized the important progresses made since 1999 in developing control programmes.

The meeting expressed its concern on epidemiological changes linked to anthropogenic activities in some areas: in the case of white rhinoceroses reintroduction into Matusadona Game Reserve in Zimbabwe all white rhinos died of trypanosomiasis due to the loss of resistance, being rhinos bred in captivity without contact with tsetse flies; another example reported was the cotton belt in West Africa where heavy use of insecticides has had an effect in reducing tsetse populations. The use of insecticides is now being discouraged, due to environmental pollution and the introduction of new varieties of cotton more resistant to disease. This may result in an upsurge of tsetse fly populations.

2.11. Linking sustainable human and animal African trypanosomiasis control with rural development strategies - P. Cattand

The draft document of this PAAT position paper dealing with a logical framework for integrating AAT and HAT in the global effort as it was delineated in the Millennium Development Goals (MDG) was presented. The paper also integrates T&T in the general context of improved human health, increased livelihood, reduced poverty and increased food security.

Food security in Africa has substantially worsened since 1970. The proportion of malnourished individuals in Sub-Saharan Africa has remained in the range of 33–35 percent, but the absolute number of malnourished people has increased substantially with population growth, from 88 million to over 200 million in 2001. UN MDGs stipulates that development should focus on eight points, each goal to be achieved by 2015. T&T control will contribute to many of these goals, among which are:

- to eradicate extreme poverty and hunger;
- to combat HIV/AIDS, malaria and other diseases;
- to develop global partnership for development (e.g. in cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries).

With the support of the International Monetary Fund and the World Bank T&T affected countries produced national Poverty Reduction Strategy Papers (PRSP). With the exception of few countries, the T&T problem is not included in these documents; hence it is essential to continue to inform national governments on the impact of T&T on the rural development of sub-Saharan Africa and insert actions against trypanosomiasis as a component of the national strategies for poverty reduction.

2.12. **Guidelines for declaring areas free of tsetse flies and tsetse-transmitted trypanosomiasis – a new proposed PAAT Technical and Scientific Series paper – U. Feldmann**

No internationally accepted guidelines exist regarding a sequence of agreed veterinary and entomological screening criteria that need to be met for declaring an area free of tsetse flies and trypanosomiasis.

Mr. Feldmann introduced a draft of a paper which aims at setting such guidelines and criteria. The approach consists of a series of parasitological, serological and entomological screening activities used in a phased process (*ante*, *intra* and *post* completion of integrated area-wide intervention measures) to assess the absence of flies and parasites and thus declare the area free. The methodology used follows the general principles developed by OIE for declaring an area free of rinderpest.

T&T intervention can be discontinued when the criteria established for declaring the area ‘provisional T&T free’ are met. This is followed by two post-intervention phases of monitoring of different intensity. If during these two post-intervention phases evidence on the existence of cyclical trypanosome transmission is obtained, or if any adult fly of the target population is trapped, a re-initiation of intervention activities will result. If the veterinary and entomological monitoring activities during both post-intervention phases are conducted properly, and result in no evidence for trypanosome transmission and evidence of tsetse absence, a “declaration of freedom from tsetse flies and the trypanosomiasis problem” can be made. The paper provides full details on the techniques and probability models to be used in the different phases of the monitoring and surveillance activities.

A spreadsheet which guides to determine how many traps or how many trapping days are needed to reach a given level of confidence in declaring the area free of tsetse was also presented.

2.13. **Open discussion on training needs of affected countries**

Participants agreed to evaluate the real impact of training; in this respect, feedback on the recently held training courses should be provided by national PATTEC coordinators.

Participants were reminded that the United States Department of Agriculture (USDA) is willing to provide 6-months training to young field officers on the principles of tsetse mass rearing.

Training in community participation should also be provided to rural communities to stimulate their active participation in field T&T activities.

Additional training should address:

- GIS technology on three different levels:
 - field level, to collect geo-referenced information and insert it into a database;
 - project office level, to summarise data and produce reports
 - higher level, to design databases and complex data analysis.
- data management (processing and analysis);
- planning of T&T intervention;
- technology transfer and introduction and adoption of new improved technology;
- sustainable capacity building/human resources development.

2.14. **T&T research, development and training at CIRAD - S. de la Rocque**

An overview of CIRAD (French Agricultural Research Centre for International Development), its activities, human resources and ongoing research programmes, with a special emphasis on activities related to the T&T problem was presented.

CIRAD-EMVT has a long experience in T&T research activities. Since 2000, EMTV has joined IRD (Research Institute for Development) to establish a unit working on T&T. The main fields of activity concern vectors and pathogens (population genetics; taxonomy; vector competence; drug resistance), interactions between tsetse/trypanosome/host (epidemiology; trypanotolerance; host specificity; competition; symbionts), risk assessment (diagnosis; risk factors and indicators; prevention; aid for decision making), prevention and control (friendly environmental techniques; trapping protocols; vaccine development).

EMTV is currently involved in a project funded by Wellcome Trust aiming at understanding the impact of habitat fragmentation on tsetse population dynamics. The project uses environmental and remotely sensed datasets to quantify and qualify the fragmentation of riparian and savannah woodland

vegetation. The results are expected to contribute to the development of more effective T&T intervention strategies.

CIRAD-EMVT is also deeply involved in training activities, the most important being the “*Certificat d’Études Appliquées Vétérinaires*”, DESS in Animal Productions in tropical countries, international training course in entomology (Pasteur Institute of Paris), Master of tropical diseases (Valencia, Spain), Master of Parasitology, (University of Montpellier II); “*Master International D’ENTOMOLOGIE médicale et vétérinaire*” (Cotonou, Benin).

2.15. **ILRI activities under PATTEC initiative - J. Maitima**

The ILRI representative presented possible contributions of the Institute to the implementation of the PATTEC initiative. ILRI developed significant experience in environmental and socio-economic impact assessments of T&T control strategies, sustainable land management and capacity building, in particular in the fields of RS and GIS. ILRI also offered its support to national institutes and PATTEC Office for the development of research activities.

With respect to the environmental and socio-economic impacts assessment, it is important to evaluate pressures on the agro-ecological systems, their status and response. Cause-effect relationships must be established and appropriate indicators are to be identified with a view to scale up and out the obtained results.

In the field of Sustainable Land Management (SLM) a proposal to develop an integrated framework for SLM in PATTEC tsetse freed areas is under discussion with UNEP/GEF (Global Environment Facility). Another proposal investigating the ecological and environmental implications of land use / land cover changes in PATTEC tsetse freed areas is under development for submission to NASA.

SLM should build on approaches similar to those used in some already completed projects like LUCID (Land Use Change Impacts and Dynamics) and TOC (Trajectories of Change). Other approaches could include the survey based expert opinion and indigenous knowledge system analysis, the spatially based land use/land cover modelling and scenario analysis, the identification and scaling out of best land use, land management practices and the policy analysis.

In the field of training, ILRI has planned to hold a GIS Training course 8 - 26 May 2006.

2.16. **Animal trypanosomiasis research at the Institute of Tropical Medicine - S. Geerts**

The T&T research objectives for 2006-2007 of the ITM, which is celebrating in 2006 its 100th anniversary, were presented.

Focus is on three main subjects: development and validation of molecular techniques for the detection of drug-resistant trypanosomes, study of the animal reservoir of *T. b. gambiense* and molecular epidemiology and control of trypanosomiasis.

Considering that present tests have a numbers of drawbacks, namely cost and labour intensity, the improvement of drug resistance diagnosis is necessary. The novel technology developed foresees that samples be taken on a filter paper and sent by snail mail to a laboratory; results could be obtained in short time (within 2 days). Molecular tools for the detection of drug-resistant trypanosomes are expected to be validated by 2007 and then the technology will be transferred to the affected countries.

A brief overview was also provided on distance learning opportunities at the Universities of Pretoria and Utrecht, in collaboration with ITM. Currently available modules target tropical medicine and animal health.

Mentioned was the difficult financial situation of ITC (International Trypanotolerance Centre, The Gambia), a partner centre of ITM. The action taken to improve the situation was the reduction of number of staff, animals and field stations. ITC Council has proposed to merge CIRDES and ITC with a view to creating a stronger livestock research centre in West Africa.

2.17. **International Centre of Insect Physiology and Ecology (ICIPE) - R. Saini**

An overview was provided on the way in which ICIPE operates and on its potential contribution to the PATTEC initiative.

ICIPE works on four major programme areas: human, animal, plant and environmental health. The core activities of the animal health area aim at increasing livestock productivity by effectively managing tsetse flies and ticks. Ongoing projects are:

- Enhancing the diffusion of new tsetse control technologies for improved livestock health and productivity in smallholder indigenous communities in sub-Saharan Africa (Donor: IFAD; Collaborators: KARI-TRC and ILRI);
- Community based tsetse control in Mwea National Reserve (Donor: Biovision, Switzerland; Collaborators: Kenya Wild Life Services);
- Tsetse control through adaptive management in Ethiopia (Donor: SDC, Biovision & Helvetas; Collaborators: Regional and National Governments).

As regards potential contributions to PATTEC, ICIPE could provide assistance for ecological studies (dispersal/distribution of vectors), vector suppression, barrier development using baits and repellents (push-pull approach), tsetse mass rearing, backstopping on R&D activities, socioeconomic studies and capacity building.

ICIPE representative finally introduced the capacity building and institutional development programme of the institute, implemented through the “African Regional Postgraduate Programme in Insect Science” (ARPPIS). Within the ARPPIS programme ICIPE trained over 170 PhD students, over 100 MSc

students, 600 veterinary services extension staff and IPM specialists and over 14,000 farmers.

2.18. **The role of the private sector in T&T interventions and partnership with FAO - F. van Gool**

IFAH (International Federation for Animal Health) is an international federation representing manufacturers of veterinary drugs, vaccines and other animal health products in both developed and developing countries across five continents. The representative of IFAH introduced mission, priorities and members of the federation.

IFAH corporate member role in T&T interventions is to guarantee supply of quality drugs, to combat in the most efficient and safest way tsetse flies and trypanosomiasis. IFAH is also committed to providing services such as training of veterinarians, technicians and farmers on diseases, diagnosis, food hygiene and good veterinary practice.

An FAO - IFAH cooperation is currently dealing with the problem of control of quality of trypanocidal drugs. A considerable amount of dubious quality and fake trypanocidal and other veterinary drugs are found on the African markets. These compounds are characterised by reduced or absence of efficacy, toxicity, unknown/unwanted residues in the food chain and resistance in pathogens. The FAO - IFAH collaboration also foresees to transfer the generated technology to two analytical laboratories (one in West Africa and one in East Africa) for quality control of veterinary drugs available in Africa. The laboratories will use standardised protocols, methodologies and equipment and will provide continuous training to African technicians.

Comparative results between original and non-original drugs were presented.

Mr. van Gool concluded his presentation by stressing the urgent need for the African veterinarians and farmers to know exactly the quality of veterinary drugs on the local market. The FAO-IFAH cooperation provides a means to assist African partners in controlling the quality of veterinary drugs locally available and disseminating the results to all involved stakeholder (regulatory authorities, veterinary services, veterinarians, farmers). This effort should support the African market to provide effective and safe drugs, which in turn will enable to significantly increase animal production and contribute to both food safety and food security.

3. **CLOSING**

Ms. Alice Perlini, DG of IAO, thanked all participants for attending the meeting. She expressed IAO interest in being informed on the follow-up from the PAAT PC meeting, considering the common goal of alleviating poverty, improving socio-economic conditions in the developing world through technical and scientific collaboration. She declared the meeting closed.

The next PAAT-PC meeting will be held in WHO HQs, Geneva, April or May 2007.

4. RECOMMENDATIONS

4.1 The following recommendations were formulated.

- A. The meeting recognises the importance of training and human resource development, and **recommends**:
- to develop training modules at various levels for personnel and community involved in T&T field intervention activities.
- Action:** PATTEC.
- to improve networking and coordination of training activities among the AfDB beneficiary countries.
- Action:** PATTEC, beneficiary countries, PAAT, research institutes.
- B. The meeting commends the work done to strengthen the PAAT Information System and **recommends**:
- to continue and further expand the PAAT-IS resources.
- Action:** PAAT.
- C. The meeting encourages investment in further efforts to model tsetse populations and **recommends**:
- to enhance GIS applications to facilitate planning, decision making and progress assessment.
- Action:** Donors, PATTEC, beneficiary countries, PAAT, research institutes.
- D. The meeting acknowledges the existence of baseline datasets in AfDB benefiting countries and the availability of guidelines and strategies for designing T&T field intervention programmes. Hence, prior to the planning and implementation of standardised baseline data collection, it is **recommended**:
- a thorough screening of existing information;
 - the efficient use of existing guidelines and strategies for designing T&T field intervention programmes in the AfDB beneficiary countries;
 - the transfer to digital format of datasets which are still in paper format
- Action:** PATTEC, beneficiary countries, assisted by PAAT.
- E. The meeting notices a certain weakness in communication flow and **recommends** that:
- all partners make an effort to ensure efficient exchange of information amongst one another, making optimal use of existing dissemination pathways, in particular the PAAT-IS.
- Action:** all PAAT partners and stakeholders, PATTEC.
- F. The PAAT Programme Committee welcomes and supports the IGAD Livestock Policy Initiative project. The meeting **recommends**:
- to include policy issues related to trypanosomiasis control in the Greater Horn of Africa within the IGAD-LPI project activities.

Action: IGAD-LPI.

- G. Considering that the 11th Meeting of the Panel Advisory Group Coordinators of PAAT, held in Addis Ababa, 21-22 September 2005, encouraged WHO to strengthen control activities to face HAT as a disease candidate to be eliminated, the meeting **recommends:**
- to ensure the involvement of MoH in PATTEC project elaboration in order to guarantee that HAT control is included in PATTEC operations.
- Action:** National coordinators of AfDB beneficiary countries.
- H. With reference to the recommendations of the 28th ISCTRC conference in Addis Ababa (September 2005), the meeting **recommends:**
- That all partners and stakeholders of the ISCTRC provide feedback to the ISCTRC Secretariat on the progress of the implementation of the 28th ISCTRC recommendation as soon as possible.
- Action:** beneficiary countries, PAAT, PATTEC, FAO, IAEA, WHO, research institutes.
- I. The meeting acknowledges the progress made in producing guidelines under the form of position papers. The meeting **recommends:**
- to disseminate to an appropriate audience and thus provide feedback to the two draft PAAT position papers (“Linking sustainable human and animal African trypanosomiasis control with rural development strategies”, “Guidelines for declaring areas free of tsetse flies and tsetse-transmitted trypanosomiasis”) and to the PPLPI working paper “Comparable Costings of Alternatives for Dealing with Tsetse: Estimates for Uganda”.
 - in the case of the paper dealing with declaring areas free of T&T, to complement it with a simple guide for field implementation.
- Action:** beneficiary countries, PAAT, IAEA.
- J. Concerning research activities, the meeting **recommends:**
- to adapt the research programmes of research institutes to service the requirements of the AfDB beneficiary countries.
- Action:** CIRAD, ICIPE, ILRI, ITM.
- K. The meeting recognises the importance of applied field research in T&T and related subjects. The meeting **recommends:**
- to take advantage of AfDB funded project to identify and carry out demand driven research.
- Action:** donors, research institutes, beneficiary countries, PAAT, PATTEC.
- L. The meeting acknowledges the support of IFAD and UNIDO to PAAT. The meeting **recommends:**
- to further strengthen the inter-Agency (PAAT mandated organisations / IFAD / UNIDO) collaboration;
 - to advance in the implementation of the cooperation with IFAH on quality control/quality assurance of trypanocides and other veterinary drugs;

- to extend partnership with the private sector in the field of both human and animal trypanosomiasis.

Action: PAAT, IFAD, UNIDO, IFAH.

10th Meeting of the PAAT Programme Committee

26-27 April 2006

Florence, Italy

Agenda

Wednesday, 26 April 2006

08:30 – 09:00

Registration

09:00 – 09:20

Opening address – *A. Perlini*

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

09:20 – 09:50

Adoption of report of 9th Programme Committee meeting and action taken on the recommendations, including FAO/PAAT activities – *A.A. Ilemobade, R.C. Mattioli*

09:50 – 10:00

Report from IAEA – *U. Feldmann*

10:00 – 10:10

Report from WHO – *P. Simarro*

10:10– 10:20

Report from AU/IBAR – *H.M. Solomon*

10:20 – 10:50

Coffee break

10:50 – 11:10

PAAT-Information System: what's new – *G. Cecchi*

11:10 – 11:30

Report on the progress in the implementation of PATTEC-AfDB initiative – *J. Kabayo*

11:50 – 12:20

Comparable costing for alternative tsetse control options: examples from Uganda– *A.P.M. Shaw*

12:20 – 12:40

The IGAD Livestock Policy Initiative: planning trypanosomiasis interventions in the Horn of Africa – *T. Robinson*

12:40 – 13:00

Discussion – *A.A. Ilemobade, moderator*

13:00 – 14:30

Lunch break

14:30 – 15:00

Implementation of AfDB-PATTEC supported T&T intervention in Ethiopia – *T. Alemu*

15:00 – 15:30

Implementation of AfDB-PATTEC supported T&T intervention in Burkina Faso-Mali – *I. Sidibe, E. Koulibaly*

16:00 – 16:30

Coffee break

16:30 – 17:00

AfDB-PATTEC supported T&T intervention in Kenya – *P. Olet*

17:00 – 17:30

AfDB-PATTEC supported T&T intervention in Uganda – *L.D. Semakula*

17:30 – 18:00

Round table discussion – *S. Geerts, moderator*

18:00 – 19:30

Gathering together (IAO reception room)

Thursday, 27 April 2006

09:00 – 09:30

Summary and main points of Day 1 – *A.A. Ilemobade*

09:30 – 10:00

Linking Sustainable Agriculture and Rural Development (SARD) strategies with Sleeping Sickness control – *P. Cattand*

10:00 – 10:30

Guidelines for declaring areas free of tsetse flies and tsetse-transmitted trypanosomiasis – A new proposed PAAT Technical and Scientific Series paper – *U. Feldmann*

10:30 – 11:00

Coffee break

11:00 – 12:00

CIRAD, ILRI, ITM, ICIPE: their activities in T&T Research and Development and training opportunities – *S. de la Rocque, J. Maitima, S. Geerts, R. Saini*

12:00 – 12:30

IFAH's activities in sub-Saharan Africa and possible integration and support to T&T interventions – *F. Van Gool*

12:30 – 14:00

Lunch break

14:00 – 14:30

The Istituto Agronomico per l'Oltremare: its activities in developing countries with a focus in sub-Sahara – *A. Perlini, A. Scappini*

14:30 – 15:45

General discussion: coordinated action, assistance, needs and requirements of the six countries benefiting of the AfDB financial support – *AA. Ilemobade, S. Geerts*

15:45 – 16:15

Coffee break

16:15 – 17:00

General discussion - *AA. Ilemobade, S. Geerts, moderators*

Conclusions and recommendations

Any other business

Next meeting

Closing

10th Meeting of the PAAT Programme Committee**26-27 April 2006****Florence, Italy*****List of Participants***

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10th Meeting of the PAAT Programme Committee

26-27 April 2006

Florence, Italy

List of Documents

1. Agenda and List of Participants
2. Report of the 9th PAAT-Programme Committee meeting, 3-4 May 2005, Vienna, Austria
3. Actions taken on the recommendations of the 9th PAAT Programme Committee Meeting, 3-4 May 2005, Vienna, Austria.
4. Powerpoint presentation *Strengthening PAAT-Information System*.
5. Leaflet on UNIFEED satellite transmission on tsetse fly
6. “International assistance to intervention policies and implementation of area-wide tsetse and animal trypanosomiasis programmes”, Extended Synopsis and powerpoint presentation, FAO/IAEA International Conference on *Area-Wide Control of Insect Pests: Integrating the Sterile Insect and Related Nuclear and Other Techniques*, 9-13 May 2005, Vienna, Austria.
7. *Potential impact of tsetse fly control involving the sterile insect technique*, Chapter 7.4 of *Sterile Insect Technique. Principles and Practice in Area-Wide Integration Pest Management*, 2005, IAEA.
8. Draft Final Report on *Quality control of trypanocidal drugs – Validation of an analytical method for the determination of isometamidium and related substances, 1 Dec 2005-17 Feb 2006*, Agrochemicals Unit, FAO/IAEA Agriculture and Biotechnology Laboratory, Seibersdorf, Austria in collaboration with Department of Pharmaceutical Sciences, Strathclyde Institute for Biomedical Sciences, Glasgow, Scotland, UK.
9. *Livestock-Agriculture Development and Human Health in Tsetse and Trypanosomiasis Intervention Areas*, FAO/IAEA/WHO Assistance Formulation Team, Terms of Reference for countries benefiting from AfDB financial support.
10. *Guidelines for declaring areas free of tsetse flies and tsetse-transmitted trypanosomiasis*, PAAT Technical and Scientific Series (Draft document and spreadsheets), 2006
11. *Mapping the benefits: developing a new decision tool for tsetse and trypanosomiasis interventions* (Leaflet and draft document in English and French), 2006
12. Note to the file *IAEA Meeting of National Coordinators*, IAEA HQs, Vienna, 7-9 December 2005.
13. *Linking sustainable human and animal African trypanosomiasis control with rural development strategies*, PAAT Technical and Scientific Series (Draft document), 2006.