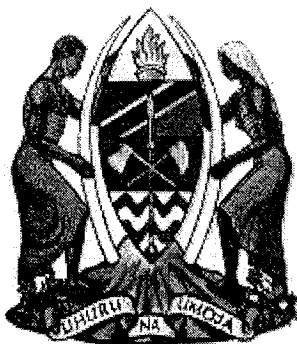


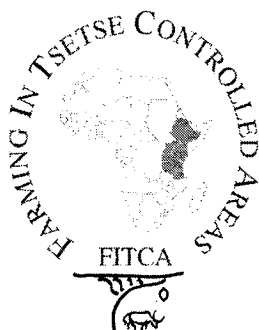
**THE UNITED REPUBLIC OF TANZANIA  
MINISTRY OF WATER AND LIVESTOCK  
DEVELOPMENT**

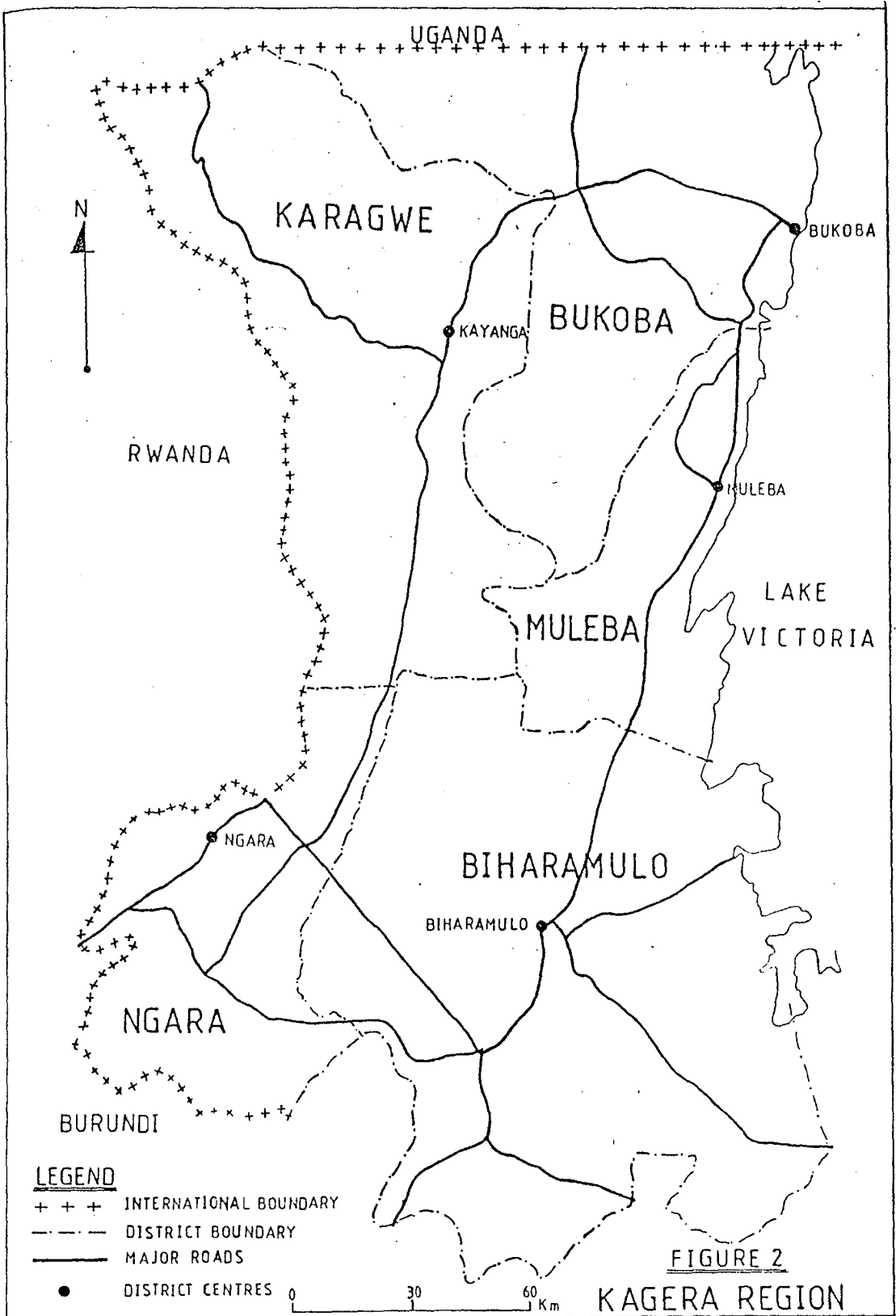


**FARMING IN TSETSE CONTROLLED AREAS OF  
EASTERN AFRICA - KAGERA  
FITCA KAGERA**

**PROJECT EDF NO 7 ACP/PRP/578**

***Briefing notes for Dr. Harald Rojahn,  
the FITCA regional TA (AU/IBAR – Nairobi)  
(Kagera visit 16/6/2004 – 21/6/2004)***





**LEGEND**

- +++ INTERNATIONAL BOUNDARY
- DISTRICT BOUNDARY
- MAJOR ROADS
- DISTRICT CENTRES

**FIGURE 2**

**KAGERA REGION**

# **FITCA KAGERA**

## **IN BRIEF**

### **THE HISTORY, THE CURRENT**

**And**

### **SOME FUTURE THOUGHTS ON FITCA PHASE II**

**(16/6/2004)**

## **General;**

Kagera region lies in the northwestern corner of Tanzania and is bordering Uganda in the north, Rwanda and Burundi in the west and Kigoma, Shinyanga and Mwanza regions in the south. Lake Victoria is the natural eastern border. The total area of land surface 28,500 square km is subdivided into five districts, Bukoba (with Bukoba town, the administrative and commercial center with 45,000 inhabitants), Karagwe, Muleba, Biharamulo and Ngara.

The region consists of a number of ridges and plateaus, separated by valleys, most of which are swampy. The altitude varies between 1128m and 1646m. Annual rainfall averages between 1,000 mm and 1,500mm, although some areas receive up to 2,000mm while others receive less than 500mm of rain in some years. 20,000 square km is suitable for agriculture.

The region has a population of over 2 million people (2002 figures). Over 80% of the people depend on agriculture for their livelihood. Average holding size is 1.08 hectares.

The regional economy heavily depends on agriculture and animal production. Major food crops are bananas, cassava, maize, sweet potatoes and beans (also functioning as a cash crop). In most areas, the dominant farming system is the integrated banana coffee complex. Productivity is low. Major causes include pests, low soil fertility.

Approximately 23,000 households are engaged in livestock keeping. The livestock population consists of approximately 374,000 heads of cattle; 369,000 goats; 52,000 sheep; 6,600 pigs and 444,000 poultry. Within the livestock sector, different subsystems can be distinguished.

- The cattle/crops subsystem, in which banana/ coffee farmers keep cattle. The farmers main interest is the manure production for more/better crop farm productivity. However in Southern part of the region, in Biharamulo district cotton is grown and cattle here have an additional function in providing draught power for the cotton cultivation.
- Semi-nomadic cattle keepers are mainly found in the northwestern Karagwe district, sometimes migrating with their cattle to the bordering areas in Uganda. They have larger numbers of animals per household. As they are not involved in crop production, manure is of less importance to them, and that they are more interested with milk for their subsistence.
- Specialized dairying was started and developed by the closed Dutch funded program in 2000 (Kagera Livestock development project = KALIDEP). Currently the region has about 9000 small holder dairy farmers with a total of over 15,000 dairy animals. The demand for dairy animals is very high in the region. There is definitely a great need to further expand and improve the dairy industry in the region.
- The fourth and last livestock farming system is the commercial ranches, which occupies 179,491 hectares of land in the central part of the region. The four commercial ranches have a total of slightly over 18,000 cattle.

# The project, FITCA Kagera

During the early 1980's and before, two thirds of the entire Kagera region was infested with tsetse fly, making livestock development very difficult to accomplish. It was common to register tsetse fly catches of apparent density (AD) of 200 to 600. This sort of tsetse numbers translated it self to trypanosomiasis being in the list of the two most important cattle diseases the other one was tick borne disease.

Before, FITCA program, through the activities of the Dutch funded, KALIDEP program, 'deltamethrin' and other **synthetic pyrethroids** (e.g bayticol) use for both ticks and tsetse control was stimulated from the year 1991 (some 14 years ago). To the best of our knowledge, the large scale deltamethrin use on cattle as live moving targets for control of both ticks and tsetse fly has been used for a long time and successfully controlled tsetse in the region.

FITCA was therefore introduced to the region, when tsetse and trypanosomiasis importance was possibly number 5 after, ticks and the tick borne diseases, helminthiasis, CBPP, viral & bacterial diseases.

FITCA Kagera activity implementation was started in June 2002, though the awarding and signing of the management contract by CDP East Africa LTD indicated that the implementation of the project would start on the 29/1/2002. The approved annual work-plan and budget for the district FITCA operational activities indicated that the FITCA Kagera work would start on the 2/5/2002.

All in all there was a delay in starting the implementation of the program by about four months from the time of signing the management contract and by one month from the time of the approval of the 2002/2003 Annual Work – plan and Budget for FITCA Kagera. The delay has been mainly due some bureaucratic procedures of the EU, the financier of the FITCA program. Because the program did not get any working advance, CDP E.A. LTD the contracted implementing consultant financed the FITCA starter activities by advancing the FITCA Kagera project shillings 31,925,927.40 that was used to finance the 1<sup>st</sup>, 2<sup>nd</sup>, and some 3<sup>rd</sup> quarter costs of AWPB1 of the FITCA Kagera activities.

FITCA is being implemented in the two districts of Karagwe and Bukoba (rural). With the overall objective is to improve the general standard of living for the people dwelling in tsetse infested areas by supporting local initiatives and seeking to reduce expenditure while also enhancing the capacity of government and other services to responding to client demands

The purpose of the FITCA program is to support on-going control activities already being undertaken by populations living in tsetse infested areas in Kagera region in Tanzania by utilizing low cost, effective and environmentally beginning techniques.

Results, of the FITCA Kagera include; (i) Improved capacity of public and private sector technical services to meet the needs of the livestock keepers in monitoring and controlling trypanosomosis in livestock. (ii) The use of trypanocides and acaricides rationalized to achieve adequate control of trypanosomosis and tick-borne diseases. (iii) The ability of the local communities, in the target areas to assess trypanosomosis challenges and its actual and potential impact on the local economy enhanced. (iv) Tsetse monitoring and control programs are implemented, integrated and harmonized into community development plans of Karagwe and Bukoba districts.

The FITCA Kagera monitoring sites for the two districts of Bukoba and Karagwe are shown in Annex 1 in figure 1a and 1b for Karagwe and Bukoba districts respectively.

(v) Improved trypanosomosis control strategies practiced by most dairy producers especially women involved in zero grazing production systems. (vi) Tsetse and trypanosomosis control and monitoring activities are harmonized with proper land use planning and natural resources management at the border areas of the settled villages or livestock grazing areas bordering the gazetted conservation and forest reserve areas

Annex 1 of this report gives a summary description of Kagera region and the two 'FITCA' districts of Karagwe and Bukoba, while annex 2a & 2b is briefly explaining the projects management aspect at the district level. Figure 1a & 1b is showing the FITCA Kagera monitoring sites. Last but not least annex no 3, is giving some ideas on possible outlook of the FITCA phase II

By the end of the December 2003, the total implementation months for the FITCA Kagera program had been 19 (11 months for the AWPB1 and 8 months for the AWPB2). The conclusion is that the nineteen months was obviously a very short time especially when considering that FITCA Kagera is a rural development program. For a program where stakeholders are firstly empowered by being trained, with an intention of them taking over responsibility for the execution of the program in latter coming years.

The FITCA Kagera phase 1 main activities can generally be categorized into 6 as follows,

- (i) The working area and the stake holder identification,
- (ii) The stakeholder training materials development.
- (iii) The execution of the stakeholder training program.
- (iv) Provision of the program implementation logistics.
- (v) Tsetse & trypanosomiasis control & monitoring (including the additional monitoring of ticks and tick borne diseases and helminthiasis in the same areas, because of the stakeholders wishes.
- (vi) Program implementation & monitoring/coordination.

For the purpose of the program implementation in the FITCA phase 1 in both the 11 months of AWPB1 and the 8 months of the AWPB2 the above listed 6 main activities have been expanded into 23 detailed field activities as follows;

<b>Main activity grouping</b>	<b>Detailed activity summary for the purpose of the AWPB implementation.</b>	<b>Summary achievements of the detailed activity implementation.</b>
(1) Stake holder identification.	<ol style="list-style-type: none"> <li>1. Selection of the monitoring areas.</li> <li>2. Identification of the participating farmers.</li> <li>3. Stimulation of the formation of the farmers groups.</li> <li>4. Baseline surveys in the monitoring areas.</li> </ol>	<ul style="list-style-type: none"> <li>◆ 16-monitoring sites selected (8/district).</li> <li>◆ 380 group members.</li> <li>◆ 12 (6/district) formed.</li> <li>◆ Two baseline surveys done at start of program.</li> </ul>
(2) Stakeholder training material preparation.	<ol style="list-style-type: none"> <li>5. Training needs identification.</li> <li>6. Prepare farmers group dynamics training guide.</li> <li>7. Prepare tsetse, trypanosomiasis, ticks &amp; tick borne diseases and helminthiasis monitoring guide.</li> <li>8. Prepare rational and appropriate use of the acaricides for the ticks and tsetse control.</li> </ol>	<ul style="list-style-type: none"> <li>◆ Done (July – 02).</li> <li>◆ 1<sup>st</sup> version finalized (July – December 2002).</li> <li>◆ 1<sup>st</sup> version finalized July – December 2002.</li> <li>◆ 1<sup>st</sup> version finalized July – December 2002.</li> </ul>
(3) Execution of the stakeholder training programs.	<ol style="list-style-type: none"> <li>9. Study tours to FITCA Uganda and Kenya by farmers and field staff.</li> <li>10. Farmers group dynamics training.</li> <li>11. Training of staff and farmers motivators on tsetse, trypanosomiasis, ticks &amp; tick borne diseases and helminthiasis monitoring.</li> <li>12. Training of staff and farmers group leaders on rational and appropriate use of the acaricides for the ticks and tsetse control.</li> </ol>	<ul style="list-style-type: none"> <li>◆ 23 –participated. (30/9 –5/10/2002).</li> <li>◆ 62 trained. (13-17/4/03)</li> <li>◆ 33 trained. (22-27/7/03)</li> <li>◆ 36 trained. (28-31/12/03)</li> </ul>
(4) Provision of the implementation logistics.	<ol style="list-style-type: none"> <li>13. Purchase of motorcycles for the DTO's.</li> <li>14. Provisions of the 4 wheel drive vehicles for the field use.</li> <li>15. Purchase of laboratory and monitoring equipment's.</li> <li>16. Provision of the office equipment's.</li> <li>17. Development of computer software for the monitoring of the field progress.</li> </ol>	<ul style="list-style-type: none"> <li>◆ Two bought &amp; in use.</li> <li>◆ Available by hiring on demand.</li> <li>◆ Major March-03. Minor on demand Aug – Dec 03.</li> <li>◆ Availled as required.</li> <li>◆ Implemented, (July 02-April 03.) Testing &amp; perfecting, continuos, however important to have a lot of field raw data.</li> </ul>
(5) Tsetse &	18. The control and monitoring of the	◆ Control on going

trypanosomiasis control & monitoring	tsetse, trypanosomosis, ticks & tick borne diseases & helminthiasis.	(weekly & monthly) acaricides application on cattle. ♦ Monitoring total 2x (10-30/10/03 & 17-24/12/04)
(6) Program implementation & coordination.	19. Follow/Supervision and support of the field staff performance. 20. Follow/Supervision and support of the farmers (farmers groups) performance. 21. District technical meetings. 22. National steering committee meeting.  23. Regional FITCA coordination meetings	♦ Through out (July 02 – December 2004). ♦ Through out (July 02 – December 2004). ♦ Once every quarter. ♦ Three times, Tanga, Dar, &Kagera ♦ 3 times, (Jinja once & Nairobi twice)

As can be seen from above table, most of the planned activities have been implemented. However because of the very short implementation period (19 months). The implementations of the activities were at a rash and some sub activities have not been touched at all as listed below.

- The use of cheap locally available inputs and/or technologies to control tsetse & trypanosomiasis, ticks & tick borne diseases, & helminthiasis.
- The appropriate land use principles for its optimum utilization.
- The printing of the three sets of the above developed training manuals and the relevant extension leaflets.
- The full involvement of the zero grazing dairy farmers is still to be taken.

*In summary FITCA Kagera has achieved the following, since its implementation started in the two districts of Bukoba and Karagwe in July 2002;*

- ♦ Over 300 FITCA group members, have been supported, to improve their tsetse and trypanosomiasis control and monitoring through the farmers directly or/and their representatives/leaders & group motivators being supported by FITCA by,
  - ❖ Being taken to study tour to FITCA Kenya and Uganda.
  - ❖ Being trained in group dynamics and financial matters.
  - ❖ Being trained in the monitoring of tsetse, trypanosomiasis, ticks & tick borne diseases and helminthiasis.
  - ❖ Being trained in rational use of the acaricides and trypanocides
  - ❖ Frequent & regular field visit, have been done to support the group activities.
  - ❖ Being educated on rational land use planning principals in Agriculture.
- ♦ Its stakeholders and other non-stakeholders in Karagwe and Bukoba districts know FITCA Kagera.
- ♦ The farmers in the FITCA areas, have been stimulated to work in groups, and as at present, FITCA Kagera has 14 active groups, 6 for the Bukoba villages and the remaining 8 for Karagwe district (2 monitoring villages have 2 groups instead of the common 1 group per village)



- ◆ 8 monitoring areas (6 villages and 2 commercial ranches) per each of the FITCA districts (Bukoba and Karagwe) are operational (See annex 1, figure 1 & 2). The FITCA groups members participate in the operation of the village monitoring sites.
- ◆ The government and the private technical staff, and the NARCO ranches technical field staff who participated in the FITCA monitoring training have improved their knowledge in tsetse and trypanosomiasis monitoring. At the same time the group farmer motivators have been made to understand various monitoring principals and have been exposed to the monitoring techniques.
- ◆ The FITCA stakeholders use the acaricides and trypanocides rationally.

**The FITCA Kagera AWPB3 April to December 2004 'no cost extension'** In this AWPB3, the objective is to consolidate and incorporate achievements realised in the FITCA1&2 firmly into the routine work plans of the stakeholders the activities which has been initiated in the past 19 months of FITCA Kagera. At the end of 2004, the end of FITCA phase 1, the relevant stakeholders will be able to mobilise the resources to continue with control and monitoring of tsetse and trypanosomiasis, ticks and tick borne disease and helminthiasis in the two districts of Karagwe and Bukoba on sustainable basis.

It is therefore important that the training activities are completed as early as possible during the first part of the implementation period. This will leave ample time to enable stakeholders to undertake the implementation of taught techniques while the Consultant providing backstopping support only. With this approach the capacity of stakeholders to continue with activities after the project will have been enhanced, particularly for the district tsetse officers, the farmers groups in the monitoring sites and the extension staff working in tsetse districts.

To achieve this it is planned that during the exit phase, the six original output of FITCA phase 1. Should be consolidated by implementing the below 6 outputs with 24 activities. It is important to note that similar to the table mentioned above the main activities after grouping the similar ones will still be about 6. Because of this it is optimistic that the implementation of the 24 activities planned for April to December 2004 is realistic, provided the financial flow is reasonable. The summary of the exit phase (April to December 2004) results, activities, and the budget in Tanzania shillings per result and per activity are given in the below table;

**THE BUDGET (Tsh) PER RESULT AND PER ACTIVITY FOR THE NO COST EXTENSION PERIOD (APRIL TO DECEMBER 2004)**

<b>Budget line</b>	<b>Description</b>	<b>Amount (TZS)</b>
<b>Result 1</b>	<b><i>Improved capacity of public and private sector technical services to meet the needs of the livestock keepers in monitoring and controlling tsetse and trypanosomosis ticks and tickborne diseases and helminth in livestock</i></b>	<b>12,253,500.00</b>
Activity 1.1(1)	Re – identify the training needs of the public, private and the farmers group motivators to enable them improve on their technical ability in the T&Tc, Ticks & TBD and helminthiasis monitoring and control.	419,500.00
Activity 1.2 (2)	Printing of the monitoring manual 1000 copies (500 for Kagera and another 500 for Tanga)	3,000,000.00
Activity 1.3(3)	Re-train public and private technical staff in the agreed areas of T&TC, tick & TBD and helminthiasis monitoring and control and community development methods.	4,310,000.00
Activity 1.4(4)	Make follow-ups on knowledge and skills gained from retraining on improved control and monitoring of T&T by public and private staff.	1,862,000.00
Activity 1.5(5)	Re train communities and service providers on locally available materials and methods that can be used in monitoring and control of T&Tc, Ticks & TBD and helminthiasis.	2,662,000.00
<b>Result 2</b>	<b><i>The use of trypanocides and acaricides rationalized to achieve adequate control of tsetse and trypanosomosis, ticks and tick-borne disease and helminthiasis in the two Kagera districts</i></b>	<b>10,881,000.00</b>
Activity 2.1(6)	Printing of the acaricide/trypanocide rational use manual 1000 copies (500 for Kagera and another 500 for Tanga)	3,000,000.00
Activity 2.1(7)	Two training sessions of stakeholders in the two districts of Bukoba and Karagwe on rational use of acaricides and trypanocides.	5,073,000.00
Activity 2.2(8)	Conduct a two-days seminar to all twelve (12) FITCA groups (25 Participants per village making a total of 480 participants) in the two FITCA Districts.	2,808,000.00
<b>Result 3</b>	<b><i>The ability of local communities in Bukoba and Karagwe to assess trypanosomosis challenge and its impact on actual and potential land use enhanced.</i></b>	<b>8,138,000.00</b>
Activity 3.1(9)	Conduct meetings to re-identify target communities and assessing their training needs.	1,016,000.00
Activity 3.2(10)	Edit the training guideline made during AWPB2 and conduct training on identified needs.	992,000.00
Activity 3.3(11)	Monitoring the progress on carrying community involvement and discuss outcomes/implications with community.	1,120,000.00
Activity 3.4(12)	Edit & print appropriate land use manuals	3,150,000.00
Activity 3.5 (13)	Conduct training on appropriate land use	1,860,000.00

<b>Result 4</b>	<b><i>Tsetse and trypanosomosis ticks and helminthiasis monitoring and control program continued to be implemented, harmonized and integrated into community development plans of Karagwe and Bukoba districts.</i></b>	<b>31,126,000.00</b>
Activity 4.1(14)	Mobilization of community to form 4 Farmers field school (FFS)	2,810,000.00
Activity 4.2(15)	Four staff trained in farmer field school extension approach.	4,000,000.00
Activity 4.3(16)	Printing of 1000 copies of the farmers group dynamics training manual (500 for Kagera and another 500 for Tanga)	3,000,000.00
Activity 4.4(17)	Conduct meetings to re-sensitise village leaders on their role in monitoring and controlling tsetse and trypanosomosis.	1,840,000.00
Activity 4.5(18)	Assist communities to Implement the tsetse and trypanosomosis ticks and tickborne disease and helminthiasis monitoring and control programs	19,476,000.00
<b>Result 5</b>	<b><i>The number of Dairy farmers especially women, using improved T&amp;TC, ticks &amp; TBD and helminthiasis control techniques shall be increased.</i></b>	<b>27,496,000.00</b>
Activity 5.1(19)	Re-Train selected dairy farmers in dairy husbandry and T&T, ticks and tick borne diseases and helminthiasis techniques.	428,000.00
Activity 5.2(20)	Improve milk marketing (especially sorting out the seasonal excesses and shortages). AND diseases control strategies (trypanosomiasis, helminthiasis, ticks & tick borne diseases) practiced by most dairy producers especially women involved in zero grazing production systems.	3,700,000.00
Activity 5.3(21)	Conduct farmers study visits to other FITCA areas (Tanga, Kenya & Uganda) with T&TC in dairy farming	18,000,000.00
Activity 5.4(22)	Introduce netting as a means of tsetse and other biting and nuisance fly control and monitor the general performance of the dairy farmers on the T&TC, ticks &TBD and the helminthiasis control and advice on any improvements.	5,368,000.00
<b>Result 6</b>	<b><i>Program adequately managed.</i></b>	<b>41,751,000.00</b>
Activity 6.1(23)	Hold (local) district and national FITCA co-ordination meetings.	18,468,000.00
Activity 6.2(24)	Administrative costs to the two FITCA districts & self-assessment of the FITCA impact in the two districts of Bukoba & Karagwe plus neighboring districts.	23,283,000.00
<b>Contingency 5% of above</b>		<b>6,582,275.00</b>
<b>Total</b>		<b>138,227,775.00</b>

## **Explanation of the AWPB3 – FITCA Kagera.**

**The overall objective of FITCA Kagera (Tanzania),** The Tanzanian component of the regional FITCA project is to improve the general standard of living for the people dwelling in tsetse controlled areas of the project area. This project strives to achieve this by supporting local initiatives and seeking to reduce expenditures while also enhancing the capacity of the government and other service providers in responding to client demands.

## **Project Purpose**

The purpose of this final phase of the program is to consolidate the activities of Support existing control activities already being undertaken by populations living in tsetse infested areas in Kagera region in Tanzania utilizing low cost, effective and environmentally benign techniques.

## **Results & activities**

According to the terms of reference for this assignment there are ten activities for this final consolidation phase of FITCA Kagera listed below,

- (i) Training of livestock extension, community development and service providers in control techniques utilizing locally available inputs and in community organisation issues.
- (ii) Technical services in collaboration with technical assistance, also made available by the FITCA Regional Co-ordinator, will assemble information necessary to rationalise the use of trypanocides and acaricides.
- (iii) Prepare, with extension staff, technical information and train all clients (livestock producers, suppliers, etc.) in the principles of trypanocides and acaricides use.
- (iv) With district councils in Karagwe and Bukoba, assist already identified communities involved in tsetse monitoring activities.
- (v) Continue community-training programmes and implement a regional visit to Kenya and Uganda.
- (vi) With resource persons, prepare guidelines and methods for tsetse and Trypanosomosis assessments within communities.
- (vii) With relevant resource persons, also made available by the FITCA Regional Co-ordinator, and community members, complete site specific assessments in identified communities including material and non-material costs and benefits and possible impact of control options on land use (Bukoba and Karagwe).
- (viii) Agree on options for a control and financing plan for Bukoba and Karagwe communities and determine organization and work plan for participants.
- (ix) Assist communities to implement monitoring and control programmes.
- (x) Determine with already selected individual dairy producers, especially women, in locations with significant Trypanosomosis problems and with resource persons, alternative options for tsetse control.

However for the smooth execution, during this very short time of execution, 24 activities have been identified and are presented under each of the 6 results as follows:

### ***1. Improved capacity of public and private sector technical services to meet the needs of the livestock keepers in controlling trypanosomosis and ticks & tick-borne diseases and helminthiasis in livestock.***

Through training of the identified technical staff and farmer motivators for every FITCA group in the monitoring and proper control methods. The monitoring training manual prepared in FITCA AWPB1 will be edited/improved by an independent consultant who will merge the Tanga and the Kagera manuals to produce a national FITCA monitoring manual after being discussed between the FITCA Kagera and Tanga. The manual will then be printed to improve the national monitoring understanding at various levels. The activities for this result are;

**Activity 1.1 (1) Re – identify the training needs of the public, private and the farmers group motivators to enable them improve their technical ability in the T&Tc, Ticks & TBD and helminthiasis monitoring and control.**

Through field performance evaluation, and discussion with the technical (public & private) and farmers motivators, re-discuss and agree on the training needs for the Tsetse, trypanosomiasis, ticks, Tick borne diseases and helminth control and monitoring.

**Activity 1.2 (2) Printing of the monitoring manual 1000 copies (500 for Kagera and another 500 for Tanga)**

The manuals whose preparation was ready since the first/second quarter of the AWPB1 for FITCA Kagera will be edited/improved by an independent consultant, who will then combine it with the FITCA Tanga monitoring guide to produce the national FITCA monitoring of the tsetse and trypanosomiasis at various levels. FITCA Kagera will pay the printing charges while FITCA Tanga will pay the consultancy charges.

**Activity 1.3 (3) Re-train public and private technical staff in the agreed areas of T&TC, tick & TBD and helminthiasis monitoring and control and community development methods**

FITCA will conduct these training in collaboration with the District Veterinary officers (DVO'S) and other district staff of the two project Districts involving the frontline public and private livestock technical field staff and the farmer motivators on the identified and agreed areas of retraining. Two training sessions will be made at suitable time intervals to ensure better grasp of the target trainees.

**Activity 1.4 (4) Make follow-ups on knowledge and skills gained from retraining on improved control and monitoring of T&T by public and private staff.**

District Veterinary Officers (DVOs) and District Tsetse Officers (DTOs) will organise and conduct field visits to follow up and guide the retrained public and private workers and farmer motivators to ensure continuity of the implementation of what has been re-trained.

**Activity 1.5 (5) Train communities and service providers on local methods and/or locally available materials and methods that can be used in monitoring and control of T&Tc, Ticks & TBD and helminthiasis.**

The information gathered towards the end of AWPB2 on the available local methods for the tsetse, trypanosomiasis, ticks, Tick borne diseases and helminthiasis control and treatment will be reviewed edited/updated.

***2. The use of trypanocides and acaricides rationalized to achieve adequate control of trypanosomiasis and tick – borne diseases in the two Kagera***

### ***districts.***

The appropriate identified re-training of the target stakeholders (farmers, both public and private field technical staff responsible for animal health delivery services) with the aim of improving their ability in making rational choices on trypanocides and acaricides for their use. The rational acaricide and trypanocide use manual prepared in FITCA AWPB1 will be edited/improved by an independent consultant who will merge the Tanga and the Kagera manuals to produce a national FITCA acaricide/trypanocide manual after being discussed between the FITCA Kagera and Tanga. The manual will then be printed to improve the national rational use of acaricides/trypanocides understanding at various levels. The training will be carried out by the senior district staff (DVO's and others of the two FITCA project districts) and supported by the project manager and any other suitable contributor who will be found necessary.

#### **Activity 2.1 (6) Printing of the acaricide/trypanocide rational use manual 1000 copies (500 for Kagera and another 500 for Tanga)**

The manuals whose preparation was ready since the first/second quarter of the AWPB1 for FITCA Kagera will be edited/improved by an independent consultant, who will then combine it with the FITCA Tanga acaricide/trypanocide rational use manual to produce the national FITCA acaricide/trypanocide rational use manual. FITCA Kagera will pay the printing charges while FITCA Tanga will pay the consultancy charges.

#### **Activity 2.2 (7) Conducts two training sessions of stakeholders in the two districts of Bukoba and Karagwe on rational use of acaricides and trypanocides.**

It is important that the livestock technicians and the farmers use trypanocides and acaricides correctly. Due to the fast introduction of many different kinds of acaricides and trypanocides into the market. Two re-training sessions for the technical field staff, veterinary input suppliers and FITCA farmers group motivators will be executed to ensure farmers and other stakeholders have an excellent command in proper trypanocide, and acaricides handling and proper usage.

#### **Activity 2.3 (8) Conduct a one day, two sessions training seminar to all twelve (12) FITCA groups (25 Participants per village making a total of 480 participants) in the two FITCA Districts.**

All FITCA group members will attend a one-day training seminar on rational use of acaricides and trypanocides, in two different training sessions. Technical staffs will continue offering training on field visits and demonstration to FITCA groups and individual farmers.

### ***3. The ability of local communities in Bukoba and Karagwe to assess trypanosomosis challenge and its impact on actual and potential land use enhanced.***

Through both formal (residential), and informal (practical) follow up training of the implementing communities and their trained representatives (farmer's group motivators and leaders).

And through reviewing all existing official documents related to the national, district and

village land use policies and laws and by laws whose implementation started in the last quarter of AWPB2. A summary of the important identified legal and policy issues related to rational land use aspects in conjunction to the technical aspects of appropriate land use will be discussed with district authorities in order to reach agreement on relevance and applicability in the FITCA target areas. Subsequently seminars will be organized at village level in the target areas in order to educate all stakeholders and seek their agreement on the appropriate land use in the FITCA areas as a model to the non-FITCA villages. For the villages bordering the game and the forest reserves, the neighboring stakeholders (farmers living and farming at the game/forest reserve borders, the game/forest reserve officials and the local administrators and technical staff). Will be stimulated to organize additional meetings for informing them and discussing the appropriate land use issues in their localities. And finally they had to adopt a common strategy of continuing to co exist as neighbors, and continue to utilize the local resources efficiently and legally for their sustainable continuity of their activities.

**Activity 3.1 (9) Conduct meetings to re-identify target communities and assessing their training needs.**

Communities that are ready to participate with FITCA in monitoring and control of T&T had been identified, during implementation of AWP&B1&2. However because of training need change with time, the re identification of the new training need will be done to ensure relevant training is offered.

**Activity 3.2 (10) Edit the training guideline made during AWPB2 and conduct training on identified needs.**

After needs have been re-identified, a training program will be prepared based on the identified needs. Training will then be conducted to the communities to enhance their capacity on T&TC monitoring and control.

**Activity 3.3 (11) Edit the training guideline made during AWPB2 and conduct training on identified needs.**

**Activity 3.4 (12) Edit the training guideline made during AWPB2 and conduct training on identified needs.**

**Activity 3.5 (13). Monitoring the progress on carrying community involvement and discuss outcomes/implications with community.**

Farmers need to know and be able to assess loses arising from tsetse and trypanosomosis, ticks and tick borne diseases and helminth infections in their animals and how the diseases affect their economy. This knowledge will assist the farmers to evaluate their performance and the appropriate control options.

***4. Tsetse monitoring and control programmes integrated into community development plans in Karagwe and Bukoba. Tsetse, ticks and tick borne diseases and helminthiasis monitoring and control programs are implemented, integrated and harmonized into community development***



### ***plans of Karagwe and Bukoba districts.***

Through identifying and incorporating more farmers in the monitoring areas into FITCA activities and meetings with the village, ward and district planning committees in order to further sensitize them on the FITCA program and to further educate them of the importance of incorporating FITCA in their plans. Training of the four technical field staff (two from each district) in the farmer's field school, extension methodology techniques will be carried out in Nairobi, Kenya. After graduating they will be the trainers of the trainers for group mobilization and extension.

In addition the farmers group dynamics training manual prepared in FITCA AWPB1 will be edited/improved by an independent consultant who will merge the Tanga and the Kagera manuals to produce a national FITCA farmers group dynamics training manual after being discussed between the FITCA Kagera and Tanga. The manual will then be printed to improve the national farmers group dynamics training' understanding at various levels.

#### **Activity 4.1 (14). Mobilise the community to form 4 Farmers field school (FFS) (2 per each FITCA district).**

Farmer's field school, extension methodology is the current extension approach being adopted in the FITCA countries. It is important that FITCA Kagera also starts with this technique to be in line with other FITCA programs. After graduating the trained personnel will be the facilitators in forming the first 4 livestock FFS.

#### **Activity 4.2 (15). Train 4 front line extension officers implementing FITCA activities in their areas of work in 'Farmers field school (FFS)' skills.**

The 4 staff will get a training in Farmer field school technique to be organised by ILRI in Kenya. After their training they will be the facilitators for the newly starting farmers field schools in Kagera.

#### **Activity 4.3 (16) Printing of 1000 copies of the farmers group dynamics training manual (500 for Kagera and another 500 for Tanga)**

The manuals whose preparation was ready since the first/second quarter of the AWPB1 for FITCA Kagera will be edited/improved by an independent consultant, who will then combine it with the FITCA Tanga to produce the national FITCA farmers group dynamics training manual. FITCA Kagera will pay the printing charges while FITCA Tanga will pay the consultancy charges.

#### **Activity 4.4 (17). Conduct meetings to re-sensitise village leaders on their role in monitoring and controlling tsetse and trypanosomosis.**

Involvement of stakeholders at all levels is important in that it ensures ownership and maximum participation of all community members. Village leaders can easily mobilise other members of the community to participate fully.

#### **Activity 4.5 (18) Assist communities to implement the tsetse and trypanosomosis monitoring and control programs**

Farmers organised in FITCA groups will continue implementing the actual monitoring of tsetse and Trypanosomosis in their areas with assistance and guidance of the technical staff. Methods to be used are the deployment of traps (biconical, nguruman and sticky targets) for the tsetse monitoring and trypanosomiasis investigation using the standard parasitological methods. However ticks, TBD and helminthiasis investigation will simultaneously be carried out as was recognised during FITCA AWPB1&2. This will continue throughout the whole program.

***5. Dairy producers, especially women involved in zero grazing production systems using improved trypanosomosis control strategies. Improved milk marketing (especially sorting out the seasonal excesses and shortages) AND diseases control strategies (trypanosomiasis, helminthiasis, ticks & tick borne diseases) practiced by most dairy producers especially women involved in zero grazing production systems.***

Through dairy farmers groups being visited regularly by the district council extension officers responsible for implementing FITCA project and the group farmers motivators being informed. And being informed of the cost-effective milk production whose production cost price will be favorable compared to the local market prices and the alternative milk marketing alternatives. Strategic and good control of the major cattle diseases will be emphasized to dairy farmers. (I.e. trypanosomiasis, helminthiasis, ticks and tick borne diseases).

**Activity 5.1 (19) Re-Train selected dairy farmers in dairy husbandry and T&T techniques.**

The target will be the dairy farmers who are involved in small scale dairy production operating in the FITCA districts. Re selection of the dairy farmers to be re-trained in the FITCA monitoring areas especially women will be carried out. The farmers will be re-trained on principles of dairy production and tsetse and trypanosomosis monitoring techniques.

**Activity 5.2 (20) Improve milk marketing (especially sorting out the seasonal excesses and shortages). AND diseases control strategies (trypanosomiasis, helminthiasis, ticks & tick borne diseases) practiced by most dairy producers especially women involved in zero grazing production systems.**

On milk marketing problem, FITCA stimulating the;

1. Identification of the milk marketing problem causes through local surveys.
2. Group discussions of the milk marketing problems and suggestions of how to overcome them.
3. Trial dairy farmers implementation of how to solve dairy farmers milk marketing problem.

Group discussions coupled by regular extension advice during field visits will be the most important dairy cattle disease control strategy (trypanosomiasis, helminthiasis, ticks & tick borne diseases).

In order to get a better insight monitoring of the progress as a result of the interventions put, will be introduced just before introducing the interventions and will be continued as interventions are made.

### **Activity 5.3 (21) Conduct farmers study visits to other FITCA areas with T&TC in dairy farming**

Dairy farmers together with the traditional livestock staff and escorting staff from the two Kagera FITCA project districts will be given an opportunity of visiting other FITCA areas (Tanga region, FITCA Uganda and Kenya). To see and learn how the other dairy farmers control tsetse and trypanosomosis, ticks & TBD and helminthiasis in their locality. During these visits 50% or more of the participants should be female.

### **Activity 5.4 (22) Demonstrate impregnated netting to 16 zero grazing dairy farmers and monitor the general performance of the dairy farmers on the T&TC, ticks & TBD and the helminthiasis control and advice on any improvements.**

The dairy farmers actually using T&Tc, Ticks TBD and helminthiasis control and monitoring techniques will be monitored and advised on how to improve their animal husbandry and performance. In case of damages caused by epidemics the farmers will be advised on the control measures.

## ***6. The FITCA Kagera program adequately managed.***

### **Activity 6.1 (23) Hold (local) district and national FITCA co-ordination meetings.**

The Kagera FITCA stakeholders representatives will hold four-district technical co-ordination meeting for each district and two district management meetings again for each district. The national FITCA steering committee will take place twice in Kagera and twice outside Kagera in each quarter. A summary brochure publication of the FITCA Kagera in brief in full colour will be written and printed to show the FITCA activities in brief (past and present) to the interested readers. Last but not least, this activity will also accommodate the 50% costs of the National FITCA liaison outside Kagera (The remaining 50% will be paid by FITCA Tanga) and 100% of her costs inside Kagera.

### **Activity 6.2 (24) Meet administrative costs of the district FITCA offices of Bukoba and Karagwe.**

Renovate and provide furniture to the two DVO office implementing FITCA in Bukoba and Karagwe and support office administrative costs for the offices to provide a conducive working environment to the district office staff. In addition carry out the self-assessment of the FITCA impact in the FITCA districts and in the neighbouring districts of Kagera and Kigoma

## **PROGRESS MADE IN THE IMPLEMENTATION OF THE AWPB3 (April to Mid June 2004).**

- ◆ The stakeholders are aware of the 'No cost extension budget' AWPB3, and the heavy workload which it carries with it. The AWPB3 have to be completed by November 2004.

- ◆ The 60,000,000.00 million shillings advance from EDF/EU have been received by the project since 7/6/2004. A bank guarantee has been secured and presented to the EU.
- ◆ ~~EDP EA LTD~~, until has to be refunded the +- 43 million shillings from the AWPB2 costs which it paid using its own funds.
- ◆ The activities which have been implemented since the start of this AWPB3 are

Result no	Activity no	Activity Description	What has been implemented (April – Mid June 04)
4	14	Mobilization of farmers to form 4 - farmers field schools	Four farmers groups are being mobilized to form FFS groups as follows, 1. Ruhita, Karagwe (indigenous large scale cattle keeping). 2. Katera, Karagwe (small scale zero grazing dairy cattle keeping) 3. Rugaze, Bukoba (indigenous, small scale cattle keeping) 4. Bukoba peri or urban (commercial poultry/dairy farmers)
	15	Four staff trained in farmer field school extension approach	2 Extension staff from each FITCA district of Bukoba & Karagwe, participated in an 11 days facilitator training held in Bungoma Kenya from 10 –21 May 2004.
	18	Communities assisted in T & Tc, ticks & TBD's and helminthiasis monitoring & control	Three rounds of monitoring was carried out in the two districts by stakeholders as follows; <b>Date</b> <b>Monitoring details</b> 30/4-6/5      Tsetse monitoring by group members 31/5/04      T&Tc, ticks&TBD, helminthiasis Kashanda Karagwe practical training & Monitoring. 1/6 –11/6      T&Tc, ticks&TBD, helminthiasis carried in all the remaining seven sites in Karagwe district. 3/6/04      T&Tc, ticks&TBD, helminthiasis Buchurago Bukoba practical training & Monitoring. 9/6 –11/6      T&Tc, ticks&TBD, helminthiasis carried in all the remaining seven sites in Bukoba district.  In addition three computers and the relevant software and related hard were have been purchased for field use
6.	23	National and local coordination meetings	One National and two local coordination meetings took place as follows; <b>Date</b> <b>Details of the meeting.</b> 14/4/04      1st AWPB3 meeting held in Bukoba. 17/4/04      Follow up meeting for the Bukoba meeting of 14/4/2004 meeting held at Kyaka, Bkb 28/5/04      FITCA National steering meeting held in Tanga. 12/5/04      2nd AWPB3 meeting held in Karagwe
	24	Administrative costs for the FITCA Kagera	Various administrative costs (telephone bills, stationery and secretarial services. etc have been met.

## **ANNEX 1: DESCRIPTION OF KAGERA REGION AND THE TWO KAGERA FITCA PROJECT DISTRICTS.**

### **A. KAGERA REGION IN BRIEF**

Kagera Region, in the north-western part of Tanzania, has a total area of 28,500 km<sup>2</sup> of which 20,000 km<sup>2</sup> is suitable for agriculture. The Region is subdivided into five districts, Bukoba, Karagwe, Muleba, Biharamulo and Ngara. Bukoba district is further subdivided into Bukoba Urban, the administrative and commercial centre, and Bukoba Rural. The altitude in Kagera Region ranges between 1,128 and 1,646-m. Annual rainfall averages between 1,000 and 1,500 mm but may be as low as 500 mm and as high as 2,000 mm in some areas. Human population is approximately 1.3 million and the population density varies widely from 23 to 80 people/ km<sup>2</sup> (National Census, 1988).

The regional economy heavily depends on crop production and to a lesser extent on animal production. The total number of farm families is estimated at 220,000 spread over 522 villages with average holdings of 1.1 ha/ family (National Census, 1988). Permanent crops like banana, coffee and tea occupy 145,000 ha and annual crops take 188,000 ha; the remaining 1,536,000 ha (or 80%) is pasture land with nil to high tsetse challenge.

There are three dominant land-use types:

#### *Kibanja*

The land is planted with banana and on the outer circles coffee. Beans are found during specific seasons. The land is the property of the man and is often inherited on clan basis

Due to the application of mulch and manure the rather good fertility is man made.

#### *Kikamba*

Is planted mostly with annuals and surrounds the Kibanja

#### *Rweya*

Land covered with grass used for communal grazing and the cultivation of bambara nuts by women in a shifting cultivation pattern. Due to the transportation of nutrients from the Rweya to the Kibanja the soil is generally very poor.

Approximately 20,000 households keep indigenous cattle (Houterman and Omolo, 1992) with an average number of heads per household of 6.3 (Muttagwamba et al, 1991). The livestock population consists of approximately 300,000 heads of cattle, 345,000 goats, 55,000 sheep, 2500 pigs and 500,000 poultry (MALD, 1988). There are three dominant subsystems under which the majority of ruminant livestock are kept. (See KILIP)

### **B- KARAGWE DISTRICT.**

#### **NATURAL RESOURCES AND LAND USE**

Karagwe District is one of the five districts of Kagera Region and covers an area of 7,716Km<sup>2</sup>. The district is located in the northwestern corner of Tanzania. It borders the

Republic of Uganda in the North, the Republic of Rwanda in the West, the District of Ngara and Biharamulo in the South and Muleba and Bukoba districts to the East.

Karagwe District is characterized by mountain ranges, which are separated by swampy valley bottoms. The height of the mountain ridges range from 1,500m to 1,800m above sea level, while flood plains are 1,150m to 1,450m above sea level. River Kagera, which is on the western side of the district, forms the boundary between the district and the Republic of Rwanda. Numerous streams drain into the Kagera River basin, which empties its waters into Lake Victoria. Lake Burigi and other smaller lakes, namely Ikimba, Rushwa and Rwakajunju provide fishing opportunities to the District's residents. The District has a tropical climate. The annual average temperature is 26 degrees C. Average annual rainfall measured over 25 years period is 1,040mm with a minimum of 730mm/year (1981) and a maximum rainfall of 1,290mm per year in 1991. Rainfall distribution is bimodal, with peak rains falling between September to December and March to May. The period between January and February is the dry spell while June to September is a period of marginal or no rainfall. In general, rainfall decreases from East to West.

The Natural Vegetation is categorized as lush savanna bush interspersed with pockets of natural forest in the plateaus and papyrus reeds and Acacia species in the lowlands along riverbanks and swamps. Overall forest area is estimated to be 300,000 hectares. The savanna bush found in the eastern part of the district is infested by tsetse flies. The natural vegetation on the ridges and slopes consists of Acacia-Combretum bush lands, whereas the acacia and savanna dominates in the areas. On the valley bottoms and in the incisions, the natural vegetation consists of riverine forests of ficus species. Vegetation cover of the district is as follows: continuous banana, coffee plantations and annual crops 2,363 Km<sup>2</sup> (31%), woodlands, savanna, forest, plains and shrub patches 3,987 Km<sup>2</sup> (52%), closed forest 169Km<sup>2</sup> (2%), seasonal swamps of papyrus, reeds and acacia species 158Km<sup>2</sup> (2%).

#### DEMOGRAPHY

The total population of Karagwe District is estimated to be about 352,000 (1998). Males are estimated at 174,058 while females are estimated at 177,575. The population growth rate is estimated at 2.7 per cent per annum. About 235,637 people have to depend on 115,996 people, who are within the active employment age category.

#### ECONOMY

The Gross Domestic Product (GDP) for Karagwe District is not known, however, estimates for economic productivity income for Kagera Region is Tsh14,000 per capita. This is 52% of the national average, which rates the region among the poorest in Tanzania.

The main economic activity in the district is agriculture. Subsistence small holders who grow bananas and beans for local consumption and for the domestic market dominate the economy. Coffee, bananas and beans are the main cash crops of which the first one is the most important one. Farmers sell coffee to the Karagwe Cooperative Society and

increasingly to private traders. Substantial quantities of coffee are also sold across the border with Uganda.

Livestock keeping is the second most important activity in the district. There are four main livestock production systems in the district. (i) Keeping of indigenous cattle on communal land together with cultivation. (ii) Semi-nomadic livestock keeping. (iii) Small holder dairy system, mainly cross of Friesian and either Boran cattle, East African Zebu or Ankolean cattle. (iv) Large-scale beef cattle ranches (3 ranches owned by the National Ranching Company (NARCO).

It is estimated that about 480 community groups are active in economic small-scale enterprises. 53% is engaged in agriculture and livestock, 20% in mat making and weaving, 16% in local brew production and selling and about 5% in petty businesses including fishing in rivers and lakes within the district. There is potential small-scale tin mining in the district however, the state mining corporation (STAMICO) is dormant at present.

### ADMINISTRATIVE STRUCTURE

Administratively, Karagwe district consists of four divisions: (i) Kaisho/Murongo (68,958 inhabitants), (ii) Bugene/Nyaishozi (64,814 inhabitants), (iii) Kituntu/Mabira (130,844 inhabitants) and (iv) Nyabiyonza (53,001 inhabitants). The divisions are divided into 28 wards and 97 registered villages. There are two parliamentary constituencies with elected members of parliament: Karagwe and Kyerwa.

The District Council whose major mandate includes development in the rural and urban areas has 28 elected male councilors and 7 nominated women councilors. Councilors are the Chairmen of the Ward Development Committees. All elected and nominated councilors elect a Council chairman who chairs the Finance and Planning Committee and the Full Council meetings. The Council operates with sub-committees that are mandated to look at various issues of administration, management and development of the district (eg Finance and Planning committee, Economic Affairs Committee, Establishment and Administration Committee, Social Services Committee). The Council receives funding from the central government, donors and from local revenue collection.

### AGRICULTURE

Agriculture is the main economic activity in the district followed by livestock activities. The district has relatively fertile soils and a climate accommodating potentially high crop and livestock production, however, productivity of both, agriculture and livestock is rather low.

Banana serves as the staple food and although there is an excess production, due to decline in soil fertility and lack of manure, productivity is declining. The banana industry is furthermore affected by pests and diseases, while at the same time the production of banana is seasonal with a peak in the period June-October and a lower production the remainder of the year. In general, the majority of the population is vulnerable to food insecurity. Contributing factors to food insecurity are:

- (i) The lack of inputs and inappropriate farming techniques.
- (ii) The occurrences of pests and diseases.
- (iii) Inadequate extension staff and extension facilities.

(iv) Poor infrastructure and generally an under developed marketing system for agricultural and livestock produce,

(v) Inadequate high yielding varieties.

## LIVESTOCK

Livestock husbandry is generally characterized by low production, mainly due to low and poor productivity of the indigenous breeds kept, poor pasture and animal management and diseases.

Prevalence of ticks in the district causes East Coast Fever (ECF), babesiosis, anaplasmosis and heart water diseases to cattle. Forty per cent of the deaths of the traditional and dairy cattle is caused by ECF. The cost of treatment is prohibitive. Trypanosomiasis, a disease transmitted by tsetse flies, also accounts for a lot of deaths particularly in the low-lying areas of Rushosho, Kashanda and Murongo/Bugomora. Contagious Bovine Pleuro Pneumonia (CBPP) has made it difficult to sell and distribute heifers from the ranches to farmers. Other diseases include Foot and Mouth diseases, rabies and rinderpest.

### Livestock Population and infrastructure for Karagwe District .

Livestock Type	Karagwe District
Indigenous Cattle	120,000
Improved Dairy Cattle	4,085
Improved Beef Cattle	25,872
Goats	67,250
Sheep	17,660
Chicken	69,746
Pigs	457
Dipping sites	29
Important livestock diseases	Worms, tickborne, trypanosomiasis & CBPP
Disease immunized	CBPP
No. livestock immunized	88,634

Source: National Livestock Census 1993/94; Karagwe District Livestock Office, Update 1999

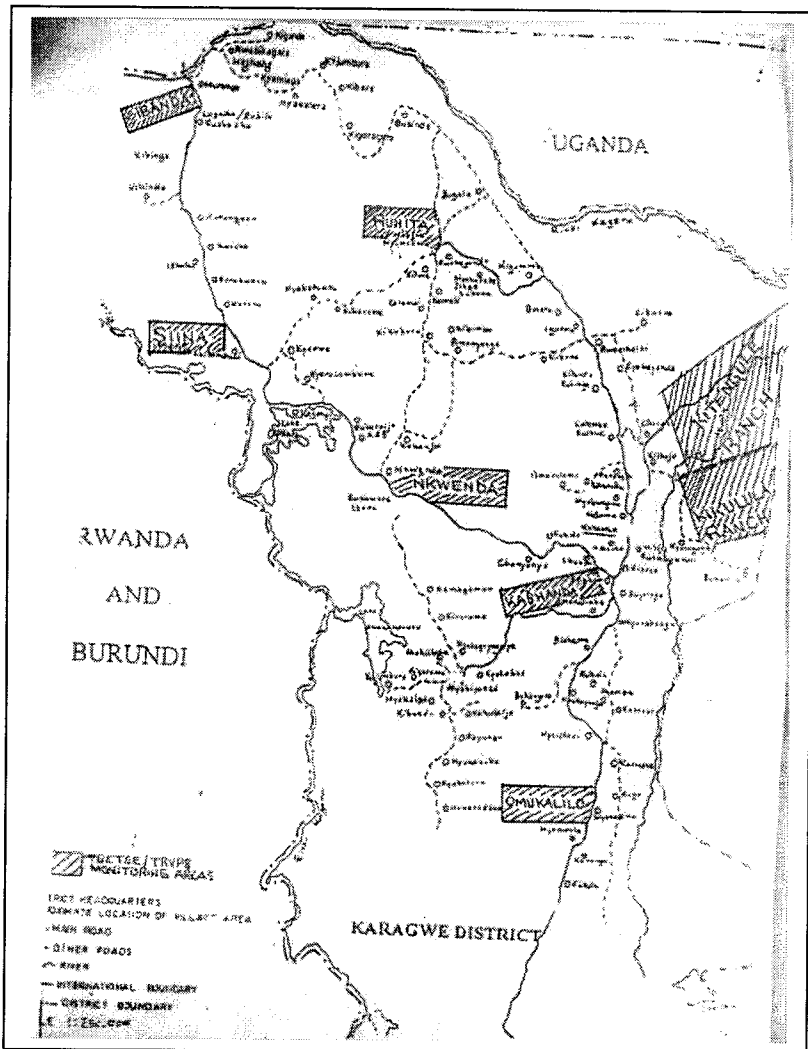
There are four distinct livestock production systems in the district. The first one is the keeping of indigenous cattle by coffee/banana farmers on communal land set aside by village governments. The main objective here is to produce milk for home consumption and manure for the banana farms. The second system is of a semi nomadic livestock keeping. This system is carried out on a communal land particularly near the Uganda border. These herds are usually large and are grazed away from home in search of favorable grazing areas. This is a low input, low output production system characterized by low productivity. Average milk production is 2 liters per cow per day (calf sucking not included), calving rate is 36%. Calf mortality is 25% and adult mortality is around 8%. The third system is the small holder dairy farming. Farmers involved in this type of production have an average herd size of 1 to 2 cows. Cattle are mainly the Friesian crossed with boran, zebu, or Ankole and their crosses. Currently, about 3,500 dairy animals are in the district, of which 1,019 are milking cows. About 5% of the total number of dairy animals are producing milk, at an average of 6 liters per cow per day.



The main output is milk and manure. Milk is consumed at home and surplus sold to mainly neighbours. The fourth system is the large-scale beef cattle ranches. There are 3 such ranches owned by National Ranching Company (NARCO) of Kikulula, Mabale and part of Kagoma which occupy a large area south eastern part of the district. These are areas of sparse population.

Karagwe District has a variety of infrastructures to serve the livestock sector. Some of these facilities include Farmers Extension Centers (10), Cattle dips (29), Cattle sprays, hides and skin sheds, water facilities and cattle auction yards. Farmer Extension Centers are used for: (1) Focal points for agricultural extension; (2) Centers for distribution of agro-inputs, drugs, chemicals, feed supplements, seeds, fertilizers and minor farm implements with an objective to turn this role to the private sector; and (3) service center for Veterinary, diagnostic, animal breeding and oxenization activities .

Figure 1(a) FITCA Karagwe district monitoring sites of Kikulula Ranch, Kitengule Ranch, Kashanda/Omulusimbi village, Kihinda village, Nkwenda village, Omukalilo village, Ruhita village & Siina/Katera village.



## (C) – BUKOBA DISTRICT.

### NATURAL RESOURCES AND LAND USE

Bukoba District is one of the six Districts of Kagera Region and covers an area of 562,475 hectares. It is situated on the west of Lake Victoria between 30°45' and 32°00' East and 1°00' and 3°00' South. On the northern side, the Bukoba District is bordering Uganda, on the East Lake Victoria, on the South Muleba District and on the West Karagwe District. The district is composed of six Divisions, subdivided into 41 Wards and 166 villages.

About 13 per cent of the land is under annual and perennial crops (coffee, banana, tea, sugar cane, maize, beans, cassava, yam, vegetables); 64 percent under different types of grassland; 8 percent under mainly riverine and groundwater forests; 10 percent consists of swampy areas; lakes and rivers, rock outcrops and buildings take the rest.

A considerable part of the district is of high altitude with several streams flowing into the Kagera and Ngoni rivers and ultimately into Lake Victoria.

Generally, the district experiences enough rains for most of the year in two seasons, between October and November (short rains) and between March and May (long rains). Along Lake Victoria the annual rainfall is between 1,400 and 2,000mm; in the highland belt between 1,000 and 1,400mm in the Western zone between 600 and 1,000mm. However, in the past five years the rainfall pattern seems to have diminished especially in the dryer areas. The average temperature is 20°C with extremes of 15°C and 28°C.

### DEMOGRAPHIC TRENDS AND POPULATION SETTLEMENT

The total population of Bukoba District (rural and urban) in 1998 was estimated to be about 461,490. An interpretation of the census data shows that the population in the rural areas (high and medium rainfall zones) grows at modest rate of 1.2 percent per year whereas the population in the low rainfall zone grows at a rate of 3.1 percent per year. The population growth in Bukoba town is estimated at 5.9 percent per year. The total estimated population of Bukoba Town in 1998 was 52,000.

The population density varies per division in terms of population per total area and population per effective area (see table below).

Table: Population and Settlement of Bukoba District (R)

	Bugabo	Kyamtwar	Kiziba	Katerero	Misseny	Rubale	TOTAL
Population (1998)	38,791	38,209	73,895	96,375	83,429	78,832	409,531
Households	7,758	7,642	15,395	21,417	20,857	17,916	90,985
Average HH-size	5.0	5.0	4.8	4.5	4.0	4.4	4.5
Growth rate (%/year)	1.2	1.2	1.2	1.2	3.1	3.1	
Total area (ha)	23,800	18,600	74,175	74,700	196,700	167,000	562,475

Pop density per Km <sup>2</sup>	163	205	100	129	42	47	73
Pop density/effective area	199	286	171	181	49	48	90

About 50 percent of the district population live in Kiziba, Kyamtwara and Bugabo divisions, which cover around 20 percent of the total district area. A large part of the area along Lake Victoria has become poor in soil fertility due to intensive cultivation and high leaching of nutrients. For at least two generations (since the 1960's), there is an out-migration from the divisions bordering Lake Victoria to the western divisions (Missenye, Rubale) and to other districts (Karagwe) and an immigration from Muleba District to the south-eastern part of the Bukoba District.

The reasons for the movement of population are obvious: The population density is rather high in the coastal areas and the farm units are too small to be divided into even smaller units. However, farming in the western parts is constrained by adverse weather conditions (dry zone) and remoteness from urban (market) centers. Therefore many young people (educated ones) are trying to find their luck in Bukoba Town and other areas of the country.

The population pressure and consequently population movements and changing settlement patterns have had a considerable impact on the use of natural resource base and the sustainable use of land resources.

### AGRO-ECOLOGICAL ZONES

For effective planning of development interventions in agriculture, livestock and natural resource management, the district is divided into three agro-ecological zones following a classification based on criteria as rainfall, soils, population density, agriculture and livestock production systems and migration:

The Bukoban high rainfall zone: Bugabo, Kyamtwara and the eastern part of Kiziba and Katerero divisions;

- The Bukoban medium rainfall zone: the western parts of Kiziba and Katerero divisions;
- The Karagwe-Ankolean low rainfall zone: Missenye and Rubale divisions; and
- The Alluvial system zone: along the Kagera River.

### ECONOMIC ACTIVITIES

About 96 percent of the population are engaged in agriculture and livestock keeping. Farms are small-scale (average of 2.7 acres) except for sugar and tea plantations owned by public institutions of which the respective products are processed in factories situated in the district. Agricultural practice is that of mixed farming. Banana plots are inter cropped with coffee trees and during the rainy seasons with beans and maize (Kibanja farming system). The preferred staple food is banana supplemented by beans, yams, sweet potatoes and cassava. Coffee, mainly the Robusta type is grown by almost all households and is the main cash crop followed by beans, tea and bananas in areas

where there is a surplus. The processing of beer from bananas is an important agro-processing activity in the rural areas. Output of banana production is falling due to the declining fertility of the soils and the attacks of pests and diseases such as Fusarium Wilt (Panama), banana weevils and nematodes. Ownership of cattle explains the major differences in wealth, living conditions and status between households in the rural areas, the size of the family, educational status, access to farmland and the family and farm development cycle in general.

Many farming households have benefited from the recent market liberalization and private investments in the coffee sector. However, virtually all coffee is still sold in unhulled state (maganda) no differentiation is made between well treated, picked dried and selected quality coffee and an inferior one. This pricing mechanism leads the farmer to pay little attention to the quality of his/her coffee trees, the way in which harvesting of coffee berries takes place, the ripe and green unripe berries are stripped together. Farmers within a boundary of 20km from the Ugandan border are still more interested in selling coffee to the Uganda coffee buyers. The main reason is that farmers get paid cash at the delivery place, whereas the KCU, Bukoba's main coffee buyer (60 percent), delays its payment to farmers with sometimes one year or more. The disadvantage of coffee being sold to Uganda is that the district loses an opportunity to collect taxes on this coffee. The farm-gate price for coffee by the KCU has been set at Tsh200 per kilo for (2000).

Dairy cattle, introduced by KALIDEP are an important part of the farming system (and rural income) especially around Bukoba Town. Indigenous cattle for grazing use the natural grasslands (rweya) for grazing. This type of cattle is mainly kept to provide manure, which is often sold in the villages. A summary of the Bukoba district infrastructure and the livestock population is presented in the below table;

Livestock Population and infrastructure for Bukoba District .

Livestock Type	Bukoba District
Indigenous Cattle	84,060
Improved Dairy Cattle	4,397
Improved Beef Cattle	79,663
Goats	64,000
Sheep	10,000
Chicken	110,500
Pigs	2,971
Dipping sites	44
Important livestock diseases	Tickborne, Trypanosomiasis CBPP & Worms
Disease immunized	CBPP
No. livestock immunized	41,928

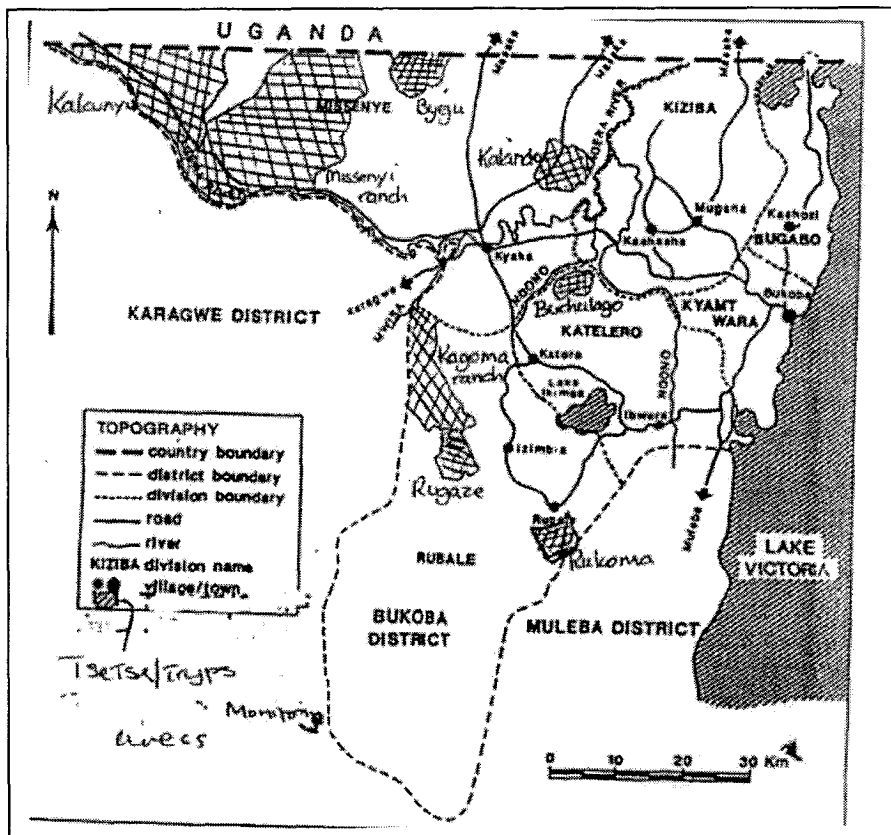
The demand for fuel wood, timber and burned bricks is increasing. The preferred trees are Eucalyptus and Pine, because of their fast growing and easy to maintain and suitable for the acid soils of the rweya grasslands. The conservation of natural and planted forests is still constrained by encroaching farmers, bush fires, uncontrolled

cutting of trees and poor forestry management in the forest reserves (Minziro, Kiikuru and Munene).

Villages along the shores of Lake Victoria are involved in fishery activities as a very important supplement to cash income and the daily diet. An increasing number of farmers, especially young people are involved in this activity. More and more fish (Nile perch) is sold to the private fish marketing and processing company which has started operations in Bukoba since 1995. A recent mapping exercise of the fishery department showed that along the shores 30 fishing/farming communities are located along the shores of Lake Victoria occupied by 5,745 fishermen in the high and 2,720 fishermen in the low fishing seasons.

Construction of houses and all kinds of informal sector activities (carpentry, welding, plumbing, car repairs, and unskilled labor) provide additional employment and income and attract mainly young people. The activities are concentrated in Bukoba Town and the rural service centers where besides the common families, development agencies and private institutions initiate constructions of buildings and sites.

Figure 1(b) FITCA Bukoba district monitoring sites of Kagoma Ranch, Missenyi Ranch, Buchulago village, Kakindo village, Kakunyu village, Byeju village, Rugaze village & Rukoma village.



### 2A: THE PROJECT MANAGER

- (i) Oversee that all that has been identified, planned for and approved (both technical and logistical) for the Kagera FITCA component, and in particular the transfer of knowledge to the farmers, field staff and other FITCA stakeholders are implemented in time and met in a timely manner. The key aim being to meet the above objective through the listed five results after carrying out the several listed activities in receiving each result.
- (ii) Ensure regular field visits to exchange ideas and information with the field operators on the betterment of the Kagera FITCA field activities. The manager with consultation with other stakeholders will prepare a realistic fieldwork timetable suitable for covering all the field operation areas. However more time will be spent in the most challenging areas where the greatest assistance will be needed. Of the five days per month 3.5 days will be reserved for field visits.
- (iii) Ensure that the field tsetse staff attached to Kagera FITCA program carry out their work according to the agreed plan.
- (iv) Organize and participate in local Kagera FITCA stakeholder meetings to discuss the quarterly, half-year and annual Kagera FITCA performance report. And to discuss and agree on annual plans, approval of the coming annual budgets.
- (v) Link between the Kagera FITCA component and the outside. This includes the link with the Tanga FITCA program, the link with the technical ministry of water and livestock development. The link will be extended beyond the Tanzania borders to include among others, the regional FITCA headquarters in Nairobi, sister states implementing the FITCA program (Uganda, Kenya and Ethiopia) and research institutions dealing with FITCA-related activities, to learn and exchange ideas of how best to improve the program performance.
- (vi) Review periodically the Kagera FITCA activities and findings from the monitoring results, and take timely and appropriate action of improving the situation.
- (vii) Ensure that materials required for the Kagera FITCA are available in time for the Kagera FITCA smooth operations.
- (viii) Ensure that the field technical staff and other stakeholders perform the planned FITCA work by giving them the necessary support so that they can do their expected Kagera FITCA role as planned.
- (ix) In collaboration with the various stakeholders through their meetings as described above, prepare an annual physical and financial budget.
- (x) Last but not least attend to any other FITCA work as may be required by the various committees of the Kagera FITCA program, or the higher authorities of FITCA program

## **ANNEX 2B: THE FITCA KAGERA OVERALL MANAGEMENT STRATEGY;**

There will be three levels of the FITCA Kagera project management. The first level will be the farmer grass root level. The technical meeting will be second level and the last and highest level will be the Steering committee level. The details are given below of how each level will be functioning.

### ***(a) The local grass root tsetse and trypanosomiasis monitoring group meeting.***

This will take place for one day at the end of every month in any of all the district FITCA groups, in the two FITCA districts of Kagera. However, a carefully selected venue in areas where the livestock farmers have already formed active livestock groups, discussions and eventual agreement of carrying out FITCA activities through these already existing groups will be made. The members to the local grassroot tsetse and trypanosomiasis monitoring will include:

1. All FITCA field officers implementing FITCA program in the district. All cattle (indigenous and dairy) farmers, the goats, sheep, pig farmers leaving in that locality. It is recommended that the local grass root level committee should have a minimum of 15 members and a maximum of 30 members however depending on the nature of location, variations will be accepted. The farmers will there fore be coming from the nomadic traditional livestock keepers, the sedentary traditional livestock keepers and the zero grazing dairy cattle keepers. And from livestock farmers keeping sheep, goats and pigs.
2. The group motivator/animal health worker.
3. Any private veterinary service provider who is active in any of the FI TCA related activities leaving in the group coverage area.
4. The project coordinator will not be a permanent local group member but will be free depending on the importance and the available time will be attending selected group meetings. It is expected that during the project life period the project coordinator should at least have attended all the local group meetings in both the two FITCA districts.

The agenda for the local tsetse control grassroot-level meeting will be;

- (a) To elect office bearers, who are the local group chairman, secretary, and treasury. These leaders will hold office and will carry out their responsibility according to the group constitution.

- (b) To discuss and finally approve the group's constitution. The group can also make any amendments to the already approved constitution if they think it is necessary.
- (c) To recommend the name of the group's motivator/animal health worker.
- (d) To discuss the field technical performance reports and to propose any useful modification of bettering the FITCA performance at grass root level in the light of eventual sustainability.
- (e) To discuss and propose the local group FITCA annual budget which will be used to carry out the FITCA activities at the local grass root level. The budget should clearly indicate the source of income and the expenditure activities.
- (f) Lastly the local committee will make recommendation of what should be discussed by the FITCA technical and steering committee meetings.

The members will determine the venues for the local grassroot-level meetings, but it should be within the groups area of operation. It is however recommended that the venues should be rotating rather than being held in one permanent point. It is recommended that the meetings should be brief and not take more than six hours. However whenever there is some practical field work to be done, the meeting time can considerably be longer, of which the most of it is allocated for practical activities.

***(b) The technical meeting:***

This will take place for one day two weeks after the end of every quarter in any one of the FITCA districts of Kagera.

The technical committee will have 17 members who are:

- 1 The two District Veterinary Officers (DVO of the two Kagera FITCA districts. Depending on the meeting venue, the host DVO to the meeting will be the chairman to the meeting.
- 2 All FITCA tsetse field officers in the two districts of Kagera FITCA districts.
- 3 6 Farmers representative, three from each FITCA district representing the nomadic, traditional livestock keeper, the sedentary traditional livestock keeper and the zero grazing dairy cattle keeper.
- 4 4 selected farmers group/animal health workers from the tse-tse and trypanosomiasis farmer control groups, two from each FITCA district in Kagera.
- 5 Two private veterinary service providers, one from each FITCA district who is active in any of the FITCA related activities.
- 6 The project coordinator.

The agenda for the technical committee meeting will be;

- (a) To discuss the field and district field technical performance reports and to propose any useful modification of bettering the FITCA performance in the light of eventual sustainability.
- (b) The technical committee will also propose the Kagera FITCA annual budget, which finally have to be endorsed by the Kagera FITCA steering committee.



(c) Lastly the technical committee meeting will prepare the agenda for the Kagera FITCA steering committee.

The venues for the technical committee will be alternating from district to district for the two FITCA districts. The meetings will be organized so that they are brief not taking more than 6 hours.

(c) The Kagera FITCA district coordination committee;

This will take place for one day twice annually, in July and November of every year at any one of the FITCA districts of Kagera.

The committee will also have 17 members who will be:

1. The two District Executive Directors (DED) of the two Kagera FITCA districts. Depending on the meeting venue, the host DED to the meeting will be the chairman to the meeting.
2. The two District Agriculture and Livestock Development Officers (DALDO) of the two Kagera FITCA districts.

The two District Veterinary Officers (DVO) of the two Kagera FITCA districts.

3. All FITCA field officers in the two districts of Kagera FITCA districts.
4. 6 Farmers representative, three from each FITCA district representing the nomadic traditional livestock keepers, the sedentary traditional livestock keepers and the zero grazing dairy cattle keepers.
5. Two private veterinary service providers, one from each FITCA district who is active in any of the FITCA related activities.
6. The project coordinator.

The agenda for the steering committee meeting will be;

- (a) To discuss the district field technical performance reports and to propose any useful modification of bettering the FITCA performance in the light of eventual sustainability.
- (b) The steering committee will also approve the proposed Kagera FITCA annual budget, by the FITCA technical committee.
- (c) Lastly the steering committee may discuss any other matter related to Kagera FITCA project.

The venues for the steering committee will be alternating from district to district for the two FITCA districts. The meetings will be organized to be brief not to take more than 6 hours.

### ANNEX 3: The perspectives (The FITCA Kagera phase II)

The agricultural sector has consistently been dominant in Kagera region. The sector engages about 90% of the region's economically active population in the production of food and cash crops. Major food crops are bananas, beans, maize and cassava. Coffee, tea and cotton are the main cash crops.

The region had been one of the most important tsetse regions in Tanzania mainland. The Kagera tsetse belt is not limited to the two current FITCA districts of Bukoba and Karagwe, but extends to all the 5 districts of Bukoba, Muleba, Biharamulo, Ngara, and Karagwe. From the regional outlook, Kagera is bordering Rwanda & Burundi (Karagwe & Ngara districts) in the west and Uganda (Karagwe & Bukoba districts) in the north.

The FITCA phase 1 program (May 2002 to December 2004), is considered as a preparatory phase leading to the FITCA Phase 2 program. Kagera is still having tsetse, and is surrounded by countries with tsetse (Rwanda, Burundi & Uganda). So it is important that some kind of tsetse trypanosomiasis activity (implying FITCA phase II) should be continued. However in this second phase the main focus should be on, Improved productivity, proper land use and marketing as control of tsetse has already been going on in the region for a considerable length of time (Aerial spraying – 1976 – 1980 & the use of deltamethrin on cattle from 1988).

The overall objective in FITCA II should be improved leaving standards of the main stakeholders, the livestock farmers in the whole region of Kagera. This improvement will come partly through their core activity, which is (livestock keeping).

The fine tuning of the final version of FITCA 2, program will be as a result of the PRA techniques involving all the stakeholders.

However some points that need to be captured in FITCA II are;

- (a) Because of the trans - boundary nature of the tsetse, the program should cover all the 5 districts of Kagera region and it should be a regional program covering Kagera (Tanzania), Rwanda, Burundi, and Uganda.
- (b) FITCA II should be a livestock development program, with tsetse being the main catalyst. Kagera should continue with monitoring, but on a wider context to include environmental elements, game & forest reserve boundary areas with the inhabited areas, drug resistance, and the monitoring of other important livestock diseases. The tsetse & the tick control should continue to be an activity to fully be implemented by individual and farmers groups. FITCA should support them by educating them on the correct and rational use of the available control options and drugs.
- (c) As mentioned above, the most important points which should be captured from the start include;
  - (i) Introduction & expanding the heifer in trust credit scheme and Improved productivity (Through cross breeding by using natural methods with a combination with artificial insemination). Both dairy, and beef cattle can be targeted
  - (ii) Proper land use. It is very essential to ensure that the success in tsetse control in the region does not result in the abuse of the available natural resource, land. Stakeholders have to be aware of

the governing land use laws and recommended appropriate stocking rates.

- (iii) Marketing. Experience in current FITCA 1, has revealed that marketing problems of the livestock and their products is possibly the biggest hindrance of the farmers to exploit fully and expand their livestock husbandry enterprises. Sorting the marketing issues is definitely a priority in the FITCA 2.a
- (iv) Land tenure and use training on gender equality on inhere trainee
  - Education on right of women to own land through inheritance /powerhouse.
  - hope utilization of range lands
  - Individual ownership by pastoralists farmers their development.
  - Introducing regulations on use of commercial land
  - Infrastructure & service development in the range lands

(d) Some important considerations in the FITCA 2 include.

- Willingness and interest communities of the targeted communities in FITCA work.
- The approach should be community based.
- Button up (demand driver) should be the basis of the formulation.
- There fore participatory planning involving all stakeholders is part of the FITCA II.
- Private sector investment with areas defied roles (Ngo's, Agrovet, drug companies) should be stimulated.
- Use of cheap and locally available materials should be stimulated.
- Introduction of cost sharing approaches.
- Should use environmentally friendly approaches.