



EMERGENCY OPERATIONS AND REHABILITATION DIVISION (TCE)

**Strengthening Livelihoods through Food and
Nutrition Security in Vulnerable SADC Countries.**

**Mid- Term Review of OSRO/RAF/510-511/SAF
(Incorporating Lessons from 403/404/SAF)**

October 2006

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Acknowledgements

Executive Summary

Title	Strengthening Livelihoods through Food and Nutrition Security in Vulnerable SADC Countries. Mid- Term Review of OSRO/RAF/510-511/SAF (Incorporating Lessons from OSRO/RAF/403-404/SAF)
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Introduction	<p>This report presents the findings of the Mid – Term Review of RSA support to projects implemented by the FAO namely Strengthening Livelihoods through Food and Nutrition Security in Vulnerable SADC Countries (OSRO/RAF/510/SAF) and SADC/FAO Surveillance and Control of Epidemic Foot-and-Mouth Disease (FMD) and Contagious Bovine Pleuropneumonia (CBPP) in Southern Africa (OSRO/RAF/511/SAF). The report also draws in the projects preceding these namely OSRO/RAF/403-404/SAF, which were implemented in 2004 to 2005, to establish continuity of purpose and strategy to address the problems of food security on hand.</p>
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The Southern Africa Region suffers from chronic vulnerability due to both endogenous and exogenous factors which have led to the increasing crisis of households in the region failing to sustain their livelihoods.

The analysis of the past few years reveal the crisis to be a complex interaction between three factors which UN agencies and NGOs working in the region have identified as the three underlying causes, known as the ‘triple threat’, that are believed to be having the biggest impact:

- **Food insecurity.** The chronic and unacceptable levels of food insecurity are driven by the combined effects of weak(ened) markets for inputs and outputs, drought, declining soil fertility, and livestock disease. These problems feed on each other and accumulate over time to the degree that food shortages have become the norm rather than the exception.
- **HIV/AIDS.** AIDS targets the most productive members of society, and has spread to such a degree that the impacts extend beyond individuals and households, and are now eroding entire institutions, including education, government services, and the extended family system. The region has one of the highest prevalence in the world.
- **Weakened capacity for service provision.** AIDS comes upon the heels of years of severe spending constraints that have drastically curtailed government capacity for services, regulation, and planning, particularly in rural areas. Many government departments have enormous operational constraints to the point where they rely on joint programmes with donors to perform even core tasks. Weakened capacity for governance not only affects service delivery, but also the important functions of market regulation and development, urban and rural planning, and environmental protection.

To the above list can be added emergencies due to the **spread of transboundary animal diseases** in the region. This risk to the sustained productivity of livestock farming in the region threatens household food security, rural livelihoods and access to livestock commodity markets. The threat was highlighted by a special meeting of the SADC National Directors of Veterinary Services in Pretoria, July 2003. Between 1995 and 2003, there was a grave risk that the TADs epidemiological situation of SADC was deteriorating almost to a point of getting out of control. There was a spate of unusual outbreaks, starting with contagious bovine pleuropneumonia (CBPP) in Botswana, Tanzania and later Zambia. Then exotic foot-and-mouth disease (FMD) in South Africa. Then there was epidemic FMD in Zimbabwe with spread into Botswana and Mozambique. Another episode was the outbreaks of FMD in Malawi and Zambia both from within and then there was the spread of FMD from Tanzania to northern Malawi and northern Zambia. All this was taking place when the region was also experiencing drought and some of the disease episodes could be linked directly to the effect of drought.

All the above considerations are apart from a steady decrease in overall rainfall, shocks of droughts and floods, all of which may be related to the effects of climate change.

As a consequence of the complex crisis outlined above, the region has been receiving food aid with increasing frequency. The recipient countries, the donors and other observers all appreciate and value the short-term emergency support they have been getting to alleviate the food crisis. However, through the SADC Regional Indicative Strategic Development Plan and the Dar-es-Salaam Summit Declaration on Agriculture and Food Security, it was pointed out that countries should move away **from short-term emergency responses and engage in long-term development interventions**. This move would help address the underlying fundamental causes of the food crisis and create sustainable medium and long-term agricultural and related development growth

In 2003 the Government of the Republic of South Africa (RSA) **responded with a grant** through the UN aimed at addressing some root causes of the food crisis. The proportion apportioned to FAO (\$US10,454,356) was the basis for projects OSRO/RAF/403-404/SAF which were implemented in 2004 and 2005. Another grant R98 million (US\$16,001,305) was announced in September 2005 and became operational from March 2006 as projects OSRO/RAF/510-511/SAF.

Projects OSRO/RAF/403-510/SAF have concentrated on (1) Input Trade Fairs, (2) Gardens, (3) Conservation Agriculture, (4) Small Scale Irrigation, (5) Crop diversification, (6) Restocking, and (7) Information, coordination and advocacy. The gardens have included such issues as promotion of school gardening to improve the agricultural skills, life

skills, and school diet of school-going pupils; improving the dietary diversity of HIV/AIDS-affected communities; and support to Nutrition Rehabilitation Units for malnourished children.

Projects OSRO/RAF/404-511/SAF have focused on transboundary animal diseases, specifically the containment and arrest the spread of epidemic foot-and-mouth disease (FMD) and contagious bovine pleuropneumonia (CBPP).

Objective of the Review	<p>The team was tasked to:</p> <ol style="list-style-type: none">to review progress of planned OSRO/RAF/510-511/SAF activities towards achieving the outputs and objectives of the current project;to conduct an ex-post evaluation of key interventions that were supported under OSRO/RAF/403-404/SAF in order to assess whether beneficiaries have sustained capacity to meet their food security needs
Scope of the Mid Term Review	<p>The mid-term review mission was to assess the:</p> <ol style="list-style-type: none">Relevance of the project to agricultural emergency and rehabilitation priorities and needs in vulnerable SADC countries.¹Clarity and realism of the project's immediate objectives, including specification of targets and identification of beneficiaries and prospects for sustainability.Quality, clarity and adequacy of project design.Efficiency and adequacy of project implementation including:Progress towards project results, including a full and systematic assessment of outputs produced to-date (quantity and quality as compared with work plan and progress towards achieving immediate objectives).

The review was in particular to focus and make recommendations on the following issues:

1. The appropriateness of the technical interventions to addressing acute and chronic vulnerability to food insecurity in southern Africa.
2. The extent to which interventions have addressed different constraints in the food chain (i.e. from production –utilization-marketing)
3. The extent to which a “programme approach” has been adopted and adds value to FAO TCEO work at country and regional level, e.g. through sharing information and joint planning around common intervention opportunities.
4. The extent to which the project has been able to implement immediate actions to address urgent humanitarian needs while at the same time advocate for immediate actions to address underlying & structural constraints.
5. The extent to which an analysis of the HIV and AIDS context and appropriate responses have been mainstreamed into FAO

¹ Links to VACs etc

- TCEO's approach and interventions.
6. The extent to which both the needs of women and men have been identified and responded to within interventions.
 7. The extent to which Joint Programme modalities with UN agencies have been used as an implementation modality and if this has added value for a more effective and efficient response to humanitarian needs.
 8. Institutional linkages at national and regional levels, including SADC

Methods

The review was carried out in the 7 countries covered by the projects, namely *Angola*, Lesotho, Malawi, Mozambique, *Tanzania*, Swaziland, Zambia Zimbabwe and Namibia. The study was conducted by a team of three external consultants. Members of the South African Department of Agriculture joined the team in selected countries. The review involved a desk exercise, plus visits to project countries and consultations with the principal stakeholders and partners at national and sub-national levels; the teams visited project sites and made an assessment of beneficiary perceptions of project implementation, outputs and impacts. The principal stakeholders were the representatives of the emergency coordination unit, the focal points in the line ministries, the implementing partners, and the beneficiaries. Audience was also sought with the FAOR, the WFP country representatives and the Republic of South Africa Embassy or High Commission.

Findings at the Project Level

1. **Gardens** have been used in various settings including schools, junior farmer field and life schools, gardens associated with nutrition rehabilitation units to teach mothers the value of a garden to the prevention of malnutrition, and gardens run by Home Based Care (HBC) groups to support peoples affected by AIDS.
2. In **Malawi** the gardens have been shown to lower the incidences of malnutrition if the mother has gone through the training of the use of a kitchen garden during the time her child was rehabilitated. The expected impact of the gardens is the **increased income and consumption of green vegetables**. Presently, there is no data collected on these desired changes. There also have not been documented follow-ups by the volunteers to enable the project judge who or how many of the graduates from the model gardens are practicing what they learn. A minimum of approximately 10 msq is the expected plot size to be established by the graduates who are given a kit consisting of seed and tools to help them set up. It is expected that 10 msq size of the plot can be watered by grey water from everyday household reproductive activities. The process indicators show that the component activities have been implemented satisfactorily except for delays in a few districts. We may, therefore, expect that the demonstration gardens at NRUs and other sites will provide the material for training of mothers and pupils and that the trainees would acquire insight into how to prevent and

manage malnutrition in infants.

3. In **Zambia**, the project is set to stabilize the food supply through two strategies of (i) **small scale irrigation** and (ii) **crop diversification**. Through crop diversification, drought tolerant crops such as cassava and sweet potatoes have been introduced in areas where it was not custom to consume cassava. The efforts of cassava nurseries established in the preceding OSRO/RAF/403/SAF project have continued to pay-off as other farmers have found a source of cassava cuttings within their communities. The promotion of cassava consumption has to be accompanied by demonstrations of the many ways it could be used. Cassava will supply a household throughout the year without undue decline in supply at anytime.

**Findings at the
Project Level Cont.**

4. **Conservation agriculture** has been promoted to improve efficiency of resource use, especially given the difficulty of accessing credit for inputs and declining rainfall. Practiced correctly, CA has potential to assure crop production even when the rainfall is low. Many countries in the project have planned to use the practice during the coming planting season. CA has been used both in both cycles of SAF funding to establish nurseries and as part of a production package in commercial links between farmers and private sector business. The yield differences between the CA and conventional ploughing is usually very high, especially in poor rainfall seasons.

5. **Small scale irrigation** contributes to stabilizing the food supply in a similar way to crop diversification by extending food supply by a few months. In **Malawi**, the communities where irrigation assets have been built may grow more than two crops of maize in one year. This production is used to fill the hunger gap that is so evident from the hospital records of malnutrition among infants. Each year, the number of malnourished children admitted to the hospitals increases during the so called hunger period extending from September to March. The existing irrigation scheme at Kasungu, established under OSRO/RAF/403/SAF, is contributing to the food security of the beneficiaries. At the time of the MTR, the third maize crop was green in the irrigated fields. Moving a household from harvesting one crop from the upland to three from the lowland, albeit from small hectares has contributed to the livelihood of the beneficiaries. From this scheme the mission learnt that it is important to have a volunteer who is a member of the community working with the group continuously. The project should interface with the community through the group set-up rather than on individual basis as that prevents enmity between households. Further conflicts about access to water or land are better handled using the existing local structures reflected in the group.

6. **Diversification** also encourages the **ownership of livestock** such as chickens or goats. This activity has not been as well developed compared to the crop based activities. In **Lesotho**, it has been difficult, for example, to encourage households to pass on a goat to the neighbours, whereas passing a few kgs of seed or cassava cuttings is not that difficult. Overall, there appears to have been little programming for livestock production aspects of project OSRO/RAF/403-510/SAF. In

general livestock projects require more than just 12 months programming. Therefore, the two projects that have been time constrained at 12 to 18 months each were not well disposed for embarking on programmed livestock production activities.

7. **Junior Farmer Field and Life Schools (JFFLS)** have been supported to improve livelihoods and ensure long-term food security of HIV/AIDS orphans and vulnerable children, by improving their agricultural knowledge, life skills and self esteem, food security opportunities and entrepreneurship skills. Special attention is also given to gender-equal attitudes and HIV/AIDS prevention. In **Mozambique** under OSRO/RAF/510/SAF the schools continued with much the same curriculum and ideals but with the addition of **livelihoods support for graduates as an exit strategy**. The curriculum was developed by using models adapted from elsewhere. It entails a combination of practical and theory as well as traditional education – writing, reading and arithmetic. Such are the successes of JFFLS in Mozambique that the principles may be integrated into the regular education programme of national institutions (Ministries of Agriculture and Food Security, Education, Women and Social Action, National AIDS Council etc.) to complement formal school activities. The JFFLS has also become a source of seeds, for example sweet potato seed, for other Ministry of Agriculture and Security activities. Graduates and children from other JFFS in the area are now replicating some of these initiatives in the community – clearing plots and planting vegetables using the techniques learned as well as making livestock structures, pens and coups using local materials. The children have had great success in providing food not only for themselves but have produced great surplus which they both sell and distribute to other vulnerable children.

8. Through **Input Trade Fairs (ITF)** vulnerable, drought affected farming households are provided with increased access to agricultural inputs. This is combined with capacity building of local government services and civil society in addressing input related needs of emergencies. ITFs have moved beyond pilot and are now a government policy in Mozambique. On the contrary the ITF vouchers scheme is not practicable in Zimbabwe due to the differences in the economic fundamentals of the two countries. Zimbabwe ECU would like to vary the funds and use it to support cassava utilization in regions that already grow the crop.

Lessons Learnt

1. The small producers are vulnerable to drought and institutional support for input supplies. Vulnerable households grow very small fields and do not apply fertilizers; consequently they run out of maize by August.
 2. The course on cassava processing and utilization turned the attitude of beneficiaries significantly in favour of cassava. Without demonstrating its uses and the benefits that could accrue to the producers, the uptake of cassava production would still have continued slowly.
 3. Cuttings that were obtained 1000km away often incurred great
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losses as they dried on the way to the producers. The nurseries established under the project have availed cutting for other farmers within easy reach.

4. The OSRO/RAF/403/SAF was a good intervention; the wells dug provided water not only for the cassava but also for vegetables, drinking water and water for the livestock. The wells and pumps have continued to be used in the OSRO/RAF/510/SAF activities of Dry Season Vegetable Farming.

5. The input trade fairs (ITF) have proved useful in creating effective demand for inputs and connecting the suppliers with buyers in relatively stable economies.

6. From Mozambique, we learn that JFFLS have been successful due to:

- the wide range of partners involved, and the strong development of ownership of students, graduates and community members;
- the appropriate targeting of beneficiaries,
- the training/curriculum on appropriate skills that includes an integrated understanding of agriculture, food, nutrition and life with the positive support for children's vulnerability and trauma through cultural activities.

Exogenous macro level factors, which undermine the emerging impacts

1. The small producers have shrunk their production compared to the early 1990s due to policies that have removed marketing support and access to credit. Areas that were previously engaged in limited cash crop production are now largely based on subsistence agriculture, with very little use of external inputs.

2. Because the private sector is small and is strictly governed by of profit maximisation, the coverage of credit and input supply has shrunk in many SADC countries, while the conditions governing access to inputs have been greatly tightened, and hence excluding yet more people.

3. The exclusion of many people from the credit and input supply system has increased dependence on direct cash purchases to obtain the required inputs. However, since the cost of inputs is so high, many people are not able to purchase sufficient inputs to sustain reasonable levels of crop production.

4. The need to purchase agricultural inputs with cash comes at a time when a lot of people have either lost their livestock assets due to the diseases, or liquidated the same assets in order to augment their low staple production occasioned by the prolonged droughts and need to look after the sick.

5. Overall the quality of livelihoods for many rural households has drastically declined, partly because of the two factors immediately above. Livelihoods now focus more and more on harvesting the natural resources. For instance while mango fruits are a rich source of vitamins essential for health, some households in Malawi are cutting down mango trees to prepare charcoal for use in brick making

<p>Key recommendations for OSRO/RAF/510/SAF</p>	<p>General</p> <ol style="list-style-type: none"> 1. Given the context of chronic vulnerability that the project OSRO/RAF/510/SAF is trying to address; a different approach and time frame is needed compared to the typical emergency response. The mission recommends that in order for humanitarian livelihood and agricultural rehabilitation interventions to be effective that a funding horizon of 3- 5 years be provided for in future collaboration. The mission notes that the donor, RSA, is well aware of the long term commitment that tackling such a problem entails. 2. As the livelihoods approach is appreciated, activities increasing the production of livestock should be prominent in the project “Strengthening Livelihoods through Food and Nutrition Security in Vulnerable SADC Countries” 3. The project should make the host government ministries the Implementing Partner (IP) of choice followed by the NGOs. Where capacity (such as the lack of a bicycle or training) is the factor excluding the government structure, there must be clear evidence to the effect that the project has taken steps to build that capacity. 4. Even when it has become more proactive, selection/targeting of beneficiaries remains a challenge to be inclusive of the most vulnerable as they often cannot supply labour and other inputs (e.g. sand and stones for construction). In order to be inclusive there should be better understanding of socio-economic status and socio-cultural behaviour before selection of beneficiaries. With milk goats in Lesotho, for example, it is challenging to enforce the criteria that benefits must be past on from the more enabled/successful to the more vulnerable in the communities. 5. For M&E, monitoring and mentoring should be mainstreamed into all activities as ongoing feedback for technical support is crucial. A better support network of extension agents and capacity building of the same is needed. More needs to be done to strengthen existing capacity of implementing partners, as well as the ECU as monitoring and evaluation is a shared responsibility. 6. We commend the joint action between FAO and WFP that established the Kasungu scheme. The two agencies should continue to seek synergy by bringing food relief and rehabilitation together at community level. The process of building the irrigation asset with food for work is good, example of synergy, especially if coupled with supply of inputs such as fertilizers.
	<p>Specific</p> <ol style="list-style-type: none"> 1. Drawing lessons from the 403/SAF, the management of an irrigation scheme is best left in the hands of the community with the extension person rendering support and linking the community to other service providers. The community is better able to use its institutions to allocate land and share water. 2. To be an effective source of planting materials, the project should draw a contract with seed growers specifying what quantity of seed is given and how much is expected of the grower than to simply expect them to hand back 50% of what they produce.

3. In order to ensure sustainability, the project should have a **community garden/group** that would support individual households who embark on gardening. The group is a meeting centre for the households and avenue for extension messages to reach group members.

4. The ECUs should **promote social cooperation** and/or provide greater clarity of criteria for inclusion in the benefits of the irrigation activities. At one of the schemes some of the farmers were excluded by others since they could not contribute financially to the purchase of fuel to run the pumps.

5. The mission recommends that **processing and food preservation** should be pursued actively. Access to wider markets by adding value to products with initiatives such as packaging would be advantageous. Training in processing and quality control to better compete in (international) markets is recommended.

The main findings for

OSRO/RAF/511/SAF

1. OSRO/RAF/511/SAF has been a consolidation of OSRO/RAF/404/SAF which in turn built on the lessons from emergency interventions by FAO's Regular Programme resources through TCP projects.

2. The widespread outbreaks of foot-and-mouth disease in Zimbabwe with spill over into Mozambique have been arrested. Zimbabwe has not experienced FMD for at least 1 year and Mozambique has not experienced FMD since the end of 2003. Similarly there has been no further FMD outbreak in Malawi.

3. During 2006 Botswana has experienced 2 outbreaks. One was due to FMD type SAT-1. Molecular analysis of the causal virus by the Onderstepoort Veterinary Institute in South Africa has shown this virus to probably be derived from local wildlife. The second outbreak was due to type SAT-2. The molecular analysis of this strain suggested a close relationship with the strain that had been responsible for the 2001 outbreak in South Matebeleland and the spill over outbreak into Botswana in 2002. There is acknowledgement of a high volume of illegal movement of livestock commodities from southern Zimbabwe into Botswana.

4. The 404-SAF intervention had helped to reduce the number of outbreaks in the Caprivi Region of Namibia where the disease had occurred after an absence of about 60 years. The government has now taken over responsibility for the follow up surveillance.

5. Similarly in Tanzania and Zambia interventions through OSRO-404/511-SAF have helped to reduce the number of cattle deaths and to reduce the incidence of disease. Returns from abattoir surveys indicate that CBPP has not spread from southern Tanzania into either Malawi (where it has never been recorded) or Zambia.

6. The involvement of Angola has only just started with OSRO-511-SAF. Mobile laboratories have been delivered and field sample collection has started.

7. The emphasis for OSRO-511-SAF is on disease surveillance for FMD in Zimbabwe, Malawi and Mozambique and for CBPP in northern Malawi, southern Tanzania, Zambia, the Caprivi Region of Namibia and Angola.

8 An innovation for supporting field disease surveillance has been the development of the digital pen for capturing field data and instant transmission to a server via either mobile telephony or internet.

9. There are good indications that FMD control activities in Zimbabwe, Malawi and Mozambique will be taken over by an EDF funded SADC regional project for FMD control.

10. Similarly in Zambia an IFAD funded development project will support CBPP control.

11. CBPP and FMD surveillance activities initiated by OSRO-511-SAF are likely to be integrated into a regional project to be funded by the African Development Bank. (SADC TADs project) in Angola, Malawi, Mozambique, Tanzania and Zambia.

12. Nevertheless there are gaps which will need to be addressed by OSRO/RAF/511/SAF through the recommendations below.

**Key
recommendations for
OSRO-511-SAF:**

1. Extension of the FMD/CBPP surveillance work of OSRO/RAF/511/SAF to the end of 2007 in order to avoid creating a gap between the current activities and the equivalent to be supported by the pipeline development projects outlined above. Such a gap would carry a risk of undetected disease resurgence.

2. In the case of Tanzania and Zimbabwe, there is need to extend the OSRO/RAF/511/SAF project activities to the end of 2008. For Tanzania this will enable the government to test a protocol of eliminating CBPP from the OSRO/RAF/511/SAF project area, which could be the basis of a long-term project for the progressive control of CBPP from the rest of the country. While in the case of Zimbabwe, the extension will enable the government to consolidate the buffer vaccination with South Africa during the critical period when there might still be FMD asymptomatic cattle. This will also enable Zimbabwe and South Africa to develop joint programming for buffer vaccination, cross-border TADs surveillance and the monitoring of free-range buffaloes especially in view of the proposed trans-frontier border.

3. Angola, Namibia, Zambia and Tanzania face the challenge of designing risk management/control strategies for low prevalence CBPP. We strongly recommend that the work-plan of OSRO/RAF/511/SAF be adjusted within the current budget to allow for a workshop primarily for field government officials at the District/Province/Zonal laboratory level together with a limited number of national specialists from the three countries plus northern Malawi to exchange experiences and agree on common key disease control intervention approaches.

4. There is an urgent need to address the issue of supporting CBPP control in southern Angola. The Review Team strongly recommends that FAO with the concurrence of the Government of South Africa should seek to use the provisions of OSRO/RAF/511/SAF in order to assist the Government of Angola develop a specific project proposal for the progressive control of CBPP in southern Angola and help to seek appropriate donor funding.

5. Project OSRO/RAF/511/SAF has developed a unique digital pen technology for field disease data capture and disease alert, an important

element in emergency control of TADs epidemics. The Review Team believes that the necessary resources be allocated within the proposed extension of OSRO-511-SAF to end 2007 to permit the pilot to be sufficiently developed to allow for its integration into the TADInfo system. Furthermore, the project group should consider modifying the current project work plan to extend the field trials to Mozambique and Tanzania where the use of TADInfo is already established.

7. Projects OSRO/RAF/404-511/SAF have dealt with major and prolonged epidemics of FMD and CBPP, The socio-economic impact of these epidemics and of the associated disease control measures have not been assessed at both the national and community/household levels. Such impact assessments should also take into account the background of the other prevailing acute and chronic emergencies in the region. Therefore, the MTR recommends that such studies be prominent in the proposed cross-cutting issue follow up project.

**Recommendations
for post
OSRO/RAF/510-
511/SAF FAO-RSA
collaboration.**

1. The Mission recommends that FAO and the Government of South Africa should consider the next phase in their collaboration as being based on assured funding for a 3 to 5 year core programme that addresses the continuing humanitarian crisis and its impact on the food security status of vulnerable households which have agricultural based livelihoods in the Southern African Region. This could form about 70% of the funding, with the remaining 30% being allowed for innovative short term interventions that may be either experimental or judged as catalytic or for addressing country specific needs

2. That, given such assured funding, FAO-RIACSO should consult with other UN Agencies, the SADC Secretariat, the South African National Department of Agriculture, relevant Ministries in the project countries, key stakeholders in the national agricultural and livestock systems – both governmental and non-governmental as well as the FAO Normative Technical Divisions in developing such a set of activities that will bridge emergency interventions with long-term development. The driver should be the quest for building the capacity within the farming communities for their ability to face future agricultural shocks.

3. That FAO-RIACSO develops a core programme for addressing chronic agricultural vulnerability based on the Livelihood Framework

4. That in selecting the themes and activities, FAO-RIACSO should pay particular attention to those that are likely to have a regional and sustainable impact on rural livelihoods and food security in accordance with both the Millennium Development Goals and the Dar es Salaam Declaration of the SADC Summit of 2004. The MTR offers the following as examples of approaches that could be considered for developing a livelihood framework based approach

Examples of	<i>Piloting agricultural productivity improvement and good farming</i>
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Possible Core Themes For potential future support:

practices for addressing the negative impact of chronic emergencies on rural livelihoods, drawing on the FAO normative expertise not only in the field of crop and livestock production but also on expertise in such aspects of sustainable agriculture² as land use and climate change

Theme I

This could cover the following selection of activities:

1. Extend conservation agriculture to all the project countries (including Angola and Tanzania) focusing on the grain and vegetables (i.e. on food security). Zimbabwe (and Lesotho) provides a C.A. Task Force model that could be emulated by ECUs in other countries.
2. Piloting school gardens, building on lessons from OSRO-403/510-SAF
3. Piloting small-scale irrigation, building on the lessons from OSRO-510-SAF but also taking into account the needs for promoting small-scale aquaculture. The theme shall not only address small river diversions made by hand but also large scale diversions to supply larger tracts of land. The diversion at Musonda falls in Luapula that supplies water to the local power station is a good example of a diversion, not destructive, but slicing enough water to water large areas.
4. Piloting small-scale dairying in peri-urban areas of Angola, northern Namibia including Caprivi and in Lesotho, to the extent possible building on experience from within the region, such as the USAID funded project in Zambia which is implemented by Land-o-Lakes cooperative in collaboration with the government livestock extension system. (Final list of countries after consultations)
5. Piloting and promoting biosecurity-based, good farming practices for village chickens and other short-cycle stocks (rabbits, goats, sheep, pigs) for all project countries. For chickens emphasis should be on housing to minimise co-habiting of chickens with humans and on Newcastle disease vaccination to be on the basis of triple benefits (enhancing household income, food security and facilitating avian influenza preparedness). For small-ruminants (primarily goats) promote networks especially in Angola, Zimbabwe, Zambia, Tanzania, Swaziland and Lesotho. For pigs encouraging hygienic housing and provision of local slaughter facilities will also serve to prevent the introduction and spread of African swine fever and classical ; piloting could commence in Mozambique, Malawi. It should be noted that a programmed promotion of short-cycle stocks will be an indirect empowerment instrument for women as in most countries short cycle stock are kept predominantly by women. It should be noted that the emphasis on biosecurity-based, good farming practices is driven not only by considerations of animal productivity and prevention of animal diseases but also by attention to human health. Recent studies have shown that during the last 30 years some 75 to 80% of new emerging or re-emerging human diseases have originated from animals. This is acknowledged by the World Health Organisation. The list of such diseases includes ebola, HIV/AIDS, SARS, mad-cow disease and avian influenza, especially the H5N1 sub-type, which is a contemporary

² E.g. LEISA

threat. NB-1: This activity should be jointly programmed with 511 TADs aspect of addressing SADC tactical diseases. NB-2: Selection of countries to follow consultations

7. **Processing and preservation** The project should access small to medium scale processing plants or appropriate technology types to help in the processing and preservation of small farm produce to add shelf life and value at community level.

8. Introduce **battery systems** for small scale chicken production (a university in the RSA has a working model)

9. Support to small and **medium scale processors**, creating employment and local investment

- meat processing to stage three
- leather industry
- chicken processing plant to cater for small producers

10. Operate the Innovation **fund** to pilot new ideas such as

- a. testing the utility of a maize cultivar difficult to process but easy to store. Farm households would be able to build a store of this crop over time and use under stress.
- b. testing other means of soil fertility improvement such as
 - i. new ways of using cattle manure [faster kraal shifts, manure placement models]

11. Produce and sustain blended meal for the staple using cassava, maize, sorghum, millets in various wining combinations. Create/promote substitutes for maize from non-cereals.

12. Work on market linkages to stimulate small farm production through market incentives. The main factors constraining resource poor farm households are market access, credit and extension.

Theme II:

To focus on preparedness, response and piloting control interventions for TADs, in collaboration with FAO-EMPRES Livestock and ECTAD and to assist countries set up surveillance and early warning systems for migratory pests, especially locust and army worm, in collaboration with FAO-Locust and Plant Protection.

The following could be key activities:

Piloting the control interventions for the two strategic diseases

- In collaboration with the SADC TADs (AfDB) & SADC FMD (EU) projects, undertake FMD risk assessment and pilot cross-border risk management of TADs through harmonised surveillance and disease control interventions in the Caprivi eco-system involving Angola, Namibia, Zambia and Botswana, the Zimbabwe-RSA Limpopo eco-system and the Tanzania-Malawi-Zambia interface
- CBPP control strategies in the current project area in Tanzania, Zambia and extend same to southern Angola building on experience of Namibia, Tanzania and Zambia.

Through joint programming with 510-successor project, pilot control strategies for specific tactical disease control i.e.,

- African swine fever in relation to small-scale, family pig farming in Mozambique
- Contagious Caprine Pleuropneumonia (CCPP) small ruminants Tanzania NB: to prevent spread to rest of SADC as TZ is only country affected by CCPP
- Newcastle disease control in village chickens in potentially high risk avian influenza areas in all countries, both to improve rural livelihoods and to facilitate the surveillance for and preparedness against avian influenza.

Through joint programming with avian influenza programme and in collaboration with the SADC TADs project piloting institutionalisation of preparedness for TADS at the district, national and SADC regional level. In addition to the list of exotic/emerging diseases identified by the SADC Directors of Veterinary Services, there could be added diseases which are confined to only one or two countries in the SADC region. Notable examples are classical swine fever which can be confused with African swine fever and which has recently been identified in South Africa and Caprine Contagious Pleuropneumonia in Tanzania.

Transfer work on migratory pests from 510 to 511-sucesor project so that 511 would link to both arms of the FAO EMPRES programme. Thus, in collaboration with the FAO EMPRES – Locust and the SADC Secretariat, pilot institutionalisation of preparedness against migratory crop pests (especially the red locust and army worm) in SADC, focusing on surveillance, early warning and targeted spraying.

Collaborate with FAO-EMPRES (Livestock and Locust) in linking the digital technology to FAO systems for early warning for either transboundary animal diseases or migratory pests.

Theme III

Joint programming with 510-511-successor projects and other UN agencies in order to pilot institutionalization and/or mainstreaming of livelihood diversification, skills development, processing and marketing of agricultural produce as well as addressing such crosscutting issues as gender, HIV-AIDS and nutrition.

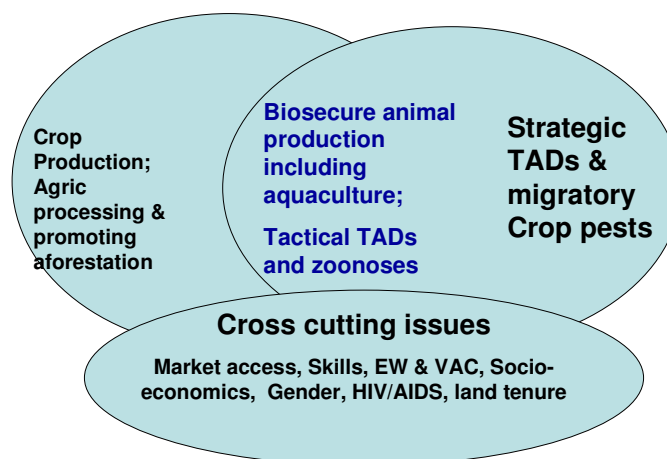
The following are some suggested activities

- Piloting market access initiatives for small-scale horticulture and short-cycle stocks, bearing in mind the role of women and children in this type of agriculture. This could include the voucher system that has been piloted in Mozambique under OSRO/RAF/510/SAF, provided at the end of OSRO/RAF/510/SAF there is evidence of the potential for sustainability of the system.
- Socio-economic studies to assess impact of interventions on rural livelihoods, on recovery and to systematically identify causes of vulnerability. It is important that such studies be extended beyond crop agriculture to examine also the role of

livestock, aquaculture and artisan fishing in rural livelihoods.

**Summary of
programme
integration**

Post 510/511 Programming



The proposed integrated programming, including the stakeholder consultations, will further strengthen the regional integration in agricultural development to the mutual benefit of both South Africa and the other countries in the SADC region. It will also address the issue of transboundary animal diseases for which there is an increasing risk of both elevated incidence and spread within the region along the economic gradient that will be associated with increasing cross-border movement of peoples and animal commodities in the SADC region. A truism is that the economic gradient will increasingly be towards South Africa, at least in the medium term and thereby the increasing risk of animal disease spread towards South Africa.

Finally the MTR has proposed the animal production systems to be promoted through the new programme should emphasise biosecurity-based good animal production practise. This will address not only improvement in animal production and the prevention of animal diseases but it will also aim at protecting human health, as it is now widely recognised that some 75 to 80% of new emerging human infections in the last 30 years have originated from animals or animal products.

1. Introduction and Background

In recent years, the Southern African Region has suffered from shocks of natural acute emergencies against a back-drop of underlying chronic vulnerability. The net effect has been a worsening food shortage, with people who experience chronic food shortages and who are entrapped in chronic poverty and vulnerability. The acute emergencies have included the droughts of 2001, 2002 and 2005 and unusual spread of transboundary animal diseases, grossly distorting the epidemiological balance and posing a threat to the livestock industries of countries of the region. For example, until 1990 contagious bovine pleuropneumonia (CBPP) or cattle lung sickness was confined to southern Angola with spill-over outbreaks into northern Namibia. However since then severe epidemics of CBPP have been experienced in Botswana, Tanzania, Zambia and the Caprivi Region of Namibia. Unusual outbreaks of foot-and mouth disease were experienced in Zimbabwe, Mozambique, Malawi, Botswana and South Africa. This was on top of such devastating outbreaks as African swine fever and the attrition by Newcastle disease in village chicken flocks. The chronic or underlying shocks have been due to HIV/AIDS, increased mobility between countries and the evolving impacts of climate change. Most of the current climate models indicate that the overall mean temperatures over land areas are expected to increase by an average of around 1–2°C by 2020 (relative to the 1961–1990 baseline), with the largest increases occurring in southern Africa. By 2080, mean temperatures are expected to increase by about 1.7–6°C in southern Africa. Also most climate models predict a decrease in rainfall for southern Africa of approximately 5% by 2020 and 10% by 2050.

Thus the trend of the past decade could worsen unless appropriate measures are initiated to address this chronic agricultural vulnerability and frequent shocks to the livelihoods of the Southern African region.

The past decade has shown an increasing frequency of shocks to the livelihoods of the Southern African region. The livelihoods of the peoples of Southern Africa have been adversely affected by three inter-linked and somewhat symbiotic problems of vulnerability, weakened public service delivery institutions and, more recently, the HIV/AIDS pandemic. These problems have adversely impacted agricultural production and related services, resulting in recurring food shortage crises in the region. These crises have been exacerbated by the vagaries of weather, principally: (i) the increasing incidence of intermittent, prolonged droughts and flooding; (ii) reductions in funds to invest in the agricultural sector; (iii) government policies which, in some countries, have not fostered optimum growth of the agricultural sector; and (iv) weaknesses in the economies of most of the countries, leading to substantial increases in unemployment and malnutrition and significantly undermined livelihoods.

Often it has not been possible or feasible in the past for individual countries to cover their unmet food requirements through commercial market purchases; instead, they have relied heavily on development partners and other humanitarian organizations to source, deliver and participate in food distribution. This situation is likely to continue in the short to medium term unless steps are taken to address the underlying causes of this food crisis.

In 2003, the RSA responded in support of mitigating the crisis with a funding to the UN aimed at addressing the underlying causes of the food crisis.

This programme rests on recent regional development plans and declarations which point out that countries should move away from short-term emergency responses and engage in long-term development interventions. This shift would help address the underlying fundamental causes of the food crisis and create sustainable medium and long-term agricultural and related development growth, in efforts to meet two key Millennium Development Goals (MDGs) of halving the number of people living in hunger and those living in absolute poverty³ by the year 2015. The interventions would also contribute towards the achievement of Pillar 3: Increasing Food Supply and Reducing Hunger of the New Partnership for Africa's Development (NEPAD) Comprehensive African Agricultural Development Programme (CAADP) as well as the FAO-supported Special Programme for Food Security (SPFS).

The shift in emphasis from relief to rehabilitation or sustainable development recognizes the fact that relief food does not reduce the risks faced by households nor does it enhance the ability of the population to resist them. Disasters are not exogenous, uncontrollable events but are a result of processes that lead to the accumulation of risk. That risk has two interlinked elements, hazards and people's vulnerability (defencelessness) to those hazards (dangers). A hazard is an event or a process that has potential to cause "loss of life or injury, property damage, social and economic disruption or environmental degradation".

Vulnerability is the extent to which individuals, households and social groups are exposed (naked) to hazards and are unable to cope with and recover from their impacts. The opposite of vulnerability is capacity or resilience. The project **Strengthening livelihoods through food and nutrition security in vulnerable SADC countries**, therefore aimed to reduce the vulnerability of the households through disaster risk reduction. Disaster risk reduction involves efforts to minimize hazards, reduce people's exposure to hazards and boost their capacity to cope and recover from hazard impacts. It is long-term and should be an explicit part of the post disaster rehabilitation and recovery as well as the of development process.

A key contributor to the crisis has been the HIV/AIDS pandemic. Southern Africa is one of the most serious HIV/AIDS impacted regions worldwide. National infection rates are estimated to range between 14 and 42 percent, with approximately 10 million people reportedly infected. Of these, about 4.2 million live in the 7 countries targeted by the proposed project. Moreover, HIV/AIDS has impacted approximately 5 million children in the region, and 2.7 million of these have been orphaned by the disease. Many of these children have lost both parents, and despite their youth, are now running households and growing their own food.

³ defined as living on US\$1 per day or less

Vulnerability to food insecurity in the region is also a factor of weak institutional capacity within the countries involved. Besides the loss to HIV/AIDS of public servants who support agriculture and related services, professional staff numbers have been depleted as technical professionals take more lucrative jobs in other countries or within the same country. This has led to inadequacy in the numbers and quality of public sector service providers who support the agricultural sector and a low morale among those left behind. All of these factors have resulted in sharply-reduced productivity in the sector. This trend needs to be reversed if the countries are to revert to the positive agricultural production they once enjoyed.

In most of the affected countries, other endogenous and exogenous factors have played critical roles in hindering vulnerable groups from attaining food security. These include: (i) over-reliance on rain-fed agriculture in a uni-modal rainfall regime with increasingly uncertain predictability; (ii) a mono-cropping culture (mainly maize); (iii) inadequate access to suitable agricultural inputs needed to boost crop and livestock yields and sustain soil fertility; (iv) lack of sufficient diversification in the food crops grown and livestock kept; (v) lack of innovative, highly-productive and rapidly-impacting agricultural practices and technologies in some countries to boost crop and livestock production quickly and at affordable cost; and (vi) increasing lack of appreciation of agricultural production activities of women young children and youths. Many of these constraints could be minimized through selective, low-cost and sustainable interventions during the emergency operations period as a beachhead for the medium- to long-term agricultural development activities and programmes to follow.

This report is addressing chronic agricultural vulnerability in southern Africa through evaluation of projects OSRO-RAF403/404-SAF and mid-term review (MTR) of projects OSRO –RAF/510/511-SAF funded by the government of the Republic of South Africa and implemented by FAO-RIASCO, Johannesburg

2. Method Used in the Evaluation and Review

The team of reviewers comprised three independent consultants contracted by FAO and three specialists from the Department of Agriculture in South Africa. The three from the FAO were an agronomist, Livestock diseases specialist and a socio-economist. The MTR team convened at RIACSO on 17 September 2006 before the arrival of the socio-economist but after the livestock specialist had covered Tanzania with regard to TADs. After the brief from the regional emergence team, the MTR team leader and the Livestock specialist met with WFP, OCHA, National Department of Agriculture and the FAOR. After these initial meetings and briefs, the two consultants left for Zambia and Namibia on 21 September. At the end of the fieldwork for the two countries, the team convened in Harare on 25 where the socio-economist joined, thereby completing the MTR team to launch the fieldwork for Zimbabwe. The experts from the NDA were also in Zimbabwe at this time. The following day the livestock specialist remained in Harare while the socio-economist and the agronomist each went to cover other countries in the project. All countries except Angola were visited by members of the FAO team in combination with the South African team. Members of the South African team went to Zimbabwe, Malawi and Lesotho. In each country visited, discussions were held with the principal stakeholders and partners at national and sub-national levels; the teams visited project sites and made an assessment of beneficiary perceptions of project implementation, outputs and impacts. The principal stakeholders were the representatives of the emergency coordination unit, the focal points in the line ministries, the implementing partners, and the beneficiaries. Audience was also sought with the FAOR, the WFP country representatives and the Republic of South Africa Embassy or High Commission.

The fieldwork was complemented by the following:

1. At the regional level: a desk review of project documentation, and relevant background materials
 - a. Review of available baseline and monitoring information
 - b. Review of lessons learnt exercises (ITF, SSI, CA)
 - c. Meetings with regional stakeholders (RSA, UN agencies, NGOs)
2. A Mid Term Progress Review Workshop. Participation included: ECs, FAORs, Ministry of Agriculture representatives from countries, RSA (NDA), TCEO and technical divisions from Rome and WFP. The workshop served to reach region-wide consensus on issues raised by the mission. (see 7.3 under recommendations)

3. Project Objectives and Design

3.1. Project OSRO-510-SAF

The overall goal of the project is to improve the food security status of the vulnerable farming households of the SADC to enable them to improve their self-reliance through increased production and income generation.

The project is designed to contribute to long-term household food security and nutrition in the SADC countries. The immediate objectives are (i) Intensification of agricultural and livestock production and productivity⁴ (ii) Livelihood diversification, (iii) Promotion of livelihood and life skills, and (iv) Information, coordination and advocacy. The intended project strategy was to build assets of the households that would build capacity to resist the shocks that occur within the region. The observed chronic vulnerability was to be reduced so that the households would not need regular food relief.

The activities of this project focused on, among others, (i) small-scale irrigation to supplement both summer and winter production systems; (ii) promotion of school gardening to improve the nutritional status and agricultural life skills of school-going pupils; (iii) conservation agriculture, (iv) home-based care diffusion to improve the nutritional status of HIV/AIDS-affected communities; (v) multiplication and distribution of planting material, and (vi) the establishment of a Nutrition Rehabilitation Units.

The project thus intended to improve the capacity to resist shocks through diversifying the cropping pattern from maize to include cassava and through increased use of irrigation through treadle pumps or river diversion. Project activities are meant to assist the selected communities to achieve both short-term and long-term food security, as well as to improve the nutritional status of individuals. Chronologically, the project will ensure that selected communities and households sustain their food crop production systems, improve their income generation capacity, build their capacity and skills and globally sustain and improve their nutritional status.

The project document recognized the variation among the target countries and allowed for the development of country level log frames. The result is that at regional level, the many objectives from the countries were not harmonized. For example the small scale irrigation is framed in widely different objectives yet the aim is to increase the capacity of the households to irrigate (and ultimately access food with which they would fill the hunger period).

The project has had a total of two years from the first funding (403/404), but each year was planned with a fixed 12 and finally 18 month period. The short horizon was reflected on the content and implementation modalities of the project. This is the first formal review of the project since the donor began a partnership with the UN system three years ago.

3.1.1. Indicators, Assumptions and Risks

The project document provided process indicators only⁵. The project Monitoring and Evaluation system is being finalized. The collection of information from the field is not

⁴ which encompass Improving Input Access, Small-Scale Irrigation and Promoting Soil and Water Conservation Management or conservation agriculture, and control of trans-boundary animal diseases

⁵ possible because the one year project period was too short to record any impact of the project

tied to the measurement of the change that the intervention is meant to cause. It was assumed that the national-level Emergence Regional Coordinating Unit (ERCU) would be responsible for the regular monitoring of the activities at country level in close consultation with Implementing partners (IPs) (i.e. Government counterparts and local and international NGOs). Monitoring of the activities would be done through the existing, national M&E mechanisms where appropriate. Improved M&E systems would be installed in all participating countries where required. The ERCU will also be responsible for assisting the Government in disseminating country-level data and information among stakeholders on FAO in-country emergency operations.

It was recognized that emergency operations, by nature, were of a limited duration and, therefore, they ran a risk of being unsustainable and ceasing soon after the completion of project implementation activities. To prevent that from happening, TCE at FAO HQ in Rome would communicate regularly with the key FAO technical divisions, particularly those pertaining to agriculture, sustainable development and investment, gender issues and livestock, about the windows of opportunity created by the proposed emergency operations. The relevant divisions will then include these appropriate, proven activities into their own mainstream, normative programmes once emergency operations have been completed.

At the regional and country levels, the RECSA and ECs, through their advocacy roles, will articulate the activities of the project to national governments and donors so they can incorporate the post-emergency development needs created by project emergency interventions into their own mainstream programmes.

Risks mentioned in the project document related to the assumptions above, i.e. non-availability of collaborating staff from line ministries or insufficiently tested capacity of implementing partners. Delays in the delivery of equipment, seed material, and other materials and supplies were not listed. Instead there were concerns about whether there would be fencing materials in the area, and whether there was sufficient land and water (for irrigation activities) as well as a risk that there might be a lack of genuine interest and commitment in certain communities.

3.1.2. Beneficiaries

The project mentioned as beneficiaries small subsistence farmers and their families, the vulnerable segments of the population including HIV/AIDS-affected households, orphans and vulnerable children, the elderly and single-headed households. Smallholder irrigation activities targeted smallholder farmers and homestead gardeners who have access to land for agriculture and water for irrigation development. It thus planned to benefit food and nutrition insecure households and those affected by the HIV/AIDS epidemic.

Households and pupils were meant to benefit from various components in the project such as small-scale irrigation, JFFLS, school gardening, home-based care and NRUs. Households were to be trained in the principles of small-scale irrigation systems. These

households would then continue to benefit from the establishment of irrigation schemes in their areas based on suitability to either gravity-fed or treadle pump systems.

HIV/AIDS-affected households were to receive assistance in Home Based Care (HBC) Centres comprised of HIV/AIDS-affected households and households with orphans, elderly and chronically-ill patients.

3.1.3. Institutional Arrangement

FAO prefers implementation of the project to be in collaboration with the line ministries such as agriculture, health and education. NGO IPs have been used for implementing various aspects of the project at country level such as for implementing and monitoring the activities in the field. Where feasible and beneficial, joint programming arrangements with other UN agencies operating in the country were pursued, though it was evident joint planning and execution was not a strategy the agencies were oriented to. The implementation arrangements are designed to meet the urgency need of emergency. Consequently the elaborate implementing arrangements and structures with national authorities, though preferred, were not first choice but are currently being emphasized.

3.2. *Project OSRO-511-SAF Surveillance and Control of Trans-Boundary Animal Diseases*

This project was designed to consolidate work that had been undertaken under OSRO-404-SAF. The project does not seek to eradicate either FMD or CBPP from the affected areas. Its objective, like that of OSRO-404-SAF, is the containment and stop the spread of either FMD or CBPP in their epidemic forms. The running theme has been to strengthen the capacity for the detection, monitoring and surveillance of CBPP and FMD in the affected and at high risk areas, while continuing to support CBPP control activities in Zambia and Southern Highlands area of Tanzania. This strategy is also compatible with the guidelines that were laid down by the SADC National Directors of Veterinary Services for the framework for the progressive control of FMD and CBPP.

Thus the beneficiaries and implementation partners remain identical to those previously identified for OSRO-404-SAF.

The activities of the two projects have been in the domain of the national/regional public good. Therefore they have been implemented, primarily, by the national government systems and they have had to conform to the national regulatory systems governing notifiable animal diseases as defined in the national laws. In each country the design has taken into account the national contribution by the governments. Neither OSRO-404-SAF nor OSRO-511-SAF has been designed to assume full responsibility for the operational or recurrent cost of disease control. They have been designed to act as a highly focused catalyst. So while they provide much input, they also act as capacity building instruments.

As neither OSRO-404-SAF nor OSRO-511-SAF have been disease eradication projects, their long term success depends on their ability to dove-tail with appropriate government programmes or long-term donor support. The MTR has found that in all the project countries the budget allocation by the national government has progressively increased, although this has not been reflected in a proportionate decrease in the South African contribution. This reflects the magnitude of the problem that has been faced in the affected countries. While long-term donor support has been slow in coming, the MTR has found this is now forthcoming in most of the project countries. The critical question is whether the activities of OSRO-511-SAF will be able to dove-tail with those planned for long term funding to allow for a progressive disengagement of South Africa from the same activities and divert resources to other pressing objectives. These issues are dealt with in the specific activity review and in the recommendations.

4. Key Outcomes/Lessons from Projects OSRO-403/404-SAF and Implementation Status of OSRO-510/511-SAF

4.1. Evaluation of OSRO-403-SAF and Review OSRO-510-SAF

The success or impact of the interventions are tempered by the larger factors influencing the performance of agricultural production in the SADC region. The first is the low average rainfall that is seasonally highly variable in time and space and increasingly unreliable. Rainfall is the major factor determining the production level of farm households. The performance of agriculture sector is still tied closely to the quality of the rainy season. The second factor is the lack of capital meaning that the cultivated landholding have continued to be small. The small size conspires with the declining soil fertility to mean ever decreasing total production in some countries where the possibilities of shifting to more fertile lands is no longer an option. The fourth factor is the lack of extension support which is a reflection of the declining government services. Lastly, the producers are often forced to sell their produce at very low rates because of the need to meet ever increasing demand for cash⁶

4.1.1. Country Report – Angola

There has been no activity in Angola for either 403 or 510. This is because Angola has been covered by country specific CAPs. The only activity under the South African funds has been work on TADs.

⁶ e.g. hospital costs associated with AIDS—one of the triple threats in an environment where free medical care is no longer available.

4.1.2. Country Report – Lesotho

4.1.2.1. Mid Term Review Context

The majority of Lesotho's population is rural and agriculture dependent yet less than 10% of land is considered suitable for arable production. Intensive and unsustainable land use has led to considerable degradation. This coupled with high intensity but low penetration rainfall and increasing population pressure has led to marginal land use and thus unsustainable cultivation. Therefore it is important to adopt water and land conservation practices and technologies to improve agricultural output whilst conserving the natural resource base. It was this principle that guided the selection of activities in Lesotho coupled with the vulnerability context defined in the February 2006 LVAC that carried out livelihood baseline profiling in all six zones.

Table 1 Population, Farmers and Vulnerable People

Demography	Statistics
Total Population	2.35 Million
Affected Population	948,300 people vulnerable to acute food insecurity between (May-June 2006)
Agricultural/Pastoralist Population	Over 80%

Recurrent drought and increasing prevalence of HIV/AIDS affects 23% of the population. Nonetheless, although in 2005 agricultural production was a third of the average level of the previous five years, there were no extreme negative coping strategies deployed by the population. This was due to food aid and remittances provided from migrant labour to South Africa. The 2006 season is expected to show some improvement due to more favourable climatic conditions. The programme components for Lesotho include small livestock support, irrigation and water harvesting, conservation agriculture and support to nutrition gardens through a variety of inputs including conservation agriculture.

4.1.2.2. Review of Key 403-510 Components

Small Livestock Support

The aim of these activities is to improve household livelihood asset holdings through provision of short cycle livestock (milk goats) and vaccinations (against scabies and mange). The main activities are:

- Review of 403 interventions
- Goat procurement
- Beneficiary selection and distribution of goats
- Development of a vaccination plan and implementation ⁷
- Training to improve the technical capacity for small livestock management.

At the time of the MTR an evaluation of 403 goat rearing interventions had just been drafted with the first version of the report 'The Status of Milk Goats in Southern Lesotho' produced. The survival of progeny varied widely from 6-77% according to district. There is no clear analysis in the review's conclusions regarding this large district to district variation. With the exception of procurement of goats from South Africa, most 510 goat milk continuation interventions had not started at the time of the MTR and thus lessons learned are based on this report plus visits to field sites of 403 activities from which case studies were reviewed (see socio-economic impacts, section 6 below).

Lessons Learnt:

- In general individually owned goats performed better than those distributed to groups. However, it should be noted that with livestock (milk goats), groups were formed for the activity. In other interventions where group activities were successful, the groups targeted were already in place and functioning successfully (albeit with other activities).
- Due to the wide variation in successful goat breeding and management from district to district, greater monitoring and mentoring with exchange of knowledge facilitation is needed.
- There is a need for greater involvement by the respective technical agencies within the Ministry of Agriculture and Food Security in the support of beneficiaries. Also responsibilities to prevent inbreeding and cross breeding with Angora goats should be defined.
- For sustainability/successful impacts of the activity, beneficiary selection is critical. The 'right type' of beneficiary, appeared to be those who demonstrate commitment from the outset by following advice for constructing goat shed/housing and/or planting forage grass.
- Other selection criteria were geared for success rather than targeted at the most vulnerable i.e. those able to feed the animal/s either by growing feed or managing milk production and marketing to gain cash to buy feed. This, however, may exclude the poorest of the poor/most vulnerable households.

⁷Up to 1.2 million sheep to be vaccinated against sheep scab disease

- As there was little evidence of the ‘pass on of the gift’ the approach should be better explained to beneficiaries and better monitored and implemented. Obligations of the recipients are not consistently followed. This should be better monitored particularly in relation to the project qualification criteria of contribution to secondary beneficiaries such as passing on the ‘gift’ of next born kid and providing milk to vulnerable households.

A. Irrigation and Water Harvesting

Activities started in 403, building on successes in water harvesting by the Ministry of Forestry and Land Reclamation⁸, and continued into 510 along with various irrigation activities implemented by the Ministry of Agriculture and Food Security in order to improve the capacity for irrigation of agriculture in Lesotho. Main 510 activities are:

- Training of 55 GoL staff and 1,000 household in irrigation design, development and management
- The rehabilitation of 42 smallholder irrigations schemes

Water harvesting activities are household water tanks and larger community storage facilities construction. Activity beneficiaries are selected using criteria defined by the Ministry of Forest and Land Reclamation and in collaboration with FAO. The beneficiary must express an interest and show a will to contribute to the activity in terms of labour and supply some material – sand and stones. The project then provides: cement, pipes and wire mesh to reinforce the cement and training.

The support to rain harvesting activities was prioritised due to the above-mentioned degradation of natural resources. Furthermore water harvesting had been conducted by the Government since the 1980s and although its value was recognised the measures remained small scale. Women are more proactive in seeking government support for water harvesting than men who, it appeared needed sensitisation to the benefits before taking up the technology. Hence for 510 schools and farmers were targeted for training initiatives. Moreover the purpose of the tanks was more clearly defined for 510 and targeted for facilitating irrigation for increased crop production (although evidence of this could not be ascertained). There is a focus on youth with the rationale that the training will be geared towards providing a skills set within a population group that will be most inclined to use basic building skills to diversify their livelihoods i.e. build other tanks elsewhere for those not willing or able to build their own and/or start to set up small building businesses in youth groups. The socio-economic benefits of this apparent livelihood diversification has not been measured but there is some anecdotal evidence that this has occurred with youth groups trained under the scheme going on to build small

⁸Although Lesotho has relatively high rainfall in comparison to many other southern African countries there is poor penetration and catchment. This leads to lack of available water as a livelihood resource as well as contributing to the degradation of soils. Hence the Ministry of Forestry and Land Reclamation was established three years ago (April 2003) as a separate entity to the Ministry of Agriculture and Food Security and appears to have been a successful move with regard to conservation and sustainable use of natural resources.

scale agricultural buildings such as pig sty as well as some house building (see case studies, section 6 below).

The water harvesting activities are carried out in close collaboration with the Ministry of Agriculture and Food Security and a project benefit was that, within the Ministry of Agriculture and Food Security, there have been some changes of attitude with regard to the importance of conservation of natural resources for agricultural production/intensification. Originally the Ministry of Agriculture and Food Security and Ministry of Forestry and Land Reclamation made decisions separately but 403 and 510 has brought closer collaboration between the two ministries with regard to decision making although challenges remain. FAO and the Ministry of Forestry and Reclamation appear to have a good, mutually supportive relationship. However, with the Ministry of Agriculture there appeared to be some capacity challenges. At the time of the MTR four weeks of irrigation technology training had been provided to 16 GoL officers. There is a need for these officers to have ongoing support from experienced irrigation technicians (monitoring and mentoring) for support with designing and management.. There was some progress in ground water testing and equipment had been purchased and sites for development selected.

With regard to water tank construction, sites had been selected in all 10 districts. However, the budget available is sufficient for 50 tanks, 50% short of the 100 indicated in the project document. One tank viewed that was constructed under 403 reached approximately only 60% capacity with water collected lasting just 2-3 months. Modifications in design are suggested for 510 intervention (scaling down) as well as covers for tanks to reduce evaporation as well as more efficient guttering to ensure that as much water is collected from each roof as possible.. Although some modifications have occurred in the past and a cover has already been offered as an option not taken up as it was feared this would hamper cleaning and promote algae growth.

Lessons Learnt

For irrigation some output targets need revising as targets were not being met by the implementers. For example:

- Current training numbers by the GoL falls short of numbers indicated in the project document.
- The number of irrigation sites to be developed/rehabilitated stated in the project document is too high given the time and level of technical expertise needed to undertake design and implementation in the context of limited national capacity for irrigation development. GoL has selected sites for development but a prioritisation of those sites needs to be done
- Monitoring and evaluation of the benefits of irrigation has not happened. Support is needed with this particularly in relation to having a greater understanding of livelihood impacts and diversification at a household level.

For water harvesting a better tailored design for individual cases, according to the area/size of harvesting (roof size) and rainfall, would cut down on material used by too large tanks for use/available water. The GoL could consider modifications in design. For

example some trial cases with easily removable covers (inexpensive removable wood covers as opposed to completely sealed units for ease of cleaning) could also be offered along with more sensitisation on the benefits of reducing evaporation.

B. Conservation Agriculture

Conservation agriculture activities were established in 403 often building on successful, long standing CA practitioners' pilot projects in order to increase cereal and vegetable production and to promote the conservation of natural resources for sustainability. For 510 there is an aim to improve Lesotho's overall technical CA capacity and to have 1,000 households practising CA. Activities undertaken to date are:

- Contracting implementing partners and procuring inputs
- Sharing of knowledge visits to RSA of GoL implementers and farmers
- Bi-monthly meetings that involve GoL members, NGOs and FAO to promote information exchange
- A baseline study of CA is being prepared
- Setting up of demonstration plots – technical and material support
- Training course for GoL staff and NGOs
- Training farmers

Start up of these activities was established at the time of the MTR with the baseline study to be completed in October (not yet received by the reviewer), implementing partners contracted, sharing of knowledge visits undertaken and bi-monthly meetings set up. Some improvements could be made as indicated in lessons learned during the MTR process from both 403 results and the start up of 510 activities.

Lessons Learnt:

- Focus more resources on low- and medium-tech conservation agriculture as this is where vulnerable farming households are likely to realise benefits
- Demonstration sites should be of manageable size – a 'manageable size' varies according to activity and so should be considered at the planning stage. Lack of agreement has led to delays
- Sites should be fewer in number in order not to spread resources (human and material) too thin as to not show a positive impact
- Timely procurement and delivery of inputs
- The importance of better weed management should be demonstrated and clear allocation of responsibility of weeding and other tasks should be made
- Leadership of CA demonstrations needs to be allocated to a department that has the resources, both manpower and machinery, to effectively manage the demonstrations throughout their life/crop cycle. Careful identification of the lead department which has the required resources (technical staff and machinery) to manage the demonstrations effectively should be made and agreed at the outset

C. Support to Nutrition Gardens

Under 403 (and continued in 510) support was targeted to garden projects established and well managed. Support included seed and tree inputs, 4 drip kits, Agricultural Trade Fairs training in CA and HIV/AIDS awareness training. Positive impacts of these interventions were noted particularly where activities supported already successfully established gardens, for example at Muluti Hospital. The original hospital gardens started in 2000 in the hospital grounds with labour from the families of vulnerable (poorest) patients whose families could not pay for their treatment. Under 403, 470 lead farmer households were trained in basic principles of organic vegetable production using some conservation agriculture techniques. Knowledge was then passed on by each lead farmer to 18 further households particularly in relation to techniques to extend growing season and to diversify crops grown with additional advice from nurses on nutritional benefits. 36 villages in the region around the hospital were included in the activities with these targeted according to links with patients who use the hospital. The final beneficiaries/end users were selected by village chiefs. There remain 12 trained field workers per village.

There are indications of sustainability and up scaling of these activities with support from other sectors. The Ministry of Health has now appointed a social scientist to lead the project and to better understand the socio-economic needs for improved targeting of beneficiaries. Beneficiaries targeted include 300 orphans with a total of 54 acres although this target was proved to be too high with 120 orphans feed last year. The social survey will scale down targeting starting with 4 villages as pilot studies.

Lesson Learnt

- Better socio-economic survey to understand needs should be a criterion for selection of beneficiaries in conjunction with community leaders rather than just relying on village leaders decisions.
- Extending the crop season and diversifying crops by CA planting techniques and revising the types of crop grown e.g. planting more kale in order to supply fresh vegetables to beneficiaries for a longer period and being inclusive of the winter months when more calories are needed. Onions and garlic are also being trialled due to high vitamin C supply of both and antiseptic and more diverse health benefits of garlic.
- There were problems of wastage of seeds with direct sowing onto the fields.⁹ If transplanted from individually sown containers in polytunnels this not only cut down on seed wastage but also extended the growing season.
- Fruit Trees – 100% of apple trees supplied survived but only 10-15% of peaches and plums. For better chances of survival trees need better care in transport and should be collected and cared for immediately on arrival. Those not collected went 2-3 weeks without care during this transport and collection period. A way forward would be to trial small scale village based nurseries with ‘local variety’ yellow peaches that are hardy and have a history of success in the region. This could be in conjunction with supplying a polytunnel in each village (using locally available wattle for structure therefore reducing construction costs) not only for the fruit trees but for a variety of crops seedling maturation.

⁹ Particularly in the case of mustard seed which also then appeared to flower too soon.

4.1.2.3.Challenges:

Lesotho is a small country with low capacity in many sectors. For instance, Lesotho has no socio-economists.¹⁰ The Ministry of Agriculture and Food Security is the main 510 implementing partner due both to the programme preference to support implementation through appropriate Ministries combined with the lack of NGO capacity in the country. However, many donors regard implementing capacity has been reached in Lesotho with the Ministries not meeting implementation targets. The challenge is to support the Ministry of Agriculture and Food Security in order to meet 510 targets and/or to scale down activities. Strengthening of the Lesotho FAO Emergency Coordination Unit may be needed in order to achieve this. In addition the project should focus on interventions that are within the implementation capacity at national level i.e. take into account the strengths and weaknesses of ECU, GoL and Lesotho's NGO capacity. Definition of roles and responsibilities of FAO and its implementers should be better defined. A clearer understanding of expectations of both implementers and beneficiaries remains a challenge.

A further challenge, with regard to capacity, is that in some vulnerable households there are not many innovators. Thus introducing new technologies and activities through them is challenging. In some areas innovative farmers were instead targeted and success was better with a targeting 'balancing act' undertaken with some farmers who are more innovative/less vulnerable included in order to successfully demonstrate new approaches.

Although the selection/targeting of beneficiaries has become more proactive in 510 than previously (in water harvesting for example), it remains a challenge to be inclusive of the most vulnerable as they often cannot supply labour and other inputs (e.g. sand and stones for construction). Improvement of the targeting of beneficiaries remains a challenge. In order to achieve this there should be better understanding of socio-economic status and socio-cultural behaviour before selection of beneficiaries. With milk goats, for example, it is challenging to enforce the criteria that benefits must be passed on from the more enabled/successful to the more vulnerable in the communities.

Although there are many successes both with regard to uptake and sustainability there are still challenges with the 'hand over' of the technology/tanks when original owners move on i.e. parents die, people move geographically.

Despite high rainfall Lesotho has a water shortage for most of the year. 403 water harvesting activities have been successful but the challenge remains to provide more sustainable/year round water for irrigation by developing more inclusive irrigation plans to better link with water harvesting projects. Providing sensitisation and expertise to the more affluent/able farmers but not the materials (cement and wire mesh) with training that should be more inclusive of socio-economic issues is one suggestion. More attention should also be paid to future water needs and provision. Planning for droughts is a further

¹⁰ In the Ministry of Finance there are macro-economists who tend not to look at social needs and impacts.

challenge; larger community water storage and infrastructure facilities (e.g. dams, pipes channels) could be considered.

The following challenge was well articulated at the Ministry of Forestry and Land Reclamation where it is felt that there needs to be a greater understanding of 'people's needs to improve targeting to maximise benefits/outputs and to link with other activities to diversify livelihoods'.

“Technicians have a tendency to forget the importance of knowing the social background to their projects. There are indications of changes in this attitude but technicians need support in knowing how to mainstream social needs and an understanding of the social situation so that ‘we don’t dictate to people what they should do without know what is best for them”.

It was considered that this was not just a water conservation challenge but covered all land use and access issues. It was appreciated that any future funds directed to socio-economic understanding may mean a diversion from direct material inputs but it was thought it was still important to understand the social situation first and try to influence/change/sensitise communities to projects before starting for '*as this has not been done we have had failures*'. Understanding what people will do may make things sustainable and then even diversify livelihoods from natural resource dependent which would be a conservation measure in itself.

A challenge, now starting to be addressed, is that monitoring and mentoring should be mainstreamed into all activities as ongoing feedback for technical support is crucial. A better support network of extension agents and capacity building of the same is needed. More needs to be done to strengthen existing capacity of implementing partners, as well as the ECU as monitoring and evaluation is a shared responsibility. The ECU could engage an officer dedicated to M&E who has expertise in socio-economics and livelihood diversification. For the future monitoring and evaluation systems should be set in place from the outset. Monitoring and reporting would also benefit from better and more timely feedback needed on day to day processes e.g. in reporting birth of goats, arrival of tree seedlings etc. and for the activities overall.

Finally, for a small country like Lesotho with limited capacity, less is often more until activities are proven as sustainable. The challenge is to demonstrate success - small pilot projects should be trialled rather than resources too widely dispersed on large scale activities that thus fail to show a positive impact.

4.1.3. Country Report – Malawi

4.1.3.1. Mid Term review Context

Malawi's economy depends on agriculture. The average land size of most Malawian farmers is less than 1 ha. The majority of these smallholder farmers experiences food insecurity and high levels of malnutrition in addition to HIV/AIDS pandemic. The dry spell of 2004/05 growing season affected about 4.2 million people in the country. The government appealed to donors for food aid in addition to implementing a target input subsidy for 2.1 million households.

- The Ministry of Agriculture third round crop estimates for 2006 show a good maize harvest at 2.61 million tonnes. This is a 113% improvement on previous year's harvest. The Malawi Vulnerability Assessment Committee states that overall food production is more than what is needed at the national level and there is no need to import maize this year.
- However the MVAC also states that a number of isolated areas have had a poor season (in some cases as bad as last year-e.g. Kasungu) and household access to food will be undermined by low incomes.
- Nutrition data (at harvest time) indicate that there are substantial numbers of children suffering from chronic malnutrition in areas affected by drought last year. In all areas, stunting and mortality are significant.

The successful harvest this season, a historic record in recent years, is attributed to two main factors (i) favourable weather conditions (with the exception of a few areas) and (ii) high uptake of fertiliser and improved maize seeds due to the government's fertiliser and seed subsidy program.

The programme components for Malawi include multiplication of planting material for cassava and sweet potatoes, Small Scale Irrigation for vulnerable and food secure households, School Gardening, Junior Farmer Field and Life Schools, and backyard gardening in Nutrition Rehabilitation Unit and Home Based Care groups.

4.1.3.2. Review of 403 - 510/SAF components

A. Multiplication of planting material for cassava and sweet potatoes

This component was initiated in 403/SAF with the objective to improve the food security status of vulnerable households dependent on agriculture by decreasing the impact of dry spells and droughts on crops, by supporting crop diversification (cassava and sweet potatoes in addition to maize)

Planned project beneficiaries included food insecure households and school children. Some 700 rural families in 17 targeted districts were to be provided with irrigation equipment to increase their agricultural production and selected small scale farmers would be helped to establish 20 hectares of cassava seed nurseries and 20 hectares of sweet potato seed nurseries. The planting material from these nurseries was to enable 800 and 1 000 farming families diversify into growing cassava and sweet potato respectively. In addition, selected school children were to receive practical training in agriculture and nutrition.

A total of 38 hectares of cassava and 32 hectares of sweet potatoes were planted. At harvest time, beneficiaries retained 50 percent of the planting material and all the tubers for their own use and re-distributed the other 50 percent to secondary beneficiary farmers. It is expected that each of 1 150 secondary farmers were to produce 1.2 tonnes of cassava tubers and 1.2 tonnes of sweet potato, in addition to the planting material that they would have at their disposal. Furthermore, based on the average nursery size of 0.1 ha, each grower would keep about 1.2 tonnes of tubers and 15 bags of the sweet potatoes either to sell or plant further. Therefore, this activity not only improved food availability and income prospects for the beneficiaries, but it also greatly assisted in reducing the scarcity of good planting material in the country.

At termination of 403/SAF funding, the component was “handed over to the government” and ECU had no further knowledge of how the project progressed from then on. In particular the capacity to re-distribute seed to other farmers threatened the activity when it was handed over. This sudden end to an activity was also observed for Zambia and it emanates from the short term nature of emergence programming.

Lessons Learnt

1. It is more effective to draw a contract with seed growers specifying what quantity of seed is given and how much is expected of the grower than to simply expect them to hand back 50% of what they produce.

B. Small Scale Irrigation

Irrigation was initiated in 403/SAF when the irrigation site at Kasungu was established with collaboration of WFPs Food for Assets intervention. After the end of that phase, the site has been listed under another donor, the Spanish Government, who will continue to work with the community. Irrigation is Government of Malawi priority. Two years ago the Ministry of Irrigation and Water development was created to afford required attention to irrigation development. Because of the problems associated with treadle pumps, ECU Malawi has decided to focus on river diversions for irrigation interventions. While the government has distributed 500 treadle pumps per constituency, other organizations in the sector have been distributing similar pumps.

Table 2 Status of irrigation sites development

Region	District	Scheme Name	Type of scheme	Number of Participants	Survey Complete	Baseline Complete	Training complete	Procurement completed
Central	Ntchisi	Kawombe	River diversion	100	Y	Y	Y	N
South	Ntcheu	Chawawaine	River diversion	70	Y	Y	Y	N
	Mwanza	Dickson	River diversion	40	Y	Y	N	N
	Phalombe	Thuchila	Gravity	61	Y	Y	N	N

The small irrigation component is aimed at food insecure households. Some 700 rural families in 17 targeted districts were to be provided with irrigation equipment to increase their agricultural production.

Activities to Date

- The irrigation projects are being implemented working closely with the Ministry of Irrigation and Water. A Memorandum of Understanding has been agreed and coordinating official (focal person) appointed.
- Topographic surveys have been completed and extensive baseline data collected and processed from all proposed irrigation sites.
- Detailed designs for all schemes are still in the process of finalisation.
- Training: 170 participants from Ntchisi and Ntcheu have completed training facilitated by Total Land Care. One of the sites where training took place is Chawawaine, which was first developed by the FAO under the SPFS. FAO will add 20 ha to the existing 30 ha. The beneficiaries at this site did not receive WFP assistance yet there are many who may go hungry, especially during the December to February period. The need for relief is annual because the harvest is low due to poor seed, and inadequate fertilizer (which determines the size of land). The community has requested for the rehabilitation of the canal. The requested cement and pipes have been brought to the site. The community has moulded bricks, crushed stones as their contribution to the asset building, but still await the expert to come line the canals.
- Government irrigation officers also attended the training to facilitate future monitoring. Similar training is underway in Mwanza and later in Phalombe in the southern region.
- Procurement of basic inputs is approximately 50% completed.

Lessons Learnt

The lessons were learnt from the Kasungu irrigation site which was opened in October 2004.

- It is important to have a volunteer working with the group continuously. The volunteer should be a member of the community.
- Work in a group set-up rather than on individual basis—prevents enmity between households.
- Conflicts about access to water or land are better handled using the existing local structures reflected in the group.
- The process of building the irrigation asset with food for work is good, especially if coupled with supply of inputs such as fertilizers. The maize at Kasungu did not appear commensurate with the effort put in irrigation. Either the water supply is problematic or the management of the crop (fertilizers etc) does not use the water fully.
- It is critical to have animators who would stay with the group to ensure that the group functions as expected.
- The three ingredients leading to sustainable access to adequate food is
 - a. Technical support (read extension)
 - b. Inputs (read credit)
 - c. Assets (irrigation facility), and
 - d. Markets (prices)¹¹

¹¹ Hence adding value at the local level may help the prices small farmers receive

- The ECU has decided to focus small scale irrigation on use of river diversion; they are cheaper. Treadle pumps have labour and difficult ergonomics. The Malawi model of the treadle pump is too heavy to use.

4.1.3.3.Challenges

- This component of the RSA project has taken time to get off of the ground due to various extenuating circumstances: approval to begin project activities was only received in February/March 2006, the project officer only began working with FAO in mid April and it took sometime to be familiar with FAO systems, rules and regulations, etc.
- The prices received for the farmers' produce is too low "Vendors steal from us". The community was promised a market, but that has not been delivered (yet).
- The community is unable to negotiate a price for their produce. Cooperative may be known to the group but they have not tried to form one due to lack of exposure.
- Though it is preferred to partner via the Ministry of Irrigation they have been slow to respond to requests, e.g. completing surveys and designs. They are also involved in many other pre-funded projects causing delays that are out of synch with recipient's aspirations and expectations.
- There is a shortage of water during the dry season. The community would prefer a dam to help in all year round cultivation.
- Most farmers use re-cycled seed
- The observation of the farmers is that the rain is unreliable, consequently they asked "Could we look at other businesses other than farming?" This is a flag for the need to look at other sources of livelihoods in the community.

4.1.3.4.Expected Outcome

In Malawi the existing irrigation scheme at Kasungu, established under RAF 403, is contributing to the food security of the beneficiaries. At the time of the MTR, the third maize crop was green in the irrigated fields. Moving a household from harvesting one crop from the upland to three from the lowland, albeit from small hacterages, has contributed to the livelihood of the beneficiaries. The best indicator would be the total production per household, summing the rainy season and irrigated production. This figure would then be compared to total production before the irrigation was installed or with a neighbouring community with similar attributes who do not have access to irrigation. In both cases, the total production would be converted to total months of provisioning given the total household cereal requirements. Total production figures for each household in the scheme, which would help estimate the impact of the small irrigation intervention, are yet to be collected. The monitoring and evaluation framework has only recently been agreed upon and it will permit the project to measure both the output and outcome indicators. Until that time, we may only rely on anecdotal evidence and qualitative interviews. The only indicator the MTR mission could access was the concluding interview with the women of Kasungu irrigation who said they needed "relief food NOW" as the hunger season had already started. It was confirmed to the team that indeed Kasungu was dry during the main crops season despite Malawi receiving good rains this season.

Irrigation schemes will contribute to food security by allowing a longer cropping period. There are management problems for crops under irrigation which the beneficiaries still

have to grapple with. For example the changing levels of water in the diversion in the course of the year.

A. Promotion of Gardens and Fruit Tree Planting

This component was initiated in 403/SAF in which it was meant to improve the nutritional status and agricultural knowledge and life skills of school children. The coverage has since expanded to cover the rehabilitation of malnourished children at NRUs

Nutrition Rehabilitation Units (NRU) & Home Based Care (HBC) Programme

A total of 25 NRU demonstration gardens have been established to which are attached 50 HBC gardens with the aim of building long term access to food security and nutrition in households. One Health Surveillance Assistant and volunteer from each NRU; and one volunteer from each HBC group were selected for training. The Maternal Child Health coordinators provide an overall supervision of the NRU and follow up of activities at district level while other health personnel have been identified based on their integrity, dedication to work and interest in volunteering work. The NRU are also supported by WFP in form of food supplements for the infants and caregivers. NRUs are existing units within certain clinics and hospitals. The value added by the FAO is the gardens and the training on infant feeding and care given to mothers.

Table 3: NRU and HBC Locations

Region	District	NRUs (numbers)	HBC (Numbers)
North			
Central	Nkhota Kota, Salima, Dowa, Mchinji and Lilongwe.	16	31
South	Mangochi, Machinga and Balaka	9	19

The baseline survey is yet to be completed while the training of staff is completed. The procurement of supplies for the NRU and HBCs is partially completed. The supplies to support the gardens at NRUs have been purchased and supplied while the supply of chickens for the same is yet to be completed as the ECU awaits the NRUs to build chicken runs.—Whilst the NRU point out that the chicken houses are not on their operational budgets which were approved long before the issue of NRU chickens runs was brought up. However, in other NRUs such as those under Dowa, the chicken houses are ready but ECU will not supply chickens until almost all NRUs are ready to receive them so that the cost of transport is held low.

School Gardens

A total of 30 demonstration/ learning gardens have been established in 30 full primary schools in the central and southern regions of Malawi. This represents 30/5000 schools in the pilot at the national level. This project is being implemented in direct collaboration with the Ministry of Education as a lead Ministry and Ministry of Agriculture in partnership with Canadian Physicians for Aid and Relief (CPAR), Catholic Development Commission (CADECOM) and Adventist Development and Relief Agencies (ADRA) in Lilongwe, Mchinji and Phalombe respectively. The

gardens are meant to improve agricultural knowledge and agricultural life skills for primary school going pupils.

Junior Farmer Field and Life Schools (JFFLS)

This is a jointly planned and coordinated activity in a pilot phase in Malawi. The technical working group includes FAO as the lead implementing and technical agency, WFP providing school feeding and UNICEF training skills. Various Government Ministries are involved in the technical working group. However, the Ministry of Education has finally agreed, after negotiation, to take the lead and endorse a MoU because the Ministry is most closely aligned to the aims and ideals of JFFLS programming.

Activities are now beginning to pick up. 8 schools have been selected based on a detailed survey which was facilitated by FAO through FAO project in Mangochi, who have agreed to assist us with the implementation of this project, and coordinated closely with Ministry staff, WFP and UNICEF. A work plan has been completed and procurement schedule concluded.

Due to coordination problems, this activity has delayed. It has only been possible to record some activity in the last two months namely (i) the sensitization of the communities and the schools and (ii) training of volunteers from agriculture, social welfare and school feeding programmes. The implementation has commenced without the signatures of either UNICEF or WFP. The mission did not visit a site associated with JFFLS.

Lessons Learnt

- School Gardens ownership is improved by working with a small number of pupils other than the whole school. The size of garden matters—the bigger the garden the harder to manage
- Include the ministry in the planning and implementation of the activity. The use of the headquarters is valuable as it assures continuity of the programme. The ministry has plans to include the gardening in school curricular. The coordination with stakeholders is much improved-especially with line ministries. The gaps in coordination are still with the other UN agencies
- Data collection should cater for profiling the trainees, what circumstances would have precipitated the malnutrition?
- -Data storage appears to be very weak. It was not possible to conclude whether relapses at NRU in Likuni had reduced due to the interventions in 403/SAF; there was no sufficient data to support the observation in 2006 indicating a 6% relapse compared to 34% last year.
- The presence of gardens at NRUs¹² may already have a positive effect. When children have been rehabilitated from malnutrition, they may relapse and be re-admitted. In 2003-04 season, the Likuni NRU recorded 34% relapses while in 2004 – 05 only 6% were relapses. The environmental health officer would like to attribute this drop in re-admission to the gardens introduced by the FAO. However, in the absence of long term data on relapses, it is at most anecdotal

¹² Since 403/SAF

- evidence for the impact of the gardens at nutrition rehabilitation units. Reduction in relapses decongests the hospitals.
- As gardens are meant to improve nutrition, information on meals eaten should be included in the monitoring programme by the ECU.
 - Given that the implementation is carried out by other partners, FAO may be missing out on the subtle lessons/insights gained by closer interaction with the beneficiaries. The persons who are in regular contact with the beneficiaries may not have the skill to translate the response that the beneficiaries may give to the interventions promoted.

Challenges

- The baseline information collection has been delayed due to unforeseen circumstances surrounding mainly the development of survey instruments and logistics.
- Training of beneficiaries mainly in NRUs is slow due to the fact that most households are now able to feed themselves but very soon the numbers will pick up (despite this being a good year). Normally households experience problems with malnutrition during October – April when food reserves run so low.
- This trend in admissions has partly affected procurement trends. The cooking utensils for the NRU have not been purchased, nor are the kits that will go with the graduates.
- The provision of starter packs i.e. the seed and tools to start a garden or layers to start egg production will limit the extent to which graduates implement what they learnt during rehabilitation. At the end of 403/SAF, the purchase of feed was very low and constrained the operation of the egg production at Likuni NRU.
- At the peak of the hunger period, admissions to the NRU may reach 30 per day. During this period, much more support is required. A suggestion would be to raise chickens to support more than the expected admission. The extra cash could be used to finance some of the NRU requirements.
- For sustainability, it is better to have a community garden/group that would support individual households who embark on gardening. The group is a meeting centre for the households and avenue for extension messages to reach group members.
- The translation from the classroom into practice by the graduates. The proportion of graduates who establish their own gardens has not been established yet.

Expected Outcomes

The gardens established in Malawi range from the 25 at NRU to the 30 at primary schools. Some of the gardens at NRUs were established during 403/SAF. The expected impact of the gardens is the increased income and consumption of green vegetables. Presently, there is no data collected on these desired changes. There also have not been documented follow-ups by the volunteers to enable the project judge who or how many of the graduates from the NRUs are practicing what they learn. A minimum of approximately 10 msq is the expected plot size to be established by the graduates. It is expected that this size of the plot can be watered by grey water from everyday household reproductive activities.

The process indicators show that the component activities have been implemented satisfactorily except for delays in a few districts. We may, therefore, expect that the demonstration gardens at NRUs will provide the material for training of mothers and that the mothers would acquire insight into how to prevent and manage malnutrition in infants. In fact the MTR team spoke to mothers at one NRU. The scale of the demonstration, i.e. the number of NRUs with gardens will also contribute to the proportion of households raising kitchen gardens.

Similarly, the gardens at Schools, Junior Farmer Field schools, and HBC centres all contribute to better nutrition of the beneficiaries and acquisition of knowledge of agriculture for use when they graduate or in assisting the AIDS patients. The unknown is whether the graduates will in fact establish the gardens.

Until impact data start being reported, we can only speculate at the probable impact of the interventions:

1. The Gardens at the NRUs provide an entry point for mothers to learn practical ways to safeguard the health of their infants
2. Gardens at schools are an investment in the knowledge of agriculture, knowledge that is under threat from the loss of active adult population from HIV/AIDS.
3. Junior Farmer Field and Life Schools in particular have shown to develop self esteem among young people.

4.1.4. Country Report – Mozambique

4.1.4.1. Mid Term Review Context

4.1.4.1 Mid Term Review Context

The majority (80%) of the rural population in Mozambique live in absolute poverty and suffer prolonged periods of food insecurity with 31% of rural people having difficulties meeting their basic food needs. Mozambican agriculture is characterised by smallholdings. The predominant farming system is based on the rain-fed production of cereals and tubers, with maize and cassava being the staples produced by the overwhelming majority of holdings.

Table 4.1.4a Population, Farmers and Vulnerable People

Demography	Statistics
Total Population	17.6 Million
Affected Population	801.000 people vulnerable to acute food insecurity between October 05 and March 06
Agricultural/Pastoralist Population	75%

In February 2006 a VAC Assessment was made in all 10 provinces of Mozambique to monitor the current food security situation. Household food security has improved in southern and central Mozambique due to the increased availability of food (fresh crops and the harvest of matured crops) and food aid distribution targeting 75% of the insecure population. The 2006 harvest is expected to be better than 2005, despite localized irregularities of rainfall with the dry spell in February affecting crops of maize and sorghum. Nevertheless, good rainfall conditions for the second season may make up for the reduction in the yield during the first agricultural season. Rains in March and April 2006 helped the survival of new plantings and provided adequate moisture for the second planting season in May/June 2006. 510 interventions should be cognisant of the general recommendation of the VAC February 2006 report.

In Mozambique there are eight RSA funded components with most of the activities being implemented in conjunction with the GoM, usually the Ministry of Agriculture and Food Security but also the Ministries of Education and Social Affairs as participating partners. Some successful activities were implemented by NGOs e.g. Newcastle Disease intervention but other NGO implementers failed to produce required results in 403 so were not continued in 510 e.g. draught power support provision by Vet Aid due to the limited capacity of the NGO. Provinces currently targeted for RSA funds are: Tete – 510 and 511, Zambezia – 510, Manica - 510, 511, Sofala - 510, Gaza - 510, 511, Inhambane - 510, Maputo - 510.

510 activities are: Improved food security in the ‘Green Zones’ of Maputo which are commercial horticultural zones (peri-urban agriculture). This is a 403-510 linked project. Irrigation, namely the rehabilitation of dams in Gaza and drip kits. Upgrading of meat/beef cold storage and slaughter systems in order to decrease movement of live animals in the Gaza/Zimbabwe border regions. Vaccination of poultry against Newcastle disease (in 403 only Manica and Sofala and now extending for 510) using government and NGO vets. Micro projects for mitigation against HIV/AIDS (JFFLS 403 Manica and Sofala) School agricultural production training on fruit trees and small livestock management are being undertaken... JFFLS are being extended across Mozambique through 510 and will also now (under 510 activity improvements learning lessons from 403) fund start up income generating activities for graduates (as a previously lacking exit strategy). Conservation agriculture, input trade fairs are to be launched in mid October. Inputs include seed, spades, hoes, and machete. Improved co-ordination of information exchange and project monitoring and evaluation particularly with regard to emergencies is also ongoing for 510 and 511. The 511 activities include training vets, supply of vaccine equipment and vaccinations. A joint UN program between WFP and FAO with funding from 510 incorporating lessons learnt from the school garden project funded by the Danish Government is in the initial stages and is being implemented in four schools in the Maputo Province.

Details of 403 and 510 activities, with a review and evaluation, are presented below.

4.1.4.2 Review of Key 403-510 Components

A Irrigation

Irrigation activities are geared towards reducing the vulnerability of small scale farmers to unfavourable climatic conditions in Gaza, a province severely impacted by drought in the context of the infrastructure still not rehabilitated since the devastation of the 2000 floods. These include contributions to the rehabilitation of degraded and poorly performing small scale irrigation schemes located in drought affected areas. Main activities are:

- Completion of rehabilitation/construction of irrigation schemes
- Assisting on organization of water users associations
- Provision of technical assistance to national consultants, extension services and farmers
- Training of provincial and district staff and end user associations on maintenance of water schemes

- Training in production, storage, processing, utilization and marketing of crops, taking in consideration gender and HIV/AIDS.

Three irrigation canals were constructed under 403. However, at the time of review these were not yet connected to fields. This is expected to be completed by March 2007. Nonetheless the farmers groups have been established (by end of 2005) and a national consultant contracted in October 2006 to train and implement activities. Training has been organized for the October 2006 - April 2007 season.

Lessons Learnt:

- Completion of the irrigation systems is important for efficient utilisation of infrastructure and resources for example the seepage in canals that do not have cement lining results in excessive use of fuel for pumps
- Social cooperation and/or a greater clarity of criteria for inclusion in the benefits of the activity need to be promoted. At one of the schemes some of the farmers were excluded by others since they could not contribute financially to the purchase of fuel to run the pumps.
- Allocation of resources should allow for longer term support.

B Input Trade Fairs (ITFs)

Through ITFs vulnerable, drought affected farming households are provided with increased access to agricultural inputs. This is combined with capacity building of local government services and civil society in addressing input related needs of emergencies.

Main activities are:

- Identification of beneficiary provinces/districts, on basis of the VAC assessment
- Preparation of national fair team
- Organization of workshops on methodology and formation of local Fair Preparation Groups
- Identification and assessment of potential sources of agricultural inputs
- Preparation, promotion and implementation of the ITFs
- Evaluation of the ITFs.

ITFs were organized during May-June 2005/2006. 35,000 vulnerable families from 8 provinces received/ bought seeds and tools.

Lessons Learnt:

There is a need to involve communities in the seed supply chain for markets. Diversification and community participation has triggered a seed quality dilemma. The National Seed certification Board, in the Ministry of Agriculture, has not been able to guarantee the quality of the locally produced seed.

Timely disbursement of funds for the realisation of ITFs is crucial in order for the farmers to meet optimum planting times for the season.

C Peri-urban Agriculture

A variety of peri-urban agriculture support activities occurred in 403 and continued into 510 with the objective to boost and diversify crop production, increase nutritional uptake and increase incomes of vulnerable households in Maputo's peri-urban green zones.

Main activities are:

- Identification of vulnerable households, in collaboration with local authorities
- Identification and contracting of a national consultant in small scale horticulture development, conservation agriculture and IPM techniques
- Training of Farmers Groups (including nutrition, HIV/AIDS and gender, processing storage, packing and marketing)
- Distribution of agricultural inputs
- Contract a consultant for market feasibility study and for pack house construction
- Monitoring and evaluation.

Gardening associations around Maputo were first set up in the 1980s. Beneficiaries are targeted/plot allocation is according to a farmer's proven capacity and willingness to work hard. In the first year it is difficult to assess impact but after three seasons progress can be assessed. If farmers are not doing well or show little interest or commitment their plot is reallocated. This is not always to the neediest but to those who can accumulate more land and therefore, as with the case of the Association President, who bought a car, can become relatively wealthy. Under 403 there was:

- Diversification of planting to include cabbage, carrots, tomatoes, beetroot and green beans as well as kale, lettuce and onions.
- Crop protection and pest management
- Spacing and intercropping

For 510 a national consultant was contracted in May 2006 and 85 participants (farmers and extortionists) were trained as master facilitators in June 2006. Training on food nutrition was also carried out in June 2006. Two motorbikes were supplied to improve mobility of extension staff in August 2006. By September 2006, 700 of 1000 targeted families had benefited from the ongoing IPM training sessions and other technical assistance. A tender for conducting the market feasibility study has been advertised and the consultants will be selected by 15 October 2006.

Since 403 and 510 there has been a significant increase in crops grown and marketed. With the extra income items paid for according to priority are:

- Agricultural inputs specifically seeds and tools
- Education
- Medicine and hospital treatment
- Luxury items – including the President of one association buying a car

The technical benefits of increased production are evident – diversification gives higher yields, although crops remain vulnerable to pests and variable weather. However, although there has been some nutritional training and an increased diversification of vegetables grown, diversification of diet does not necessary mean more meat or fish is

bought but a wider range of vegetables are eaten (especially amongst the children; with some indications that adults are less reluctant to change their vegetable intake). The more successful associations, in terms of diversification and uptake of the nutrient behaviour, training seem to be those formed under 403 maybe because right from the start its principles formed best practise and/or were considered criteria to access of benefits of 403.

Lessons Learnt:

As the green zones have been established for over 15 years before 403 and 510 interventions, the impacts of the 403 and 510 interventions were difficult to disaggregate from the successes of the peri urban activities in the green zones overall. Nonetheless the interviews conducted for the MTR indicated that the activities were appreciated by a broad range of stakeholders. In addition crop diversification has occurred as has diversification of the diet, although none of the interviewed beneficiaries considered improvement in nutrition as one of the major benefits of the activities. Thus it appears that appropriate activities attached to already successful systems are likely to show positive impacts. However, clarity on health impacts could not be achieved due to lack of baseline data.

Diets are diversified under the program but usually due to adding different types of vegetables grown rather than prioritising buying other food stuffs (protein) with cash made. Monitoring and evaluation of socio-economic (health) impacts should be improved with an appropriate baseline understanding of the social context ascertained at the start of activities designed to improve nutritional status. More monitoring and evaluation of end use – i.e. diversification of diet and equality of land access/sharing of benefits is recommended.

There remains poor access to markets with people not having as much control over the market as they would like i.e. not a great sense of long term security. It was stated that support with transport was needed. However, there are signs this is changing. The farmers are well known and market access has increased. Indeed they even sell directly to buyers who come from South Africa.

Access to wider markets by adding value to products with initiatives such as packaging would be advantageous. Training in processing and quality control to better compete in international markets has been requested.

C Junior Farmer Field and Life Skills

These were established to improve livelihoods and ensure long-term food security of HIV/AIDS orphans and vulnerable children, by improving their agricultural knowledge, life skills and self esteem, food security opportunities and entrepreneurship skills. Special attention is also given to gender-equal attitudes and HIV/AIDS prevention. Main activities are:

- Establishment of demonstration gardens at all targeted centres
- Provision of agricultural (and livestock) kits to trained households
- Inclusion of JFFLS activities in the district plans

- Procurement and establishment of a chicken production component at all centres (in conjunction with Newcastle Disease activities – see below)
- Training of facilitators

JFFLS were first established in Manica and Sofala in 2003. With support from 403 interventions there are now 8 in Sofala and 20 in Manica. In Manica 15 are connected to primary schools and thus are principally organised by Ministry of Education structures. 5 are run by associations and civil society organisations, principally church groups and are staffed mainly by committed volunteers. Under 510 these schools will continue with much the same curriculum and ideals but with the addition of livelihoods support for graduates as an exit strategy. The curriculum was developed by using models adapted from elsewhere. It entails a combination of practical and theory as well as traditional education – writing, reading and arithmetic. FAO's JFFLS's partners include WFP, Ministries of Agriculture and Food Security, Education, Social Affairs and the National HIV/AIDS Council.¹³ UNICEF is now contributing to the development of teaching manuals. Under 403 FAO provided:

- a) Capacity building specifically agricultural training
- b) Agricultural inputs – seeds and farming implements
- c) Education material such as exercise books, pencils and pens.

Much of this is being continued and at the mid term review stage, for 510 LoAs were ready for signing with partners (Government and Non Government Organizations) for the implementation of income generating activities from October 2006. Training of facilitators (ToT) on Income Generating Activities was organised in August and September 2006. The identification of micro-projects and other income generating activities was done in participatory workshops along with community surveys. Good donor partnerships/buy in was seen to be supporting and complementing 510 activities e.g. WFP supplementing children's food and Danida providing oil pressing machine. Indeed such are the successes of JFFLS that the principles may be integrated into the regular education programme of national institutions (Ministries of Agriculture and Food Security, Education, Women and Social Action, National AIDS Council etc.) to complement formal school activities. The JFFLS has also become a source of seeds, for example sweet potato seed, for other Ministry of Agriculture and Security activities.

Lessons Learnt:

JFFLS are extremely successful in Mozambique possibly due to:

- the wide range of partners involved,
- the strong development of ownership of students, graduates and community members;
- the appropriate targeting of beneficiaries,

¹³ After some hesitation to get involved (as there was an apparent misunderstanding on the purpose of JFFLS with regard to whether this was education support or child labour), UNICEF joined in the second year after making a visit to the projects in Manica.

- the training/curriculum on appropriate skills that includes an integrated understanding of agriculture, food, nutrition and life with the positive support for children's vulnerability and trauma through cultural activities.

Graduates and children from other JFFS in the area are now replicating some of these initiatives in the community – clearing plots and planting vegetables using the techniques learned as well as making livestock structures, pens and coups using local materials. The children have had great success in providing food not only for themselves but have produced great surplus which they both sell and distribute to other vulnerable children.

On the International day of the child (1st June 2006), the FAO supported JFFLS's centre used \$300 of its profits to hold a party for children from neighbouring districts. They also have donated funds for school equipment. The way forward appears to be to replicate these projects in other schools, training more teachers to integrate these techniques and approach into their lesson plans. The Ministry of Agriculture and Food Security does not have the capacity to train teachers. However, there is ongoing debate as to whether the JFFLS approach should be more formally integrated into the curricula. In October 2006 this will be raised at a forum attended by Ministry of Education, Department of Women and Social Affairs and the National Council of HIV/AIDS representatives as well as NGOs such as Africare. USAID and SCF are also interested in replicating similar projects in other Mozambique provinces such as Zambezi. An informal meeting with Oxfam Australia Co-ordinator also revealed that Oxfam was interested in supporting JFFLS due to the success of the model. However, Oxfam thought the initiative was so well supported that they did not know where to intervene although it suited Oxfam's strategy of influencing government and supporting HIV/AIDS vulnerable given that several Ministries were already involved. Care should be taken with up scaling so as not to dilute and/or skew the very aspects of JFFLS that are producing current success.

D Conservation Agriculture

Current (510) conservation agriculture activities are geared to consolidate conservation agriculture practices of 403 in Manica and Sofala and, for 510 to introduce CA in other provinces (Gaza) and reinforce the extension services to support these activities. Main activities are:

- Training of local extension workers, trainee teachers and farmers in different technical aspects of Conservation Agriculture
- Establishment of Training and Demonstration Units
- Procurement of Conservation Agriculture equipment
- Training of farmers and extension workers on the use of Conservation Agriculture equipment for different food and cash crops
- Participatory workshops with the beneficiary farmers and extension workers to design Conservation Agriculture models for different agro-ecological zones and to compare economic performance between conservation and conventional agriculture.

The 403 activities have fostered good links with the Ministry of Agriculture and Food Security and Ministry of Education to bridge the food shortfall since WFP's scaling down of support for school feeding programs. The expectation is that CA will improve yields in Gaza as in Manica and Sofala. Two pilot plots are to be established for 510 in each province to be run by contact farmers chosen by extension workers with the basic criteria that they must be responsible, supportive of other farmers and of a similar socio-economic status as the majority of farmers.

The selection of districts, extension workers to be trained and teachers at teacher training colleges has been undertaken. The national consultant for training has been appointed and workshop content developed. CA workshops and planning sessions have been undertaken between May to October 2006 targeting Government extension workers (ToT) and Teachers from 3 Northern provinces and 4 provinces from the south and centre of Mozambique. It is expected that by March 2007 equipment and inputs will be in place with 180 extension workers and teachers at teachers colleges expected to be trained by June 2007. At the community level 27,000 families are expected to have been trained by June 2007. Activities are currently on course to meet this target with standards of training assessed for the MTR considered to be high with the exception of mainstreaming cross-cutting issues.

Lessons Learnt:

With only one woman attendee at the training workshop attended and the gender naive explanation for lack of women trainers, it is apparent that there needs to be more gender awareness in selecting training of trainers in Mozambique. Moreover the training should be focussed to promote greater gender equity in farmers. There also should be more awareness training on HIV/AIDS.

In the past the Ministry of Agriculture and Food Security was more dictatorial over what CA activities could be used. Now extension workers have greater autonomy over the techniques according to local conditions and issues and most decision making for 510 activities is made at a decentralised (district level). The extension worker's input into decision making varies according to local priorities although this is guided at a national level according to overall strategy.

The current system of extension workers is considered too costly and not the best use of funds. There is a need to do two training session per month. It is assumed that extension workers are geographically clustered. However, there is a wider spread of the 250 people each extension worker is responsible for than he can reach by motor bike. There is political pressure to keep this costly system going. More motorbikes and/or farmer field schools are a less costly alternatives being trialled in Maputo (a pilot project funded by IFA).

E Protecting and Improving Poultry Assets

The interventions for 403 were targeted at vulnerable households and, working through Homes Based Care Groups, centred on community based Newcastle Disease control,

improved husbandry practices, increased awareness of public hygiene measures and the potential threat of Avian Influenza. Main activities are:

- Participatory Rural Appraisal (PRA) conducted in the selected communities
- Staff of community based organisations trained as community vaccinators
- Local extension workers trained in vaccinating
- Two ND vaccination campaigns (July 2006 March 2007) to be supported and evaluated
- Farmers trained in low-cost improvements to village poultry husbandry
- Piloting awareness raising activities on Avian Influenza.

Around 10 years of experimentation and refinement means successful modules and pilot projects have been developed by a dedicated NGO that delivers to time and at the appropriate level. These pilots can then be (and are being) replicated elsewhere. Under 403 the activities to protect and improve poultry assets were very successful with the pilot activities of Manica and Sofala to be up scaled for 510. For 510 little has yet happened and will not take place until January 2007 the best season to start vaccinations. However, the project structure is in place: a LOA was signed with the International Rural Poultry Centre and 3 LOA signed with Veterinary Services of 3 provinces from the south of Mozambique for training community vaccinators, (September 2006). Participatory rural appraisals will be completed by December 2006. It is considered that the targets of community beneficiaries and extension workers trained and 135,000 chickens vaccinated by June 2007 will be met.

Lessons Learnt

The MTR did not visit a beneficiary of these activities. However, it is recognised that participatory approach in training and use of community vaccinators is important for community participation, appropriate targeting, ownership and sustainability. Other reasons for positive impacts/triple benefits are:

- Use of basic day to day education to raise awareness
- Restocking and promotion of indigenous chicken is more appropriate for the vulnerable poor as they are cheaper to rear and “do not take food away from the beneficiaries’ plates”.

F Livestock Marketing Interventions

Activities under 511 are undertaken to improve livelihoods of families in arid zones by improving livestock marketing specifically the reduction of live animals transported to Maputo market. Main activities are:

- Construction of cattle slaughter facilities (a new abattoir at a major border crossing route, Gaza/Zimbabwe)
- Installation of cold storage/cooling facilities in Chicualacuala.
- Increased linkages between small holding cattle owners and the larger scale commercial sector.
- Market feasibility study due February 2007

A tender document was prepared with Government counterparts in September 2006 for the rehabilitation of the abattoir on the Zimbabwe Mozambique border. However, these implementing partners have only just been in place within the Ministry of Agriculture and Food Security and thus it was difficult to gauge whether these activities were on course. None have yet started although it is projected that the intervention will control transboundary diseases through reduced livestock movement; contribute to the development of livestock products markets and improvement of public health (as products will be inspected by the veterinary services. An estimated that 200.000 people will benefit from using the abattoir.¹⁴

Lessons Learnt

Implementing through government means activities are vulnerable to delay according to staff movement within ministries.

G Monitoring and Evaluation

To strengthen M&E of emergency interventions and enhance linkages with SETSAN, INGC and NGO's through better communication and information dissemination by collating data pertaining FAO emergency and rehabilitation interventions. Main activities are:

- Establish and maintain relevant data and information exchange with SETSAN, INGC, NGO's and other sources within the country.
- Collate country baseline information and data pertaining agricultural production, food and nutrition security, HIV/AIDS and marketing systems.
- Elaborate quarterly updates on agricultural and marketing season and vulnerable groups.

A new M&E and Information officer was contracted in August 2006 after the previous M&E national consultant resigned. He has not yet received full training and the current activities have not yet started in a systematic manner.

Lessons Learnt:

¹⁴ This is a figure quoted by the Provincial Directorate of Agriculture as a population estimate of the Chicualacuala and areas immediately surrounding. It should be noted that the benefits of the abattoir should go beyond this area; projected to influence as far south as Maputo Province

Monitoring and Evaluation is not best started mid way. Changes in FAO staff can set back cross cutting interventions.

Challenges

The value of supporting successful activities and then up scaling under 403 and 510 was clearly illustrated in Mozambique. These can be used as pilot activities for transfer of knowledge e.g. the approach to Newcastle disease could be introduced to Lesotho where the failure rates of poultry rearing is over 90% and the lessons of JFFLS could be applied to Namibia and Malawi where they are yet to demonstrate success. However, targeting beneficiaries has to be consistent even if the application has to be adapted to local environments. Even with successful interventions the challenge remains for greater gender equality considerations in targeting beneficiaries. There needs to be more social inclusion - greater ownership of projects by whole communities is needed for sustainability.

Although availability has vastly improved, availability is just one component of food security. Access is another as is use. Equitable access and distribution of food available is not always happening at household level... There is a poor understanding why but political and cultural aspects play a role as well as economic status (see cross-cutting issues, section 6 below).

Challenges for 510 agricultural production are:

- Access to technology
- Research of the Mozambique specific situation
- Dissemination of information
- access to basic services and infrastructure upgrading for better market access and silos for storage

Increase in production over the last few years has not correlated with a decrease in malnutrition, which for the case of children, the level has in some places remained at 42% of under 5 year olds despite a good harvest this year. JFFS is a successful intervention for moving towards redressing children's malnutrition but it will take a long time before significant impacts can be understood. Better monitoring is needed to understand these impacts and better links with other ministries such as Health and Education. Nutritional impacts are a challenge to establish. Therefore SETSAN is well positioned as a co-ordination unit.

The challenge is for better targeting of beneficiaries through increased understanding of socio-cultural make up of household and communities. Local committees play an important role in selecting beneficiaries but there is insufficient understanding of these selection criteria. NGOs have stated that political aspects or network ties in some cases take precedence over targeting beneficiaries according to need. There should be a better understanding of how beneficiary selection takes place. Action Aid put forward beneficiary selection guidelines but it appeared these were not taken up as the local socio-cultural and socio-political context varies so much across Mozambique and the guidelines were not sufficiently sensitive to these nuances.

Family structure impacts on how sensitisation to activities is taken up; therefore a clearer kinship understanding may shed light on the way forward. As articulated in the Ministry of Agriculture and Food Security at the MTR:

'We may want to help but with the wrong beneficiary selection we not only will not help but we might even create problems'.

4.1.5. Country Report – Namibia

4.1.5.1. Mid Term Review Context

Namibia has a population of 1.83 million (2001 census) and a total area of 824 116 square kilometres. An estimated 67 percent of the population live in the rural areas, mostly in the north. A large commercial farm sector farming an area of 300 000 square kilometres, with private land title, produces quality beef, sheep and goats on dry land farms. The communal sector also farms about the same land area; it has higher rainfall than the commercial areas, but at much lower efficiency due to lack of capital and skills. Namibia is classified as a lower middle income country with a gross national income per capita of US\$1 870. However, this masks huge income disparities between the rich and the vulnerable. Namibia has the highest Gini Coefficient in the world at 0.71, with just over 5 percent of the population earning 50 percent of the total Gross Domestic Product (GDP). According to the United Nations Development Programme Human Development Report of 2005, 35 percent of the population live below the poverty line of US\$1 per day, and Namibia is ranked at 125 out of 177 countries on the Human Development Index. The most vulnerable people live in the rural areas, such as the Caprivi Region, and for that reason, this project's activities were centred there.

Given that 67 percent of Namibia's population live in rural areas and that rainfall and land availability are generally good in Caprivi Region and other communal areas (compared to commercial farming areas), agriculture plays a major role in ensuring household food security. The agriculture sector is beset by a range of constraints, including:

- the HIV/AIDS pandemic, which is severely limiting the agricultural labour force and reducing the numbers of key income earners and with them the farming knowledge necessary for food security;
- lack of capital or credit for farm investment caused by the system of communal land ownership, which removes land from the economic equation

4.1.5.2. Review of Key 403/SAF-510/SAF Components

A. Coordination

The coordination forum had also agreed to collaborate in humanitarian activities, with the encouragement of the FAOR who had emphasised the UN policy for inter-agency joint programming of activities. Apart from the JFFSL concept the areas identified for collaboration include the following:

- UNFPA support through Africare for gardening, fisheries and poultry will draw on the technical expertise of FAO. (A memorandum of understanding has already been signed)
- WFP collaboration with FAO for the programme of food for agricultural activity.
- MoA extension and community forestry collaboration with FAO in technical support to the garden project, starting with the Lutusane project.
- An agreement has been reached with WWF for piloting Conservation Agriculture. The work has not commenced yet.
- For example the JFFLS fits into the log-frame objective for agricultural extension to give prominence to community based programmes. He had already been assigned to oversee the JFFSL activities in the area covered by his Agricultural Development Centre.

B. Support to farmers through seed distribution

The project provided good quality maize, sorghum, millet, groundnut, bean and pumpkin seed to 4 000 vulnerable farming families to increase local food and seed production. Due to the shortage of good quality seed in Namibia, some seed was procured from Zambia and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Malawi. The project also provided Kafasepco Cooperative and Northern Namibia Farmers Seed Cooperative with weighing scales for use in procuring seed from villages.

The meeting with **Kafasepco Cooperative** was held with the cooperative leadership in the warehouse. The cooperative started in 2001/2. The purpose of the Coop is seed production. It comprises of 46 seed-grower members. The capital is based on annual subscription of N\$50 per member plus a 30% withholding on the sale of seeds. This is the only seed producing enterprise in Caprivi East.

The 1st harvest was in 2003. This was seriously affected by drought. The support from FAO in 2004 (project OSRO-403-SAF) was mainly for:

- The purchase of foundation seed for the 2004 season
- Purchase of seed grower bags
- Weighing scale and
- Technical advice.

The heavy floods of 2004 disrupted the work of the cooperative for seed distribution. For 2006 (OSRO-510-SAF), FAO is assisting with:

- 2kg and 5kg plastic bags
- seed dressing chemicals

The gaps identified by the cooperative leadership were:

- cash flow – as they can now only pay the members after the cooperative had succeeded in selling the seeds
- repair of the (seed) processing plant (cost not determined)
- irrigation for developing the land at Mubiza village which had been allocated to the cooperative
- assistance with linkage to donors
- Mr Nzehengwa felt that the sub-optimal performance of the Kafasepco cooperative is in a large measure due to two successive droughts as the cooperative was emerging. Nevertheless they had produced 31 tons of seed and the MoA was appreciative of the support that is being given by FAO. The MoA will try to assist the cooperative to seek an appropriate loan from AgriBank to help them overcome their current cash-flow problems.

C. Junior Farmer Field and Life Schools (JFFLS)

The initial emphasis has been on introducing the new concept of the JFFLS. The consultations have resulted in each party identifying the contribution to the scheme. At the local level several workshops and participatory consultations have resulted in the selection of the 4 sites for piloting the JFFLS on the basis of criteria drawn up and agreed by the communities, taking into account of experiences from Swaziland. The project had trained two staff members of the MoA DEES (Ms Mary Kabuku and Mr Mulonda) in the JFFSL concept who will act as facilitators.

During the visit to **Lusese School site for the JFFLS** a PRA exercise was in train involving the community and a group of young adolescent children. The exercise was led a trainer assisted by a

MoA extension officer and two Peace Corps. It was for the identification of the most vulnerable target families.

D. Migratory Pests

The SAF funding via RAF/403/SAF provided support to the fighting of locust in Caprivi, equipment supplied was especially camping equipment. The equipment greatly facilitated the surveillance and early spraying in the field for red locust hoppers and army worm and it has reduced the transport cost. There is a need for a second mounted sprayer and some more camping equipment.

E. Lutusane vegetable and mushroom project - OSRO-510-SAF

The group has been trained in mushroom growing by MoA technician who continues to give technical support. It comprises 10 members from the same village. The local Catholic Church gave the members the right to use land. The group has cleared about 1 hectare out of 1.5 hectare available. The group constructed one mushroom house from which the group has had one crop which sold readily.

The project provided the following to the group:

- Fencing material - (the fence was being erected during the time of the visit)
- Water pump and irrigation piping – (the members explained to the mission the plans for installation of the equipment)
- Local material for extension of the mushroom house - (the group leader, Mr Martin, explained where the extension will be)
- Other farming inputs.

The group was hopeful that within a year they will be producing vegetables from most of the cleared land (which was already cultivated at the time of the visit) and the extended mushroom house. The group members seemed enthusiastic. They were from the same village but different religious backgrounds.

F. Observations for Project OSRO-510-SAF

- The problem of the migratory pests, which together with flooding was a major contributor to the 2004 crop emergency, was well supported by project OSRO-403-SAF. However, there seems to have been no further support for red locust and army worm surveillance under OSRO-510-SAF. Yet there seem to be some key gaps. It might be worthwhile to consider linking the assistance for the surveillance for migratory to OSRO-511-SAF; subject to budget provision so that 511 could be addressing transboundary animal diseases and plant pests, in line with the underlying principles of the FAO priority programme EMPRES. Both would focus on surveillance leading to early warning and early reaction.
- The Lutusane (self-help) mushroom and vegetable garden project has started well. This seems to be like a telefood project. The group will need to be closely guided by FAO in collaboration with MoA in order that the group focuses on profitable production and marketing without premature and excessive diversion into social and welfare objectives. It will need to be guided into being a successful community based on commercial enterprise in order that they can fulfil their social objectives of supporting orphans and

- their own welfare. At the moment their notion of a business plan is still hazy. However they are an enthusiastic group who should be guided to success. This will allow replicating the experiment in other areas as envisaged in the project document.
- JFFLS. This initiative is well supported by government and the consultations with the communities indicate a swell of ground support. There is also a healthy inter-agency collaboration. The following points for consideration in developing the work plan for OSRO-510-SAF-NAM:
 - Such a scheme requires time to mature. The government representatives that the mission talked to indicate a requirement of at least 3 years to enable the concept generate some concrete results that can be assessed for their sustainability. This is a reasonable position.
 - This being a new concept it is important to ensure the pilot scheme succeeds. It would be advisable to desist the temptation of further replicating the JFFLS beyond the currently identified 4 sites or a maximum of 6 sites.
 - The PRA technique as was being applied on the day of the visit to Lusese seems to have been somewhat over-powering. This could easily lead to misconceptions among the community groups, with some risk that the method would be seen as the end objective rather than a means to the end and could be misconstrued as imposing a foreign culture. It may be worthwhile to adjust the work plan to concentrate initially on training several MoA extension technicians who would then undertake PRA exercises in direct communication with the community groups, assisted the by PEACE Corps or other international assistants. Apart from the benefit of a more direct iterative interaction with the communities, the PRA method will more readily become an integral part of extension services, and thereby sustainable.
 - The gaps identified for the Kafasepco Cooperative are reasonable. The additional support from OSRO-510-SAF-NAM should focus on facilitation and the repair of the seed processing machine, provided the cost estimates are within the operational budget of the project. With respect to facilitation the most crucial is the business orientation of the group. FAO could help to link them either to the Department of Cooperative Development in the MoA in Katima Mulilo and/or the Micro-Financing Lux Development, which is a member of the Stakeholder Coordination Group and has a focus on developing business skills for small and medium enterprises.
 - The absence of any production activity for goats and village chickens in OSRO-510-SAF-NAM gives an impression of an inadequate attention to the livelihood of this livestock dependent community. Consideration could be given at least to including these subjects in the planning discussions of the Coordination Group in order to be able to identify an intervention role for OSRO-510-SAF-NAM

4.1.6. Country Report – Swaziland

4.1.6.1. Mid Term Review Context

The Kingdom of Swaziland, a small country of 17, 370 square kilometres, is landlocked, surrounded by the Republic of South Africa and Mozambique. Swaziland is divided into four administrative regions: Hhohho in the north; Manzini in the centre; Shiselweni in the south; and Lubombo in the east. Each region has councils (Tinkhundla) made up of chiefdoms (*Imiphakatsi*). Regional administrators provide the organisation framework for

activity implementation. Most 403 and 510 activities are concentrated in the dry regions of the Lowveld (Shiselweni).

Swaziland is a lower middle-income country with a per capita gross national product of US\$1,360 and a human development index of 0.577. The economy is mainly agro-based, reasonably well diversified although vulnerable to exogenous shocks and influence. The country's good economic growth of the 1980s led to an upsurge in domestic and external reserves as well as significant investment in social and economic infrastructure. However, since the 1990s Swaziland's GDP growth declined from 7% (1980s) to 1.5% 2000 (GOS, 2001). With an estimated population growth rate of 2.7%, this decline represents a major deterioration in living standards. The inherent socio-economic challenge inherent is compounded by uncertain revenue prospects vis-à-vis rising public expenditure; unsustainable population growth, increasing unemployment; changing weather patterns (specifically increased droughts) and the major impact of the worsening HIV/AIDS situation. Prior to the 1997 census, the population growth rate was 3.6%. However, the 1997 census indicates a reduction in population growth rate to 2.9%. A further decline in natural increase is anticipated as taking into account the impact of the HIV/AIDS pandemic. Swaziland's demographic situation is presented in table 4.1.5a.

Table 4: Population, Farmers and Vulnerable People

Demography	Statistics
Total Population ¹⁵	1.146 million
Population vulnerable to acute food insecurity	262,000
Agricultural/Pastoralist Population	829,000
Urban and Peri Urban population	55,000

The aim of 403 and 510 support in Swaziland is to improve food security for vulnerable groups particularly in the more drought prone areas and specifically targeting orphans and vulnerable children (OVCs). The components are mainly agriculture activities and thus season dependent. Swaziland's optimal planting and growing seasons are October – February. Most rain falls in November and December with drought conditions in Lowveld areas for much of the year. During the dry season, people have to rely on large rivers, springs and water stored in the few ponds or lakes for water supply. Most streams in the Lowveld flow only during the wet season and dry up completely during the dry season with farmers having to carry water over long distances.

The 2006 harvest is predicted to be better than 2005. Late planted maize and sorghum is on course for good crops with intensive rains in January and February 2006 reducing the implementation of coping strategies although brown rust and grey leaf spot on maize may disappoint expectations of good yields. Moreover, in August 2006 strong winds badly impacted on the countries infrastructure (homesteads, roads and phone and power lines) with 13,000 in need of recovery assistance. Altogether 40,000 are predicted, in the latest VAC report, to suffer some food insecurity during 2006-2007. 510 activities in Swaziland

¹⁵ Approximately 50% of the population is under 15 years old and over 200,000 of the remainder are HIV positive.

are targeted at the vulnerable food insecure, mostly women and OVCs. These are reviewed below with an evaluation of 403 activities.

4.1.6.2. Review of Key 403-510 Components

A measurement of achievements of 403 activities, presented in the 2005 Final Project Report, was numbers of beneficiaries reached. Most were on target, some exceeded target and a minority did not reach targets as shown in table 4.1.5b.

Table 5: Number of Beneficiaries Targeted and Actual Beneficiaries (403 activities)

Component	Target Number	Actual Number	Target ¹⁶ Number of Beneficiaries	Actual Number Beneficiaries
Primary School Gardens	30	55	3 000	19 250
Neighbourhood Care Points	70	70	3 750	3 780
Household Gardens	700 (HH)	590 (HH)	4 550	5 070
OVCs with access to fields	2,500	1,640	2 500	1 640
Input Trade Fairs	10,000 farmers	10,000 farmers	10 000 farmers	10 000 farmers
Communal Gardens for OVCs	7	8	1 500	2 600 (50 Members)
Conservation Agriculture	Not specified	Not specified	No number specified	1 625 (50 farmers)
Sweet potatoes and cassava promotion	Not specified	16 schools 14 NCPs 3 community gardens	Number specified	7 331
Livestock Centres	Not specified	9 partially constructed	3 000	2 935 (450 HH)

Thus in terms of process, 403 activities were efficient in terms of reaching a large number of beneficiaries. However, impacts and sustainability were less clear although the report stated that ‘distribution of equipment and material has had an impact on OVCs and others assisted, allowing them to immediately participate in diversified food production. ITF’s significantly assisted farmers in drought prone areas to increase production. Components designed to encourage use of drought tolerant methods had limited impact but have great potential.’ Little in terms of nutritional and other socio-economic impacts was systematically documented due to lack of socio-economic support and awareness training at the outset of 403. Nonetheless lessons from 403 were learned and it is clear that training, facilitation, monitoring and evaluation and timely input distribution need to be greater supported. CA was found to be an important input but there is a need for beneficiaries to be greater sensitized to the value of benefits and/or activities are better

¹⁶ Number of beneficiaries were calculated by calculating that 6.5 persons (based on average no in HH according to population census 1997) per benefited HH i.e. 1 farmer = 6.5 beneficiaries.

geared towards actual rather than perceived needs for a greater sense of ownership¹⁷ to be instilled amongst beneficiaries. In order to achieve this, the nine 403 components were reduced to five components for 510. Although this is viewed as a beneficial move it is also recommended that other initiatives are undertaken such as participatory needs assessments conducted at the start of activities/planning stages.¹⁸

It is aimed that these 510 activities will be implemented in partnership with the Government of Swaziland (GoS), usually the Ministry of Agriculture and Cooperative (MoAC) but also the Ministries of Education (MoE) and the Ministry of Youth and Rural Development (MoYRD) who will be engaged more closely when 510 activities fully develop. Currently there is a good relationship with FAO and the MoAC extension workers system/directorate and at operational level there is an understanding of roles and responsibilities. However, concerns were expressed by representatives of the MoAC that there should be more involvement of the Ministry in strategic planning and selection of FAO staff in order to support capacity building of the Ministry and facilitate improved communications. The MoAC suggested the way forward would be FAO acting as a co-ordinating and influencing unit with the MoAC playing a more central role in implementation. A meeting of FAO and MoAC was held in February 2006 and the agreement was reached for the formation of a Steering Committee. This should be activated as soon as possible to facilitate consultative management. With regard to implementation partnerships, the RSA High Commissioner considered it necessary for FAO to take part in implementation in Swaziland as the GoS capacity¹⁹ needed greater support in order to be effective and deliver the grassroots level impacts the RSA desire. Thus for 510, implementation is a mixed responsibility between MoAC extension staff, FAO and NGOs.

Building on lessons learned from 403²⁰, there are a wide range of food security NGOs targeted to act as implementing partners for 510 including: Lutherans Development Services and Red Cross – Community gardens and NCPs, World Vision – Community gardens, NCPs and Primary Schools, Care Nakekela – NCPs, Moya Centre- Primary Schools, Alliance of Mayors Initiative for Community Action on HIV/AIDS at Local Level (AMICAALL) – NCPs, All Out Africa – NCPs, Peace Corps – Primary Schools, Community Gardens, NCPs, Leadership for Africa – NCPs and Action Cooperative Trust – Community Gardens. COSPE is also to be contracted for 510 activities as they conducted CA training for 403. For 510 UN partner agencies include: UNICEF and WFP for the primary school gardens and NCPs activities.

¹⁷ Without ownership chances of sustainability are minimal; to instil ownership an understanding of behaviours/socio-economic context is needed.

¹⁸ Good examples of such PRAs are found with the poultry management (Newcastle Disease) support activities in Mozambique – lessons should be learned from this success (triple benefits) and shared with Swaziland.

¹⁹ With regard to capacity building the University of Swaziland, Faculty of Agriculture students are also to be involved in 510 activities and research (not yet specified).

²⁰ Principally that some NGOs delivered and others did not.

With regard to NGOs for 403 it was found that some of the implementers were either lacking capacity or the will to ensure success. Also with the high turnover of staff in NGOs, initiatives have been found to fail when staff leave. However, some of the NGOs had both capacity and determination and thus demonstrated good successes. The NGOs consulted for the MTR stated that in terms of strategic guidance on HIV/AIDS, gender and capacity building more support should have been provided by FAO in the early stages of 403. However, the general opinion was that the new RIASCO staffing had a 'make things work' attitude and was better orientated towards 'delivering impacts for vulnerable people' (rather than administration of process) than previously by FAO Swaziland. Indeed an HIV mitigation training consultant was in the process of being contracted at the time of the MTR and there were discussions of employing a socio-economic consultant in January 2007.

The 510 activities are: Neighbourhood Care Points (NCPs) where OVCs are cared for namely by WFP food provision with gardens being set up by 510 inputs. Primary School Gardens with 70 targeted for 510 support in all four regions. Eight new Community Gardens in all four regions will also be supported by 510 with some of the 8 already established in 403 (as well as others established from other NGO projects) also supported with tools and seed. Conservation agriculture building on activities initiated by DfID in 2005 and Dry Land Cropping activities whereby drought resistant crops such as cassava, sorghum and sweet potato are to be introduced into the Lowveld.

For this MTR secondary data was reviewed, key informant interviews (see contact list in appendices) undertaken and one primary school garden with two children's homestead gardens, three community gardens and two NCPs were visited. Despite the fact that the 510 activities project officer has only been in place for three months, due to a fatal accident of the previous officer, most of these activities (with the exception of seasonal inputs) are on course. However, the 510 project officer needs support with greater sensitisation to/training on gender and HIV/AIDS issues.

A Neighbourhood Care Points

The aim of setting up Neighbourhood Care Points is to provide day care and nutrition for OVCs. For 510 at least 35,000 OVCs in 70 NCPs throughout Swaziland are to be targeted. The NCPs, initiated in 2002 by UNICEF, are usually established by women's associations supported by an NGO. WFP provides food usually in the form of beans, maize and vegetable oil. Women carers also receive a food for work food basket of maize, beans and vegetable oil – 3 food baskets per NCP. Under 403 and 510 seed, fence wire and posts, gates, tools including watering cans, hoes and rakes and manure are provided. There is an extremely wide variety of vegetables grown – pumpkin, green beans, green pepper, onions, squash, tomato, cabbage, beetroot, spinach and lettuce. The quality and variety of these vary from NCP to NCP for a variety of reasons (see lessons learned, below). The women use the vegetables for feeding the children; most commonly by making soup and vegetable stew to 'make the beans go further'.

Main NCP support activities for 510 are:

- identification of NCPs and full data collection (completed);
- planning of gardens, verifying water source and designing water systems (started and ongoing);
- procurement of materials and inputs (approximately 50% completed);
- installation of water systems for garden irrigation;
- distribution of materials and inputs (started August 2006 and ongoing);
- training of beneficiaries
- M&E and reporting (one quarterly report completed).

Lessons Learnt:

Key technical problems are access to water. Under 510 these are being addressed with irrigation support activities starting to be established. However, other concerns were raised that are not yet being addressed. It has been stated by different sources during the MTR that there are some problems with accountability of NCPs. Whilst the FAO gardens have been largely successful in diversifying the food basket produce (more so than with the primary schools – see below) impacts in terms of children's access to this diversified nutrition are less clear. Concerns were raised that, due to poor monitoring, there is little accountability at NCPs with some qualitative/anecdotal evidence that children did not receive as many different types of vegetables as produced/supported by 403 activities. It was suggested that a full assessment of NCPs is conducted and a monitoring system is set in place for the continuation, of 510 support.

Other lessons learned are that:

- NCP gardens must be of a manageable size. Association members and carers have been noted to get demoralised when responsibilities of watering, for example, become too onerous. Gardens should also be located close to a water source
- When targeting the NCP beneficiaries, innovators have to be amongst the group carers. A demonstration of commitment should be assessed at the outset
- Training on water preserving techniques should be included with distribution of outputs as part of the basic training.

B Primary School Gardens

The aim of Primary School Gardens activities is to improve nutrition of children in vulnerable (usually drought stricken) regions and provide training on agricultural techniques. 70 primary schools are targeted for support under 510 building on the activities of 403. Under 403 fruit trees seed, fence wire and posts, gates, tools including watering cans, hoes and rakes and manure were provided. Vegetables grown included green beans, peppers, squash, pumpkin cabbage, lettuce, beetroot, spinach and tomatoes. The (usually women) teachers use the vegetables for feeding the children; most commonly by making soup and salad at times of surplus. The fruit trees provided under 403 had mixed success. At the one school visited orange, mango, lychee and banana trees were provided. However, only the orange and mango trees survived due, it was stated, to lack of water. More recently, July 2006, a water tank was provided by FAO and there is

currently greater success with growing fruit trees with papaya, provided by the school teachers themselves, producing good fruit at the time of the MTR adding to the orange and mango trees that survived.

Main activities for 510 are:

- identification of schools and data collection (completed);
- planning gardens, water sources improvement and designing irrigation systems (started October 2006, ongoing);
- procurement of materials and inputs (approximately 50% completed);
- installation of water systems for garden irrigation;
- distribution of materials and inputs (started October 2006);
- training of teachers (training on trench gardens by an implementing NGO – Moya Centre);
- rehabilitation of boreholes in five primary schools in the Lowveld
- M&E and reporting.

Lessons Learnt:

Under 403, with some of the primary schools, there were problems with motivation to keep the gardens. This lack of motivation was generally down to two things – lack of water (and thus crop failure) and lack of support from parents who stated that children should be following a traditional curriculum and not spend their days in the garden but in the class room. In fact a child spends on average approximately five hours per week in the garden. Length of time in the garden on routine chores (as opposed to learning gardening/agricultural techniques’ would be reduced with better water supply/irrigation as much time is spent by children going back and forth to water sources with watering cans.

In an attempt to overcome the negative attitude of some community members to children learning agriculture and in order to instil greater community and pupil commitment ownership, under 510 a pilot ‘Gardening Competition’ has been launched at one school. At this school, up to 100 children have been given seeds, fertilizers and basic tools in order to set up their own gardens at home. They will be supported by monitoring and mentoring from an FAO field officer. After three months the successes of the gardens will be judged. Two of these home gardens were visited for the MTR one run by a girl and one by a boy. The boy’s garden was on a well managed family plot and seemed to be progressing well in comparison to the girls who’s family did not grow vegetables to the same degree/success as that of the boys. Attitudes between the two were varied and seemed to reflect the family input/association with crop production. The girl said she wanted to be part of the competition as if she did not get a job she would have to grow vegetables. Meanwhile the boy said that he wanted to take part because when he grew up he wanted to be a farmer. He felt he could make a good living selling vegetables. As with the community and schools themselves success appeared to be linked to individuals (and/or household) commitment. The challenge remains to instil strong commitment more widely.

C Community Gardens

Greater successes were recorded at the community gardens where the aim of 403 and 510 was to support (mostly) women's associations.²¹ Under 403 and 510 seed, fence wire and posts, gates, tools including watering cans, hoes and rakes and manure are provided. Vegetables grown are usually cabbage, lettuce, beetroot, spinach, carrots, onions, pumpkin and squash. The women use the vegetables for feeding their families and the surplus is intended to be sold. There are currently four operational for 510 three of which were visited as part of the MTR, one of which was linked to an NCP garden. Individual plots are better tended than those for which the whole community has an obligation to supply vegetables for the NCPs. However, some successes were noted whereby the community gardens were so profitable under 403 that part of the income was used to build a primary school (teachers to be provided by the MoE) which will also then have a school garden component. Much of this success was due to implementation through an NGO with sufficient capacity and commitment.²²

Main community garden activities for 510 are:

- identification of community garden sites and selection of beneficiaries (completed at time of MTR);
- planning gardens, verify water sources and designing systems (completed at time of MTR);
- procurement of materials and inputs (approximately 50% completed at time of the MTR);
- installation of water systems for garden irrigation;
- training of beneficiaries;
- M&E; and reporting.

Lessons Learnt:

There have been many successes of these gardens with FAO inputs much appreciated. However, there have been difficulties with sustainability of activities. Problems are mostly attributed to lack of water provision although there has also been some difficulty in garnering commitment to sustainability due:

- Late supply of FAO funds
- Under estimate of how long start up activities take
- Problems with MoAC with accessing support for irrigation²³
- A shortfall of transport to deliver the inputs so NGO had to provide transport for collection.

Some of these issues are being addressed. For example FAO has now provided 10 bicycles and two motorbikes to address transport difficulties.

²¹ When asked it was stated by all NGOs and extension workers that women were mostly involved in these associations as gardening was women's work in Swaziland with men occupied in other things traditionally hunting with now formal labour regarded more of a man's activity than a woman's.

²² In this case, the Red Cross.

²³ For example in one case MoAC provided a tractor to build the dam but the MoAC technician could not install the irrigation system because of administration challenges of FAO/MoAC coordination.

D Conservation Agriculture

The aim of supporting conservation agriculture in Swaziland is to preserve natural resources, improve yields, particularly in relation to maximising the chances of success in the dry Lowveld and to minimise the costs of farming. CA in Swaziland was implemented by activities funded by DfID. These start up activities were: identification of participating farmers, field mapping and preparation of annual cropping plan and preparation of farmer training Phase I programme (completed by DfID at time of MTR). 100 farmers were trained in CA techniques under the DfID supported programme. Each of these is expected to train three more (farmer to farmer knowledge exchange scheme). For 510 the activities started with the DFID funding are being continued. These activities (to start in November 2006 when DfID funding ceases) are:

- farmer training (Phase II);
- procurement and distribution of inputs;
- establishment of demonstration fields;
- M&E and reporting.

As CA activities have not yet started under 510 lessons learned were not reviewed in the MTR suffice to note the start is on course as planned.

E Dry land Crops

Dry land crop activities are supported in Swaziland because water shortages in the Lowveld were identified as key challenges in the cultivation activities of 403. Hence crops that do not need as much water as those traditionally attempted to be produced, (such as cassava and sweet potatoes), are being introduced.

Main 510 activities are:

- procurement, multiplication and distribution of planting material and seed (procurement started June 2006);
- training of beneficiary farmers and preparation and distribution of extension leaflets in Siswati;
- M&E and reporting.

Activities to date have not been prioritised as it is not yet the right season for start up. These activities are due to come online in mid-end October 2006 and thus lessons learned are not included in the MTR.

Challenges

For successful continuation of 510 activities there are three key challenges in Swaziland a) water provision and appropriate crops and techniques for drought stricken areas, b) instilling ownership and commitment and c) limited capacity.

a) Water Provision

With regard to water provision those gardens that failed under 403 mostly did so because of lack of water. Initially it was intended that boreholes with electric pumps would supply water. However, although three boreholes were dug there was no electricity supply. So hand pumps were supplied. Many of these, however, did not work because the water table in 2005 was too low. Furthermore, hand pumps are extremely labour intensive and difficult to use by women who are the main farmers/beneficiaries of RSA funded activities in Swaziland. It is recommended that gender and vulnerability sensitive inputs/power supply are investigate/provided for these boreholes such as remote area power supplies (RAPS) e.g. solar, which have been successful in parts of southern Africa.²⁴ Another option suggested is that more support is given to building earth dams. However, it should be noted that supply is limited and permits to build dams can be restricted in order to conserve supply.

b) Ownership and Sustainability Challenges

With regard to commitment and sustainability of the activities there seem to be several interlinked issues that influence behaviour:

- People loose commitment when the promised inputs do not arrive on time
- People loose commitment when inputs are inappropriate. This has been shown to happen in other SADC countries but in Swaziland this was mostly linked to water problems i.e. supplying a borehole without a pump, supplying a pump without power, building a dam that proves to be too small etc.
- When obligations are not clearly defined at the outset there is a lack of ownership/sustainability i.e. if it is not specified that people should retain money for their own seeds they may/do expect free seeds the next season.
- When expectations are too high. In Swaziland this was noted in particular in relation to marketing. Women questioned for the MTR at community gardens who had the expectation to make profits from selling vegetables did not have market access or an understanding of how they would get their goods to market. Most said that they simply hoped people would come to the gardens to buy direct. One woman said they would just pray they could sell the goods.

c) Building Capacity and Sustaining Good Relationships with Implementers

There is a challenge for FAO to support good relationships with implementing partners. Improved communication has been requested for mutual understanding of difficulties such as improved email contact and/or 6th monthly feedback workshops to share mutual experiences, information exchange and problem solve.

Considering these above outlined challenges²⁵ a suggested way forward is to support a more realistic timeframe for activities in order to ensure sustainability. A possible timeframe that could be raised in discussions is outlined as:

²⁴ See Namibia and South Africa's Energy for Development Research Centre (Cape Town) examples.

²⁵ Bearing in mind this country assessment is rudimentary and the analysis not as considered as the MTR would like. Thus the reader should consider that comments and recommendations are given in the context of only 4 days allocated for document review, travel, fieldwork, key informant interviews,

- 1st year preparatory and start up phase to include actions such as accessing funds, set up infrastructure e.g. irrigation, transport systems/arrangements, targeting regions and beneficiaries, training FAO staff, devising appropriate methodologies etc. There are often delays with some of these activities and first year optimum planting seasons can thus be missed
- 2nd year training of trainers, farmers and other beneficiaries, input distribution and technical and management trial and error of pilot activities and demonstration plots.
- 3rd year assess and evaluate indications of impacts/results.
- Support for 4th and 5th year should be continued of activities indicating success and commitment to ensure sustainability with ongoing monitoring and mentoring.

Finally note that extraneous factors impact on programmes/timeframes. For example two years of drought may impact on outputs/expected outcomes.

analysis of data, report writing, feedback and incorporation of feedback comments. Thus these ‘way forward recommendations’ are intended to raise debate, stimulate discussion and are not proposed as a final solution.

4.1.7. Country Report – Zambia

4.1.7.1. Mid Term Review Context

Despite growing interest in agriculture in Zambia as evidenced by the increased areas dedicated to food crop planting, food insecurity continues largely due to the drought, particularly in the Southern, Eastern and Western Provinces, where vulnerable households are unable to obtain enough food from their own production, and lack the funds necessary to purchase commercially-available food.

Production from the 2004/2005 agricultural season has been seriously affected by erratic rainfall, which in the later months of the season turned into prolonged dry spells and drought. The FAO/WFP CFSAM of May 2005 found that the 2004/2005 cropping season was generally vulnerable in 27 districts of Southern, Eastern, Western, Lusaka and Central Provinces. The drought essentially has exhausted the coping mechanisms of many households and it was estimated that almost 50 percent of the rural population needed immediate agricultural assistance for early rehabilitation.

Constraints to food security

The major constraints and underlying factors causing food and nutrition insecurity are: (i) erratic **rainfall**; (ii) unsuitable farming **practices**; (iii) lack of access to **capital** and lack of collateral for **credit** leading to a lack of funds to purchase even basic inputs such as seed and fertilizer; and (iv) loss of cattle due to disease leading to loss of draught power. The HIV/AIDS pandemic has contributed to this situation by exacerbating labour shortages for land preparation and weeding and by increasing the mortality of heads of household, leaving thousands of orphans and vulnerable children to be cared for by grandparents and extended family members.

Food Supply and Access

Zambia produced a surplus crop during the 2005/06 season with adequate staple food to meet national requirement. Generally, the 2005/06 season was characterized by an increase in food production mostly as a result of increased yield rather than increase in area planted while cash crop production dropped by significant margins as a result of reduced hectarage. The total maize output was 64% above the previous season having increased from 866,187MT in 2004/05 season to 1,424,439MT in 2005/06 season.

Poverty among small holders is due to the inability to acquire inputs such as draft power, seed and other farm implements. Training on how to produce – i.e. acquisition of knowledge and skills is limited. The access to credit is limited by not only sheer inadequacy of financial products targeted at the small producers but also by the absence of information on how to access that which may be in place. Producers could also improve their incomes by adding value such as processing, preservation and skills on methods of utilization of their produce. Currently, vegetables are dried in big quantities only during the show period yet there are companies that would buy such vegetables all year round. The Ministry of Agriculture is embarking on a pilot project to encourage vegetable drying and have contracted the Technology Development Unit at the

University of Zambia to make 9 driers to be stationed at the farmer training centres. A new project supported by JICA starting this October will also support processing.

4.1.7.2. Review of Key 403/SAF-510/SAF Components

Cassava Nurseries in Drought Prone Districts

The project established 60 hectares of cassava nurseries in drought prone districts of Eastern, Western and Southern Provinces of Zambia for the purposes of enhancing food security and providing an alternative crop to vulnerable households otherwise relying on maize as the main source of food. Twenty nurseries were established in each Province.

Once the beneficiaries and implementing partners were selected, the land was prepared using CF methods. The following inputs were procured: 15 tonnes of fertilizer, 16 tonnes of lime, 600 000 cassava cuttings, 60 treadle pumps, suction and delivery pipes, 60 Zamwipes and 120 chaka hoes. By mid November 2004, all inputs were delivered to the project areas and planting took place in December 2004. The treadle pumps were distributed to groups of 7 households one of whom had to be above the average, and would be in charge of the pump.

All beneficiaries and extension agents were trained on cassava production, processing and marketing, as well as on the use of treadle pumps and Zamwipes. Sixty farmers and their families were to be the direct beneficiaries of the intervention and receive inputs and training in the establishment and operation of 1.0 hectare cassava nurseries in their own fields. These nurseries would constitute the core of the planting material for the beneficiary farmers and for other interested growers in the area. In total, the project planned to reach 8 000 resource-poor and vulnerable farmers with an interest in growing cassava as their alternative staple food.

The varieties distributed were Nalumino, Kapumba, Mweru, and Chila; each farmer received four varieties. The farmer could sell or barter the sticks at harvest. Of the varieties, Chila was the most preferred in Southern province because it was sweet. Cassava is relatively a new crop in this province and any means to promote it are used. The sweetness may also chart a different use pattern compared to areas where it has been a staple crop. The farmers were trained in the agronomic practices of the crop and the utilization of the crop. Cooking demonstrations were carried out showing various recipes of products that could be made from the cassava.

The nurseries have been a source of planting materials for other programmes and Africare in Southern province has received request from Africare offices in Chipata and Namibia, and from Harvest Help. The treadle pumps have been use to establish the off season cropping activities in 510/SAF below. The farmers hosting the nurseries have continued to profit from the sale of planting sticks and access to cassava as a food, lowering somewhat the peak hunger period. A group in Choma reports opening a bank account from the proceeds of the cassava nursery.

Dry Season Vegetable Farming- 510/SAF

The project will enhance food security in drought prone areas by assisting farmers to grow vegetables and winter maize to fill the food gap during the dry season. The activity is located in Siavonga, Choma, Sinazongwe and Kazungula of Southern Province. It is managed by Africare, and Ministry of Agriculture and Cooperatives. For the IP, the objectives of the dry season cropping were:

- 1.To distribute 332.5 kgs of assorted vegetable seeds, 2 metric tons of maize seeds and three to four metric tones of urea and compound D fertilizer to 21840 farmers by the end of August 2006.
- 2.To provide technical assistance in managing off season crops to 21840 farmers and disseminate the information by August 2006.

The activity is the first under 510/SAF as the funds came in too late for the main rainy season cropping. Inputs supplied were rape, cabbage, amaranths, tomato, onion, beans, and maize. The inputs were delayed resulting in farmers planting their own seed at some sites. Africare effectively commenced project implementation during the second half of July 2006. Input supply in Kazungula was delayed by the floods that occurred in the area. In the event, 988 farmers received inputs in southern province compared to the 21,840 in the plan. The 988 is only 5% of the planned target. However, it is not clear from their completion report how Africare arrived at the 22,000 households as a target for southern province alone when the 510/SAF project document targets 35,000 households in *three* provinces.

The wells and pumps from the 403/SAF have been used to support this activity in some districts of the provinces. The interest of the FAO and the IPs are sometimes hard to discern but are ever so congruent. For instance the district agricultural office in Eastern province is involved in the monitoring of field activities as they dominate the technical expertise while the Wildlife Conservation Society (WCS) is responsible for mobilizing the beneficiaries and recruiting them into the programme. WCS is interested in promoting cropping in the game management areas so they could move the people away from poaching wild animals. The IP understands that poaching is caused by lack of food. There has been some success in this objective as indicated by surrendering of guns, increase in number of animals, and low incidences of charcoal burning.

The present status

The status of 510/SAF in Zambia is that all inputs have been distributed and crops planted. The WCS was not sure what the next step will be after harvest. WCS have their own programmes in the area: the society has recently acquired a soybean processing facility to produce HEPS. The product will reach the needy via hospitals, RHC, and school feeding programmes. The WFP works closely with the IP on this programme. The facility is expected to produce 200mt of HEPS. Other income generating activities are honey production, also designed to move hunters away from poaching; community bush camps run during the dry season for eco-tourism.

Challenges

- Monitoring by MACO was not effective due to transport constraints. Most Camp Extension Officers do not have fuel to effectively monitor project activities. This has affected the quality of data available to project management and partners.
- Late start up of project activities resulted in the beneficiaries losing hope thus prompting them to use up the land which was reserved for this activity for other farming operations. At the time the inputs arrived the farmers had to start looking for other land. Land near the water bodies is usually scarce during the off season period.
- In Kazungula and Siavonga planting of beans and maize was delayed due to floods in the fields.
- Some seeds were wrongly packaged as this did not correspond to what was labelled on the pack. Most affected was the beans and maize. Equally a shortage of Amaranths was observed in Choma District.
- The waters at Lake Kariba in Siavonga were receding at a very faster rate thus affecting the irrigation of gardens. Unless treadle pumps are made available quickly the beneficiaries are likely to face difficulties in irrigating their fields.
- The MACO camp officers had problems in coordinating the program due to lack of resources like fuel. This affected project implementation as the staff could not effectively supervise the beneficiaries at critical times.
- The delay in distributing treadle pumps is affecting the irrigation of gardens as the beneficiaries are using pails to irrigate the gardens. This is affecting the performance of the gardens.
- Chila was found to be susceptible to termite attack in southern province
- The main problem for the WCS was the crops destroyed by wild animals
- The inputs arrive late in July and August and were sent out before the MOU was signed between FAO and WCS. The District agricultural office stepped in and received the inputs while the mou was being finalized
- Irrigated maize crop was hit by the cold in some sites. Often, the irrigation sites are located in low lying areas prone to night frost during the cold season.

Lessons learnt

- The ECU should resolve the arrangements for data collection between the MACO and the other IPs. Without good data, the evaluation of the success of the project would be impossible.
- For the specific environment of the warm valleys of the Zambezi, July, when the inputs were supplied in Sinazongwe, was too late as at this time green maize from the local farmers is normally being sold. Some farmers have kept the inputs for use next season.
- The course on cassava processing and utilization turned the attitude of beneficiaries significantly in favour of cassava. Without demonstrating its uses and the benefits that could accrue to the producers, the promotion of cassava would still have continued to be slowly.

- Cuttings that were obtained 1000km away often incurred great losses as they dried on the way to the producers. The nurseries have availed cutting for other farmers within easy reach.
- The 403/SAF was a good intervention; the wells dug provided water not only for the cassava but also for vegetables, drinking water and water for the livestock. The wells and pumps have continued to be used in the 510/SAF activities of Dry Season Vegetable Farming.
- Cassava cuttings from the nurseries have been distributed to other areas cheaper because of sourcing them from within the province by both FAO and other agencies like the WFP.
- Cassava was originally a women's crop in the SP, but as cash earnings began to rise, "the men hijacked it"
- The small producers are vulnerable to drought and institutional support for input supplies. Vulnerable households grow very small fields and do not apply fertilizers, consequently they run out of maize by August.
- CA too many confounding factors to determine whether it was a positive practice since it was often tied to access to inputs.
- CA practice is not usually continued beyond the life of the project. It may be instructive to establish other approaches that would sustain the use of the practice beyond the project.
- When the NGO is given inputs, there are no reactions coming back from them. They just take the inputs and distribute efficiently. The experience with the extension service has been that they would question the choice of a particular variety and give suggestions on targeting. Such interaction from the government service demonstrates the existence of engaged technical expertise beyond simply distribution of inputs to beneficiaries. Resources must be availed to allow this human resource to contribute to the programme

The impact of 510/SAF were not measurable at time of the MTR, suffice it to say that the plots at some sites were very small and the farmers were multiplying a hybrid maize variety instead of an OPV. Thus the benefit of the short season OPV seed is lost to some of the households who received fraudulently labelled seed. The cold season was waning when most of the seed was planted. Thus, again, the production of cool season vegetable may not have been to potential.

4.1.8. Country Report – Zimbabwe

4.1.8.1. Mid Term Review Context

Zimbabwe has undergone a food security crisis over recent years, largely due to intermittent and sometimes prolonged droughts, but also due a constrained policy environment and economic meltdown. These factors have been exacerbated by the HIV/AIDS pandemic which has undermined the health and productivity of the affected population, absorbing energy and resources. These factors continue to simultaneously erode self-reliance at the household level and the quality of basic livelihoods in general.

During the 2004/2005 production season, suboptimal rainfall, inadequate input access and untimely supply of inputs were major contributing factors to low production and consequently food insecurity. Despite predictions of generally favourable rainfall conditions in the southern Africa sub-region for 2005/2006, the unfavourable production situation of Zimbabwe is likely to worsen, as inadequate access to inputs continues. Therefore, measures to address this and other complementary constraints need to be taken to ensure that the majority of Zimbabwean rural households are able to meet their own food requirements, as well as strengthen other sources of their livelihoods.

The overall objective of the project is to reduce the risk of acute and chronic food and nutrition insecurity at national and household levels by protecting and strengthening the livelihoods of vulnerable groups, with particular reference to the impact of HIV/AIDS. Specifically, the project will:

1. ensure that donor/NGO emergency interventions are streamlined and well coordinated;
2. promote HIV/AIDS and gender mainstreaming in all programmes and projects;
3. increase agricultural crop production, productivity and incomes of smallholder, vulnerable communal farmers through improved soil, water and crop management practices on a sustainable basis in different agro-ecological zones in the country; and
4. support the agricultural implementation and policy framework through capacity building and information management interventions among agricultural stakeholders in the country.

4.1.8.2. Review of Key 403/SAF-510/SAF Components

A. Fodder production

The activity was carried out under OSRO/RAF/403/SAF. Besides the less than satisfactory monitoring of the activity, the funds for OSRO/RAF/510/SAF came too late to include the fodder production on the list for 510. In general, however, farmers gained knowledge and skills in: growing fodder crops; good animal husbandry, including the need to provide supplementary feed; utilization of other locally-occurring feed for feeding livestock in the dry season; and using trees and shrubs as fences. More than 60 tonnes of fodder was produced and fed to over 1 000 animals. About 500 beneficiary farmers established a live fence around

their plots. Farmers produced seed and planting material both for sale and expanding their own fields. The report on the current status of the assets built in 403 is yet to be compiled.

B. Rehabilitation of irrigation schemes

Under OSRO/RAF/403/SAF, five irrigation schemes were made fully operational and served 208 households. The total area under irrigation was 190 hectares. The rehabilitation improved water use efficiency and resulted in farmers being able to improve their yields by increased cropping intensities, extended seasons and increased numbers of seasons per year. The sale of the crops produced on the irrigated plots increased the income generated by the farmers from 5-20 percent, compared to their income prior to the project.

However, not all rehabilitated schemes have been successful. It was soon realized that the physical rehabilitation was not enough for increased productivity. Chegutu is a farmer managed scheme that the FAO has recently helped rehabilitate. The farmers are migrants from the communal areas settled soon after independence on farm bought from commercial farmers. The farmers do not have land outside the irrigation scheme and have to earn their living from the irrigation scheme. In order to go beyond rehabilitation, the ECU has worked to link the farmers to the market through a contract with a private company (a seed company). The linkage with a private company has brought out other challenges for Chegutu. Firstly is the amount of land they would commit to seed maize for the company, the other is the location of their own maize for food (time isolation has been suggested), and the source of cash during the time that the maize was growing. Thus the 1.5ha for each farmer needs to be divided into portions that will meet his livelihood requirements.

C. Farmers' Union project

This activity was implemented in the drought-affected districts of Kwekwe, Guruve and Makoni. The Zimbabwe Farmers' Union provided training and practice on land preparation designed to conserve moisture and build soil structure. The focus was on sustainable land use and environmental protection, including improved land use systems, integrated crop and pest management approaches, soil conservation and conservation tillage. HIV/AIDS awareness was also included.

Work with the farmer union involves the ECU paying for extension service only, and on re-habilitated schemes. The aim is to help transfer technology to communal areas. Each farmer has one hectare on which s/he grows three crops namely cotton, maize, legume. The union projects have been going on since OSRO/RAF/403/SAF when, despite the drought, farmers were able to harvest beans, sorghum and maize in greater quantities than would have been possible without the project's assistance. An independent survey carried out showed that the beneficiary communities perceived the project as having a huge impact on their livelihoods, with different degrees of success according to the area. The project made a difference in their lives both in terms of food security and self-confidence in crop farming.

These farmers are linked to a company which support the production of the crops. A fulltime supervisor is stationed at the irrigation scheme to assist the farmers in their production activities. The role of the ECU is to scrutinize the contracts to ensure that the farmers are not cheated, and to pay for the extension support. Out of the 1500 farmers in these schemes, 700 are now working directly with the private companies. The improved

practices that come with the contract is the use of conservation farming. The AREX is only now coming to accept the promotion of the CA. It is essential to have the institutional base under which to promote the technology to ensure sustained advisory support. The University of Zimbabwe and ICRISAT have the contract to evaluate the impact of the CA on farmer productivity.

D. Nutrition gardens

The promotion of gardens has been going on since OSRO/RAF/403/SAF. The MTR enquired about the types of crops promoted by the ECU, and whether there were any special varietal preferences. The drying force for choice of crops in the gardens is food security and nutrition. Hence the garden would have dry beans and vegetables in four categories namely white, yellow (carrots, tomatoes); greens (rape etc); and other traditional cultivars. Generally, 80-90% of the greens are consumed by the producers while 80-90% of the yellows are for sale.

The gardens are often used for maize growing during the rainy season. During this time, the disease load on vegetables is too high and the gardens are passed on to maize. The maize in the gardens is targeted for sale as green maize. However, if the judgement of the season is that it will be a poor season, the farmer may let the garden maize to dry and store for use in the regular consumption.

In OSRO/RAF/403/SAF, farmers were issued with treadle pumps based on their proximity to a water source. In Dombeshawa (visited during the MTR), the recipients have increased the area under the gardens and are now able to draw water from a longer distance by investing in delivery pipes. Consequently the amount of vegetables sold has also gone up. There is a shift in the varieties of vegetables grown. The farmers more and more prefer chomolia to rape or cabbages because chomolia has a longer harvesting period. In contrast cabbages will mature at the same time and require a ready market when they do. In tomatoes, farmers prefer roma because it is pest tolerant and has a long shelf life. The average irrigation area for drip kits is 100 m², while for treadle pumps it is 0.1 hectare. With more water available for their crops the beneficiaries were able to increase their vegetable production and consumption, thus increasing their vitamin and mineral intake, general calorific intake and basic nutritional status.

E. Input Trade Fairs (ITF)

The ITF have not performed well in Zimbabwe. The voucher system depend son the willingness of the NGOs or Seed Company. There has been much less interest from the NGOs dampening the drive to scale up the ITF by the FAO. The Seed companies would only participate if they see the potential for expanded business. That is not obvious under current economic environment. For example, the value of the voucher will drop significantly from the time a trader receives it to the time its value is redeemed. The seed company cannot give credit. The fair is also too costly for private business to participate. As vouchers cannot work in Zimbabwe, the ECU would like to shift the funds from

vouchers to cassava promotion. The cassava promotion would be in the areas where cassava is known, focusing on improvements in utilization.

F. Coordination of agricultural assistance in Zimbabwe

Every year FAO collects and analyses data on planned interventions in agriculture implemented by NGOs and other humanitarian organizations. During the 2005/2006 season, almost 40 national and international NGOs targeted over 410 000 households in rural areas of Zimbabwe. Most of the assistance was directed towards communal households and new resettlement areas. FAO coordinated these efforts through its different co-ordination mechanisms, monthly meetings and working groups.

Advantages of SAF funding

The advantage of the SAF funding has been that the ECU is not confined to the communal areas or farmers who are destitute. The unit is able to operate in an open manner in the communal areas targeting the whole village instead of individual households. In such targeting, some households will be better than others. Such variation may be used to the advantage of the group. In other circumstances, however, the heterogeneity may mean that some of the farmers will take a free ride at the expense of the more industrious.

The SAF funds in Zimbabwe have also gone to support the a policy study that tries to suggest options for pricing inputs or outputs. The secondary data collection for this study is on schedule while the collection of primary data is still not clear due to difficult to access the key informants and the record that they keep. Among the interviewees intended is the Price Stabilization Committee of the government of Zimbabwe. Other activities funded are internet connections for the ministry of agriculture; the mid-term review of the SAF funding, and formulation of the HIV/AIDS strategy for the ministry of agriculture. The strategy will be launched 7 November

4.1.8.3.Challenges

The promotion of the treadle pumps has not been smooth. Firtly the locally produced pump has gone from 50 to 300 USD within one year. The ECU recommends a pump from India which lands for less than 50d dollars in Zimbabwe. However, procurement procedure have often delayed the procurement as the purchase has to go on open international tender. At this point, it is not the cheapest that the ECU wants but the particular pump which has had the modifications suggested and has proved to be suitable for the country. The risk is always there that the procurement unit will choose any other pump as long as t was cheaper, without regard the ergonomics and other considerations.

Access to fertilizers still determine the production level in the irrigation schemes and elsewhere. The varieties used may differ in their tolerance to streak virus. Due to rotating maize with wheat, the streak virus may carry over from the wheat. The government requires that farmers produce wheat, especially on government (AREX) managed schemes.

JFFLS are not institutionalized; it is increasingly become difficult to run programmes outside the institutional framework if we want them to continue.

The AREX is only now coming to accept the promotion of the CA. It is essential to have the institutional base under which to promote the technology to ensure sustained advisory support. The University of Zimbabwe and ICRISAT have the contract to evaluate the impact of the CA.

4.1.8.4.Lessons learnt

Lessons learnt from the rehabilitation of schemes is that rehabilitation-i.e. reinstalling the infrastructure alone is not enough for a successfully operating scheme.

As vouchers cannot work in Zimbabwe, the ECU would like to shift the funds from vouchers to cassava promotion. The cassava promotion would be in the areas where cassava is known, focusing on improvements in utilization.

Lessons: the promotion of micro-irrigation requires extension support at all times. The distribution of a technology without advisory support has led to a reduction in usage of technologies such as the drip irrigation. Generally the advisory service should include the source of spare parts and other technical advice.

4.2. Evaluation of OSRO-404-SAF and Review OSRO -511-SAF (Transboundary animal diseases)

FAO and the OIE describe transboundary animal diseases (TADs) as those animal diseases that are of significant economic, trade and/or food security importance for a considerable number of countries; which can easily spread to other countries and reach epidemic proportions; and where control/management, including exclusion, requires cooperation between several countries. The list of TADs, include rinderpest, contagious bovine pleuropneumonia (CBPP), foot-and-mouth disease (FMD), African swine fever, Newcastle disease, avian influenza, Rift Valley fever and lumpy skin disease.

Between 1995 and 2003, there was a grave risk that the TADs epidemiological situation of SADC was deteriorating almost to a point of getting out of control. There was a spate of unusual outbreaks, starting with CBPP in Botswana, Tanzania and later Zambia. Then exotic FMD in South Africa. Then there was epidemic FMD in Zimbabwe with spread into Botswana and Mozambique. Another episode was the outbreaks of FMD in Malawi and Zambia both from within and then there was the spread of FMD from Tanzania to northern Malawi and northern Zambia. All this was taking place when the region was also experiencing drought and some of the disease episodes could be linked directly to the effect of drought.

So in July 2003, FAO and SADC convened a meeting the Directors of Veterinary Services/National Chief Veterinary Officer (CVOs) from Southern Africa to review the regional emergency due to TADs in the wake of a SADC appeal for international emergency support. The Directors recommended a rating of TADs within the SADC region into 3 categories and defined the actions required for each category as follows:

i) Strategic Diseases

- Foot-and-Mouth Disease
- Contagious Bovine Pleuropneumonia

These two diseases were identified for regionally coordinated strategies for progressive control with the goal of eradication from the livestock population. The Directors formulated a 16 to 20 year framework for the progressive control of the two diseases.

ii) Tactical Diseases

- African swine fever
- Rift Valley Fever
- Newcastle Disease in small-scale poultry
- Lumpy skin disease (LSD)

These diseases were identified as requiring a preparedness programme emphasising regional capacity for early detection/ early warning and for rapid reaction in case of an outbreak. It was observed, that apart from LSD, the other diseases were of short-cycle animals and therefore their prevention and control were pertinent to food security and household incomes.

iii) Internationally Emerging or SADC Exotic Diseases

- Rinderpest
- Peste des Petits Ruminants (PPR)
- Avian influenza

- BSE

These diseases required a high alert, preparedness and early warning. They also required laboratories within the region with a practical capacity for early detection and identification of such diseases.

The Directors advised SADC and FAO to follow a 2-track strategy in approaching the international community for assistance to combat the two diseases. The first was for emergency assistance to contain epidemic FMD and CBPP. The second was for long term assistance for the progressive control of the two diseases.

The assistance from the Government of the Republic of South Africa was aimed at the first objective. Accordingly projects OSRO-404/511-SAF have targeted the containment and control of epidemic FMD and CBPP in the affected countries.

The details of the implementation status for each of the expected outputs for project OSRO-511-SAF are given in Annex 8.1. Except for minor delays in training and awareness activities in Mozambique which were due to recent restructuring of the national veterinary services. The overall budget expenditure was also on schedule at 49% against a target of 35% for the initial 6 months.

4.2.1. Foot-and-Mouth Disease - Zimbabwe

4.2.1.1. Mid-Term review Context:

Zimbabwe had experienced widespread outbreaks of FMD between 17th August 2001 and 2005. The epidemic eventually involved 500 dip-tank areas in 8 provinces. These outbreaks had originated from 5 primary outbreaks between August 2001 and October 2002. All the five primary outbreaks had been associated with buffalo-cattle contact, which had been a consequence of a prolonged drought and in some cases a breach in the game fencing surrounding the game parks. It appears that 2005 was the tail end of the epidemic. The briefing document from the Department of Veterinary Services cites December 2004 as the date for the last outbreak. In his presentation to the September 2006 Agricultural Coordination Group in Harare, the Principal Director for Veterinary and Livestock Services referred to the epidemic as having lasted from 2001 to 2005. During a public awareness, OSRO-511-SAF workshop in July-August 2005, the Chief Veterinary Officer (Disease Control) gave the number of outbreaks encountered as 18, 69, 354, 85, and 10 respectively for 2001, 2002, 2003, 2004 and 2005. A Zimbabwean delegate to the SADC Epidemiology and Informatics Committee meeting (24 to 25 November 2005 at Onderstepoort) referred to there having been 13 outbreaks of FMD during 2005. (-see details in Annex 8.3). During 2006, neighbouring Botswana experienced outbreaks of FMD due to two different sero-types. One was in Kasane district. This was due to type SAT-1. Molecular analysis of the causal virus showed no relationship with SAT-1 previous isolates from Zimbabwe. This analysis indicated that the Botswana SAT-1 virus in 2006 was internally derived, probably from the buffalo population within Botswana. The second outbreak was in the Veterinary Zone 7 of Botswana was due to sero-type SAT-2. The molecular analysis at the Onderstepoort Veterinary Institute of the FMD SAT-2 virus from the 2006 outbreak in Botswana has indicated the virus to be similar to that which had been responsible for the outbreak in South Matabeleland in 2001 and the spill-over into Botswana in 2002. While there has been no clear clinical epidemiological link with any contemporary FMD outbreak in Zimbabwe, it is possible that the virus might have been transferred from Zimbabwe in sub-clinically (i.e. carrier) infected cattle, since it is acknowledged

that there is considerable illegal movement of livestock commodities from Zimbabwe into Botswana. Discussions with the Botswana veterinary authorities revealed a similar pattern both with respect to cross-border disease spread and the movement of livestock commodities. Botswana is concerned about the high volume of cross border movement of livestock commodities which is precipitated by the wide price differential between Zimbabwe and Botswana, i.e. Pula 50 versus Pula 3,000 for a steer. There is also daily border crisscrossing of livestock farm labourers (especially herd boys) from Zimbabwe into Botswana

Prior to August 2001, Zimbabwe had clearly demarcated FMD free areas from which she had been able to export meat to the lucrative markets of the European Union, South Africa and Asia. Any FMD outbreaks, such as those that had occurred in 1997 and 1999, had been quickly eliminated before spread. The situation in 2001 to 2004 was aggravated by the persistent drought during the 2001/2002 and 2002/2003 agricultural seasons and the consequent shortage of grazing and crop residues resulted in cattle being moved illegally in search of relief grazing. The concurrent resettlement programme also generated increased movement of livestock, some of which was illegal and thus carried the risk of spreading infection. Reliance on ox-drawn transport to move crops and food to and from markets exacerbated the spread of the disease.

4.2.1.2 Key Findings:

The OSRO-404-SAF and OSRO-511-SAF represent a successful continuum in addressing the FMD problem in Zimbabwe. All concerned both at HQ in Harare and in the field in West Mashonaland and South Matabeleland loudly praised the support of FAO and South Africa. This support started with FAO TCP projects, which dovetailed with OSRO-404-SAF, which in turn dovetailed with the current OSRO-511-SAF. It is hoped that this in turn will dovetail with a more long-term support from the European Union, through SADC, which is expected to become operational during 2007. It should be noted that the FAO-South Africa assistance augmented the inputs of the Government of Zimbabwe itself. This support consisted of provision of quality assured FMD vaccines, logistic and operational costs, training of field staff and community awareness programmes, disease surveillance and design of disease control strategies.

The current project, OSRO-511-SAF, is focusing on surveillance for which a consultancy has been provided to design a national surveillance strategy for FMD, which is compatible with the stipulations of the OIE International Animal Health Code.

Zimbabwe appears to have experienced no FMD outbreak for at least one year and the country is already beginning to aspire to resuming its export trade in livestock commodities. Already internal restrictions have been eased. The internal trade in livestock commodities is practically back to normal. This has eased the humanitarian difficult situation which had been by the FMD epidemic.

Some issues for immediate attention:

- The sustainability of buffer vaccination and cross-border harmonisation of TADs risk management with both South Africa and Botswana. There is a strong request on the part of Zimbabwe that the OSRO-511-SAF support in the border areas of South Matabeleland be continued for at least to the end of 2007 (their preferred option would be for another 2 years) to consolidate and maintain the immune barrier as there could still be FMD carriers among the cattle for up to 4 years (i.e. end 2008). This would also allow time for developing joint monitoring programmes with South Africa both with respect to

- surveillance and monitoring of the buffalo, especially in view of developments for the establishment of the trans-frontier game park between South Africa, Mozambique and Zimbabwe (Kruger, Limpopo and Gonarezhou) whose borders are yet to be agreed upon. NB: the joint programme will also need to take account of the risk of bovine tuberculosis already in the Kruger National Park and cross-border spread from either side of lumpy skin disease and Theileriosis.
- Segregation of buffalo from livestock. This has now full backing of the government and the expected EU-funded project on FMD will contribute appropriate resources towards this objective. NB: the combination of severe drought and some breach of game fencing are considered to have been the precipitating factors for the multi-focal primary FMD outbreaks in 2001-2002 resulting from buffalo-cattle contact.
 - Sustainability of OSRO-511-SAF epidemiologically designed, grassroots based and laboratory supported FMD surveillance. There are shortfalls on laboratory reagents, data capture and analysis as well as field operation mobility. These aspects need to be examined in setting priorities for the project work plan.
 - Sustainability of dip-tank focal point for grassroots based disease surveillance and veterinary interventions, especially in the vaccination and intensive surveillance zones. At the time of the MTR the future of the dip-tank network appeared to be a subject of review. Leasing out to the private sector or farmers associations was one of the options under consideration. Whatever option is selected eventually, it is important for the Government of Zimbabwe to preserve the central role of the dip-tank network for disease surveillance, vaccinations and extension services.
 - Strengthening surveillance to cover all the FMD free areas and the surveillance zones so as to enable Zimbabwe to seek recognition by the OIE of FMD freedom status in accordance with the International Animal Health Code. This should cover both the zone that is designated for export to Europe and the rest of the presumed FMD free areas.
 - Cattle identification and traceability are likely to be constraints to regaining the livestock commodity export, especially to the European Union.

The above issues should be brought to the attention of the veterinary authorities of the Government of Zimbabwe.

4.2.2. Foot-and-Mouth Disease and Contagious Bovine Pleuropneumonia - Malawi

4.2.2.1. Mid-Term Review Context:

Malawi had been free of FMD between 1985 and 1998 when type O infection crossed its northern border with Tanzania. There were two separate incursions in Karonga District which were both successfully controlled through prompt response with zoo-sanitary measures and ring vaccination. A third incursion in 2000 had occurred in Central Malawi from Zambia and was due to type SAT 1. The third incursion was also rapidly contained through prompt ring vaccination and movement control.

In 2003 Malawi experienced a new outbreak in the south, which took longer to contain than the incursions of 1998, 1999 and 2000. The first outbreak was identified on 25th April 2003 in Shire Valley with 200 herds affected. The disease was confirmed as SAT 2 by both the Botswana Vaccine Institute and Onderstepoort Veterinary Institute; the latter demonstrated, through nucleotide sequencing, the causal virus to be genetically similar to those previously known to circulate in the Kruger National Park buffalo population of South Africa and to be different from the virus in the neighbouring areas of Zimbabwe. The source of the outbreak seems to have been buffalo from the Lengwe National Park. Investigations showed that buffalo had broken through

the poorly maintained fence and were grazing mixed with cattle in a sugar-cane estate. By the 4th June (i.e. 5th week) the disease had spread to Bangula in Nsanje District and later to Mpemba quarantine and to Mbvundula dip tank in Chileka, close to the dairy farms in Blantyre.

With respect to CBPP, there has never been a case of contagious bovine pleuropneumonia (CBPP) in Malawi. However the country is at risk of CBPP spread from either Tanzania or Zambia where this disease has been recorded in recent years. Experience with FMD is that disease can spread across the common borders between the three countries.

4.2.2.2. Key Findings:

In Malawi project OSRO-404-SAF provided FMD vaccine, operational support for vaccination. This project and the successor OSRO-511-SAF have concentrated on supporting FMD surveillance in the FMD high risk areas of southern Malawi close to the Lengwe Game Park and the CBPP plus FMD high risk areas comprising the northern border districts with Tanzania and Zambia.

The surveillance, which has included clinical inspections, pathological inspections at slaughter facilities and sero-surveys, has been reinforced in OSRO-511-SAF with the construction of crush-pens (underway in September 2006) and the introduction of the digital pen technology for field data collection. While the digital-pen technology is still being developed, it has already speeded up immensely the system for disease alert. Previously, data transmission from the northern border districts could take up to a month.

Thanks to the support and technical guidance of OSRO-404/511-SAF, Malawi has now undertaken the initial steps for epidemiological zoning of the country according to the perceived FMD status. This gives a goal for FMD activities as being the pathway towards an OIE recognised status of FMD freedom. Similarly the work on CBPP surveillance is now being driven by the objective of OIE recognition for CBPP freedom. It should be noted that the OIE recognition imparts the freedom to formal trade in livestock commodities within and beyond the country. It is hoped that this risk-based surveillance will be able to dovetail with the long-term support that is expected from the SADC TADs project which has recently been approved by the African Development Bank.

In order to ensure such dovetailing between emergency support and development intervention, it is recommended that project OSRO-511-SAF be extended to the end of 2007 when it is expected that the SADC TADs project will be operational.

4.2.3. Foot-and-Mouth Disease - Mozambique

4.2.3.1. Mid-Term review Context:

Mozambique experienced outbreaks of FMD between November 2002 and September 2003. The disease spread from the border with Zimbabwe to Manica, Gaza and Maputo Provinces. The spread was principally from the border with Zimbabwe along the transport network towards Maputo. There was a total of 20 outbreaks recorded. The source of these outbreaks was believed to have been Zimbabwe as the primary foci were linked to those in Zimbabwe by epidemiological association undertaken by the Mozambican veterinary services and through molecular analyses of the causal virus by the Onderstepoort Veterinary Institute in South Africa. Prior to this episode, Mozambique had not experienced FMD since 1985.

4.2.3.2. Key Findings:

Mozambique was not included in project OSRO-404-SAF. However FAO was involved in supporting the relevant FMD control activities through its TCP intervention (TCP/MOZ/2906E) which ran from December 2003 to Nov 2004. This is what has dovetailed with the assistance through project OSRO-511-SAF. The current emphasis is to support vaccination (through government own resources) and surveillance (through OSRO-511-SAF) in the high risk areas surrounding the Limpopo Game Park and the districts bordering Zimbabwe, Zambia and Malawi. Thus vaccination campaigns have started. However training and awareness activities in Tete, Manica and Gaza Provinces have not commenced. This has been attributed to recent restructuring of the National Veterinary Services. Materials (vaccines, syringes and needles) and operation funds for vaccinations have been distributed to the relevant districts of the 3 target provinces. To reduce the risk of a repeat FMD spread pattern as occurred in 2002 – 2003, project OSRO-511-SAF also includes support for the rehabilitation of an abattoir at Chicualacuala on the border with Zimbabwe. This will greatly reduce the number of live animals that have to be transported from this source to Maputo. The tenders have only just been issued (September, 2006). Accordingly, at the time of the Review the construction had not started.

It is expected that the surveillance activities of OSRO-511-SAF will be able to dovetail with those to be supported by the SADC TADs project that will be funded by the African Development Bank. As this project will not be operational until end 2007, there is a strong case for extending OSRO-511-SAF to the end of 2007.

It should be noted that support for buffer vaccination will not be part of the AfDB funded SADC TADs project. Mozambique will continue to require donor support for this aspect, especially as the FMD dynamics in the border areas might be disturbed by the proposed trans-frontier game park between South Africa, Zimbabwe and Mozambique, linking the Kruger, Gonarezhou and Limpopo Game Parks. It is hoped that the EDF funded SADC FMD project will include supporting buffer FMD vaccination in its activities.

4.2.4. Contagious Bovine Pleuropneumonia - Angola

4.2.4.1. Mid-Term Review Context:

Angola was not part of the OSRO-404-SAF project. The southern part of Angola constitutes a long standing primary endemic area for CBPP. Until 1990, this plus the spill over outbreaks in the contiguous part of northern Namibia constituted the only CBPP affected focus in the whole of SADC. In 1995 this focus is believed to have infected northwest Botswana, where the disease and the consequential eradication of the disease by stamping out that involved the total depopulation of cattle from the affected district totalling 320,000 head of cattle and a cost of about USD\$ 350 million to the Botswana exchequer. There has been CBPP spread from southern Angola to the Western Province of Zambia on 4 different occasions, i.e. in 1914, 1969, 1997 and 2000. (See Annex 8.5).

4.2.4.2 Key Findings:

Project OSRO-511-SAF is supposed to provide Angola with 4 mobile laboratories, training in laboratory diagnosis and support for sero-surveillance for FMD and CPP.

Activities in all of the above elements have commenced; the laboratories have been purchased and delivered and blood sampling of cattle has started as has the training (see Annex 8.1). So far only preliminary results have been obtained. These results from serological tests at the Onderstepoort Veterinary Institute, South Africa, have shown the samples tested so far to be negative for FMD but to show a prevalence of about 30% for CBPP. If this trend were to be affirmed for FMD, it would demonstrate Angola to have a favourable FMD status, which would encourage the country to pursue a pathway for recognition by the OIE as FMD free. With respect to CBPP, the available preliminary results already confirm the existence of endemic CBPP in Angola.

It is hoped that by 2008, the FMD/CBPP surveillance activity which has been started through OSRO-511-SAF will be taken up by the recently African Development Bank approved project known as Strengthening Institutions for the Risk Management of TADS in the SADC Region (short form: SADC TADs project). This project will support the strengthening of the capacity for laboratory and epidemiological surveillance in Angola, Malawi, Mozambique, Tanzania and Zambia as well as at the SADC Secretariat regional level.

However, there is no external support for CBPP control activity in Angola. As already remarked the continuing presence of CBPP in Southern Angola constitutes a serious risk to the cattle industries of primarily Zambia and Namibia and secondarily of other SADC countries, as evidenced by outbreak of CBPP in Botswana in 1995. There is also a new risk of CBPP spread from southern Angola to the rest of the country, especially in view of the cattle restocking programmes in the central and northern parts of the country.

Therefore, there is an urgent **need for donor support for CBPP** control in southern Angola.

4.2.5. Contagious Bovine Pleuropneumonia - Caprivi Region of Namibia

4.2.5.1. Mid-Term Review Context:

Contagious bovine Pleuropneumonia (CBPP) was detected in August 2003 following the illegal introduction of an infected animal in one kraal at Maunga crush-pen area. The immediate source seems to have been Zambia although it has not been established whether Zambia was the primary or secondary source. This was the first time Caprivi experienced CBPP after about 60 years. The disease subsequently spread to adjacent kraals in Batubaja and Mbilajwe crush-pen areas since the population was naïve with no routine vaccination. There were two other incursions of CBPP in April 2004 at Mukisa crush-pen about 8 km from Katima Mulilo and in December 2004 at Kazuka crush-pen area in the eastern flood plain.

This being a virgin territory outbreak it resulted in a high death rate of cattle. Altogether about 600 cattle died. Mortality in the affected kraals ranged from 10% to 90%. Since April 2004 disease prevalence dropped to less than 1% in the previously affected areas.

4.2.5.2 Key Findings:

According to both the Director of Veterinary Services/Chief Veterinary Officer at HQ (Dr Otto Hubschle) in Windhoek and the State Veterinarian in Caprivi (Dr Frank Chitate), the emergency support through **OSRO-404-SAF** was timely, critical and successful. It provided vaccine and logistical support for 2 rounds of intensive vaccination, which resulted in a dramatic drop in the

number of cases reported. This also allowed the government to mobilize its own resources to be able to sustain the annual vaccination without interruption. Prior to the support from FAO the DVS was only able to carry out peri-focal vaccinations. The FAO OSRO-404-SAF project also supported surveillance, training of staff in disease recognition and community awareness campaigns. The emergency support from FAO is acknowledged in the annual report of the Directorate of Veterinary Services for 2005.

The following materials were provided by FAO under Project: OSRO/RAF/404/SAF:

10 Tents; 25 Stretchers; 25 Chairs; 10 Tables; 7 Camping lamps; 7 Water containers; 15 Sleeping bags; 80 Freezer packs; 20 Cool boxes; 120,000 doses anthrax vaccine; 380,000 doses CBPP vaccine.

The anthrax outbreak was successfully controlled, thereby removing a danger to human, livestock and wildlife health.

The government has not yet embarked on a CBPP eradication strategy for the northern areas and the Caprivi because of the perceived threat from the neighbouring countries.

The disease control and surveillance operations have now been **taken over entirely by the Government of Namibia.**

An issue of serious concern to Namibia is the continuing presence of CBPP in Angola and Zambia. While Zambia is enjoying donor support for CBPP control, there is no such support, so far, for Angola.

An innovation activity under OSRO-511-SAF is the field testing of **the digital pen technology**. According to both the Deputy Chief Veterinary Officer-Epidemiology (Dr Cleopas Bamhare) and the Caprivi State Veterinarian (Dr Frank Chitate), the field trials in Namibia are running well. After some initial teething problems, the uptake is very high. The Deputy CVO-Epidemiology sees high potential for improving disease alert reporting, field data capture. He considers that the next steps of development should examine the feasibility of direct link to a national GIS-driven database system, such as TADInfo. He also expects some further developments to include data verification systems. Besides the TADs data support he also envisages potential applications in movement permits and linkage with the cattle animal identification and trace-back system.

4.2.6. Contagious Bovine Pleuropneumonia - Zambia

4.2.6.1 Mid-Term Review Context:

CBPP was first introduced into Zambia (Western Province) in 1914 from Angola. The disease was eradicated by 1947. It was reintroduced in 1969 and again eliminated in 1972. In 1997, after being free from the disease for over 23 years, CBPP was reintroduced into western province. This incursion was successfully controlled thanks to support from FAO through its TCP assistance. The disease was introduced again into Western Zambia in 2000 by an influx of refugees from Angola. This has led to a spread of CBPP to all districts in the Western province and to parts of North-western province (see Annex 8.5).

The re-introduction of CBPP to Zambia in 1997

An Angolan couple came into Western Zambia for traditional medicine consultation and paid the “doctor” one ox.

The “doctor” borrowed another ox from Angola for his ox-cart.

A few days later one animal died. He kept the second animal. Later CBPP flared up spreading to cattle in the neighbourhood

4.2.6.2 Key Findings:

The support through the OSRO-404-SAF and 511 were listed as:

- Provision of 1 million doses of vaccine and logistic support for vaccination in Western, North-western and Northern Provinces
- Field testing of CBPP vaccine efficacy
- Cold chain maintenance, including provision of refrigerators
- Training of veterinary assistants and farmers in CBPP recognition especially in Livingstone, Kazungula and Sesheke districts
- Branding
- surveillance

This had resulted in a dramatic reduction in the incidence of disease and in cattle mortality. Prior to vaccinations mortality rates of 80% were common.

An incursion of CBPP into Southern Province at Bombwe had been rapidly identified and eliminated without recourse to vaccination. This was followed up by an intensive surveillance.

The Director of Veterinary and Livestock Development (DVLD) is satisfied that the objectives of OSRO-404-SAF have been achieved and those of 511 are being well implemented. The country now is ready to build on this platform to embark on the next stage of CBPP eradication. Several stakeholders interviewed share the conclusion of the Director (see Annex 8.5)

There are now pipeline development projects that will dove-tail with the FAO emergency support, building on the lessons of 404 and 511. These will adopt the strategies that have been defined by OSRO-404/511-SAF. The new projects are:

- IFAD for CBPP control in Western and North-western Provinces expected to start early 2007
- SADC-TADs (African Development Bank) for surveillance of CBPP, FMD and other TADs. The project has been approved. It is likely to be operation towards the end of 2007

The government has also made an allocation of Z-Kwacha 1.4 billion of which K700 million (about \$200,000) is earmarked for farmer compensation. This will enable to implement a targeted test-and-slaughter.

DVLD pleaded that the support for CBPP surveillance, under OSRO-511-SAF, be extended to the end of 2007 to allow for dove-tailing with the SADC TADs project. The surveillance that is being supported through OSRO-511-SAF is seen as crucial for the disease control strategy.

The next objective of DVLD is eliminating CBPP from the affected areas to allow for embarking on the OIE Pathway for CBPP freedom.

4.2.7. Contagious Bovine Pleuropneumonia - Tanzania

4.2.7.1. Mid-Term Review Context:

In view of the complexity of CBPP in Tanzania, it was agreed with the Tanzanian authorities to use the workshop approach to evaluate the impact of the OSRO-SAF projects within the context of the epidemiology and control system for CBPP in the country. The workshop was attended by 22 persons including the District Vet Officer of Njombe (Dr Fredrick Sigachuma), the Head of VIC Iringa (Dr G.R. Nsengwa) plus experts from the Faculty of Vet Medicine of SUA, the Central Veterinary Laboratory and the Directorate of Vet Services (See Annex 8.6).

The evolution of CBPP in Tanzania can be summarised as follows.

The first documented outbreak of the disease in the country was in 1916 in Loliondo on the northern border with Kenya. This spread and by 1932 the whole northern part of the country from Tanga along the coast to Mara on the eastern shores of Lake Victoria was infected. The disease was eliminated from the country by 1946 through rigorous vaccination using Kabete broth vaccine and strict animal movement control.

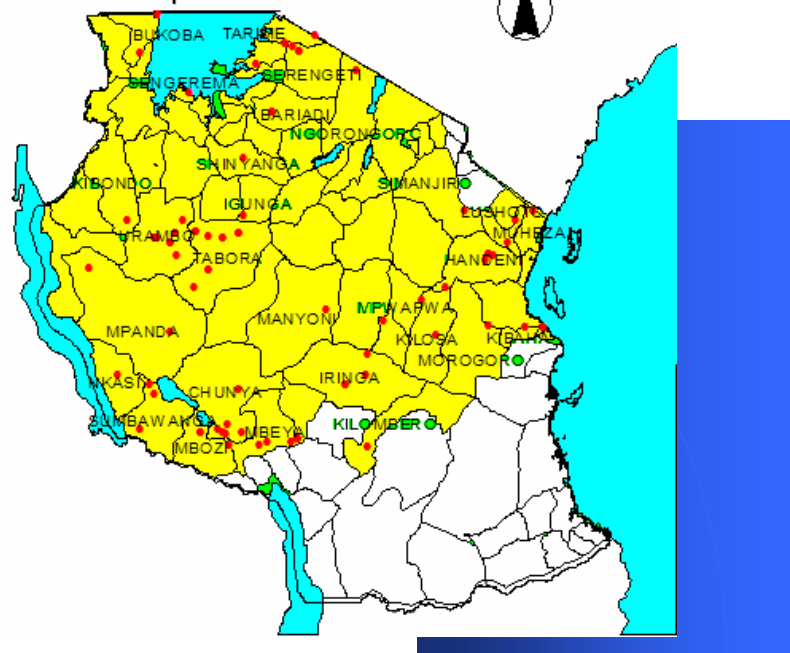
The second outbreak occurred also in Loliondo Division in 1955. This was eliminated by 1965.

After an absence of almost 25 years, the third and current raging outbreak broke out in 1990 at a place called Soit Sambu again in Loliondo Division. It is believed that 2 bulls purchased from a neighbouring country for breeding purposes were the source of the disease. The disease spread to Serengeti and Tarime districts in Mara region through cattle rustling within the same year and from there on it has spread to other parts of the country. In 1992 a new focus of the disease unrelated to the one in Loliondo occurred in Kagera region. It was established that this outbreak originated from neighbouring Rakai District in Uganda.

The disease spread south of the Central Railway Line in 1994. Records indicate that this was the first time ever for CBPP to occur south of the Central Railway Line. It was first noted in Ulanga district in that year but it was later realised that more areas were infected but due to the fact that the disease was unfamiliar to many livestock workers it was mistakenly taken to be East Coast Fever (ECF) or other pneumonic diseases. Its appearance south of the railway line in 1994/95 caused alarm both nationally and internationally. From 1995 onwards the disease has spread to many parts of the country (see map below). Thus the recent spread of CBPP which started in 1990 was unprecedented in Tanzania as it covered most parts of the country unlike previous incursions that had been confined to the northern regions.

Project OSRO-404-SAF and OSRO-511-SAF have focused on controlling CBPP in the Southern Highlands of Tanzania in order to stop the spread of disease to the immediate southern neighbouring countries thereby threatening the cattle industries of fellow SADC States.

CBPP Spread in Tanzania 1990 to 2003



4.2.7.2 Key Findings:

The two FAO-RSA projects have helped the national roll-back plan for CBPP. The following are indicators of success in relation to the objectives of the project, which were to stop the southward spread of disease to neighbouring SADC countries and to reduce the incidence of CBPP in the project area of Southern Highlands Tanzania.

- Overall the spread of disease has been arrested; the incidence of disease has declined; livestock farmers and other stakeholders are now aware of the disease and are more willing to participate in control measures being taken
- There has been no evidence of spread to Malawi. This has been verified by regular border surveillance in Malawi under projects OSRO-404-SAF and OSRO-511-SAF. Similarly border district surveillance in Zambia under the same projects has returned negative results. NB: There are regular cross-border meetings of veterinary personnel in the border districts of Malawi, Tanzania and Zambia. There is also collaboration in cross border monitoring of animal movements.
- Slaughter facility surveys in the southern Tanzania districts which border Malawi and Zambia show zero returns for CBPP lesions since 2005. There has also been a sharp decline in the incidence of detected lesions in the rest of the project area.
- Only 24 out of 3,927 serum samples (i.e. 0.6%) collected in 2005 from Mbarali, Mbozi, Sumbawanga and Mpanda districts in the project area tested positive.

The conclusion of the workshop was that the surveillance objective in OSRO-511-SAF is timely as it seems that the CBPP prevalence in the project area could be sufficiently low for the country

to consider adopting a test-and-slaughter policy with a view to eliminating CBPP from southern Tanzania.

The surveillance strategy that has been designed by a consultant under OSRO-511-SAF was considered to be appropriate. It needs, however, to be augmented with risk based, purposeful surveys. Based on the results of the surveillance, the government should consider adopting a test-and-slaughter strategy for southern Tanzania, including the OSRO-511-SAF project area. It is noted that such a strategy was the basis of eliminating CBPP from Kagera.

The recently approved SADC TADs project, which will be funded by the African Development Bank, will dove-tail with the surveillance objectives of OSRO-511-SAF. However as that project might not be operational until the end of 2007 or early 2008, it was strongly recommended that OSRO-511 be extended to the end of 2007 both with respect to intensive active surveillance and vaccination.

Animal movement management remains a major challenge. This could be complicated by the proposed and programmed relocation of pastoralists from Usangu to places within the OSRO-511 project area. Realising this complication the government has stipulated that relocation of animals will be subject to vaccinations against prescribed diseases, especially CBPP and FMD, veterinary inspections and certification as well as agreements by livestock communities in the receiving districts.

Finally, it should be noted that at the moment there is no long-term donor supported project for the elimination of CBPP in Tanzania. Such support will probably not materialise until a protocol for CBPP elimination can be established from practical results in Tanzania. It would therefore be highly recommended that either project OSRO-511-SAF be extended until the end of 2008 or a successor project incorporates such an objective.

4.2.8. Discussions with South African Senior Animal Health Officials and Experts.

Discussions were held at the Directorate of Animal Health, the Onderstepoort Veterinary Institute and the Onderstepoort Biological Products.

The following issues emerged which are pertinent to OSRO-511-SAF.

- The FMD buffer vaccination in South Matabeleland should continue beyond 2007.
- There is need for additional cross-border harmonisation between Zimbabwe and RSA veterinary authorities both at the field and HQ/expert levels, with respect to buffer vaccinations, surveillance, inspections and buffalo monitoring. The results of such activities should be made available to the Joint Management Board of the Trans-frontier game park system to avoid duplications. Diseases of concern include FMD, tuberculosis (NB: bovine tuberculosis has been repeatedly detected in the Kruger National Park and there is some evidence of a strain in humans which is resistant to antibiotic treatment), corridor disease (Theileriosis)
- The South African experience in controlling classical swine fever in East Cape Province may offer good experience to the rest of SADC both in terms of controlling ASF and in preparedness for CSF. Cysticercosis control should also be considered in promoting small-scale pig production within SADC countries. The control of the three diseases should be linked to a programme for improving pig production as a food security and rural income generation instrument.

- Emphasis should be laid in the SADC countries (including South Africa) on vaccination and control of Newcastle disease in village flocks from the point of view of food security and reduction of rural poverty as well as facilitating surveillance for and preparedness against avian influenza.
- Molecular analysis of FMD virus strains from Botswana outbreaks in 2006 demonstrate that the SAT-1 was NOT related to strains that had previously circulated in Zimbabwe. However the SAT-2 strain isolated in 2006 was found to be similar to the South Matabeleland strain isolated in 2001, as well as to the Botswana 2002 isolate which, at the time, was believed to have originated from Zimbabwe. The origin of the 2006 SAT-2 outbreak in Botswana is not clear since Zimbabwe claims to have not experienced outbreaks of FMD since October 2004. The most likely explanation is that either this represents a carrier breakdown or the presence of clinically low grade undetected FMD in parts of South Matabeleland probably masked by vaccinations. There is acknowledgment in Zimbabwe of a high traffic of illegal movement of livestock commodities from Zimbabwe to Botswana.
- OBP/OVI and Zambia have carried out some CBPP vaccine trials testing the stability of the vaccine both in the laboratory and in the field under OSRO-511-SAF. The reconstituted vaccine was shown to be stable for up to 6 hours, which is an adequate period. OVI would like to undertake some efficacy trials in cattle if financial resources permit.
- Tests in Zimbabwe and OVI indicate that the SAT-2 component of some batches of the FMD vaccine from BVI might not be inducing the expected level of immunity. So far it is not clear whether this is due to sub-standard potency or is a reflection of using heterologous virus strains in assessing antibody responses of vaccinated cattle in Zimbabwe and RSA. The OVI is carrying out some tests in cattle.

4.2.9. Digital Pen Technology for Disease Data Capture in the Field

Mid-Term Review Context:

Project OSRO-511-SAF has developed a unique digital pen technology for field disease data capture and disease alert. The efficiency of emergency control of TADs epidemics depends on the efficiency of prompt recognition of unusual clinical events, rapid transmission of such observation to expert unit, which for Africa would be far away in a capital city or even in another country. Such information should be able to trigger a chain of reactions leading to early specific detection (diagnosis), early warning and a specific early response intervention.

A major constraint in the surveillance of TADs is the lack of data collected, reported and captured from the field. In Malawi, it took on average 35 days for information collected in the field to reach the national office through their normal workflow. Namibia's concern was the time for data capture. While in Zambia, the monitoring of field operations was an issue. Digital pen technology was tested in these three countries to assist in dealing with these problems. The objectives of the pilot were to determine if this technology can work in remote areas and if information collected was correct and consistent.

This technology provides rapid transfer of data collected on paper forms via cell phones or PCs connected to the Internet. The files are sent to a server that interprets the data using character and

word recognition techniques. Once this is completed, the data are fed into a database which then can be checked and edited. The actual time for these processes is seconds.

The pilot showed that transmission from remote areas was possible using a cell phone and a computer. The pilot areas in Namibia, Caprivi and Grootfontein, sent their data via the cellular network with GPRS which is available through the country. The Sesheke district of Zambia which borders with Caprivi used Namibia's cellular network to send their forms because of the lack of GPRS coverage. In Malawi's pilot areas of Chikwawa and Karonga, the PCs were used to send data over a phone line on the Internet.

A single collection form was designed and used by the countries. This allowed for the collection data into standardized fields. This is particularly important when data is exported to other regional or global TAD-related systems. For example, linkages can be made to TADInfo by ensuring data elements are collected on the forms, data can be interpreted and captured with standardized terminology and reporting. Technically, data exchange between databases should be seamless.

Other functions of this technology include bar code scanning, picture capture and geo-location positioning which would be applicable to TADs surveillance data collection and capture.

Key Findings:

The project had trained personnel from the three countries where the technology was to be tested. A member of the MTR observed the function of the technology both at RIACSO HQ and in the field in Sesheke, Zambia, as well as interviewed users and managers in Namibia and Zambia. Equipment had been provided to all the three countries. The following were observations were made:

- people in the field report only incidences from the field (i.e. passive surveillance) but seldom undertake active surveillance
- quality data collected
- no data collected for animal movements
- actual recognition is high and could be improved further with the creation of more lexicons

The project had undertaken several technical development activities, including database design, form/questionnaire design and website design. It has also carried out training and field testing in the three participating countries.

Furthermore, the FAO RIACSO developer had established contact with the FAO Computer Services and Animal Production and Health Divisions with a view to assessing the compatibility of the digital technology with the FAO TADInfo and other GIS based database systems.

The successes and challenges of the technology can be summarised as follows:

Successes

- transmission of forms from pilot areas occurred
- were able to monitor the surveillance activities on what ongoing field
- data collected from the field was interpreted correctly
- it was not technically demanding to operate by the field staff

Technical challenges – intermittent GPRS coverage

- lack of technical knowledge of staff
- internet transmission via landline problems
- misuse of phone

Overall, the proof of concept has been established in the 3 countries where the technology is being field tested. This was confirmed during a user-workshop by the views expressed by the veterinarians who have tested the system as well as by those the Review Team met in the field. The potential for the technology has been recognised by the national epidemiologists interviewed in the field and those who attended the user workshop.

It should be noted that this technology has not been used anywhere else in Africa. It builds on some elements that were used in the South African census and it is built on the open source platform of FAO.

Nevertheless, it will require another 12 months or so in order for the system to be sufficiently robust for wider-scale use and for seamless link with the TADInfo system. The MTR recommends that this be included in the budget for the extension of OSRO-511-SAF to end of 2007. Furthermore, the project group should consider modifying the current project work plan to extend the field trials to Mozambique and Tanzania where the use of TADInfo is already established.

It is important that the project team initiates soon planning discussions with FAO Headquarters as well as with the South African source company for programming the digital pen technology regarding the requirements for effecting the integration of the data from the digital pen into the TADInfo system. Officers at FAO HQ who are concerned with the TADInfo system have already indicated some of the areas of attention to include an assessment of work flows in various veterinary field activities, further work on the design of data collection forms, the compatibility of the digital pen data with the national animal disease database (e.g. TADInfo) and software programming to provide a data flow from the digital pen data server to TADInfo. It is important that the cost of such activities be determined soon.

5. Project Management

5.1. Project Budget and Expenditure for OSRO-510/511-SAF

Overall, 21% of the budget has been spent. Of the total 13,211,518 USD 11.2% is allocated to contracts while 1.8% is to local labour. 30% of the contracts line item has been spent, while 28% of the local labour has also been spent.

The expenditure for OSRO-511-SAF appears to be running on schedule. Overall the expenditure against budget is running at about 49% against a target of 33% considering that the project has been operational for six of the programmed 18 months.

Country	Budget	Expenditure	Per cent	Remarks
Region (RIACSO)	189,174	34,478	18.22%	Workshops planed for later
Angola	555,500	129,063	23.23%	Field labs just delivered; field expenditure expected to rise
Malawi	202,400	151,698	74.95%	
Mozambique	151,800	50,615	33.34%	
Namibia	151,800	35,309	23.26%	External training delayed and field surveillance, digital pen started late
Tanzania	378,620	129,575	34.22%	
Zambia	335,500	178,923	53.33%	
Zimbabwe	1,022,116	755,741	73.94%	
	2,986,910	1,465,402	40.06%	

5.2. Project Management Structure and Back-Stopping by FAO

The coordination of projects OSRO-510/511-SAF is by a multidisciplinary team at the FAO RIACSO office in Johannesburg. The team includes specialists in agronomy/irrigation, transboundary animal diseases, human nutrition, HIV/AIDS and Gender. Consultants used have also reflected the same disciplines. The MTR would have wished to see a wider cross-section of consultants to be able to target such expertise as animal production. At the country level there is an Emergency Coordination Unit (ECU) located within the office of the FAO Representation. The size of the ECU depends on the project portfolio in the country.

The operation and financial management of the projects is exercised by the Emergency and Rehabilitation Division of FAO at HQ. This is the Division in FAO that is responsible for the FAO RIACSO unit in Johannesburg and the ECUs in the project countries.

While the regional experts at RIACSO back-stop the country ECUs, each regional expert is supposed to be technically backed by the relevant Technical Division at FAO HQ. MTR found evidence of FAO technical literature which had been distributed to project countries. Overall, the MTR found this technical back-stopping system to work satisfactorily and to be a comparative advantage for FAO. However during the MTR period the planned HQ back-stopping missions to the project areas had not taken place in most cases.

The recent introduction of a monitoring tool-kit for 510 and 511 is an excellent mechanism for M&E, which the MTR found to have great potential.

The country ECUs submit monthly reports to the FAO RIACSO in Johannesburg. While these primarily cover the evolution of the agricultural season, they also make reference to key project activities. In addition, FAO-RIACSO prepares a monthly status of food and agriculture report for the monthly meeting of the UN agencies within the RIACSO plus development partners. The FAO RIACSO submits a synthesis quarterly progress reports to the Integrated Food Security and Nutrition Task Team of the Government of South Africa as well as to FAO Sub-Regional Office in Harare and FAO HQ in Rome. The ECUs at the country level are expected to forward the quarterly reports to the SADC focal points in each country as well as to the RSA High Commission/Embassy. However the Ministries responsible for agriculture and livestock do not seem to receive such reports. Also the FANR Directorate of the SADC Secretariat would wish to receive directly copies of reports by FAO-RIACSO for information, as the returns from countries do not segregate input through RSA funding from the general list. Incidentally, it was observed at the FANR that apart from RVAC, there are regular informal contacts between FAO RIACSO and the SADC Livestock Programme. But the contact with the SADC Crop Programme is low. Finally, the FANR would appreciate receiving a copy of the MTR report, especially in view of the requirement by the Maseru Summit for an account of the effectiveness of the RSA funding to the Member Countries.

The MTR recommends to FAO-RIACSO that steps be taken to rectify the contact and reporting anomalies with the national ministries and the FANR Directorate of the SADC Secretariat...

5.3. Interaction with Other UN Agencies

RIACSO operates within an inter-agency set up of UN Agencies that deal with emergency relief and rehabilitation schemes in Southern Africa. There is also a new emphasis within the UN system for encouraging inter-agency joint programming. Apart from site coordination there is a forum of Regional Directors of the UN Agencies which deals with a broad thematic analysis of emergency and vulnerability programmes. For example FAO is charged with coordinating matters related to food security, while OCHA coordinates early warning and humanitarian emergency preparedness as well as consolidated appeals for emergency support.

Broadly speaking the coordination works well. At the country level the MTR found joint programming in the Junior Farmer Field and Life Schools... Here FAO is often the lead agency with WFP and UNICEF as active co-sponsors. Another area of collaboration encountered by the MTR is the scheme of food for work by WFP in some areas where FAO was also introducing rehabilitation schemes. However this was not universal as there were examples of independent operations between WFP and FAO.

6. Cross Cutting Issues – Mainstreaming HIV/AIDS, Socio-economic and Gender Awareness

6.1. Overview

6.1.1 Disaggregating the Vulnerability Context

The long-term socio-economic crisis in southern Africa is exacerbated by the HIV/AIDS pandemic²⁶ which is a long term emergency impacting already fragile societies and economies. The magnitude of the pandemic, in the context of increasing social vulnerability (poverty, gender inequality, socio-cultural exclusion), can lead to acute food insecurity and risk society collapse. However, disentangling the impact of HIV/AIDS²⁷ on food security and ultimately socio-economic development is difficult although they are inextricably linked. The challenge for analysts, policy makers, and donors is to understand with greater precision how societies are being affected by poverty, HIV/AIDS and gender inequality, and consequently how rural development policy should be modified to better achieve national agricultural sector objectives and in MDG targets.

The 510 and 511 activities currently being implemented for 2006-7 should build upon lessons learned from 403 and 404 2004/5 activities. However, while there are demonstrable successes in technical process of many activities and there is anecdotal evidence on the appropriateness and success of these interventions in terms of socio-economic impact on vulnerable people, there has been little systematic assessment of effectiveness. Nonetheless lessons have been learned and it is now recognised that:

- Interventions are more efficient when the socio-economic context, specifically gender and vulnerability, is analysed²⁸, understood and addressed.
- The HIV/AIDS pandemic impacting the SADC countries increases existing socio-economic vulnerabilities. It also exacerbates gender differences in terms of vulnerability and accessing resources.

It remains, however, for these lessons learned to be translated from regional strategy to country and grassroots level implementation²⁹. The difficulty of this task should not be underestimated. Understanding the vulnerability context through socio-economic analysis requires addressing strategic issues at different levels. It should be consistently reinforced that the end goals are impacts which lead to sustainable socio-economic development/livelihood diversification. Purposes, outputs and activities should consistently reflect and reinforce this goal. To this end FAO (with WFP) has produced a Socio-economic and Gender Analysis manual (SEAGA) which is inclusive and straight

²⁶ FAO literature refers to the HIV/AIDS epidemic and pandemic interchangeably. However, in the context of long term emergency, and in the context of analysis of impacts of HIV/AIDS pandemic, is considered the more appropriate term.

²⁷ This is also linked to gender inequality and indeed gender violence.

²⁸ Following lessons learned from elsewhere.

²⁹ With some exceptions – 403 and 510 JFFLS activities (see below).

forward to follow. However, the SEAGA manual was not well used in planning 403 or 510 project activities. At RIASCO it was stated that this was due to a lack of awareness that these resources exist and lack of availability in country offices. However, these manuals were found and have been used at country offices that have gender focal point officers who stated they had trained people on the approach for other projects. The logical frameworks reviewed for each country did not appear to be influenced by SEAGA's approach to be inclusive of socio-economic and gender analysis. Some country level officers were not aware of SEAGA. When asked in Lesotho the response was there were no socio-economists in Lesotho.³⁰ SEAGA analysis should be written into the log frame in order for the gender focal point officers to justify input. Currently mainstreaming gender and HIV/AIDS awareness into projects is largely the responsibility of the focal point officers (and not the National Coordinator). Solutions that have been suggested are:

- a) Include knowledge of cross-cutting issues into selection criteria for the staff
- b) Train the appointed staff if there is a shortfall in appropriate skills
- c) In the focal point officers ToR, include the monitoring and mentoring of these issues according to the project.

6.1.1 Gender and the Development Gap – Moving to Sustainable Socio-Economic Development (The Livelihoods Approach).

Women play a key role in the effectiveness, uptake and sustainability of projects and programmes and, with women's priorities differently focussed than men's, women are frequently key in reducing the development gap. This is the gap between communities' needs and what development projects and activities, such as those of 403 and 510, can deliver in order to ensure sustainable economic development. 403 and 404 activities were little inclusive of initiatives aimed at mainstreaming HIV/AIDS, socio-economic and gender awareness despite the overall program goal being dependent on/linked to these cross cutting issues i.e. successful HIV/AIDS interventions are inclusive of gender empowerment and socio-economic development. However, it has been recognised that the cross-cutting issues of livelihoods³¹), HIV/AIDS and gender are not being sufficiently mainstreamed in FAO's Emergency Programme in Southern Africa overall and lessons have been learned and acted upon.

In October 2005 a regional tool for addressing the impacts of HIV/AIDS on livelihoods in an emergency context was developed by FAO's Emergency Programme. Recognising the need for contextual analysis of interventions, in this tool box, the livelihoods, framework approach is advocated. Applying the livelihoods framework is a good method for understanding the socio-economic context and for organising and evaluating the level of social, human, physical, natural and financial assets. It is also a useful approach for understanding how HIV/AIDS can impact on these assets at both a micro

³⁰ Discussions held at the Ministry of Agriculture. This is part of a wider capacity problem in Lesotho that FAO country officers need support with/consideration. As part of the MTR process the review had to consider the capacity of the country program and the country for accurate evaluation.

³¹ For the MTR, with regard to the country/community level activities, we refer to household and community level socio-economics.

(household/community) to macro (national/regional) level. However, the livelihoods framework has been critiqued in the literature for being complex and difficult to adapt and adopt. It has also been found that its application necessitates an experienced practitioner. There are indications that capacity levels in the national emergency units are not yet sufficient to utilize the sustainable livelihoods framework. This tool has started to be promoted by FAO in southern Africa. FAO officials from Mozambique and Zimbabwe were involved in the design but the tool has yet to be taken up at country level. Social and livelihood specialists have not been deployed to the same degree as agriculture or livestock specialist. Thus the social, health, education status of target beneficiaries and how these change according to activity/intervention has not been systematically recorded which limits the ability to measure the impacts of activities in facilitating the move of households and communities across the development gap from subsistence to sustainability.

Nonetheless, some evidence of understanding impacts of project activities on gender, vulnerability and HIV/AIDS and other social issues was found albeit these are not coordinated with clear, easy to follow criteria or indeed prioritised. Thus the MTR team was tasked with producing a coherent narrative from incoherent evidence and in the absence of social specialists committed to the activities.

6.2. Approach

6.2.1. Rationale

It was initially intended that the MTR team would review specific social-economic impacts of different project components at country and grassroots level as well as distill an overview of socio-economic impacts across the program. However, during the country visits there was a change in approach. The complexities of incorporating socio-economic impact analysis into program and project management processes appear to have been underestimated and/or not resourced due to lack of awareness for the need to prioritize. Thus it was found that there was little available data on cross cutting (socio-economic) issues. Furthermore most data collection was primarily process rather than impacts orientated. The majority of the progress reviews and 'update' reports produced also monitor process rather than impact. Socio-economic impacts are not identified on a consistent basis and quantitative (nor qualitative) socio-economic data is not usually collected.

Thus the MTR team considered that reviewing socio-economic impacts in this context would be of limited benefit. It was decided that, in order to gain maximum benefit from the review process, the focus of discussion on cross-cutting issues should be not on what has not been achieved in 403 and 404 but on what can be achieved in 510 and 511 beyond coupled with recommendations on how to proceed. It was found that in most cases Emergency Co-ordinators and FAO support officers in the countries reviewed were sufficiently engaged in the projects to be observing what was oft termed 'anecdotal' information on how peoples' lives were changed by project activities. This qualitative socio-economic data was verified and added to during the MTR. However, it should be stressed that this is an incomplete overview given the time constraints and the lack of organized and/or documented socio-economic data

that could be drawn upon. Thus it should be used as an example and guide rather than a thorough review of the socio-economic impacts or situation. Even so the qualitative data collected included some indices of socio-cultural, socio-psychological, education, health and livelihood (socio-economic) status before and after project interventions. Consequently some impacts could be inferred and are discussed below.

6.2.2. Process

At the start of this mid-term review a social/gender checklist was devised. In each country the review team members could find little evidence of socio-economic considerations in activity planning. Indicators and means of verification were not geared towards monitoring socio-economic development nor are they engendered. Overall it was found that:

- Information on affected populations was not disaggregated by sex, age, socio-economic situation (asset analysis)
- There was little coordination of implementing agencies on socio-economic development and gender awareness. Yet FAO could play a role in influencing implementing agencies on these issues given consistent criteria that could be applied to the country context (socio-cultural, political) and the implementing agencies capacity.
- Information of the socio-economic impacts of 511 (FMD and CBPP) was most limited³²
- There was limited staff training/effort to build social-economic, HIV/AIDS and gender understanding at a country level although, it is evident that this is starting to be addressed.³³

Given these shortfalls the team were unable to collect quantitative socio-economic and gender disaggregated data although qualitative socio-economic analysis could be undertaken using the broad guidelines:

- Does the project/activity have socio-economic development objectives
- Is the distribution of benefits/targeting of beneficiaries taking gender roles and relations into account
- Are socio-economic issues clarified and or taken into consideration in the implementation of the projects work plans
- Is HIV/AIDS mitigation mainstreamed into activities

Verbal briefings and feedback from FAO's country level Gender Focal points and Food Security and HIV/AIDS officers, albeit little documented for 403 and 404, much assisted this aspect of the MTR process.

³² Little at the community level and none on livelihoods recovery by the affected (by outbreaks) livestock dependent farming communities – see targeting 6.2 below.

³³ There has been little interest in attending these training sessions so main participants have tended to be the focal point officers. It has been suggested by one focal point officer that these sessions should be compulsory. If so there would be budgeting implications.

6.3. Targeting

6.3.1. Targeting Criteria

6.3.1.1. Overview

The criteria for targeting beneficiaries varied according to activity, country and environmental context and the interpretation of the apparent dichotomy:

- Targeting to support the most vulnerable (sometimes referred to as the short term or emergency approach)
- Targeting to ensure sustainability (long term or emergency to rehabilitation)

However, the two are not necessarily exclusive. For example young, poor, HIV/AIDS orphans could be considered amongst the most vulnerable of groups. Yet with the JFFLS activities reviewed, the appropriate support for the children is showing early indications of long term community development/sustainability. Moreover the concept of vulnerability (and any associated stigmatisation and/or marginalisation) is being challenged by JFFLS beneficiaries as seen in Mozambique and Swaziland? Children interviewed, rather than regarding themselves as vulnerable, had started to consider themselves as amongst the communities privileged. On the International Day of the Child, JFFLS beneficiaries in Mozambique used \$300 of the money they earned that year from selling vegetables to hold a party for children from the surrounding communities who were not privileged enough to be selected for the JFFLS activities. These children were not only showing indications of empowerment in terms of decision making regarding what they could do with their money but also in terms of socio-psychological empowerment, an indicator of long term sustainability of human capacity building. Thus when planning, criteria on what is meant by vulnerable people and what category of vulnerability, should be defined for different activities in a participatory manner i.e. to be inclusive of beneficiaries own definitions of vulnerability, poverty etc.

6.3.1.2. Targeting for 511

Controlling an epidemic of FMD and CBPP, the core of 404 and 511 is an area-wide effort and is thus not best targeted according to social groups but according to the nature of the problem and geographical spread. Consequently in Zimbabwe, Mozambique and Zambia 404/511 targets all categories of farmers. However, there is a need to segregate livestock production and socio-economic recovery from shocks; the domain of 403 and 510, from efficiency of controlling FMD/CBPP. Furthermore there may be a need to look at socio-economic recovery efficiency after epidemics e.g. restocking, drought power, impact of quarantines etc.

6.3.1.3. Targeting for 510

For 510 type activities socio-economic characteristics about stakeholders at all levels should be considered. Furthermore the logical framework should be engendered and activity target data disaggregated. Whilst this happens for some activities it does not happen in a consistent manner across the countries. Yet a 'blue print' could be developed that can be adapted to being context specific based on evidence that will support program design. Furthermore the raw data is not difficult to collate. At many training sessions, workshops and community meetings the names and (sometimes gender) of the participants are recorded but this data is seldom considered in analysis.

6.3.2. Matching Beneficiaries with Appropriate Inputs and Activities

6.3.2.1. Disaggregating Social-Economic Context Data³⁴

With regard to inputs for 403/510 it is not clear who these are targeted at in project log frames nor, from the activity update reviews, who exactly has benefited. Whilst numbers of people are given who, for example, received rakes, seeds etc, i.e. a gender disaggregation input provision, are not given. Moreover, whilst children are targeted for some interventions it is also not clear whether these are girls/boys/both. For example with the successfully reviewed JFFLS in Mozambique only 1 out of the 8 graduate facilitators available for interview was a girl. Yet at the primary school level the gender imbalance did not appear so marked.

Impact monitoring questions, in order to improve targeting and implementation; have gone unasked such as 'Do these girls graduate? If not why not?' On the other hand the greater number of girls currently in JFFLS, as compared to the number of graduate facilitators, could be an indication that 403 and 510 interventions, influenced by FAO gender inclusive strategies, have had a positive impact on addressing any previous gender imbalance in pupil enrolment. Disaggregated gender baseline data was not readily available for the review but it is suggested that future monitoring of JFFLS is gender inclusive.

6.3.2.2. Targeting for Appropriate Inputs Provision

For 403 and 510 there appeared to be little adaptation of input tools geared to the needs and capabilities of vulnerable child headed household. Scaled down tools have been successfully supplied elsewhere. In Uganda, for example, when at the height of the impact of HIV/AIDS on the demography of that country, adult labour was in short supply and thus children had to meet many household and community food needs through agriculture. The provision of smaller hoes, shovels etc. proved to be successfully adopted (appropriate) inputs. Thus a socio-economic (specifically gender, age and health status) analysis not only facilitates appropriate targeting of beneficiaries but can assist in appropriate input provision. Targeting on the basis of some types of vulnerability,

³⁴ As part of situation analysis.

however, could result in stigmatisation and marginalisation such as targeting HIV/AIDS impacted households and individuals and should be approach with care by experienced practitioners.

Given a lack of complete understanding of the ‘vulnerable’ targeted, there remains a possibility of inputs being exploited by the most powerful and/or those most able to access benefits i.e. usually fit, healthy men³⁵. Moreover, some tools are used by men, some by women. For example hoes are usually used by women, men usually use shovels, machete’s and axes. The rake is generally used by men and women.

6.3.2.3. Targeting for Social Inclusion in Access to Benefits

In some instances there were indications that the most vulnerable were being excluded from project benefits if activities or inputs procured were not appropriate to the context. For example if inputs, such as fertilizer, are provided with the warning that it is not appropriate for pregnant women who are thus excluded from benefits. It was stated that in Mozambique such warnings have been used, by those selecting beneficiaries at a community level, as a reason to exclude women. This illustrates the issue of ‘who selects the beneficiaries’. Whilst including the community in selection of beneficiaries can promote a sense of ownership, if such a method of beneficiary selection is not monitored and mentored, the process may be at risk of excluding those not in favour/not considered worthy by community leaders or others doing the selection. A way forward would be to provide appropriate inputs for social inclusion such as in the case quoted of fertiliser and pregnant women, protective clothing/equipment and/or stipulating that fertilizer and other inputs that are not harmful to pregnant women should be the type of input provided. Above all, however, appropriate inputs should be provided in the context of targeting for social inclusion i.e. beneficiary targeting is achieved under clear guiding criteria that are influenced by FAO’s social inclusion policy (which reflects RSA’s social equal ideals reflected in the country’s strong gender constitution) and considered by FAO country ECUs, National Governments, NGOs and with provincial and community participation.

An example where beneficiary selection appears well targeted and appropriately implemented is in poultry management interventions in Mozambique. The picture, for 403 activities is mixed. For example in Malawi women protested that their husbands were to tired to perform other duties as the treadle pumps provided to men for irrigation were ‘unwieldy’ and labour intensive to operate³⁶. This again indicates the need for a fuller understanding/quantitative socio-economic analysis at grassroots level. For example, in Lesotho whilst watering in regarded as a women’s activity it is men who seemed to benefit more from the water harvesting activity.

³⁵ In Zambia this is usually the headman **and** his wives.

³⁶ This was a country wide provision supported by 403. Lessons were learned and these treadle pumps were not supplied under 510.

‘Women are wanting water harvesting without being sensitised more than men, who usually only come to us after one of our promotion activities in the community’

This is because to access the benefits of the water harvesting project i.e. to build a water tank, people have to have access to resources that women are often unable to supply/access i.e. labour (usually paid), sand and large stones both of which need transport. These selection criteria were in place before 403 support was added to the water tank initiative which has been in place for over 5 years with much success on some levels. The access to the benefits of this activity is illustrated in the cases studies in Box 1. Two water tank case studies were investigated. One was under construction and one in place for two years.

Box 1: Water Tanks - Ha Jimson and Ha Patsa, Mafeteng District, Lesotho

Water Tank Construction Case – Farmer and Builders

The male farmer, in his 60s (potential primary beneficiary) heard about the water tank from a community water tank promotion meeting in the region a year previously and from his neighbour who has one. After the tank promotion meeting he joined a waiting list for the cement and wire mesh for tank construction. His decision was based on the fact that he believed that his water supply from the nearby river was becoming more erratic over the years, that he wanted to expand production and that he wanted to save time hauling water. His expectation of benefits was high. Meanwhile, using family labour, he acquired sand from the nearby river bed transported using his own ox and cart and rock that he and his sons rolled down from the nearest hill. As an established farmer growing a fairly wide diversity of crops - spinach, cabbage, radish, onions, mustard seed, carrots and tomatoes he met all the criteria of being approved to be on the water tank scheme i.e. he could provide the basic materials of sand and stones, the labour (although he had his own family labour he could pay for experienced water tank builders as recommended by his neighbour – see below) and he was already an established farmer. The labour he hired was available to start immediately he received his cement and wire mesh. He agreed to pay them (2 builders) R600 for the jobs plus supplying daily meals.

The male builders (secondary beneficiary) have built 5 tanks in the 18 months since they received training. They were both already house builders and wanted to enhance their skills and broaden their labour opportunity market. They heard about the opportunity to train to build tanks at a water tank promotion community meeting. The extra money they earn from this additional business is used to improve their farm particularly in relation to livestock stocking although they farm both crops and herd goats. One of the builders is also on the waiting list to build his own water tank on the farm.

Water Tank Construction Case – Farmer

The second farmer interviewed with regard to the water tank activities had had the water tank for 20 months. They were an established farming family who before the tank already sold approximately 50% of their crops for cash. Although the household grew the same crops now as they did before the tank (cabbage, peas, rape, spinach and some fruit trees) their production had increased by approximately 20%. The extra cash from increased crop sales went on fuel and

clothes. However, there remained some problems. The tank only ever filled halfway although the house had a good guttering system. This only lasted the household crop irrigation needs for two to three months after which they had to revert to collecting water from the dam over 500m away. It was suggested that the tank could be smaller and also covered to reduce evaporation.

In both cases the benefits of the activity were clear. However, what was not found to be as clear was whether the benefits are equally distributed to men and women in communities and is inclusive of the most vulnerable or restricted to those of certain level of economic status/asset base. From VAC assessments the most vulnerable households are HIV/AIDs impacted and/or female headed and thus benefits of activities with such qualifying criteria are likely to be primarily controlled by the men.³⁷ These selection criteria were in place before 403 inputs supplemented the activities with support for up scaling. In order to be more inclusive of the vulnerable, support with these inputs for specific categories of vulnerability could be considered i.e. for the way forward funding could be geared to not only up scaling (providing more mesh and cement) but to the allocation of support for accessing labour, sand and stones to farmers with less financial capacity and/or human capacity. It has been commented, however, that the key component of this intervention (and a factor in its success according to the GoL) has been the need for beneficiaries to demonstrate their commitment by providing materials and labour. It was suggested that this intervention is thus not suitable for those without funds (usually the most vulnerable, HIV/AIDs impacted and/or female headed households). A similar situation was found with success in community gardens in Swaziland where although most of the beneficiaries/gardeners were women the fee payable to have access to a plot in the garden excluded those unable to pay – the poorest of the poor. This is further illustration that for some activities the beneficiary targeting criteria should be reviewed to examine if people are excluded for reasons of socio-economic status.

Whilst on the one hand the beneficiaries for water harvesting were (effectively by virtue of the selection criteria) targeted according to economic capacity on the other hand the beneficiaries for drip kits for irrigation, a more recent (403 supported/influenced) intervention, were targeted by extension workers whose criteria for beneficiary selection were influenced by an FAO socially inclusive strategy and were geared on:

- Interest level – usually women as they do the watering
- Proven ability as a farmer - women do most of the vegetable farming.

Gendered disaggregated quantitative data was not available but a qualitative assessment was made by sampling a few case studies such as the one in Box 2 below.

Box 2 : Drip Irrigated Gardens Supplied to Female headed household (a woman with disabled/partially blind husband) – Tsakholo, Mafeteng District Lesotho

The female farmer, in her 70s, has had the drip irrigation kit for nearly two years.

³⁷ There could be trickle down impacts on women in the household who could be regarded as secondary beneficiaries.

She was targeted as a project beneficiary as she was already an established farmer, was regarded as being a good farmer and showed a keen interest in the kits when they were demonstrated (via an extension worker visiting her fields). Although she now grows much the same as before the irrigation kit (butternut, tomatoes, spinach, cabbage and beetroot) she has benefited from:

- a) Increased production
- b) Time and labour saving in water collection (her nearest water source is over 300m. before kit she spent 'the whole day watering' now she spends 2-3hrs.
- c) Cash from selling surplus (before the kit she only met subsistence needs)

With the cash from the surplus she sells she buys more seed and 'lots of different food'. However, she regards the main benefit as freeing her time to take part in activities in the community specifically attending women's groups and religious meetings. This is an indicator of empowerment that could lead to accessing further benefits as her social inclusion and social networks have increased.

With regard to poultry production support activities, these should also target women since women are responsible for chicken rearing. Men should be involved/have awareness raising training in order to facilitate support for women to attend courses but the content should be aware of women's roles and responsibilities (see training 6.3.2 below).

It should also be noted, when targeting beneficiaries (and indeed for implementation consideration), that gender roles and responsibilities further vary according to:

- The natural resources available e.g. in a fishing community women's roles are different from in a pastoral or forestry community.
- The polygamy or monogamy system in the country or community
- Religious practices – e.g. different religions advocate different practices to with regard to whether women can go into the fields/access markets etc.

When targeting beneficiaries for activities, selection criteria should be inclusive of an awareness of the socio-cultural context and sensitivities. For example with regard to taboos that are particularly restrictive to women. Pregnant women in some countries for instance are told they can not eat eggs.³⁸ Where this is found to be the case³⁹ then such taboos can be dispelled with technical knowledge i.e. pregnant women can eat eggs that are cooked properly and thus have access to one of the most widely available protein sources in rural communities across many of the SADC. Moreover, it should be noted that different food taboos occur in different countries and even in different districts of

³⁸ The explanation for this taboo in Zambia is that because women have cravings when they are pregnant there is a risk they will consume all the eggs in the community. So rather than being a taboo designed to protect women it is a taboo to exclude women from food with the preference being to protect food sources.

³⁹ Given that the socio-cultural context is analysed/understood before training.

countries. In Mozambique, the Ministry of Health, in order to dispel taboos which bar different people from up take of nutrition, has had to produce three manuals - one for the North, Centre and South of Mozambique.

As well as the socio-cultural context, inputs should be sensitive to the fact that women and men have different priorities. For example, even when people were starving in Manica and Sofala provinces in Mozambique, in 2005, cattle were not slaughtered/sold. This may be because men have decision making over cattle and their priorities are different to women i.e. men have greater tendency to retain cattle as status/security whilst women, if given choices, usually favour the feeding of their families. However, care must be applied to avoid making gender assumptions. For instance, in some countries it is a socio-cultural tradition not to sell cattle so women may also not sell cattle as a coping mechanism, even in times of stress/shock and extreme vulnerability. Furthermore, although activities targeted at women are more likely to support community development and the move towards bridging the development gap, it should not be assumed that all women are the same/have the same altruistic tendencies. For example, with the milk goat project in Lesotho although most of the successful beneficiaries appeared to be women, the passing on these benefits to secondary beneficiaries was limited. In fact with the milk goat program in Lesotho in only around 33% of cases was there a successful pass on/sharing of benefits to secondary beneficiaries. The data on whether these are men or women were not readily available and more gender understanding of the country context (socio-cultural and social network analysis) as part of a situation analysis would be beneficial as a basis for an improved understanding of how programming could be modified to incorporate these considerations. However, qualitative indicators were identified as illustrated by the case in Box 3.

Box 3 : Dairy Goats Supplied to Female headed household - Tsakholo, Mafeteng District Lesotho

The farmer, a widow in her 60s, was a beneficiary of the 403 milk goat programme. She has done well under this programme in producing more goats. However, she has not passed these goats on claiming that the one she was meant to pass on had died whilst *'waiting for the people to come and collect it'*. Although twin goats had just been born at the time of interview she stated that she would not pass these on as *'she had done her bit with the one that died'*. This is one indication to show that women are not always community cohesive orientated.

Socio-cultural and individual behaviour is difficult to change. However, given the right capacity building some change in behaviour is possible with movement towards adopting socio-cultural and personal practices that are more conducive to creating an environment likely to support sustainable development. This is illustrated in the following section.

6.4. Lessons Learnt

6.4.1. Capacity Building – Gender and HIV/AIDs Sensitive Training

In order to move towards sustainable development there should be inclusive criteria for the training of extension workers. Extension workers training should stipulate that, as far as is reasonable given the country context, a gender balance in targeting beneficiaries should be aimed for. Whilst in some countries and with some activities gender equal targeting of training of trainers (extension workers and others) has been achieved in 403 (examples are volunteers a hospital nutrition gardens in Malawi and carers at OVC centres in Swaziland and JFFLS teachers in Mozambique) influenced by FAO's gender equal guidelines this does not appear to be happening in a consistent manner. For example, at the conservation agriculture training of trainers held in Gaza, Mozambique (on 3.10.06) there were 25 men and one woman. The reviewer was told by the National Director, Ministry of Agriculture, National Directorate of Agricultural Extension that this was because:

'Women had household duties such as rearing the children and therefore did not want to travel'.

He acknowledged that this 'gender imbalance' was a concern and needed addressing. In such instances FAO could take a supporting/influencing role and indeed it was noted that in some circumstances FOA has done so. For instance, in the Green Zones (peri-urban agricultural activities) of Maputo female agricultural extension worker were seen to be more involved. It was subsequently found out by the reviewer that gender sensitive training had been given at planning levels for these activities (gender focal point, FAO Maputo). Four gender workshops have been held for Green Zone stakeholders, 2 in 2005 and 2 in 2006. Each workshop was one day and targeted extentionists and farmers. The training was geared towards a gender balanced representation i.e. half men and half women. In Zambia the solution was to hold courses at village centres to be more responsive to women's triple roles.

To ensure gender equality in capacity building training of trainers should be done at a time suitable for women's' triple roles (child care, economic and community development). For example, it was suggested by FAO's gender focal point officer in Mozambique that where gender equality was raised as a specific concern that in order for women to have access to training benefits of the 510 activities, child care could either be:

- Paid for by the project on an individual basis
- Facilities could be arranged at the workshop/training centre for childcare
- Women could be encouraged to draw on social networks (neighbours and extended family) where they exist for child care.

At a household level men and women should be encouraged to share child care roles i.e. it could be suggested that a household have access to training benefits through the woman. Therefore the man would have an incentive to care for the children. These

suggestions could be considered within the context of social and human asset assessment where the livelihood framework's asset assessment is adopted.⁴⁰

Finally, some districts, provinces and countries appear to need greater gender awareness raising than others. Thus the socio-cultural/gender context at household through to country level should be analysed before implementing an activity/intervention i.e. as with most activities reviewed one model does not fit all. Best practise models could be produced and adapted according to socio-economic and socio-cultural context in the same manner that technical models are adapted according to climatic and soil conditions, for example.

6.4.2. Empowerment for Equal Access to Activity Benefits

Who should benefit from activity outputs was also not found to be consistently 'vulnerability context aware'. For example, increased sales of agricultural products do not necessarily mean that women have access to the cash from these sales even though they might be the farmer in the household who contributed most to these sales. Support for the commercialisation of fruit and vegetables should be accompanied by support for women to have greater access to markets and control of benefits. Market chain analysis should be conducted in gender sensitive manner. Even so, examples were found where 403 activities had led to social and economic empowerment.

Box 4 : Milk Goats Supplied to Female Headed Household – Qalabane, Mafeteng District, Lesotho

The woman milk goat herder (primary beneficiary) interviewed has had goats for three years. She has had mixed success with rearing goats; one died and two survived. She uses the milk for both household needs (she has two children) and to sell. She gets approximately 10 litres of milk from one goat per day. Her priority is to sell the milk. She only gives milk to her children when she has a surplus that she can't sell. This on average is around three times a week. Before goats they did not have milk at all. She sells goat milk to her neighbours and to residents of neighbouring villages usually for cash. However, she says she has occasionally given milk to sick neighbours in the past for free as she was told to do so as a condition of gaining access to the goats. She does not do this any more. She has not trained anyone else on how to care for goats. The cash she gets for the milk is used to buy goat feed, paraffin, shoe polish, cosmetics, candles and food groceries. Before she had the goats she washed and ironed clothes to meet these cash needs but now feels she has more control over what she is doing and can plan things better. She has a very small plot of land on which she grows peas and beans in rotation and has three peach trees. She recently (the previous week) acquired a pig. These are indicators of empowerment and development.

Unequal power relationships within households can mean that nutritional benefits inferred from increased consumption does not necessarily translate into the most in need

⁴⁰ Although this maybe beyond the scope of 510 program if the livelihood framework is used by FAO such analysis can be drawn upon by ECUs.

gaining access. For example, it was stated that in Mozambique although it might be recorded that households consume more eggs,⁴¹ men are usually the first to benefit/account for this increased consumption. Men's nutritional needs are often favoured over those of women's and children's despite the fact that it is usually women (and children) who rear chickens. It can be women who, not empowered to realising personal value, are as complicit in continuation of unequal distribution of food in a household. This can also be because of the threat of violence and abuse. Interventions in Zambia⁴² have been better training of how more equal food distribution at household level can occur by introducing different cooking practises e.g. shredding the chicken and mixing the meat with vegetables (as opposed to the meat to the man and vegetables to women/children).

Women's empowerment and a greater understanding of prevention of sexual violence and exploitation are also linked to HIV/AIDS protection. Yet with the exception of JFFLS there was limited evidence found of mainstreaming awareness raising on these issues into 403, 404 and ongoing activities of 510 and 511. Moving beyond 510 and 511 it is not sufficient to regard that HIV/AIDS mitigation mean giving men and women education on HIV protection measures e.g. advocating the use of condoms or that gender empowerment means interventions that support gender biases roles and responsibilities. Gender empowerment is needed in order for women to be able to take up these 'protection measures'. Although gender empowerment has been regarded as some as beyond the scope of 510 and 511 examples were noted where gender equality and HIV/AIDs was being addressed with indicators of empowerment. The inclusive curriculum of JFFLS being a good case in point. Aspects of this approach could be considered for adapting and adopting elsewhere. Further recommendations on the way forward to address these issues are given in the following section.

⁴¹ As seen with the Newcastle disease control activities and improved poultry management interventions.

⁴² Not 403 or 510 activities but lessons learned from other activities taken up successfully in Zambia (and elsewhere).

Draft Conclusions (yet to incorporate 25th October workshop comments)

The long-term socio-economic crisis in southern Africa, exacerbated by the HIV/AIDS pandemic, is starting to be addressed by 510 activities targeted support to vulnerable people in the fragile societies and economies of SADC. This support is implemented in a context of increasing environmental uncertainty including:

- The impacts of global warming (specifically increased incidence of drought and unpredictability of rain seasons)
- Natural resources degradation (soil erosion, deforestation)
- Uncertainty of resources ownership (specifically crucial is land tenure) and
- Social-economic vulnerability (poverty, HIV/AIDs, socio-cultural exclusion).

It has been acknowledge that there needs to be:

- Improved targeting of activity beneficiaries both primary (in terms of end users – e.g. farmers and implementing (secondary) beneficiaries such as trainers)
- Strengthening of some of the activities criteria and inputs to be more socially inclusive and
- A greater understanding of the social, cultural and socio-economic context,

Nonetheless there are (qualitative) indications of increased food security due to 403 and 510 activities support. Such support can be fundamental in mitigation of the risk of society collapse due to acute food insecurity despite the context challenges listed above.

At times of shock, such as drought, people's coping mechanisms include the selling of assets (often livestock based) and migration. However, whilst stress was noted during the droughts of 2004 and 2005 neither wide scale selling of assets nor movement was noted amongst the activity beneficiaries. This appears to indicate⁴³ that social stability is being supported. Moreover, with lessons learnt from 403 and during the start up phases of 510, there has been a greater consideration of social inclusion for social stability in implementation of projects. Staff with appropriate skills are now in place.⁴⁴ Toolkits for livelihood and socio-economic assessment have been developed. Monitoring and evaluation has been improved both in terms of appropriate tools and increased staff capacity.

⁴³ Although further quantified analysis/examination of warnings systems is needed to be fully conclusive.

⁴⁴ Albeit some capacity building still needs to be done.

7. Recommendations

In situations characterised by exposure to shocks, the goal is to move households from increasing vulnerability (i.e. declining ability to manage risk) to increasing resilience (i.e. an enhanced ability to manage risk) over time. This is primarily a developmental responsibility.

7.1. Recommendations for OSRO-510-SAF

1. In order to help the region, the planning horizon should be extended to 5 years at the minimum. Equally the interventions shall be fundamental especially in reducing the vulnerability of the target groups and countries by building the capacity to resist the hazards or recover from them.
2. Regard **drought as an opportunity**. Take stock of the advantages of a drought and work to emphasise those. In a dry year, an opportunity presents itself to sell more of the alternate staples. To prepare for that, we may need to invest in processing of say cassava so it may be blended with maize. The use of other grains such as sorghum and millets may also find currency during the droughts. As the droughts occur quite often we could prepare for them by taking advantage of opportunities they bring.
3. Due to the wide variation in successful goat breeding and management from district to district in Lesotho, greater monitoring and mentoring with exchange of knowledge facilitation is needed to control or explain the variation. Mentoring should be used in other situation such as the collection of M&E data.
4. As there was little evidence of the 'pass on of the gift' the approach should be better explained to beneficiaries and better monitored and implemented. Obligations of the recipients are not consistently followed. This should be better monitored particularly in relation to the project qualification criteria of contribution to secondary beneficiaries such as passing on the 'gift' of next born kid and providing milk to vulnerable households.
5. Monitoring and evaluation of the benefits of various interventions has not happened. Support is needed with this particularly in relation to having a greater understanding of livelihood impacts and diversification at a household level.
6. Timely procurement and delivery of inputs is a concern as it influences the quality of conclusions about project interventions.
7. Leadership of CA demonstrations needs to be allocated to a department that has the resources, both manpower and machinery, to effectively manage the demonstrations throughout their life/crop cycle.
8. The MTR recommends socio-economic surveys to better understand needs and choice of criterion for selection of beneficiaries in conjunction with community leaders rather than just relying on village leaders decisions.
9. We recommend that contracts be drawn between the project and the seed growers or other partners expected to supply a product either to the project or other farmers. It is more effective to draw a contract with seed growers specifying what quantity of seed is given and how much is expected of the grower- than to simply expect them to hand back 50% of what they produce.

10. While recognizing the need for rapid response in the short period of emergence projects we recommend that ECU works with governments more to ease the problems of “handing over”.
11. The ECU in Malawi has decided to focus small scale irrigation on use of river diversion because diversions are cheaper. The Malawi model of the treadle pump has been judged to have labour and difficult ergonomics it is too heavy to use. The ECU should re-examine their policy decision in light of the emergence programming.

7.2. Recommendations for OSRO-511-SAF

Several aspects of the emergency interventions for the containment, control, arresting or preventing the spread of the two SADC strategic TADs (FMD and CBPP) are beginning to mature and therefore are poised for long term development support. It is important to note that the key objective of OSRO-404/511-SAF has not been to eradicate either CBPP or FMD (i.e. eliminate the risk). It has been to contain and minimise, rather than remove the risk totally. The resources and time allocated were insufficient to address that goal. Hence the relevance and importance of dovetailing with development projects whose objectives would include a sustained progressive control of the target diseases. The Review Team has been made aware in several countries of an enhanced allocation of funds by governments and pipeline donor funding for supporting the progressive control of the two TADs, building on the lessons learnt during OSRO-404-SAF, as well as preceding support FAO’s own Regular Programme through both TCP projects and its normative activities, especially those of the EMPRES-Livestock Programme. Currently, additional lessons are being learnt from the support through OSRO-511-SAF.

The Review Team wishes to record that, for nearly 10 years, FAO has been the principal technical agency working with both national governments and the SADC Secretariat to address the threat posed to rural livelihood by the recent spread of FMD and CBPP in the Southern African region. This has been through either its own resources, as remarked above, or through the funding provided by the Government of the Republic of South Africa. This consistent support to the region has taken the form of material and logistic inputs for vaccinations and surveillance, for training and community awareness and for the design of national and regional strategies for the progressive control of the two diseases. This has also involved collaboration with missions of donor agencies in designing development projects.

Four major development projects have now been approved for funding by collaborating donors. These are:

- The EDF funded PRINT project at the SADC Secretariat, which is focusing on livestock information management systems.
- The EDF funded SADC FMD project which will support the rehabilitation of structures and consolidate the control of FMD in Zimbabwe, Malawi and Mozambique. This project is expected to be operation during 2007. It will dovetail with the activities that have been set in motion by the succession of TCP and OSRO-SAF projects.
- The SADC TADs project that has recently been approved by the African Development Bank. This project which will strengthen the laboratory and epidemiological institutions for the surveillance and risk management of TADS in Angola, Malawi, Mozambique, Tanzania and Zambia is expected to become

operational by the end of 2007 or beginning of 2008. It is hoped that it will take up the most of the activities that have been set in motion by OSRO-511-SAF.

- The IFAD funded project in Zambia, which is expected to be operational during 2007, will support the next stage of CBPP control in Western and North-western Provinces of Zambia. This will link directly with the activities that have so far been supported by OSRO-404-SAF.

Nevertheless, there are still critical gaps in OSRO-511-SAF that the Review Team recommends to both FAO and the Government of South Africa for consideration. These are:

1. It is important to extend the FMD/CBPP surveillance work of OSRO-511-SAF to the end of 2007 in order to avoid creating a gap between the current activities and the equivalent to be supported by the pipeline development projects outlined above. Such a gap would carry a risk of undetected disease resurgence.
2. In the case of Tanzania and Zimbabwe, there is need to extend the OSRO-511-SAF project activities to the end of 2008. For Tanzania this will enable the government to test a protocol of eliminating CBPP from the OSRO-511-SAF project area, which could be the basis of a long-term project for the progressive control of CBPP from the rest of the country, funded by the Government of Tanzania with or without external donor support. While in the case of Zimbabwe, the extension will enable the government to consolidate the buffer vaccination with South Africa during the critical period when there might still be FMD asymptomatic cattle. This will also enable Zimbabwe and South Africa to develop joint programming for buffer vaccination, cross-border TADs surveillance and the monitoring of free-range buffaloes especially in view of the proposed trans-frontier border.
3. Angola, Namibia, Zambia and Tanzania face the challenge of designing risk management/control strategies for low prevalence CBPP. We strongly recommend that the work-plan of OSRO-511-SAF be adjusted within the current budget to allow for a workshop primarily for field government officials at the District/Province/Zonal laboratory level together with a limited number of national specialists from the three countries plus northern Malawi to exchange experiences and agree on common key disease control intervention approaches.
4. There is an urgent need to address the issue of supporting CBPP control in Angola. The Review Team strongly recommends that FAO with the concurrence of the Government of South Africa should seek to use the provisions of OSRO-511-SAF in order to assist the Government of Angola develop a specific project proposal for the progressive control of CBPP in southern Angola and help to seek appropriate donor funding.
5. Project OSRO-511-SAF has developed a unique digital pen technology for field disease data capture and disease alert, an important element in emergency control of TADs epidemics. The proof of concept has been shown in the 3 countries where the technology is being field tested. However, before it can be put to wide use, the Team agrees with both RIACSO and the FAO EMPRES-Livestock Group at FAO Headquarters that several features still need further development in terms of the range of data to be captured, wide-scale applicability of transmission and most importantly the linkage with the FAO baseline TADInfo system. The Review Team recommends that the necessary resources be allocated within the proposed extension of OSRO-511-SAF to end 2007 to permit the pilot to be sufficiently developed to allow for its integration into the TADInfo system. Furthermore, the project group should consider

modifying the current project work plan to extend the field trials to Mozambique and Tanzania where the use of TADInfo is already established. It is important that the project team initiates soon planning discussions with FAO Headquarters as well as with the South African source company for programming the digital pen technology regarding the requirements for effecting the integration of the data from the digital pen into the TADInfo system. Officers at FAO HQ who are concerned with the TADInfo system have already indicated some of the areas of attention to include an assessment of work flows in various veterinary field activities, further work on the design of data collection forms, the compatibility of the digital pen data with the national animal disease database (e.g. TADInfo) and software programming to provide a data flow from the digital pen data server to TADInfo. It is important that the cost of such activities be determined soon.

6. The recent economic growth of the SADC region in the absence of civil conflicts has led to a level of cross-border movement of people and livestock commodities to a level that could not have been predicted some 30 years ago. This is set to further grow with the incoming SADC Customs Union. There is also likely to be an increased cross-border movement of wildlife including those that transmit TADs such as the Cape buffalo and warthogs. As the spread of TADs **constitutes an emergency in its own right**, it is highly desirable that FAO and RSA use the umbrella of OSRO-511-SAF to promote practical cross-border disease surveillance and other risk management strategies for TADs.
7. Projects OSRO-404/511-SAF have dealt with major and prolonged epidemics of FMD and CBPP, both of unprecedented magnitude in Southern Africa. The socio-economic impact of these epidemics and of the associated disease control measures have not been assessed at both the national and community/household levels in the affected countries, although some preliminary studies have been undertaken in the Caprivi Region of Namibia and in Tanzania. Such impact assessment should also take into account the background of the other prevailing acute and chronic emergencies in the region. Therefore, the MTR recommends that such studies be prominent in the proposed cross-cutting issue follow up project (see Section 7.3.4 below). Such a study would need to be specifically focused on TADs along the lines of the pre-FMD crisis study in Zimbabwe by a consortium led by ILRI⁴⁵, ensuring that it does not duplicate any similar study that may be planned by the AfDB funded SADC TADs or other projects in the SADC region.

7.3. Recommendations for a Follow-Up FAO-RSA Collaboration

At the outset, the MTR wishes to observe that while the support of the Government of the Republic of South Africa has enabled the project participating countries in Southern Africa to implement the agreed activities with the technical assistance of FAO, this support has had an additional value of serving as a catalyst for collateral projects by other donors. Examples of such consequential benefits and co-funded activities observed during the MTR are:

⁴⁵ The impact and poverty reduction implications of foot and mouth disease control in southern Africa, with special reference to Zimbabwe. B.D. Perry, T.F. Randolph, S. Ashley, R. Chimedza, T. Forman, J. Morrison, C. Poulton, S. Stevens, N. Tebele, I. Yngstrom. International Livestock Research Institute (ILRI), Nairobi, Kenya, 137 pp. and CD-ROM. 2003-ILRI

- Avian influenza at national and regional level
- Socio-economic studies on the role of livestock in rural livelihoods in a select number of countries
- Zambia EU funding of food security activities in Western, North-western Provinces
- Zimbabwe Irish support for Newcastle disease vaccination of rural chickens (OSRO-602-Eire)
- EU funding of FMD in select SADC countries, expected to be operational during 2007
- African Development Bank funding for the SADC TADs project expected to be operation towards the end of 2007
- Co-funding of some key activities of OSRO-510-SAF-NAM in the Caprivi.

The MTR Team notes that, in 2003, FAO undertook a deep, internal evaluation of its response to the continuing agricultural crisis in Southern Africa. The Team is in broad agreement with the conclusions of that evaluation and notes that FAO has taken steps to implement several aspects of the key recommendations. These include introduction through emergency assistance technologies with a potential for sustainability. It is welcome that examples that were cited then, such as Conservation Agriculture, treadle pump irrigation and control of animal disease epidemics (TADs) still feature in OSRO-510/511-SAF. The MTR notes that the recommendation of that Evaluation to strengthen national and regional information systems on food, all aspects of agriculture and related vulnerability, have been incorporated in the activities of national and regional VACs and notes that the current basket of South African funding to FAO and WFP RIACSO includes the support for the RVAC Programme Support Unit at the SADC Secretariat. This support for the SADC Early Warning (i.e. RVAC) is being managed by WFP through an MoU with SADC. In addition FAO and WFP have been cost-sharing an expert for the SADC RVAC, since 2004. Various sources of funds have been used for this. For 2006, FAO is using the RSA funds to support this cost-share.

While this MTR did not have an objective for evaluating the work of the RVAC, the following issues were noted during discussions at the SADC Secretariat:

- The current Technical Advisor, Mr Elliot Vhukrumba, has acted as the Secretary for RVAC and provided a series of technical guidance and support to SADC Early Warning and other RVAC activities. FANR regards this jointly funded WFP/FAO position to be vital not only in terms of technical support but also in building a bridge between the FANR Directorate of the SADC Secretariat and FAO/WFP relevant global expertise. His pending departure is causing concern. The FNAR Directorate hopes that he will be replaced soon.
- Recruitment of staff for the Programme Management Unit is proceeding; candidates have been interviewed (October, 2006). There is a concern within the FANR Directorate that the RSA funding will cover the initial for 2 years of the recently approved 5-year programme for strengthening the vulnerability assessment and analysis in the SADC Region. This is considered to be inadequate considering the terms of reference of the PMU which include

strengthening SADC capacity for introduction and institutionalisation of VACs in all Member countries and harmonisation of data systems. There is a desire for extension of RSA support for PMU for an additional 3 years.

- SADC and FAO have agreed on specifications for hardware and software for the Early Warning and links between countries and FANR. However to-date no funding is available for this core activity.

The MTR wishes to draw the above concerns of the FANR Directorate to the FAO/WFP-RIACSO as well as to the Government of the Republic of South Africa. The MTR notes the invaluable work of the national VACs, where these have been established. These are now beginning to influence national agricultural and food security strategies as well as identifying areas of livelihoods vulnerability. The work of VACs and RVAC will have a critical influence on the recommendations of the MTR for the post-510/511 FAO-RSA collaboration. Therefore, the MTR considers the concerns of the FANR Directorate to be reasonable and relevant to the 510/511 projects which are being reviewed.

The FAO Internal Evaluation of 2003 also identified some weaknesses, which the MTR has found to still exist. These include an absence of a rolling 3 to 4 year programme; inadequate programmed work for livestock whether in terms of asset preservation, asset recovery after losses due to natural catastrophes such as drought or floods or disease epidemics or a pathway for poverty reduction or a component of food security. To this could be added migratory crop pests and aquaculture. The 2003 Evaluation had attributed this to the fact that Emergency Coordination Units and FAORs were staffed predominantly by crop production specialists. The MTR notes that currently there is a broader range of expertise both in the ECUs and FAORs than in 2003. Also the technical experts in the FAO-RIACSO coordination unit now have a dual reporting role to FAO HQ, i.e. to the Emergency and Rehabilitation Division as well as to the parent Technical Divisions. Accordingly, there is a greater readiness to address issues of agricultural diversification than in the past. The MTR hopes that the 510-successor project will have a programmed approach that will emphasise livelihoods including the role of livestock and fisheries as well as other income generating activities such as processing and marketing of agricultural produce.

The 2003 Evaluation also referred to the strength of the FAO Emergency and Rehabilitation system as lying in its ability to use FAO's TCP facility either for immediate response before donor intervention can be marshalled for an acute emergency or for stimulating the set up of such potentially sustainable technologies as referred to above and the ability to bridge emergency with development work drawing on the expertise of FAO's normative programme as well as its credibility with the donor community. The ability to bring into theatre collateral ad hoc support to from donors to an on-going activity was also highlighted as one of the strengths of the FAO Emergency and Rehabilitation System.

7.3.1 The MTR Team echoes the above observations and notes that the success for such an approach cannot rely simply on short interventions of 12 to 18 months. During this evaluation/review of OSRO-403/404-SAF and OSRO-510/511-SAF the activities that stood out as most successful (e.g. containment and prevention of spread of FMD and CBPP, JFFSL in Mozambique, supporting Newcastle disease vaccination in Mozambique, conservation agriculture) have been those that have either gone through a period of 5 or more years of TCP plus emergency assistance by South Africa, or have provided catalytic support to on-going activities or have built on prior initiatives by either governments or donors or NGOs. Furthermore, It is clear, from the various consultations undertaken by the MTR team, that the overriding consideration for the collaboration between FAO and the Government of South Africa, in the field of humanitarian emergency interventions, is the emphasis on rehabilitation, so as to start addressing the underlying causes of chronic agricultural vulnerability and food insecurity in the Southern African region. The MTR sees this agricultural rehabilitation work of FAO RIACSO and the ECUs at the country level as one that focuses on programmed interventions which are designed as pilots of sufficient duration to be able to generate results/impact that can influence government development programmes in the field of agriculture and livestock. Thus a major outcome would be a set of agricultural/livestock models that are based on practical results and experience generated in the region and which can be taken up by government development planning systems with or without assistance from international development partners. In designing such pilot programmes, it is paramount that their potential for regional impact on rural livelihoods and for sustainability be taken into consideration. Within this concept the MTR makes the following recommendations as a guide for the follow up FAO-RSA collaboration regarding humanitarian interventions, which hopefully can dove-tail with the current OSRO-510/511-SAF projects:

Therefore, the MTR recommends that FAO and the Government of South Africa consider the next phase in their collaboration as being based on assured funding for a 3 to 5 year core programme in order to be able to address, in a planned manner, the chronic agricultural emergency, the continuing humanitarian crisis and its impact on the food security status of vulnerable households which have agricultural based livelihoods as well as the instituting of measures for preparedness and capacity to respond to such acute shocks as droughts, floods and outbreaks of transboundary animal diseases in the Southern African Region. This could form about 70% of the funding, with the remaining 30% being allowed for innovative short term interventions that may be either experimental or judged as catalytic or for addressing country specific needs

7.3.2 The MTR views the recommendation for an assured 3 to 5 year funding as a natural progression from the current FAO-RSA collaboration that will allow FAO, through its RIACSO programme in Johannesburg as well as the country based Emergency Coordination Units within the FAO Representations, to identify a relatively short list of interventions or issues that can be programmed as regional projects which address the problem of chronic emergency management and agricultural vulnerability in southern Africa.

Therefore, the MTR recommends that, given such assured funding, FAO-RIACSO should consult with other UN Agencies, the SADC Secretariat, the South African

National Department of Agriculture, relevant Ministries in the project countries, key stakeholders in the national agricultural and livestock systems – both governmental and non-governmental as well as the FAO Normative Technical Divisions in developing such a set of activities that will bridge emergency interventions with long-term development. The driver should be the quest for building the capacity within the farming communities for their ability to face future agricultural shocks.

It is further recommended that at the country level such programmed work be included into the Country Programme portfolio for the FAO Representation.

7.3.3 The MTR views that the programme based approach would offer the following advantages to both parties:

- ⇒ Ability to have a clear emphasis on addressing chronic vulnerability in the SADC region within the livelihoods framework context, which will take on not only crop agriculture but will include livestock production (especially short-cycle stocks) and aquaculture and will also address the issues of asset protection by a visible attention to transboundary animal diseases and plant pests. The livelihood approach will also allow RIACSO to address the cross-cutting issues in agriculture, such as gender, HIV/AIDS, market access, rural based, small-scale agricultural processing and skills development in a coherent way
- ⇒ Ability to maintain in the region a close liaison with national and regional VACs and GIEWS, the Joint FAO-WFP crop assessment as well as with early warning systems for transboundary animal diseases
- ⇒ Ability to bridge between emergency interventions and the normative work of FAO as well as with the development agenda of national governments and donors. Some encouraging advances of synergy between emergency and normative work were evident in Mozambique, Namibia, and Zambia. There are also examples of a seamless transition from emergency to development, e.g. work on TADs with a pathway of TCP – OSRO/SAF – Govt and donor support for long-term programmes/projects.
- ⇒ Ability to use government extension systems for crop and animal agriculture as the preferred implementation partners while retain the flexibility of involving NGOs as well.

Would enhance FAO's technical coordination role with agricultural emergency stakeholders (governmental, non-governmental institutions, farmers associations and research institution), exercised to the extent possible in collaboration with the host government. Encouraging examples were observed by the MTR in Zimbabwe, Zambia and the Caprivi Region of Namibia. It should be noted that in some countries, e.g. Zambia and Tanzania, there are already emerging government and donor partnerships in stakeholder coordination. On the side of development partners the FAOR is often the coordinator.

- ⇒ Ability to maintain technical competence in the region that would permit rapid response in case of sudden upsurges in natural emergencies.

Therefore, the MTR recommends that FAO-RIACSO develops a core programme for addressing chronic agricultural vulnerability based on the Livelihood Framework

The MTR offers the following as examples of approaches that could be considered for developing a livelihood framework based approach

Examples of Possible Core Themes For 510-successor project

Theme:

Piloting agricultural productivity improvement and good farming practices for addressing the negative impact of chronic emergencies on rural livelihoods, drawing on the FAO normative expertise not only in the field of crop and livestock production but also on expertise in such aspects of sustainable agriculture as land use and climate change

This could cover the following selection of activities:

- Piloting conservation agriculture in all the project countries (including Angola and Tanzania) focussing on the grain and vegetables (i.e. on food security). Zimbabwe provides a C.A. Task Force model that could be emulated by ECU's in other countries.
- Piloting school gardens, building on lessons from OSRO-403/510-SAF
- Piloting small-scale irrigation, building on the lessons from OSRO-510-SAF but also taking into account the needs for promoting small-scale aquaculture.
- Piloting small-scale dairying in peri-urban areas of Angola, northern Namibia including Caprivi and in Lesotho, to the extent possible building on experience from within the region, such as the USAID funded project in Zambia which is implemented by Land-o-Lakes cooperative in collaboration with the government livestock extension system. (Final list of countries after consultations)
- Piloting and promoting biosecurity-based, good farming practices for village chickens and other short-cycle stocks (rabbits, goats, sheep, pigs) for all project countries. For chickens emphasis should be on housing to minimise co-habiting of chickens with humans and on Newcastle disease vaccination to be on the basis of triple benefits (enhancing household income, food security and facilitating avian influenza preparedness). For small-ruminants (primarily goats) promote networks especially in Angola, Zimbabwe, Zambia, Tanzania, Swaziland and Lesotho. For pigs encouraging hygienic housing and provision of local slaughter facilities will also serve to prevent the introduction and spread of African swine fever and classical ; piloting could commence in Mozambique, Malawi. It should be noted that a programmed promotion of short-cycle stocks will be an indirect empowerment instrument for women as in most countries short cycle stock are kept predominantly by women. It should be noted that the emphasis on biosecurity-based, good farming practices is driven not only by considerations of animal productivity and prevention of animal diseases but also by attention to human health. Recent studies have shown that during the last 30 years some 75 to 80% of new emerging or re-emerging human diseases have originated from animals. This is acknowledged by the World Health Organisation. The list of such diseases includes

ebola, HIV/AIDS, SARS, mad-cow disease and avian influenza, especially the H5N1 sub-type, which is a contemporary threat. NB-1: This activity should be jointly programmed with 511 TADs aspect of addressing SADC tactical diseases. NB-2: Selection of countries to follow consultations

- In collaboration with 511-successor the piloting of training/awareness packages for small-scale or communal farmers focusing on good farming practices, fodder production and dry season feeding, awareness for key animal diseases, reporting and grassroots based clinical surveillance.

For 511-successor project

Theme:

To focus on preparedness, response and piloting control interventions for TADs, in collaboration with FAO-EMPRES Livestock and ECTAD and to assist countries set up surveillance and early warning systems for migratory pests, especially locust and army worm, in collaboration with FAO-Locust and Plant Protection.

The following could be key activities:

- Piloting the control interventions for the two strategic diseases
 - In collaboration with the SADC TADs (AfDB) & SADC FMD (EU) projects, undertake FMD risk assessment and pilot cross-border risk management of TADs through harmonised surveillance and disease control interventions in the Caprivi eco-system involving Angola, Namibia, Zambia and Botswana, the Zimbabwe-RSA Limpopo eco-system and the Tanzania-Malawi-Zambia interface
 - CBPP control strategies in the current project area in Tanzania, Zambia and extend same to southern Angola building on experience of Namibia, Tanzania and Zambia.
- Through joint programming with 510-successor project, pilot control strategies for specific tactical disease control i.e.,
 - African swine fever in relation to small-scale, family pig farming in Mozambique
 - Contagious Caprine Pleuropneumonia (CCPP) small ruminants Tanzania NB: to prevent spread to rest of SADC as TZ is only country affected by CCPP
 - Newcastle disease control in village chickens in potentially high risk avian influenza areas in all countries, both to improve rural livelihoods and to facilitate the surveillance for and preparedness against avian influenza.
- Through joint programming with avian influenza programme and in collaboration with the SADC TADs project piloting institutionalisation of preparedness for TADS at the district, national and SADC regional level. In addition to the list of exotic/emerging diseases identified by the SADC Directors of Veterinary Services, there could be added diseases which are confined to only one or two countries in the SADC region. Notable examples are classical swine fever which can be confused with African swine fever and which has recently been identified in South Africa and Caprine Contagious Pleuropneumonia in Tanzania.
- Transfer work on migratory pests from 510 to 511-sucesor project so that 511 would link to both arms of the FAO EMPRES programme. Thus, in collaboration with the FAO

EMPRES – Locust and the SADC Secretariat, pilot institutionalisation of preparedness against migratory crop pests (especially the red locust and army worm) in SADC, focusing on surveillance, early warning and targeted spraying.

- Collaborate with FAO-EMPRES (Livestock and Locust) in linking the digital pen technology to FAO systems for early warning for either transboundary animal diseases or migratory pests.

Addressing cross Cutting Issues in 510-511 successor projects

Cross cutting issues should be embedded into activities at all stages of planning design and management. HIV/AIDS, socio-economic and gender awareness raising should be included in information and as part of monitoring, mentoring and evaluation. There should be appropriate targeting of beneficiaries, activities and inputs for the promotion of social inclusion with the aim to support sustainable development.

Theme;

A recommended way forward would be joint programming with 510-511 successor projects and other UN agencies such as UNIFEM, UNICEF, UNAIDS in order to pilot the mainstreaming of cross cutting issues in agriculture and livestock programmes and to institutionalize livelihood diversification, cross cutting skills development in production, processing and marketing as well as addressing the long term impacts of HIV/AIDS on nutrition through greater gender equality and socio-economic empowerment.

Planning, Design and Management

- It should be consistently reinforced that the end goal are impacts which lead to sustainable socio-economic development/livelihood diversification. Purposes, outputs and activities should consistently reflect and reinforce this goal.
- Past activities have not had clear specification of the socio-economic impact that is intended by the activity. Demonstrating which livelihood asset a particular activity was addressing (and how) would be an indicator that could be applied in planning/included in the logical framework which would support specification of data collection.
- A SEAGA analysis should not only take place during planning but throughout the course of monitoring and evaluation. Monitoring should also be inclusive of mentoring by officers experienced in socio-economics and gender issues.
- There is little coordination across the region of governments and other implementing agencies on socio-economic development and gender awareness. FAO has the capacity to play a strategic role in influencing implementing agencies on these issues given consistent criteria that could be applied to the country context (socio-cultural, political) and an understanding of the implementing agencies' capacity.

- Gender aware procurement e.g. providing protective clothing/equipment and/or stipulating that fertilizer and other inputs that are not harmful to pregnant women should be the type of input provided.
- Ensuring the uptake of the tools already developed by FAO for mainstreaming cross cutting issues. Mainstreaming cross cutting issues need resources especially for constant time input, from dedicated and specialised practitioners.

HIV/AIDS, Socio-economic and Gender Awareness in Information Sharing, Monitoring and Evaluation

- Information sharing and training material should be gender sensitive. For example, publications and presentations should be inclusive of illustrations/positive images of women farming/conducting activities. In a two day training of trainers session there should be time scheduled (2-3 hours) for cross cutting issues: HIV/AIDS and gender equality specifically. These can be simple exercises, using a participatory approach that should also be geared to group building and self esteem raising for both men and women.
- It is recommended that monitoring and evaluation/information officers appointed are also trained in gender mainstreaming and vulnerability with a view to moving from simply process monitoring to process and impact monitoring, mentoring and evaluation. This is in order to better facilitate lessons learned on the effectiveness of activities in bridging the development gap and achieving sustainability.
- Gender empowerment is needed for women to be able to take up HIV/AIDS 'protection measures'. In order to advocate, support, understand, monitor and mentor something as complex as gender empower experienced practitioners are essential.

Appropriate Targeting and Inputs For Social Inclusion and Sustainable Development

- When planning, criteria on what is meant by vulnerable people and what category of vulnerability, should be defined for different activities in a participatory manner i.e. to be inclusive of beneficiaries own definitions of vulnerability, poverty etc. A broad range of socio-cultural and economic indicators should be considered in order to understand the context of activities.
- The criteria for extension workers training should stipulate that there is a gender balance in targeting beneficiaries. To ensure gender equality in capacity building training of trainers should be done at a time suitable for women's' triple roles (child care, economic and community development).
- Some districts, provinces and countries need greater gender awareness raising than others. Thus the socio-cultural/gender context at household through to country level should be considered before implementing an activity/intervention i.e. one model does not fit all. Best practise models could be produced and adapted according to socio-economic and socio-cultural context in the same

manner that technical models are adapted according to climatic and soil conditions.

- In up scaling or adding onto activities that are already in place, support for up scaling of successful activities to be more socially inclusive should be given i.e. increased funding could be geared to not only providing more inputs but to the allocation of support for those who were excluded (farmers with less financial capacity and/or human capacity) from the activity due to selection criteria already in place.
- Support for the commercialisation of products should be accompanied by support for empowering women to have greater access to markets and control of benefits. Market chain analysis should be conducted in a gender sensitive manner.

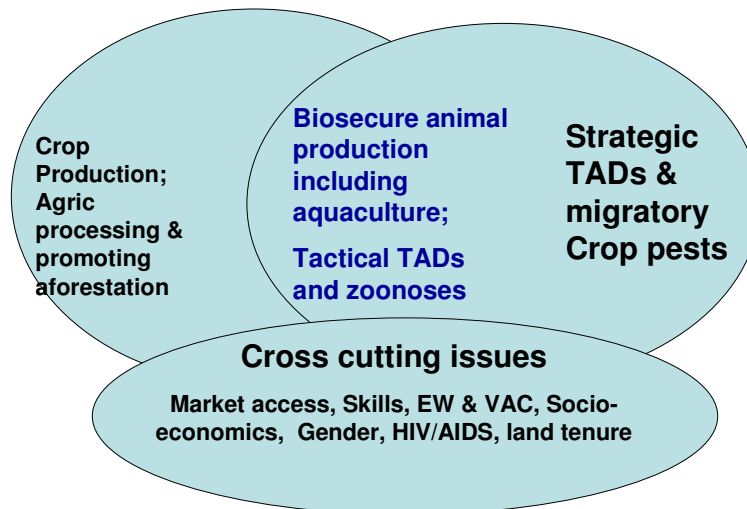
Therefore, the MTR recommends that in selecting the themes and activities, FAO-RIACSO should pay particular attention to those that are likely to have a regional and sustainable impact on rural livelihoods and food security in accordance to the both the Millennium Development Goals and the Dar es Salaam Declaration of the SADC Summit of 2003.

The MTR is of the view that the proposed programming structure will reflect a better balanced approach to the already accepted premise for focusing on rural livelihoods, reflecting better planning for animal production and for addressing cross-cutting issue in the context of chronic agricultural vulnerability in the SADC region. The chart below demonstrates the linkages of themes in the proposed programme structure.

The proposed integrated programming, including the stakeholder consultations, will further strengthen the regional integration in agricultural development to the mutual benefit of both South Africa and the other countries in the SADC region. It will also address the issue of transboundary animal diseases for which there is an increasing risk of both elevated incidence and spread within the region along the economic gradient that will be associated with increasing cross-border movement of peoples and animal commodities in the SADC region. A truism is that the economic gradient will increasingly be towards South Africa, at least in the medium term and thereby the increasing risk of animal disease spread towards South Africa.

Finally the MTR has proposed the animal production systems to be promoted through the new programme should emphasise biosecurity-based good animal production practise. This will address not only improvement in animal production and the prevention of animal diseases but it will also aim at protecting human health, as it is now widely recognised that some 75 to 80% of new emerging human infections in the last 30 years have originated from animals or animal products.

Post 510/511 Programming



8. Annexes

Annex 8.1. Consolidated Status for OSRO-511-SAF Outputs – September 2006.

OSRO-511-SAF: EXPECTED OUTPUTS - Summary of Progress to September 2006

Project Countries: Angola, Malawi, Mozambique, Namibia, Tanzania, Zambia, Zimbabwe

Expected outputs	Quantity achievement to date	Remarks
4 “Mobile veterinary laboratories” constructed and equipped in southern Angola.	The laboratories have arrived and are under customs procedures.	The zones where the labs are to be placed are under evaluation. Training requirements for lab technicians were studied.
1 000000 CBPP vaccinations in Tanzania	The Vaccines have already been ordered and are awaiting delivery. Import permit to allow delivery of the vaccines is being processed. Vaccinations have been going on since May 2006 using government purchased vaccines. A total of 1,181,284 animals have been vaccinated in the whole country and 383,250 in the project area and the target is to vaccinate 4million cattle countrywide and 1 million in the project area.	
200 000 CBPP vaccinations in Zambia	200,000 CBPP vaccines doses procured	Not yet delivered; awaiting importation formalities. Vaccinations planned for October
500000 FMD vaccinations in Zimbabwe	54890 cattle have been vaccinated with FAO assistance of fuel and DSA in the districts of Beitbridge, and Mangwe using government acquired vaccine. Assistance to DVS vehicle fleet with tyres to assist with mobility during	A reduced quantity due to budgetary constraints and has already arrived in the country. 1 st round of vaccinations in the project area is planned for October 2006 to cover

Expected outputs	Quantity achievement to date	Remarks
	<p>vaccination and awareness campaigns.</p> <p>Installation of cold room at Beitbridge border post (doubling as a port health facility and storage of vaccine) for the project area.</p> <p>improvement of the cold chain management rehabilitation of other cold rooms at Chiredzi, Rutenga and Gwanda is underway.</p>	<p>the districts of Chiredzi, Masvingo, Beit-Bridge, Gwanda and Matobo and Mangwe in Mat. South.</p>
<p>10 crush pens constructed along international borders hotspots in Malawi.</p>	<p>Five (5) crush pens constructed in two (2) districts in southern Malawi</p>	<p>Construction of the remaining five (5) crush pens in two (2) districts in northern Malawi starts third week of October 2006</p>
<p>Veterinary and sister departmental staff trained in various aspects of TADs control</p>	<p>Malawi: Twelve (20) senior veterinary personnel from the eight (8) Agricultural Development Divisions and three (3) veterinary laboratories were trained in TADs & NAI identification, Contingency Plans and Emergency Preparedness Plans</p> <p>Tanzania: 40 Veterinary staff (18 District Veterinary Officers, 18 District Meat Inspectors, 3 Regional Livestock Officers, 1 private Veterinarian) have been trained in field CBPP surveillance</p> <p>Zambia: 21 stakeholders trained; 25 Veterinary Assistants from Livingstone, Kazungula, Sesheke, Northern Province and Copperbelt trained in TADs</p> <p>Zimbabwe: Provincial and district officers were introduced to TADInfo during the inception workshop.</p> <p>Contacts have been made with RELO and Rome regarding the training and</p>	<p>Malawi: These were trained as Trainers of Trainers (ToT) for them to be able to train their front line personnel (Vet Assistants and Animal Health Surveillance Assistants)</p> <p>Zimbabwe: Targeted training for staff still to be approved by the Principal Director.</p>

Expected outputs	Quantity achievement to date	Remarks
	<p>introduction of</p> <p>Mozambique: The start of staff training and community awareness has been delayed because of the restructuring of the National Veterinary Service. However, FMD vaccination in the buffer zone has commenced.</p>	
<p>Public awareness campaigns on FMD & CBPP through radio broadcasts, posters, pamphlets</p>	<p>Malawi: Just initiated contractual logistics and other necessary arrangements for TADs awareness campaigns (radio, posters, leaflets and drama)</p> <p>Tanzania: Weekly radio spot announcements were aired by two radio stations starting from April 2006 for eight weeks.</p> <ul style="list-style-type: none"> • 3,000 posters and 6,000 leaflets were printed and distributed during the National Agricultural shows and the same number is in process of being reprinted to be distributed in the project area. • Staff members trained in mass communication travelled to the project area to show cinema shows and hold public awareness meetings. <p>Zambia: 3 Public campaign meetings in Kazungula</p> <p>Zimbabwe: over 100 members of LDCs have been trained in FMD awareness (insert details) over 1000 pamphlets and posters in English and vernacular on FMD and livestock movement control were distributed. Animal health Act that includes the role of farmers was explained and discussed with farmers.</p> <p>Facilitated radio programmes on FMD that was conducted by DVS staff.</p>	<p>Malawi: Has been a slow process in implementation because of lack of experienced and competent institutions or individuals in this field</p> <p>Zimbabwe: The number of people trained was reduced due to budgetary constraints. - There is a demand and need for production of more posters.</p>

Expected outputs	Quantity achievement to date	Remarks
<p>Reports produced on disease monitoring and sero-surveillance in target countries</p>	<p>Angola: 2 reports on FMD and CBPP from the OVI, Pretoria.</p> <p>Malawi: Two (2) CBPP sero-surveillance and one (1) clinical, necropsy and tissue samples reports from four (4) CBPP suspected animals in northern Malawi (Chitipa district)</p> <p>Tanzania: Reports from passive surveillance are routinely received at the epidemiology unit. Number of reports received from January to June 2006 for the whole country was 1,434 out of which 417 reports were from the project area. CBPP reports received from the project area within that time were three (One from Iringa region and 2 from Mbeya region.</p> <p>Active surveillance that will include sero- surveillance will be done after getting CBPP test kit.</p> <p>Zambia: 3 monthly Reports; 1 quarterly Report</p> <p>Zimbabwe: A consultant was hired to work with the project stakeholders to produce the FMD surveillance strategy document</p> <p>An FMD National Surveillance committee (NSC) comprising of DVS (field and lab) and private sector and University of Zimbabwe - Vet faculty has been inaugurated with clear ToR.</p>	<p>Angola: 136 FMD sera samples shown negatives. And of the 136 CBPP sera Samples. 33.1 %, 55.1% and 11.8% were found Positive, negative and suspicious respectively.</p> <p>Malawi: All samples were negative including those three (3) which initially tested positive serologically</p> <p>Zimbabwe: Implementation of the strategy is just starting.</p> <p>Project assistance will only be in sero-surveillance and the DVS will continue with the passive surveillance.</p>

Expected outputs	Quantity achievement to date	Remarks
FMD & CBPP buffer and surveillance zones demarcated in Tanzania, Malawi and Zambia project operational areas	<p>Malawi: CBPP and FMD surveillance zones have been identified, i.e. Karonga in the north and Chikwawa in the south. Finalised the FMD control zoning strategy in Lower Shire around Lengwe National Park which has FMD (SAT 1, 2, 3) infected buffaloes and maps produced.</p> <p>Tanzania: The project area i.e. Iringa, Mbeya and Rukwa regions are taken as buffer to stop incursion of CBPP into northern Zambia and south eastern part of Tanzania.</p> <p>Zambia: 1 preliminary Report on CBPP; 1 report on FMD</p>	<p>Malawi: Implementation of the new strategy for FMD control zoning is awaiting government approval once the bill to be submitted is approved by parliament</p>
Timely information provided for decision-making	<p>Tanzania: CBPP surveillance strengthened in the project area.</p> <p>Digital pen technology: The technology involves the capture of disease data/information collected on paper forms via cell phones or PCs connected to the Internet. The files are sent to a server that interprets the data using character and word recognition techniques. Once this is completed, the data are fed into a database which then can be checked and edited. The actual time for these processes is seconds.</p> <p>The technology is being piloted in Namibia (Caprivi and Grootfontein), Sesheke district of Zambia and in Malawi.</p> <p>Malawi – digital pen Digital Pen Technology Pilot project operational at four (4) sites in two (2) districts, one (1) each in northern and southern Malawi</p>	<p>Tanzania: Surveillance strategy has already been developed. Laboratory equipment purchased to strengthen diagnostic capacity at Veterinary Investigation Centre (V.I.C) Iringa. These include: Incubator, Water bath, Electronic weigh balance, Table centrifuge, Post mortem kit, Mono channel pipettes (2), Multi-channel pipette (1)</p> <p>Digital pen technology: The concept has been proven in that data capture, transmission and feed-back have been</p>

Expected outputs	Quantity achievement to date	Remarks
	<p>2PCs one Dan office, Oliver Unable to use cell phone transmission PC they only have access to phone lines & it is difficult to connect Encouraged them to link up with other infrastructure</p> <p>Namibia – digital pen Operational areas: Grootfontein & Katima Mulilo 4 pens – 2 in each place 1 PC in Windhoek, vet Headquarters</p> <p>Zambia – digital pen technology: 8 staff trained in data capture; 3 Computers for data capture installed in Sesheke and Lusaka; 81 Surveillance and outbreak reports sent to Server</p>	<p>demonstrated in all the trial areas. A user workshop is being held at RIACSO. Steps have been initiated to examine the feasibility of linkage with the FAO TADInfo system. The technology potential is good. But it still requires about another year of development work to ensure seamless linkage with TADInfo</p> <p>Malawi: There is potential for timely information communication and decision making for necessary interventions. Hence, ups-calling coverage of the technology, especially in Notifiable Avian Influenza surveillance will very beneficial</p>

Annex 8.2.Evolution of FMD in Zimbabwe

The following summarises the evolution of FMD in Zimbabwe, based on the presentations by the Division of Veterinary and Livestock Services.

Zimbabwe had experienced widespread outbreaks of FMD between 17th August 2001 and 2005. The epidemic eventually involved 500 dip-tank areas in 8 provinces. The first outbreak was at Willsgrove Feedlot near Bulawayo. This was traced back to ranches and communal dip-tanks in the Jopempi area of Beit Bridge district, Matabeleland, South province. The last outbreak was at Chetagwi in Mwenzi District, in Masvingo Province, neighbouring Beit Bridge District in Matabeleland South.

All the outbreaks could be traced to the following 5 primary outbreaks:

- The first at Willsgrove Feedlot near Bulawayo / Jopempi near Beit Bridge FMD SAT-2 outbreak: 17th August 2001.
- The second (SAT2) reported on the 28th August 2001 at Sobendhle Diptank in Lupane Communal Area, Matabeleland North province.
- The third (SAT2) reported on the 22nd October 2001 at Manondo Ranch in Umguza district in Matabeleland North province.
- The fourth (SAT2) was reported simultaneously at two foci on either side of the Save Valley Wildlife Conservancy on the 16th August 2002 at Top Camp Diptank in Bikita district, Masvingo Province and at Gumira Diptank in Chipinge District, Manicaland Province.
- The fifth primary outbreak (SAT1) was reported on 1st October 2002 at Davata Diptank in the Sengwe Communal Area in Chiredzi district, Masvingo Province. Davata Diptank is at the confluence of the Bubyeye and Limpopo Rivers near Gona-re-Zhou National Park. This infection may have originated from wild buffalo moving up and down the river systems from the Kruger National Park across the Limpopo River or Gona-re-Zhou National Park along the Lundi River system.

All the 5 primary outbreaks could be associated with buffalo-cattle contact, which had been a consequence of a prolonged drought and in some cases a breach in the game fencing surrounding the game parks. It should be noted that the outbreaks were due to two distinct sero-types of FMD virus, Types SAT-2 and SAT-1.

It appears that 2005 was the tail end of the epidemic. The briefing document from the Department of Veterinary Services cites December 2004 as the date for the last outbreak. In his presentation to the September 2006 Agricultural Coordination Group in Harare, the Principal Director for Veterinary and Livestock Services referred to the epidemic as having lasted from 2001 to 2005. During a public awareness, OSRO-511-SAF workshop in July-August 2005, the Chief Veterinary Officer (Disease Control) gave the number of outbreaks encountered as 18, 69, 354, 85, and 10 respectively for 2001, 2002, 2003, 2004 and 2005. A Zimbabwean delegate to the SADC Epidemiology and Informatics Committee meeting (24 to 25 November 2005 at Onderstepoort) referred to there having been 13 outbreaks of FMD during 2005. During 2006, neighbouring Botswana experienced outbreaks of FMD due to two different sero-types. One was in Kasane district. This was due to type SAT-1. Molecular analysis of the causal virus showed no relationship with SAT-1 previous isolates from Zimbabwe. This analysis indicated that the Botswana SAT-1 virus in 2006 was internally derived, probably from the buffalo population within Botswana. The second outbreak was in the Veterinary Zone 7 of Botswana was due to sero-type SAT-2. The molecular analysis at the Onderstepoort Veterinary Institute of the FMD

SAT-2 virus from the 2006 outbreak in Botswana has indicated the virus to be similar to that which had been responsible for the outbreak in South Matabeleland in 2001 and the spill-over into Botswana in 2002. While there has been no clear clinical epidemiological link with any contemporary FMD outbreak in Zimbabwe, it is possible that the virus might have been transferred from Zimbabwe in sub-clinically (i.e. carrier) infected cattle, since it is acknowledged that there is considerable illegal movement of livestock commodities from Zimbabwe into Botswana.

Prior to 2001, there had been outbreaks of FMD adjacent to the Save Wildlife Conservancy in Chiredzi district, Masvingo Province; two in 1999 (SAT3 at Mapanza Estate in June; and SAT1 at Mkwazine Ranch in July) and one outbreak at Mkwazi Ranch in August 1997. The disease has always occurred in Zimbabwe due to the presence in wildlife areas of large herds of buffalo that are the natural host and carrier of the virus that causes foot-and-mouth disease (FMD) outbreaks in cattle and other cloven-hoofed animals. Accurate recording of outbreaks started in 1931 and to date there have been 85 primary outbreaks of the disease. Ninety-five percent (95%) of primary outbreaks of foot-and-mouth disease in Zimbabwe have been associated with stray buffalo/cattle contact.

The persistent drought during 2001/2002 and 2002/2003 agricultural seasons and the consequent shortage of grazing and crop residues resulted in cattle being moved illegally in search of relief grazing. The concurrent resettlement programme also generated increased movement of livestock, some of which was illegal and thus carried the risk of spreading infection. Reliance on ox-drawn transport to move crops and food to and from markets exacerbated the spread of the disease.

Past outbreaks of FMD were quickly brought under control and did not affect large areas of the country because the Department of Veterinary Services (DVS) had had sufficient resources at its disposal to set up prompt disease containment and control measures including effective mass vaccination of cattle, movement control, disease surveillance and monitoring of the intactness of game fencing to prevent repeat wildlife-livestock contact. In 2001 all these elements were sub-optimal. Furthermore, the drought of 2001 and 2002 was far more extensive than preceding immediate experience. Except for the emergency assistance from FAO TCP projects, the support from South Africa both on bilateral basis and through FAO and a one-off provision of some vaccine by the Botswana Government, there has been no other international support for the FMD emergency. The lack of capacity for prompt response has been a major contributor to the unprecedented wide-scale spread of FMD from the initial foci (primary outbreaks).

Annex 8.3. Evolution of CBPP in Caprivi Region of Namibia

Contagious bovine Pleuropneumonia (CBPP) was detected in August 2003 following the illegal introduction of an infected animal in one kraal at Maunga crush pen area. The immediate source seems to have been Zambia although it has not been established whether Zambia was the primary or secondary source. This was the first time Caprivi experienced CBPP after about 60 years. The disease subsequently spread to adjacent kraals in Batubaja and Mbilajwe crush pen areas since the population was naïve with no routine vaccination.

At Mukisa crush pen about 8 km from Katima Mulilo 15 cattle were affected and had to be slaughtered in April 2004.

Another primary focus of CBPP was detected in December 2004 at Kazuka crush pen area in the eastern flood plain.

8.3.1. Areas affected by the disease

Crush pen areas affected by the disease to date are Maunga, Batubaja and Mbilajwe. Serological evidence of infection using CFT has been detected at Samutetesi crush pen. The crush pens are approximately 10 km from the border with Botswana.

Kazuka crush pen area is about 30km from Botswana and 10km from the Zambian border.

8.4.1.2 Cattle mortalities

Since the beginning of the outbreaks, about 600 cattle died. Mortality in the affected kraals ranged from 10% to 90%. Since April 2004 disease prevalence dropped to less than 1% in the previously affected areas.

In the Kazuka outbreak some 79 animals have died to date.

8.4.1.3 Control Measures in place

Vaccination

- a) Following the detection of the disease a vaccination campaign was launched in October 2003 which covered 32 crush pen areas from Lianshulu to Gunkwe on either side of the outbreak area. Subsequent vaccinations were done in July/August 2004. Thereafter annual vaccinations have been done.
- b) Compliance by farmers is good despite some reactions caused by the vaccine.
- c) Vaccination coverage per session ranges from 96% to 98%.
- d) Vaccine reactions have been observed in cattle being vaccinated for the first time and due to poor vaccination technique.

Depopulation

Namibia has not implemented compulsory slaughter in affected areas due to absence of enabling legislation and compensation. Farmers are being advised to slaughter affected cattle through the quarantine system. Initially there was resistance to slaughter but later farmers realised that it was a better option.

Currently farmers in the previously affected areas are sending cattle for slaughter through the quarantine system. To date some 1200 cattle have been slaughtered from the previously affected areas in the south-western focus. At Kazuka some 129 cattle have been slaughtered voluntarily.

The crush pen areas affected and those adjacent, that is, Kapani, Samulandela, Samutetesi, Malengalenga, Kazuka, Itomba, Sigwe, Muzii and Sigwe are in quarantine and the only movement allowed is for slaughter by motor transport.

Surveillance

- a) Following the detection of the disease surveillance was intensified in the risk areas. Community based animal health workers (CAHWs) and farmers were sensitised of the disease. Surveillance is implemented throughout the region by the network of Animal Health Technicians (AHT) and CAHWs.
- b) Surveillance is a combination of passive and active. Cattle are observed for clinical signs of disease during vaccination programmes, at quarantine farms and during outbreak investigation. There is also post mortem examination at the abattoirs and other slaughter facilities. Sero-surveillance is being implemented in and around the outbreak areas.
- c) In a sero-survey done in and around the affected areas (10 crush pens), serological evidence was only detected in the previously affected crush pens of Maunga, Batubaja Mbilajwe and Samutetesi. Fifteen kraals had serological positive cases from 63 kraals tested. Positive animals per kraal ranged from 7 to 36%. The sero-surveys are ongoing and the results are being communicated to the farmers.
- d) Directorate of Veterinary Services (DVS) staff with assistance of cooperating partners and CAHWs does disease surveillance. It is an ongoing exercise during scheduled vaccinations, at quarantine stations and in response to farmer reports.

Communication

- a) The farming community is sensitised through meetings at Village Development Committee (VDC) level, at farmer's association meetings, Regional Development Coordination Committee (RDCC) level and through the electronic and print media.
- b) Farmers give feedback through reports at VDC meetings and at local DVS offices.
- c) Disease reports are submitted weekly to the Epidemiology Section at Veterinary Head Office, which reports regionally (SADC), and internationally through the World Organisation for Animal Health (OIE) system.

8.4.1.4 Equipment provided by FAO under Project: OSRO/RAF/404/SAF-NAM

10 Tents	7 Water containers	120,000	doses	anthrax
25 Stretchers	15 Sleeping bags		vaccine	
25 Chairs	80 Freezer packs	380,000	doses	CBPP
10 Tables	20 Cool boxes		vaccine	
7 Camping lamps				

FAO has also supported surveillance, training of staff in disease recognition and community awareness campaigns.

Prior to the support from FAO the DVS was only able to carry out peri-focal vaccinations. The FAO support enables the DVS to organize campaign vaccinations which resulted in a dramatic drop in clinical cases. At the national level, the Director of Veterinary Services/Chief Veterinary Officer, summarised the impact of the OSRO-404-SAF as having been timely, critical and successful. It provided vaccine and logistical support for 2 rounds of intensive vaccination, which resulted in a dramatic drop in the number of cases reported. This also allowed the government to mobilize its own resources to be able to sustain the annual vaccination without interruption. The emergency was thus successfully contained. The emergency support from FAO is acknowledged in the annual report of the Directorate of Veterinary Services for 2005.

The community level impact of the CBPP outbreak can be summarised by the interview with Mr Zacharia Mashazi, Village Head, Maunga, the first area to be affected by CBPP. Mr Mashazi is a village headman at Maunga. He has two married sons and a married daughter who live in the same village.

Mr Mashazi described the disease which in 2003 had attacked his own cattle and those of his neighbours. He and his neighbours lost a lot of animals. Before the outbreak he had 98 head of cattle and now (Sept 2006) he has only 10. He described typical signs of acute epidemic CBPP, including lung congestion and excessive fluid in the chest. He had never seen such a disease before. However he could recall that when he was young his father had told him about a similar disease but it had not been so devastating.

He stated that the disease had stopped after the veterinary doctors had injected medicine (vaccination) into all the surviving cattle. He had not seen the disease in the village in 2005 and 2006.

He listed the following as the most important impacts on the livelihood of his family:

- Loss of draft power; he used to be able to cultivate a large area. Now he is reduced to cultivating by hand hoe a much reduced area.
- He is no longer able to neither pay for schooling of young children nor meet family expenses as he was able to do before the epidemic.
- While he was able to help his eldest son who married before the disease outbreak with marriage costs (including dowry), he was not able to do so for the younger son who recently married after the cattle deaths. Similarly the family into which his daughter was married were unable to meet the traditional dowry cost, because they no longer had cattle.
- He considers himself a much poorer person than before.

8.3.2. Project OSRO-511-SAF

8.3.2.1. Surveillance and control of CBPP in Caprivi

The strategy that is being adopted by the Department of Veterinary Services (DVS) in East Caprivi current policy is a combination of annual mass vaccinations of all cattle in the region (coverage has been over 95%, with good community collaboration), quarantine, movement control, surveillance and voluntary slaughter. This is well in line with the objectives of OSRO-511-SAF and represents a direct lesson from OSRO-404-SAF.

With regard to movement of cattle across the border, the DVS, Customs, Immigration, Security Forces and other stakeholders hold regular meetings with communities along the border with

Botswana. At these meetings the issue of cattle movements across the border is mentioned to the farmers.

Similarly there is an annual cross-border meeting with Zambia. It has now been agreed with the Zambian veterinary authorities to harmonise vaccination campaigns in Caprivi (Namibia) with those in Sesheke and in West Kazungula districts in Zambia, surveillance, animal identification by district through branding and monitoring of animal movement. Project OSRO-511-SAF reinforces government strategies for the two countries.

Annex 8.4. Evolution of CBPP in Zambia

8.5.1 Field Visits

8.5.1.1 Dr Jackson Soko, DVO Livingstone and Kazungula

A farmer at Bombwe bought 4 animals from Western Province, a CBPP infected area. A month later 2 died on the farm. Immediately he sold the remaining 2 animals to a cattle trader. Of these 2 animals a heifer was sold at Ngwezi in an exchange with an ox and the second was sold for slaughter at Simonga slaughter slab in Livingstone (see map below).

A veterinary assistant at Bombwe examined the lungs of the dead animals, which he had had to exhume. He suspected CBPP. Then he reported to the DVO and traced forward the two animals that had been sold by the Bombwe farmer.

The heifer at Ngwezi was blood sampled and slaughtered. No CBPP lesions were detected but the serum sample was CFT positive. The one at Simonga slaughter slab was negative by serology and no CBPP lesions were detected. Both were slaughtered within 48 hours of discovering the disease at Bombwe.

The follow up at Ngwezi: The farmer was advised by the VO to sell all the 58 cattle on the farm for slaughter. He had to consult relatives and co-owners. A week later he agreed but subsequently changed his mind. Later some animals started to cough and he sold the whole herd for immediate slaughter at Livingstone abattoir. The records of meat inspection show that lungs from several animals were described as abnormal. NB: There had been no prior experience of CBPP in Livingstone and the DVO was not called to check the lungs.

The DVO decided to test all cattle in the neighbourhood of the affected farm at Ngwezi. They were all sero-negative. The testing was repeated six weeks later with the same negative results.

Similarly the remainder of the herd at Bombwe and neighbouring herds were sero-negative in two repeat tests.

Sero-surveys and clinical inspections were carried out on all cattle in the surrounding districts of Kalomo, Choma, and Namwala. All animals at slaughter slabs were traced-back to farms of origin. Some sero-positives were detected and slaughtered. One farmer, in the Kalomo District, was found in August 2004, by community animal health workers, to have been harbouring illegal cattle traders and 6 animals were found on the farm. He was reported to the community and the DVO. The community quarantined the six animals and refused the farmer to graze his cattle with other stock in the village. This farmer had 22 animals. The six traded cattle were found to have brands from a CBPP infected area of Western Province. The 22 animals plus the six traded cattle were slaughtered. 2 animals were found to have CBPP lesions in the lungs and they were sero-positive.

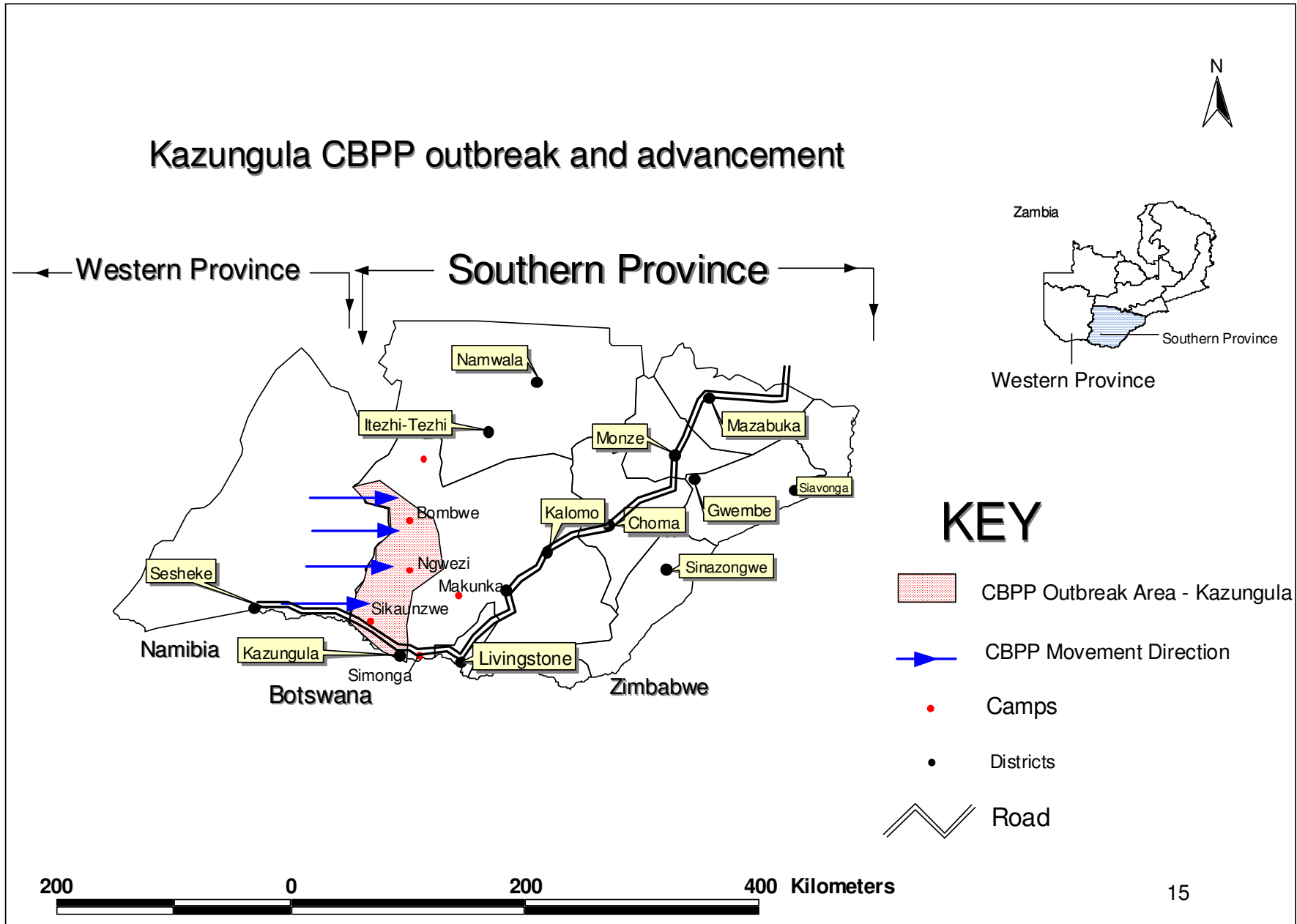
Subsequently, regular clinical herd inspections, abattoir inspections and sero-surveys have returned negative results in the district.

The key features/impact (in Livingstone-Kazungula Districts) of 404 and 511 have been

- sensitisation workshops, pamphlets and awareness of farmers and other stakeholders
- provision of pamphlets, posters and guidelines
- branding of all cattle in the district
- sensitisation of stakeholders helped to set up neighbourhood watch groups – the community now is CBPP vigilant
- technical assistance in strategy design
- case follow up and surveillance.

The DVO believes that the project (404) enabled to set up a tight surveillance with full stakeholder involvement and without resorting to vaccination. Without the project support, he believes that the disease might have spread.

Kazungula CBPP outbreak and advancement



8.5.1.2 Mr Hamankolo Athenesious, Veterinary Assistant at Kazungula Cross-point veterinary camp.

The veterinary camp is located near the cross-point to Botswana and Caprivi, Namibia. It also acts as a milk collection centre. The office was well stocked with antihelminthics and antibiotics.

In this area the project has assisted with branding cattle, collection of blood samples and herd inspections.

In 2005 no case was detected. In 2006 there have been 3 sero-positive cases

8.5.1.3 Mr Siamfumba at Mwandu Veterinary Camp, Sesheke District, Western Province.

First CBPP case in Mwandu was in November 2003 in trade animals from further west in the province.

Two rounds of vaccination in May and November 2004. Vaccination coverage was good, about 90%. A rapid drop in number of cases after the second round of vaccination. Farmers are happy. Last clinical case in Mwandu was in May 2005. Now only a few chronic cases detected at slaughter slab. There is still a risk posed by transit cattle from Katongo.

8.5.1.4 Dr Webster Chikampa, Sesheke District, Western Province.

The District Veterinary Office is located near the Zambezi River bank, overlooking Katima Mulilo in Caprivi East, Namibia.

Between October 2000 and 2003 the disease had been confined to west of the Zambezi river, having been introduced there by an influx of Angolan refugees.

The first case in Namwanda, east of the Zambezi, in 2003 was a result of dowry payment from Senanga. The dowry cattle seeded the disease in Namwanda.

From there the disease spread along the Livingstone Road and throughout the district affecting 8 of the 12 veterinary camps in the district. Up to 2005 the district was experiencing 5 or 6 outbreaks a month; now only 1 or 2 chronic cases detected at slaughterhouse inspections.

Disease control has been synergistically supported by the government and FAO projects.

Since March 2004 the veterinary teams in the district have carried out six rounds of vaccination. 1st round vaccinated about 50,000; 2nd round about 58,000, 3rd round 62,000 and subsequent rounds have covered about 63,000 out of a district cattle population of 65,000, i.e. range of 77% initially to 97% coverage. Post vaccinal reactions were detected in the first 2 rounds thereafter they have been negligible to nil.

FAO project support has focused on branding Sesheke cattle, training of vaccinators, community awareness and surveillance.

The disease incidence has dropped dramatically in the district and is confined to a few chronic cases detected in slaughterhouse surveys.

Dr Chikampa believes that the risk of CBPP spread through Sesheke to Southern Province remains high, because there is a web of clandestine cattle trading and movement to Southern Province.

He has submitted a 3-point plan to government of what he believes is necessary now to eliminate CBPP from Sesheke and reduce the risk of disease spread to the Southern Province. These are:

- a cordon fence separating Sesheke and Kazungula-Livingstone. This to be coupled with the construction of 2 or 3 slaughter-slabs in Sesheke to discourage movement of trade stock towards Livingstone.
- Intensive sero-surveillance coupled with slaughterhouse and clinical surveys.
- He believes that this is likely to show a low prevalence. Then he proposes that a test and slaughter of positive cases be introduced. At this stage he would not advocate the slaughter of all cattle in a herd with a sero-positive animal as he believes there would be strong resistance from farmers.

8.5.2.0 Discussions at the Livestock Development Trust (LDT), Lusaka.

Persons met:

- Dr Mwilola Imakando, Director
- Dr Gondwa, Head Animal Production and Health
- Dr Mava, Team Leader CBPP contract vaccination programme.

The LDT is commercial NGO in the livestock sector. It is primarily involved in livestock activities. However in recent years it has been contracted by government to coordinate CBPP vaccination in the affected areas. The first involvement was with DANIDA funding which was channelled through the LDT on the basis of memorandum of understanding between the Ministry of Agriculture, DANIDA and LDT in 2003. By this agreement, LDT received the funds and administered resources. It engaged private veterinarians to supervise the vaccinations by veterinary assistants. Government veterinarians were to undertake overall supervisory functions. Each veterinary assistant was responsible for vaccinating animals in his/her veterinary camp area.

For the FAO-RSA support the role of LDT has been to facilitate the distribution of vaccine, refrigerators and make available motor-cycles and vaccination equipment previously purchased under the DANIDA project for use in the vaccination exercise. Dr Imakando was categorical that the FAO assistance did reach the intended communities/beneficiaries. In the view of LDT, the impact of the FAO assistance was particularly in the following areas:

- Ready availability of inputs (1 million doses of vaccine plus diluent),
- Cold chain was good,
- Branding of cattle so that animals could be identified by their district of origin,
- Facilitating CBPP surveillance by government personnel,
- Community awareness, and
- Technical advice, including on strategy such as the emphasis on campaign vaccination approach.

In the view of LDT officials the success of the FAO intervention has been in 4 main areas:

- (a) the spread of CBPP has been arrested.
- (b) Prevention of high cattle mortality rates

- (c) Creation of awareness among farmers - for example now many farmers know the CBPP risk associated with the introduction of cattle from infected districts
- (d) Farmer cooperation

LDT believes that this has created a platform for the next stage, which should be CBPP eradication

For the future LDT believes that the Department of Veterinary and Livestock Development (DVLD) should be more pro-active than in the past in information distribution and stakeholder consultation. It should be better funded than in the past and should develop a CBPP eradication strategy, which should include vaccination plus adoption of a test-and-slaughter scheme. LDT believes that the vaccination can be effected by the private sector within a framework and rules determined by government. There was need to further refine the campaign strategy with an enhanced empowerment of the communities to ascertain that the vaccinators only depart the area following complete coverage of the cattle population in the area.

LDT was of the opinion that any success in CBPP control in Zambia is likely to be negated if there is no concerted support to Angola. After the war there is extensive social and commercial movement between Angola and Western Province of Zambia.

There was a strong plea to FAO for assisting Angola to control CBPP.

8.5.3.0 Meeting at the Faculty of Veterinary Medicine, University of Zambia

Persons met:

- Professor Andrew Nambota plus 20 academic and senior technical staff

3.1 The FVM-UNZA staff were concerned that CBPP was not eradicated in Zambia as had happened in the past. After extensive discussions the following issues needed to be addressed by government:

- Adequate funding of the DVLD and that money for CBPP control should be earmarked for the purpose.
- A systematic veterinary extension and surveillance that will determine the extent of disease/infection distribution
- Strengthening the old method of branding and animal movement control
- Involvement of the university expertise in building up the science-based evidence that will help the design of effective CBPP control.
- An articulated roll-back plan for the progressive control of CBPP towards Angola

8.5.4.0 Discussions with the Department of Veterinary and Livestock Development (DVLD)

Persons met:

- Dr Peter Mangani, Director
- Dr Anne Songolo, Deputy Director
- Dr Daka, Chief, Animal Production
- Dr F. Mulenga Chief, Field Veterinary Services
- Dr Christine Chisembele, Chief, Epidemiology & Information Officer

- Dr S.H. Kabilika, Chief, Veterinary Research Officer

8.5.4.1 The mission briefed the DVLD about the consultations with the various stakeholders met to which Dr Magani responded that all the issues raised were welcome and would be taken on board as a new strategy for CBPP control is being refined. He noted the need to involve more the expertise at the university and advised his staff to identify the levels for UNZA involvement in the avian influenza task force and its technical committees.

8.5.4.2 The achievements of the OSRO-404-SAF and 511 were listed as:

- Provision of 1 million doses of vaccine and logistic support for vaccination in Western, North-western and Northern Provinces
- Field testing of CBPP vaccine efficacy
- Cold chain maintenance, including provision of refrigerators
- Training fo veterinary assistants and farmers in CBPP recognition especially in Livingstone, Kazungula and Sesheke districts
- Branding
- surveillance

This had resulted in a dramatic reduction in the incidence of disease and in cattle moirtality. Prior to vaccinations mortality rates of 80% were common.

An incursion of CBPP into Southern Province at Bombwe had been rapidly identified and eliminated without recourse to vaccination. This was followed up by an intensive surveillance.

DVLD is fully satisfied that the objectives of 404 have been achieved and those of 511 are being well implemented. The country now is ready to build on this platform to embark on the next stage of CBPP eradication.

8.5.4.3 Dr Mangani informed the mission about pipeline development projects that will dove-tail with the FAO emergency support, building on the lessons of 404 and 511. These will adopt the strategies that have been defined by 404/511. The new projects are:

- IFAD for CBPP control in Western and North-western Provinces expected to start early 2007
- SADC-TADs (African Development Bank) for surveillance of CBPP, FMD and other TADs. The project has been approved. It is likely to be operation towards the end of 2007

The government had also made an allocation of Z-Kwacha 1.4 billion of which K700 million (about \$200,000) is earmarked for farmer compensation. This will enable to implement a targeted test-and-slaughter.

DVLD pleaded that the support for CBPP surveillance be extended to the end of 2007 to allow for dove-tailing with the SADC TADs project. The surveillance that is being supported through OSRO-511-SAF is seen as crucial for the disease control strategy.

The next objective of DVLD is eliminating CBPP to allow for embarking on the OIE Pathway for CBPP freedom.

8.5.4.4 Review of CBPP in Zambia.

CBPP was first introduced in Zambia (Western Province) in 1914 from Angola. The disease was eradicated by 1947. It was reintroduced in Zambia in 1969 and again eliminated in 1972. In 1997, after being free from the disease for over 23 years, CBPP was reintroduced into western province.

This incursion was successfully controlled thanks to support from FAO through its TCP assistance. The disease was introduced again into Western Zambia in 2000 by an influx of refugees from Angola. The disease has spread to all districts in the Western province. From Western province the disease spread to Zambezi, Kabompo, Mufumbwe and Mwinilunga districts of Northwestern province. In the Northern parts of Zambia, CBPP has been reported in Mbala and Nakonde districts of Northern province. Southern province has recently recorded positive CBPP cases by complement fixation test in the Kazungula district. For most parts, illegal cattle movements by traders have been the most common mode of spread of the disease.

The re-introduction of CBPP to Zambia in 1997

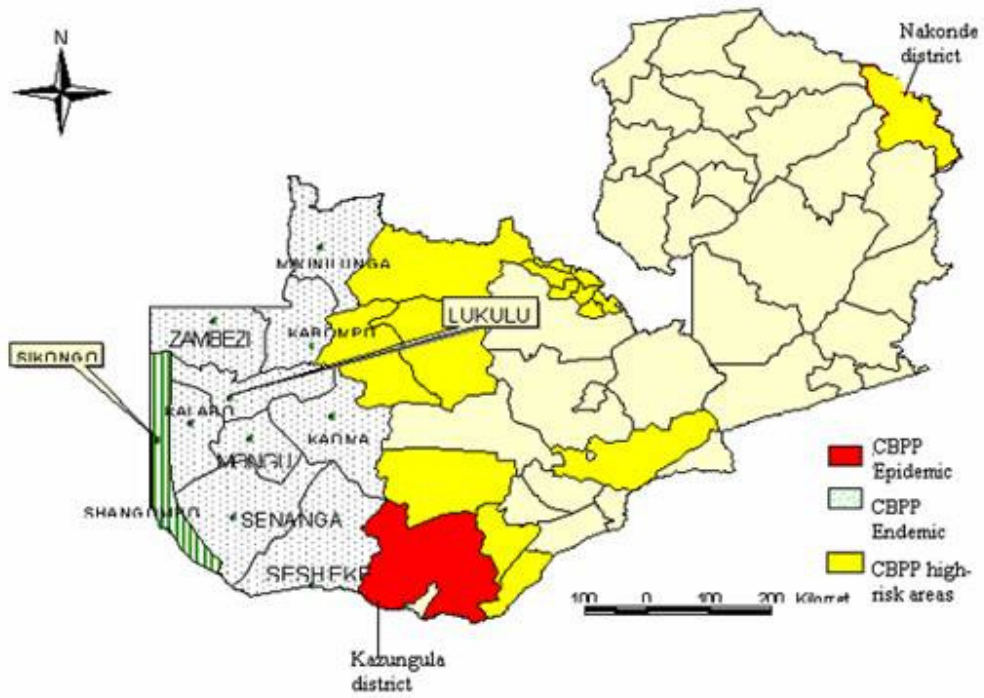
An Angolan couple came into Western Zambia for traditional medicine consultation and paid the “doctor” one ox.

The “doctor” borrowed another ox from Angola for his ox-cart.

A few days later one animal died. He kept the second animal. Later CBPP flared up spreading to cattle in the neighbourhood

CBPP control measures implemented to date have prevented widespread dissemination of the disease and have ensured that the disease is confined to the periphery of the country close to the area of introduction. The policy of the Zambian government is to eradicate this disease from Zambian territory and prevent further incursions through the maintenance of a protective vaccinated buffer zone in Northern Province and Western Province.

CBPP CLASSIFICATION OF AREAS IN ZAMBIA



Annex 8.5. Evolution of CBPP in Tanzania

TANZANIA CONSOLIDATED CBPP REPORT Projects OSRO-404-SAF and OSRO-511-SAF Review and Evaluation Workshop 13 and 14 Sept 2006.

8.6.1.0 Evolution of the Disease in The Country

The first documented outbreak of the disease in the country was in 1916 and it occurred in Loliondo on the northern border with Kenya. As the veterinary services were still rudimentary at that time coupled with the fact that there was war, no efforts were made to control it and the disease spread freely and by 1932 the whole northern part of the country from Tanga along the coast to Mara on the eastern shores of Lake Victoria was infected. Following the strengthening of the Veterinary department in 1927 by appointing the first Director of Veterinary services, concerted efforts to control the disease began in earnest. Control measures that included strict animal movement control and vaccination using Kabete broth vaccine managed to control the disease and by 1946 the disease was eliminated from all areas that were infected with exception of a few pockets close to the border with Kenya.

The second outbreak occurred in Loliondo Division at a place called Nguserosambu in 1955. Rigorous vaccinations using Kabete broth vaccine coupled with strict animal movement control managed to contain the disease by 1964. A quarantine imposed following the outbreak was lifted in 1965 but vaccinations against the disease continued until 1974.

After an absence of almost 25 years, the third and current raging outbreak broke out in 1990 at a place called Soit Sambu again in Loliondo Division. It is believed bulls purchased from a neighbouring country for breeding purposes were the source of the disease. The disease spread to Serengeti and Tarime districts in Mara region through cattle rustling within the same year and from there on it has spread to other parts of the country. In 1992 a new focus of the disease unrelated to the one in Loliondo occurred in Kagera region. It was established that this outbreak originated from neighbouring Rakai District in Uganda.

The disease spread south of the Central Railway Line in 1994. Records indicate that this was the first time ever CBPP to occur south of the Central Railway Line. It was first noted in Ulanga district in that year but it was later realised that more areas were infected but due to the fact that the disease was unfamiliar to many livestock workers it was mistakenly taken to be East Coast Fever (ECF) or other pneumonic diseases. Its appearance south of the railway line in 1994/95 caused alarm both nationally and internationally. From 1995 onwards the disease has spread to many parts of the country.

CBPP Spread in Tanzania 1990 to 2003

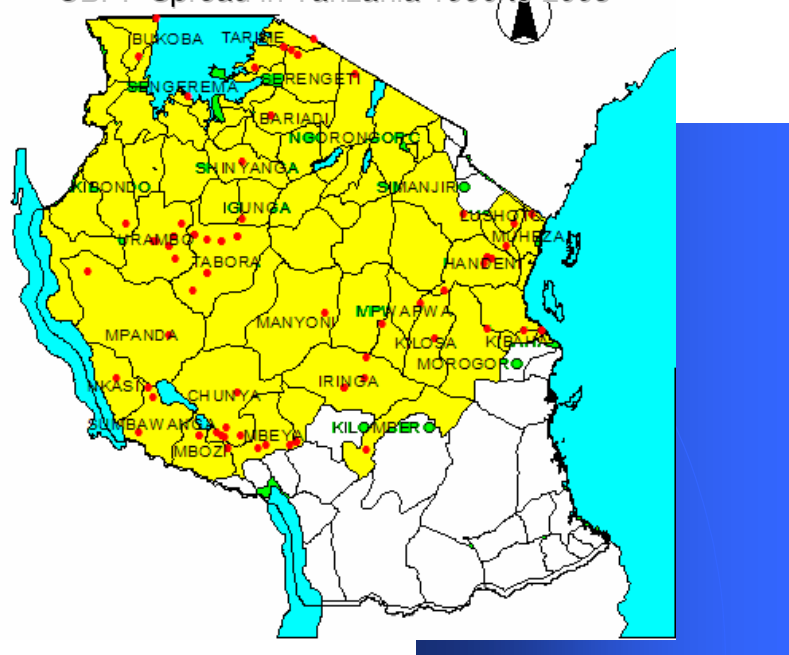


Table 6: Spread of CBPP in Tanzania from 1990 to 2005

1990/92	1995	1996	1997	1998	1999	2000	2001
Ngorongoro	Kilombero	Bariadi	Kilosa	Dodoma v	Mtwara	Bagamoyo	Monduli
Tarime	Ulanga	Kahama	Chunya	Mpwapwa	Masaki	Handeni	Simanjiro
Musoma	Iringa (m)	Shinyanga	Mbeya	Kondoa		Temeke	Muheza
Serengeti	Iringa (v)	Iramba	Mbarali	Morogoro		Sengerema	Kongwa
Bunda		Singida	Ngara				Dodoma mjini
Bukoba		Manyoni	Biharamulo				Singida mjini
Karagwe		Kibondo					
		Kigoma					2002
		Kasulu					Mbulu
		Mpanda					
		S/wanga					2003
		Nkasi					Songea
		Igunga					
		Nzega					2004
		Urambo					Newala
		Sikonge					Tandahimba
		Tabora					
		Mufindi					2005
							Kibaha

8.6.2.0 Measures Taken to Control the Disease and Outcomes

8.6.2.1 Previous Outbreaks

The first outbreak that occurred in 1916 was contained by 1946 and the second one that broke out in 1956 was controlled by 1965. These outbreaks were successfully contained after implementing rigorous control measures that included strict animal movement control and vaccinations using Kabete broth vaccine.

8.6.2.2 Efforts to control the current outbreak

Since the recent outbreak occurred in 1990, the government through its department of veterinary services has carried out several measures aimed at controlling the disease. These include:

8.6.2.2.1 Vaccinations

A combined Rinderpest and CBPP vaccine (Bisec vaccine) was used between 1990 – 1993 in Arusha and Kagera regions. From 1995 – 1996 T1 SR- vaccine was introduced and used extensively. This vaccine was later replaced with T1 44 after T1-SR proved to be ineffective. From 1996 up to date the vaccine being used is T₁ 44.

Available records show that from 1990 up to May 1999, a total of 3,396,455 cattle received one vaccination, 2,187,788 received two vaccinations and 903,000 received three vaccinations. The government declared the disease a national disaster in 2001 developed a strategy to control it.

The control strategy is based on the principle that mass vaccinations properly instituted over an extended period can reduce the disease incidence to an extent that other measures such as test-and-slaughter can be used to eradicate the disease. Briefly, the strategy is as follows.

- To carry out properly instituted mass vaccinations in all infected and high-risk areas for a period of five years.
- The vaccinations would be done on a roll back plan starting from the last infected areas and moving backwards to areas where the outbreak first occurred.
- Five million animals would be vaccinated each year.
- Vaccinations would follow the recommended OIE regime (FAO/OIE/OAU group of experts – Lagos 1970)
- Livestock keepers would not be charged directly at the crush site.
- Vaccinations would be preceded by proper preparatory groundwork that would include:
 - *Establishment of coordination unit.*
 - *Purchase of equipment and putting up infrastructure required for vaccinations.*
 - *Carrying out sensitization and awareness campaigns to livestock keepers and field personnel.*
 - *Hold preparatory pre-vaccination meetings with District .Veterinary .Officers.*
- Active surveillance would be carried out throughout the implementation period.
- Impact assessment and monitoring would be carried out throughout the implementation period.

Table 7: Animals vaccinated against CBPP from 2001 to 2006

Year	Vaccine doses purchased	Cost	Number of cattle vaccinated
2000/01	5,240,000	283,000,000	4,660,421
2001/02	2,000,000	127,000,000	1,623,649
2002/03	7,000,000	637,566,000	5,145,902

2003/04	6,000,000	544,234,000	5,706,808
2004/05	2,000,000 (FAO)	240,000,000	1,686,241
2005/06	4,000,000	354,965,000	*1,052,284

* *Vaccinations still ongoing*

8.6.2.2.2 Livestock movement

Whenever the disease occurs quarantine is imposed in the affected area to prevent animal moving out or into the area. However, enforcing these quarantines has been difficult due to vastness of the country and lack of resources.

Control of livestock movement has been a major obstacle in the control of the diseases in the country. Main reason for livestock movement are trade stock, translocation and pastoral movement and this is either by trucking or trekking. In order to control livestock movement the government has established since 2002 a zoosanitary network consisting of

- Border-posts (Total 40)
- Internal check points (381)
- Quarantine stations (20)
- Holding grounds (19)

A Presidential Circular issued in 2002 prohibits the inter-regional, long distance trekking of trade stock. The key elements of the circular were incorporated into the Animal Diseases Act 2003. This coincided with the period when primary and secondary markets were being established, with appropriate support infrastructure. These have been functional since 2004/5. Accordingly currently there is a high degree of compliance with the Presidential Circular and the provisions of the Animal Diseases Act-2003. It is mandatory to transport trade animals by using vehicles, train wagons and/or ferries.

Another move made by the government aimed at controlling animal movement is the establishment, since the beginning of 2006, of fully fledged Directorate of Animal Identification and Traceability within the Ministry of Livestock Development (MLD).

Currently, the most challenging cattle movement is that by migrating pastoralists. The Directorate of Veterinary Services hopes to tackle this challenge in collaboration with the recently established Directorate of Pastoral and Rangeland Development and the Directorate of Animal Identification and Traceability, both within the same MLD as well as with the relevant Local Government Authorities.



8.6.2.2.3 CBPP Surveillance

The country has a network of zonal laboratories, i.e. Veterinary Investigation Centres, and a functional meat inspection system. Use has been made of this network to survey for the disease. Surveillance for the disease was done both passively and actively:

Passive surveillance:

This is done by compiling reports submitted to the Epidemiology unit and monthly and annual reports. As far as CBPP is concerned the districts are also required to submit biannual reports showing field and abattoir cases. Examples of such reports are as shown in the following Tables 3 and 4:

Table 8: Abattoir CBPP cases in Southern highlands zone from January 2003 to June 2005

PERIOD	ANIMAL SLAUGHTERED	CBPP CASES FOUND
January – June 2003	33,178	92
July – December 2003	29,688	66
January – June 2004	24,910	30
July – December 2004	31,656	20
January – June 2005	31,468	13

Table 9: CBPP cases reports from 1998 to 2005

Year	Districts reporting CBPP	Outbreaks	No. of cattle affected	Deaths
1998	32	39	4894	3217
1999	35	216	8014	3445
2000	44	139	7,632	4,821
2001	29	83	4,302	3,442
2002	28	72	3,911	1,533
2003	26	82	2,669	1,149
2004	17	27	2,126	716
2005	16	34	573	223

Source – Epidemiology unit.

Table 10 : CBPP cases reports for Southern Highlands zone from 2000 to 2006

Year	Outbreaks	No. of cattle affected	Deaths
2000	1	11	4
2001	36	249	145
2002	20	147	76
2003	8	25	13
2004	6	10	8
2005	5	20	12

Source – Epidemiology unit.

Active Surveillance:

This is done by Veterinary Investigation Centres (V.I.Cs) and the Central Veterinary Laboratory (CVL), Temeke, Dar es Salaam

8.6.3.0 Success Story Examples

8.6.3.1 Maintenance of CBPP Freedom in Zanzibar

The control measures instituted on the Mainland seem to have prevented the spread of CBPP to Zanzibar, where the disease has never been recorded. Zanzibar is heavily dependent on regular imports of slaughter animals from the Mainland. Incidentally, a survey of Dar es Salaam abattoirs in 1995/6 by an FAO expert team failed to detect CBPP lesions in slaughtered cattle. Since then meat inspection records in Dar es Salaam have not indicated CBPP lesions.

8.6.3.2 CBPP Uninfected Regions of Mainland Tanzania

Two regions, namely Kilimanjaro and Lindi have not reported the disease since the current CBPP incursion in 1990. Factors responsible for this are that the main animal husbandry practice in Kilimanjaro is zero grazing and low livestock population in Lindi. Apart from these, vaccinations in other areas coupled quarantines imposed in areas where the disease has occurred have managed to stop spread of the disease into these regions.

8.6.3.3 The Kagera experience for CBPP elimination

CBPP was introduced in Kagera region from Rakai district in the neighbouring Uganda in 1992. This was an isolated outbreak that did not originate from Kenya. Tanzania was able to eradicate the disease in the region and by 1997 no new cases were being reported (

). The main methods used in Kagera were:

- **Intensive vaccinations**

The region vaccinated all animals using T1-44 strain strictly as per the recommended regimen. Three vaccination rounds at three months interval in one year.

- **Slaughter of cases**

The vaccination was followed up by intensive surveillance to detect the disease and eliminate animals that were found to have the disease. These animals were slaughtered and the meat was sold.

Reasons for successful eradication in Kagera

- a) There was a well-trained and dedicated cadre of veterinary personnel that could closely supervise the vaccination exercise.
- b) Most animals affected by a slaughter policy belonged to the National Ranching Company (NARCO) which is a Government owned company therefore, compensation was not a requirement. Furthermore, selling the meat assisted in offsetting the losses that would otherwise compromise the ranching operations.
- c) Resources were made available through a livestock development project (KALIDEP) that was operating in the region at that time.
- d) Communities participated fully in the vaccination exercise as well as in monitoring the compliance with community based quarantines.

8.6.4. Impact of Control Measures (OSRO-404-SAF and Government Resources)

The following are indicators of success in relation to the objectives of the project, which were to stop the southward spread of disease to neighbouring SADC countries and to reduce the incidence of CBPP in the project area of Southern Highlands Tanzania.

- Overall the spread of disease has been arrested; the incidence of disease has declined; livestock farmers and other stakeholders are now aware of the disease and are more willing to participate in control measures being taken
- There has been no evidence of spread to Malawi. This has been verified by regular border surveillance in Malawi under projects OSRO-404-SAF and OSRO-511-SAF. Similarly border district surveillance in Zambia under the same projects has returned negative results. NB: There are regular cross-border meetings of veterinary personnel in the border districts of Malawi, Tanzania and Zambia. There is also collaboration in cross border monitoring of animal movements.
- Slaughter facility surveys in the southern Tanzania districts (Table 6) which border Malawi and Zambia show zero returns for CBPP lesions. There has also been a sharp decline in the incidence of detected lesions in the rest of the project area.
- Only 24 out of 3,927 serum samples (i.e. 0.6%) collected in 2005 from Mbarali, Mbozi, Sumbawanga and Mpanda districts in the project area tested positive.

8.6.5. Workshop Conclusion

The conclusion of the workshop was that the surveillance objective in OSRO-511-SAF is timely as it seems that the CBPP prevalence in the project area could be sufficiently low for the country to consider adopting a test-and-slaughter policy with a view to eliminating CBPP from southern Tanzania.

The surveillance strategy that has been designed was considered to be appropriate. It needs, however, to be augmented with risk based, purposeful surveys. Based on the results of the surveillance, the government should consider adopting a test-and-slaughter strategy for southern

Tanzania, including the OSRO-511-SAF project area. It is noted that such a strategy was the basis of eliminating CBPP from Kagera.

The recently approved SADC TADs project, which will be funded by the African Development Bank, will dove-tail with the surveillance objectives of OSRO-511-SAF. However as that project might not be operational until the end of 2007 or early 2008, it was strongly recommended that OSRO-511 be extended to the end of 2007 both with respect to intensive active surveillance and vaccination.

Animal movement management remains a major challenge. This could be complicated by the proposed and programmed relocation of pastoralists from Usangu to places within the OSRO-511 project area. Realising this complication the government has stipulated that relocation of animals will be subject to vaccinations against prescribed diseases, especially CBPP and FMD, veterinary inspections and certification as well as agreements by livestock communities in the receiving districts.

Kagera

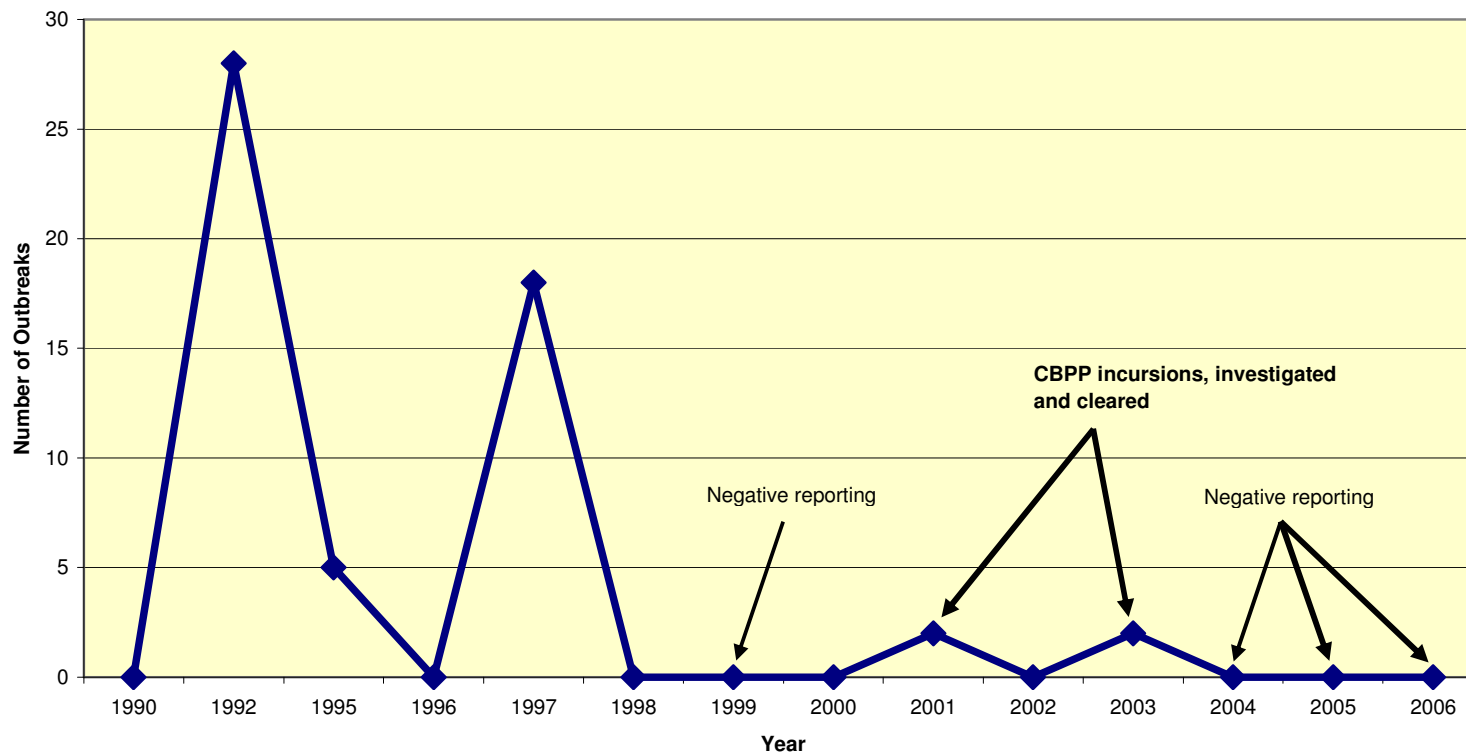


Figure 1: CBPP trend in the Kagera Region 1990 - 2006

Table 6: CBPP Slaughter Survey in the OSRO-404/511-SAF Project Area (Southern Highlands Tanzania)

CBPP ABATTOIR SURVEILLANCE 1995 – 2005

REGION	DISTRICT	YEAR	^{Number} NAME OF ANIMALS SLAUGHTERED	LESIONS OF CBPP FOUND	% OF CBPP LESSIONS	REMARKS		
RUKWA	S'WANGA	1995	2620	-	-			
		1996	2764	102	3.60			
		1997	3087	186	6.00			
		1998	3260	150	5.50			
		1999	3220	168	5.00			
		2000	3473	127	3.65			
		2001	4908	240	4.80			
		2002	4242	56	1.30			
		2003	4066	13	0.30			
		2004	3300	18	0.40			
		2005	3334	3	0.09			
		NKASI	1995	798	67	7.80		
	1996		741	91	12.28			
	1997		805	59	7.33			
	1998		819	29	3.54			
	1999		929	13	1.40			
	2000		763	8	1.05			
	2001		778	5	0.64			
	2002		1004	11	1.09			
	MPANDA	1995	2032	99	4.87			
		1996	1890	61	3.23			
		1997	2227	86	3.56			
		1998	2536	25	1.10			
		1999	2525	19	0.75			
		2000	3554	12	0.33			
		2001	2492	8	0.32			
		2002	2889	11	0.38			
		2003	2787	9	0.32			
		2004	2723	3	0.11			
		2005	226	2	0.08			
		IRINGA	IRINGA	1996	2003	8	0.40	
				1997	4975	9	0.18	
	1998			5515	22	0.40		
1999	2219			6	0.27			
2000	2332			-	-			
2001	2473			-	-			
2002	2384			-	-			
2003	5998			-	-			
2004	6561			-	-			
2005	5515			-	-			

y

IRINGA	LUDEWA	1995	102	-	-	
		1996	118	-	-	
		1997	122	-	-	
		1998	144	-	-	
		1999	135	-	-	
		2000	296	-	-	
		2001	108	-	-	
		2002	740	-	-	
		2003	747	-	-	
		2004	934	-	-	
		2005	710	-	-	
		NJOMBE	2003	2343	11	0.47
	2004		4305	3	0.07	
	2005		2721	4	0.15	
	MUFINDI	1996	1296	-	-	
			1997	629	-	-
		1998	1413	14	0.99	
			1999	329	-	-
		2000	470	-	-	
			2003	2257	10	0.44
		2004	2412	8	0.33	
			2005	1926	0	0.00
	MAKETE	2003	648	30	4.63	
		2004	2187	0	0	
		2005	216	0	0	
	MBEYA	MBARALI	1997	899	97	10.79
			2004	1964	4	0.20
2005			54	0	0	
MBEYA		1997	3892	143	3.67	
		2004	3825	0	0	
		2005	1857	0	0	
CHUNYA		1995	1344	-	-	
		1996	1332	-	-	
		1997	1425	120	8.42	
		1998	1502	221	14.71	
		1999	1598	272	17.02	
		2000	1602	305	19.04	
		2001	1803	256	14.20	
		2002	1902	185	9.73	
		2003	2025	73	3.60	
	2004	936	2	0.21		
	2005	1125	0	0.00		

MBEYA	KYELA	1995	2473	0	0.00	
		1996	2197	0	0.00	
		1997	3216	0	0.00	
		1998	2378	0	0.00	
		1999	2504	0	0.00	
		2000	3020	0	0.00	
		2001	2435	0	0.00	
		2002	2534	0	0.00	
		2003	3515	0	0.00	
		2004	2411	0	0.00	
		2005	3123	0	0.00	
	RUNGWE	1995	1834	0	0.00	
		1996	1914	0	0.00	
		1997	2021	0	0.00	
		1998	2112	0	0.00	
		1999	2221	0	0.00	
		2000	2350	0	0.00	
		2001	3787	0	0.00	
		2002	4642	0	0.00	
		2003	4535	0	0.00	
		2004	8470	0	0.00	
		2005	6574	0	0.00	
	MBOZI	2004	3185	0	0.00	
		2005	3135	0	0.00	

Future Prospects for CBPP Control In Tanzania

The country has so far spent large amount of resources towards the control of the disease. These were directed at capacity building in diagnostic infrastructure (Laboratory), human resource (Training), mass vaccinations and surveillance countrywide have all been operational especially after the disease was declared a national disaster. Since 2003, the roll back plan was started and coordinated vaccinations carried out starting from southern highlands zone moving northwards.

These efforts are finally paying off as indicated by the disease picture changes to less incidences reported from the districts (Figure 2). The trend indicates that from 2003 cases have been diminishing and consequently the need to move from current strategy to another that will enhance control efforts. The country now is moving towards establishing the scientific basis for possibly declaration of intension to eradicate the disease. A scientific CBPP surveillance has been designed to provide objective evidence of the presence or absence of the disease in the southern highlands of Tanzania. This will be a template for CBPP evaluation throughout the country.

The Kagera experience has shown that eradication is possible. It is hoped that after the surveillance exercise, up scaling of the Kagera success story would be implemented in other areas of the country.

The Roll Back Plan

Strategy:

Control strategy for the disease in the country is still based on mass vaccinations and movement control coupled with strong surveillance and diagnostic backup.

Vaccinations:

It is now intended to carry out the vaccinations using a roll back plan whereby a manageable area will be vaccinated intensively at a time and progressively moving forward until the whole country is covered. Implementation of the plan will start in the southern parts of the country.

For the purpose of implementing the roll back plan the country will be divided into the following zones.

Zone 1 – Surveillance zone

Mtwara, Lindi, and Ruvuma regions and Rufiji, Mafia and Mkuranga districts in Coast region
Kagera and Kilimanjaro

Zone 2 - Vaccinations

– Mbeya, Rukwa regions and Ludewa, Njombe and Makete districts in Iringa region

Zone 3 - Vaccinations

– Iringa rural, Iringa urban and Mufindi districts in Iringa region, Singida, Tabora and Kigoma regions.

Zone 4 – Vaccinations

Shinyanga, Mwanza and Mara regions.

Zone 5 –

Morogoro, Dodoma, Manyara, Arusha and Kibaha and Bagamoyo districts in Coast region.

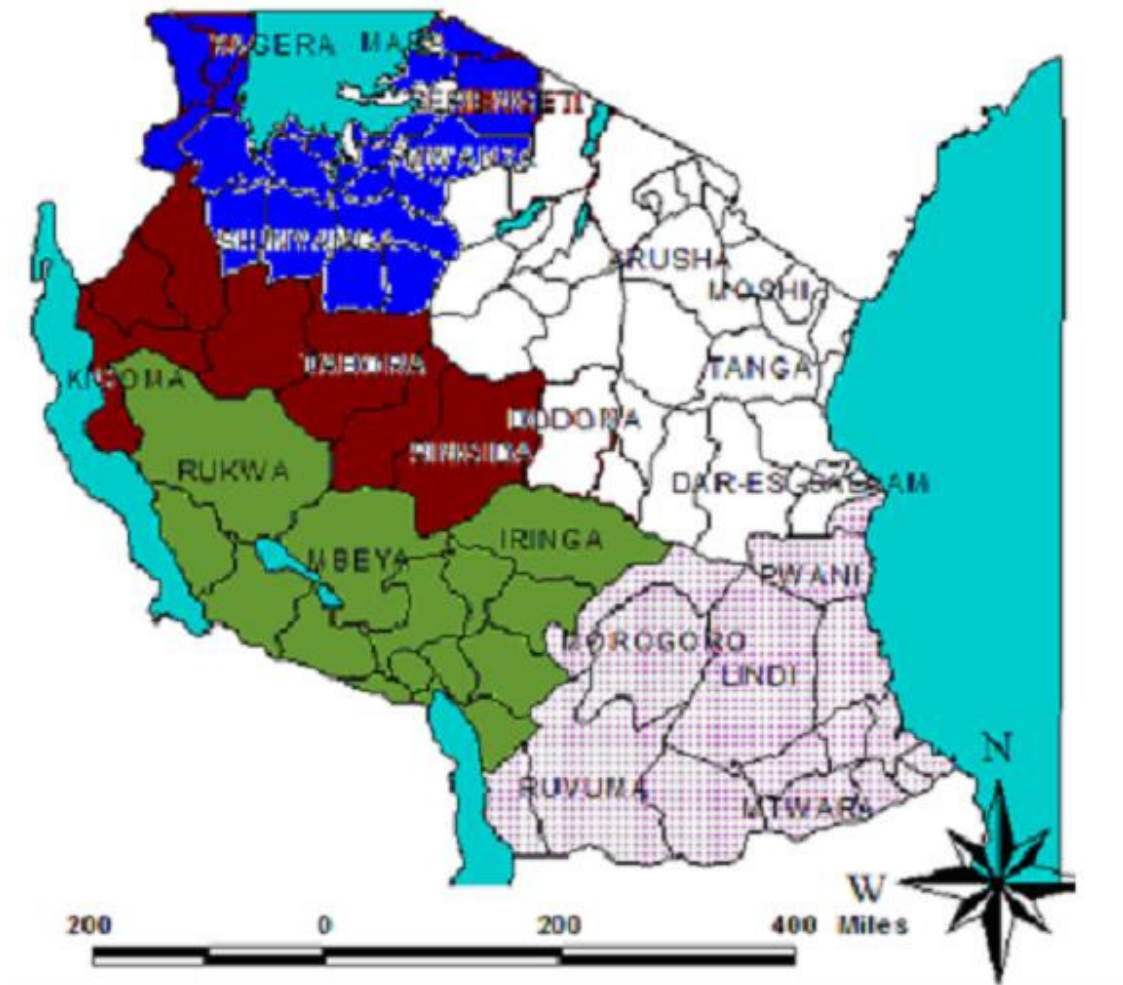
Roll back vaccinations will be done in the same order as listed above starting with zone 2.

- As there have been few incidences of the disease in zone 1, and drastic reduction of incidences of the disease in Kagera region following intensive vaccinations these areas

will be designated as surveillance zones. There will be surveillance in these zones with target vaccinations if and when disease outbreaks occur.

- Kilimanjaro region and northern areas of Arumeru region where they practice zero grazing will also be surveillance zones.

In the roll back vaccinations, cattle in each zone will be vaccinated three times in the first year followed by annual vaccination for another 4 years after which the zone will proceed to a surveillance zone or continue with vaccinations depending on the outcome of active disease search.



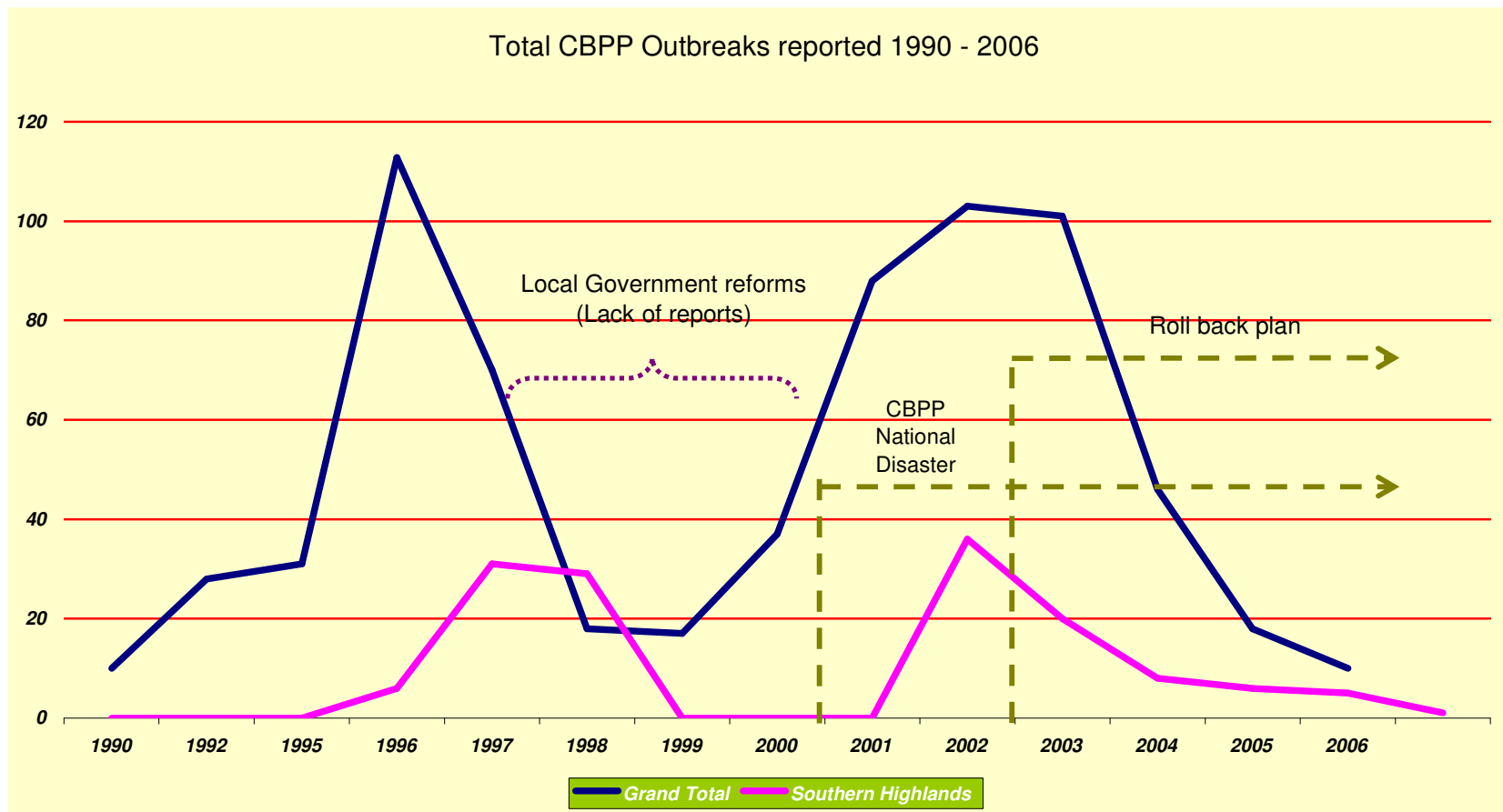


Figure 2: Trends for CBPP outbreaks for the period 1990 - 2006

IMPLEMENTATION OF OSRO/RAF/404/SAF AND OSRO/RAF/511/SAF PROJECTS IN TANZANIA

OSRO/RAF/404/SAF

Objective:

Control of CBPP in southern highlands zone through vaccinations and surveillance

Planned activities:

1. Active and passive surveillance of the disease in the target area.
2. Vaccinations.
3. Strengthen animal movement control.
4. Train livestock field personnel and laboratory technicians.

Implementation:

Items procured by the project:

1. 2 million doses of vaccine
2. 200 automatic syringes
3. 200 dozen hypodermic needles
4. 200 spare barrels
5. 13 refrigerators
6. 75 cool boxes
7. CBPP test kits (12,000)
8. 7 motor-cycles
9. Various laboratory equipment and chemicals

Surveillance

Passive Abattoir Surveillance

- Biannual reports – Not a direct project activity.
Submission of reports not encouraging

Active surveillance

- Done by V.I.C. Iringa – Clinical and Serological surveillance done at the same time
- 3,927 serum samples collected and tested at Central Vet. Lab., Temeke, Dar es Salaam. There were 24 positive cases (i.e. 0.6%) from Mbarali, Mbozi, Sumbawanga and Mpanda districts
- 200 samples collected in Njombe after being trained in sample collection.

Vaccinations:

- Project availed 2 million doses of vaccine and government purchased extra 4 million doses
- Animals vaccinated were 5,706,808 through out the country.
- Animals vaccinated in the project area were 1,064,564 (74%) – all time high since the start of roll back vaccinations

Training:

- i. One-week course for technicians in laboratory diagnosis of the disease.
 - a. Joseph Kimwaga & H. Bucheye (Tabora), A. Mrema and O. Mchomba (Iringa), A. Muhairwa (Mwanza), S. Komba (Mtwara), J. Mlungu (Mpwapwa), P. Sanka (Arusha)
- ii. Two days orientation workshop for Livestock Field Officers before vaccinations.
- iii. One-day workshop for Regional Administrative Officers, District Commissioners and District Executive Directors.
- iv. One week study tour in Zambia for technicians from V.I.C. Iringa (Omari Mchomba) and Tabora (Joseph Kimwaga)

Other training undertaken included:

- i. Training of selected group of livestock keepers in two districts in the target area to increase their awareness about the disease and the importance of controlling it – (Mbarali and Sumbawanga rural)
- ii. Training of District and Field Livestock Officers in disease surveillance, sample collection (Mbarali and Njombe).

Awareness campaigns:

- Spot radio announcements from April 2005 for 8 weeks
- 3,000 posters
- 6,000 leaflets
- Cinema shows and public meetings by communication officers

Animal movement control

- Require more logistical arrangement and financial resources.

Impact:

- Capacity building – Laboratory, cold chain and transport.
 - CVL was facilitated with various laboratory chemicals for diagnosis of Mycoplasma
 - Trained technicians

- CVL given CFT test kit for 6,000 samples
 - V.I.C. Iringa – 4,000 – Already started testing
 - V.I.C. Tabora – 2,000 – Not yet used as they are lacking some reagents and efforts are being made to avail them.
- Savings from the 2 million doses of vaccine availed by the project was distributed to districts to cover field costs.
 - Increased vaccine coverage due to availability of funds and transport
 - Meeting of Regional and District high officials had a positive impact. Good number of districts were facilitated with local funds.

OSRO/RAF/511/SAF

Main objective:

Control CBPP emphasis being on strengthening surveillance
Increase capacity of V.I.C. Iringa to diagnose CBPP starting with serological tests and later bacteriological.

Activities to be undertaken

1. Surveillance
2. Vaccinations
3. Training
4. Herd monitoring

The Work-plan

- Overall work-plan
- Surveillance workplan

Implementation:

Surveillance:

- Development of Surveillance strategy (done)
- Training Workshop – Done from 29th to 31st August 2006.
- Procurement of materials
- Sample collection to start in October

Vaccinations:

1. Awareness campaigns
 - Radio announcements
 - Cinema shows and meetings
2. Vaccinations:
 - Already started using vaccine purchased by government; project vaccine ordered.

Items purchased

- | | | |
|-----------------------------|---|---|
| 1. Incubator | - | 1 |
| 2. Water bath | - | 1 |
| 3. Electronic weigh balance | - | 1 |
| 4. Table centrifuge | - | 1 |
| 5. Post mortem kit | - | 1 |
| 6. Mult channel pipette | - | 1 |

7. Sterile swabs	-	100
8. Cotton wool	-	34 rolls
9. Serum tubes	-	30,000
10. Vacutainer needle holders	-	100
11. Ice packs	-	34

Challenges

1. Collection, storage at village level
2. Submission of samples from village to district offices
3. Number of serum samples to be collected is high – May have problems in storage and testing if submitted within a short time to V.I.C.
4. Testing capacity at V.I.C.
5. Bacteriological testing
6. Project funds alone will not suffice – Solicit for government support
7. Herd monitoring and Animal movement control

Advent of Avian Influenza has shifted attention from other diseases

Annex 8.6. Itinerary

Date	Activity	Team Leader Farming Systems	Livestock Expert	Socio Economist	RSA Representative	
Sunday 10 Sept	arrival		J'burg			
Mon 11 – Tues 12 Sept	Briefing		J'burg			
Tues 12 Sep	travel		Dar es Salaam			
Tues to 17 Sep	Country visit		Dar es Salaam, Tanzania			
Sunday 17 Sept.	Arrival	Joburg	Joburg	Joburg		
Monday 18	Briefings	Joburg	Joburg	Joburg		
Tuesday 19	Briefings	Pretoria	Pretoria	Pretoria	Briefing with mission Mr. Sam Malatji Mr. Japhta Magolela Mr. Thapsana Molepo	
Wednesday 20	Briefing/travel	Lusaka	Windhoek	Telecon briefing		
Thursday 21	Country visits	Zambia	Namibia	Document review		
Friday 22		Zambia	Namibia	Document review		
Saturday 23		Zambia	Harare	Travel		
Sunday 24		Harare	Harare	Harare	Harare (SM+TM)	
Monday 25		Joburg	Harare	Joburg	Harare	
Tuesday 26			Harare	Joburg/Les	Harare	
Wednesday 27			Harare	Lesotho (+TM?)	Harare	
Thursday 28			Harare	Lesotho (+TM?)	Harare	
Friday 29			Harare	Lesotho	Harare	
Saturday 30			Vic.Falls/Liv	Joburg		
Sunday 1 Oct.			Joburg	Sesheke/Kaz	Mozambique	
Monday 2			Malawi	K.Mulilo	Mozambique	Malawi (JM+TM)
Tuesday 3			Malawi	Caprivi	Mozambique	Malawi
Wednesday 4			Malawi	Lusaka	Mozambique	Malawi
Thursday 5			Malawi	Lusaka	Mozambique	Malawi
Friday 6		Malawi	Lusaka	Mozambique	Malawi	
Saturday 7	Drafting					
Sunday 8						
Monday 9		Joburg	Joburg	Joburg		
Tuesday 10						
Wednesday 11						
Thursday 12						
Friday 13	Receive comments					
Saturday 14		Joburg	Joburg	Joburg		
Sunday 15	Incorporate comments					
Monday 16		Joburg	Joburg	Joburg		
Tuesday 17	Submit to RSA	Harare	Joburg	Swaziland		
Wednesday 18	Drafting of lessons learnt and preparation for workshop	Harare	Gaberone	Swaziland		
Thursday 19		Harare	Gaberone	Swaziland		
Friday 20		Joburg	Gaberone	Swaziland		
Saturday 21		Joburg	Joburg	Joburg		
Sunday 22		Joburg	Joburg	Joburg		
Monday 23		Joburg	Joburg	Joburg		
Tuesday 24	Travel	Livingstone	Livingstone	Livingstone		
Wednesday 25	MTR	Livingstone	Livingstone	Livingstone		
Thursday 26	Field visit	Livingstone	Livingstone	Livingstone		
Friday 27	Travel			Travel		
Saturday 28						
November 19th	Final report submitted					

Annex 8.7. List of Persons Met

SOUTH AFRICA

National Department of Agriculture:

Participants in the MTR:

Mr. Sam Malatji: Assistant Director General Farm Settlement
Mr. Japhta Magolela: Acting Senior Manager for Food Security
Mr. Thapsana Molepo: International Relations

Directorate of Animal Health:

Dr Siegfried Meyer, Ag. Director
Dr Cornelia Gerstenberg
Dr Grietje de Klerk
Dr Willie Ungerer
Dr Johan van Wyk
Dr Luana Schoeman
Dr Marietia Bronkhost
Dr Walter Lowe
Dr Obed Letuka
DrJohan Dippenaar

Onderstepoort Veterinary Institute

Prof. Anthony Musoke, Director
Dr Wilna Vosloo

Onderstepoort Biological Products

Dr Baptista Dungu

Department of Foreign Affairs:

RIACSO

OCHA:

Chris Kaye: Head of Regional Office, OCHA
Gabriella Waaijman: Avian Influenza preparedness officer, OCHA
Jean-Luc Tonglet: Humanitarian Officer, OCHA

WFP :

Amir Abdullah: Regional Director
Thomas Yanga: Deputy Regional Director

FAO:

Margaret MacEwan
Fred Musisi
Jim Breen
Phil Phong
Mpho Sedibe

FAO Headquarters – Animal Health

Dr William Amanfu, Animal Health Officer (The Technical back-stopping officer for OSRO-510-SAF)

Dr Akiko Kamata, Animal Health Officer (The officer responsible for back-stopping the TADInfo system)

FAO Headquarters - Emergency and Rehabilitation Division (TCE)

Ms Anne Bauer, the Director, TCE

Ms Angela Hinrichs, Operations Officer (The officer that is directly responsible for the operations and budget control of OSRO-510/511-SAF)

NAMIBIA

Mr Moeketesi Mokati, the FAOR

Mr Patrick Karanja, FAO Emergency Coordinator, Caprivi-Namibia

Mr Mthembisi Mjikeliso, Counsellor, South African High Commission

Dr O. Hubschle, Director of Veterinary Services/Chief Veterinary Officer

Dra. J. Kamvi, Deputy Chief Veterinarian, Public Health

Dr. F. Joubert Deputy Chief Veterinary Officer, Animal Disease Control

Dr C. Bamhare, Deputy Chief Veterinary Officer, Epidemiology, Import/Export Control & Training

Dr A. Bishi, Senior Vet Officer, Epidemiology

Ms Paulina Shiyelekeni, Agriculture Extension Officer

Dr. F. Chitate, the State Veterinarian for Eastern Caprivi

Mr Kwinani, Veterinary Technician, Caprivi

Mr Zacharia Mashazi, Village Head, Maunga, the first area to be affected by CBPP

TANZANIA

Dr Shuruku Kawambwa, Minister for Livestock Development

Dr Charles Mlingwa, Deputy Minister

Dr Charles Nyamrunda, Permanent Secretary

Dr Jonas Melewas, Deputy Permanent Secretary

Ms Louise Setshwaelo the FAOR,

HE Mr Sindiso Mfenyana, the RSA High Commissioner,

Alex Carr , FAO Emergency coordinator

Dr. J. O. Mollel , Ag Director of Vet Services

Dr. M. M. Bahari , Ag Director – Identification

Dr. P.Z. Njau, Assistant Director (TADs & ZS)

Dr. P.F. Mujuni, National Epidemiologist

Dr. Adele Mrosso, P.V.O - TADs

Dr. J. Kitalyi , CBPP National Coordinator

Dr. S. I. Kimera, Epidemiologistg – Faculty of Vet Medicine, SUA

Mr. A.E. Temba, /Director – Production and Marketing

Dr. S. M. Das , Director – Central Vet Lab (CVL)

Dr. H. M. Msami , Pathologist – CVL

Dr. A. M. Kapaga , Pathologist – CVL
Dr. G.A Mwakasungula , Principal Veterinary Officer (PVO) - Zoosanitary
Dr. M. Ruheta , PVO.- Ticks and Tick borne Diseases
Dr. Mpelumbe Ngeleja, P.V.O – Virology
Dr. E. S. Shayo , P.V.O. Zoonoses
Dr. A. S. Bundala , P. V.O – Tick and tickborne

ZAMBIA

Dr Peter Mangani, Director, Department of Veterinary and Livestock Development (DVLD)
Dr Anne Songolo, Deputy Director DVLD
Dr Daka, Chief, Animal Production, DVLD
Dr F. Mulenga Chief, Field Veterinary Services, DVLD
Dr Christine Chisembele, Chief, Epidemiology & Information Officer, DVLD
Dr S.H. Kabilika, Chief, Veterinary Research Officer, DVLD

Professor Andrew Nambota plus 20 academic and senior technical staff, University of Zambia,
Faculty of Veterinary Medicien
Dr Aaron Mweene, Lecturer Virology/infectious Diseases

Dr Jackson Soko, DVO Livingstone and Kazungula
Mr Hamankolo Athenesious, Veterinary Assistant at Kazungula Cross-point veterinary camp.
Mr Siamfumba at Mwandi Veterinary Camp, Sesheke District, Western Province.
Dr Webster Chikampa, Sesheke District, Western Province.

Dr Mwilola Imakando, Director, Livestock Development Trust (LDT), Lusaka
Dr Gondwa, Head Animal Production and Health, LDT
Dr Mava, Team Leader CBPP contract vaccination programme, LDT

Mr Ricardo Luna-Chanove, Ag. FAOR,
HE Mr M.M. Masala , the RSA High Commissioner,
Mr Eddy Delaunay-Belleville, Rural and Food Security Advisor, Delegation of the European
Commission to Zambia
Dr James Breem ECU Manager-Zambia,
Dr Linous Munsimbwe National Consultant, FMD & CBPP, ECU-Zambia

ZIMBABWE

RSA Embassy:

- HE The Ambassador plus the First Secretary, Political Affairs

FAO

- Mr. A. Haris, Ag. FAOR and SRR
- Mr. D. Mfote, Assist FAOR

- Mr Jean Calude Urvoy, Emergency Coordinator
- Mr Micheal Jenrich, Agricultural Advisor
- Mr David Mwesigwa, Operations Officer
- Dr Frank Chinembiri, Livestock Officer

- Dr Wolfgang Boehle, Animal Production and Health Officer, SAFR

Ministry of Agriculture HQ, Harare

- Dr. Simon Pazvakavambwa, Permanent Secretary
- Mr. Masanga, Director Human Resources
- Dr Stuart Hargreaves, Principal Director, Division of Livestock and Veterinary Services
- Dr Josphat Nyika, Ag. Director , Veterinary Field and Tsetse Control Services
- Dr U. Ushewokunze-Obatulo, Director Veterinary Technical and Diagnostic Services
- Dr. Chenjerai Njagu, Chief Veterinary Officer (Disease Control)
- Dr. N. Donora, Principal Veterinary Officer (Epidemiology)

Mashonaland West, Chinyoi

- Dr. Jonathan Matongo, Provincial Veterinary Officer
- Dr Lewis Mponda, Epidemiologist, Mashonaland-West and District Veterinary Officer for Zvimba and Karoi
- Mr. Henry Mahanzu, Chief Animal Health Inspector, Mashonaland West
- Mr. Chemere Nyamangara, Animal Health Inspector, Zvimba District
- Plus 4 Communal farmers in the A1 category at a village near Baket)

Matabeleland South, Beit Bridge

- Dr N. Mangena, Provincial Veterinary Officer
- Dr. C. Chartezi. District Veterinary Officer, Beit Bridge
- Mr. L. Kumalo, Chief Animal Health Inspector, Matabele South
- Mr. Ncube, Animal Health Inspector, Gwanda

SADC Secretariat, Gaborone, Botswana

- Mr Bentry Chaura, Chairman RVAC and Senior Programme Manager Agricultural Information Management Services. Was Acting Director FANR at time of MTR visit.
- Dr Breeden Hulman, Senior Livestock Programme Manager
- Dr Simon Mwale, Senior Programme Manager, Crop Development
- Mr Richard Masundire, Senior GRIULTURAL Economist
- Mr Elliot Vhumuruku, WFP/FAO Technical Advisor SADC Early Warning and RVAC , WFP Food Security Officer, VAM

OIE Regional Representation, Gaborone, Botswana

- Dr Bonaventure Mtei, OIE Sub-regional Representative to SADC

Botswana veterinary services

- Dr Musa Fanikiso, Director, Animal Health and Production Department
- Dr Edington Baipoledi, Chief Veterinary Officer, National Veterinary Laboratory
-

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Lucky Dlamini
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Lindiwe Matsebula
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