

A PARTNERSHIP TO SUPPORT THE DEVELOPMENT OF THE FERTLISER SUPPLY CHAIN IN TANZANIA

Including

Yara International ASA, Norfund, Norad and Rabobank Group

PROGRAM CONCEPT AND PROCESS PAPER



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1. INTRODUCTION AND BACKGROUND

This Concept and Process Paper outlines proposals for the development of a broad-based commercial development program to improve fertiliser supply, distribution and profitable use in Tanzania through a Public-Private Partnership. The paper starts by describing the main issues and constraints related to fertiliser use in Tanzania (Chapter 2). It then outlines the program concept, objectives and components (Chapter 3), provides a framework for future field operations (Chapter 4) and identifies key players who might directly or indirectly be involved in the program (Chapter 5). Finally, it describes the next steps in preparing a detailed Program Document and describes issues that require further work and analysis (Chapter 6). Additional information is presented in nine Annexes.

Tanzania is a naturally rich but economically poor country with per capita income of about \$277 and high incidence of poverty and hunger. Over 80% of the 35 million Tanzanians live in rural areas and depend on agriculture. Agriculture contributes 50% of the GDP and 54% of the nation's Foreign Exchange earnings. Accelerated and sustainable agricultural growth is therefore crucial to both national economic development and effective poverty reduction. Improved use of fertiliser has an important, though not unique, role in the development process.

Agricultural growth, currently around 4%, is partly achieved through export crops, but also through increases in cropped area rather than increases in traditional crops' yield. This has resulted in increasing clearance of forests, the shortening of fallows and natural resource degradation in many areas. Under these conditions, neither will growth be sustainable nor will it be possible to alleviate rural poverty.

Roughly 44.5 million ha of land is suitable for agriculture, of which only half is currently cultivated. There are 2.3 million hectares with high irrigation potential of which only 10% is developed. The vast majority of Tanzania farmers consequently depend on rainfed crop production which has a particular set of risks for fertiliser use by poor farmers. Cereal yields have stagnated at around 1.3 tons/ha and per capita cereal production is falling

The national Agricultural Sector Development Strategy (ASDS) has been guided by the principles of the Poverty Reduction Strategy Papers (PRSPI and *Mkukta*), the Rural Development Strategy (RDS) and Tanzania Development Vision 2025 (TDV). A constant policy theme is that Tanzania's agricultural transformation cannot occur without increased use of modern productivity-enhancing inputs, and that for rural poverty to be sustainably alleviated, resource-poor subsistence farmers must be helped to become profitable small-scale commercially-oriented farmers.

The Agricultural Sector Development Programme (ASDP) provides the government with a sector-wide framework for implementing ASDS. Unfortunately, much of the work planned for the ASDP – which includes extensive support to the private sector - has become bogged down in process and procedure. It has so far had very limited impact on the ground.

It has become increasingly clear that new, additional ways for accelerating agricultural growth must be developed. Commercially-led Public/Private Partnerships, such as the program proposed

in this paper, is an attempt to move quickly ahead with a new approach that will have a rapid and sustainable impact for Tanzanian farmers.

2. FERTILISER USE AND SUPPLY

The proposed program aims to improve fertiliser supply and use in Tanzania. However, this by itself will achieve little; but combined with other supporting activities it will become a critical element in a sustainable development programme. Furthermore, it is critical that efforts to increase the use of inorganic fertiliser do not marginalize complementary work to increase the use of other land management and soil improvement techniques.

Data supplied by the Ministry of Agriculture, Food and Cooperatives' Input Unit show significant fluctuations in fertiliser supply and use (see Annex 1). Between 1972 and 1992 annual fertiliser use rose from 53,880 tons to over 140,000 tons. This subsequently fell to less than 150,000 tons between 2000 and 2003, but has risen to nearer 200,000 during the past two seasons.

In the absence of the widespread use of organic nutrients, and with increasing pressure on land from an expanding human population, this can only lead to decreasing crop yields and increased soil degradation. Over all fertiliser use in Tanzania is approximately 9 kg/ha; which is low by international standards¹. Of particular concern is the decline in the use of fertiliser for food crops. In the early 1990s, 70% of fertiliser was used for food crops, but by the end of the decade it had fallen to 32% (MAFC, 2006).

Before market liberalisation in 1992, state-owned enterprises controlled most of the input supply and output marketing systems. Part of the current problem is inadequate development of private sector aggregators in agriculture, due to slow private sector response to liberalisation. The reason for this has been uncertainty and risk due to changing policies, limited skills, shortage of capital, and a general public sector mindset that has tended to discourage risk taking and private sector investment in this area.

The data requires further checking and analysis. Some sources of current information indicate a possible annual over-supply of about 50,000 tons (MAFC, 2006). While over-supply might be expected during a bad rainfall year such as 2005/06, this would not be expected annually. Large quantities of excess, unused fertiliser are not found in the country on a regular basis. One possibility is that the apparent excess is actually exported to neighbouring countries, though the data need further review.

2.1 *Small-scale Farmers*

A significant proportion of small-scale farmers can not get reliable supplies of fertilisers. However, inadequate and untimely supplies of the appropriate types of fertiliser are one of a series of constraints to production. Others include limited access to extension support and improved

¹ Annual average fertiliser use for the whole of Africa is 20 kg/ha, 78 kg/ha for Latin America, 175 kg/ha for Western Europe and 202 kg/ha for East Asia. Source: World Bank, 2006a

technology and hybrid seeds, limited access to short-term credit, poor access to reliable output markets and undeveloped rural infrastructure. It can be seen that tackling the problem of poor fertiliser supply in isolation from other constraints is unlikely to have any significant impact.

Any large scale, commercial program looking at supplying fertiliser to Tanzanian farmers needs to understand the factors that will influence potential demand, assuming that the required supply can be assured. While there are certain site-specific peculiarities, there are also many similarities between all sub-Saharan farmers. Recent World Bank (2006a) research indicates that, in general, small-scale farmers' demand for fertiliser depends on:

- The price of crop being grown
- The price of other inputs that might substitute or complement
- Availability of information on the advantages of fertiliser use, where to get it, prices etc.
- Liquidity levels of the farm family, leading to limited finance
- Risk assessment by the farmer
- Assessment of profitability, and
- Assessment of availability of fertiliser and other inputs

Satisfactory conditions have not existed in the past for most farmers, which is why this program must address, simultaneously a number of key problems. Rainfall is critical in determining use in non-irrigated areas. Many poor, risk-averse farmers prefer to wait and see how the rain will progress during the growing season, and then apply top dressing if he or she feels it is justified. Although not agronomically ideal, this is a lower-risk strategy under rain-fed conditions than a pre-emergence basal application.

Access to credit is another, serious problem. After the collapse of the centrally-managed input supply systems, no alternative, large-scale private sector process has emerged. Furthermore, most commercial banks are reluctant to get involved in small holder agriculture, which is seen as high risk lending, or micro-finance, which is seen as high cost lending. This has made it very difficult for both farmers and retailers to get the credit necessary to pre-finance fertiliser purchases.

In addition to low demand, a number of supply-side constraints lead to inadequate quantities of the right fertiliser being available to small-scale farmers in much of the country. Limited private sector investment in fertiliser stocks has been prompted by both short term and long term policy changes, especially relating to subsidies and insufficient clarity about the authority to import stocks. This has reduced farmer confidence in the reliability of fertiliser – though this has not yet triggered a widespread response to increase the use of organic fertiliser.

Over time, farmers' organizations could become an important point for identifying demand and bulking orders for fertiliser and other inputs,. However, experience suggests that it is unwise for farmers' organisations to become directly involved in the procurement of inputs, as this is beyond their normal competence (World Bank, 2006 c). For the moment, however, the linkages between farmers and a reliable supply remain fragile. A broad analysis of the Value Chain from importer to farmer – and the major constraints at each level - is shown in Annex 2.

There can be no doubt that farmers in Tanzania will respond to favourable input and market conditions. There are many examples of successful, profitable small-holder out-growers involved

in sugar, tea, sisal and coffee. These farmers are able to have an assured market, they get good technical advice, have access to credit and have support in accessing inputs. They respond by rapidly becoming productive commercially-oriented producers².

2.2 *Medium and Large-scale Farmers and Estates*

Larger, commercial farmers do not generally face the same constraints as small-scale operators, and do not report serious shortages of fertiliser. They are more independent in terms of finance and output markets, some – such as the large sugar companies – have irrigation, and they have access to improved seeds. All these factors make the use of fertiliser sustainable and profitable. Furthermore, many are able to make their own arrangements for fertiliser delivery, and therefore do not get unexpected shortages.

2.3 *Retailers*

There are very few agricultural input retailers in Tanzania³, and many farmers have to walk 40 kms or more to buy fertiliser and other inputs. For the most part, the retailers are under-capitalised and have limited technical knowledge of appropriate fertiliser applications for their area. Like so many other Small and Medium Enterprises (SMEs) in Tanzania, they also tend to have restricted business skills and insufficient finance to purchase adequate supplies of fertiliser stocks. This leads to both poor input supply and low prices at harvest and deterioration of crops. An Action Plan input marketing prepared for Tanzania by IFDC (IFDC, 2005) found that ‘in spite of market liberalization and private sector participation, AIMS (Agriculture Input Markets) remain underdeveloped and fragmented in Tanzania. As a result, farmers face high prices, limited accessibility, and poor quality products.’ This is an area that requires considerable support and development.

2.4 *Importers, Transports and Bagging*

In 2005, 202,000 tons of fertiliser were imported by 9 different private sector importers. One brought in over 70,000 tons, four between 15,000 and 25,000 and the rest less than 10,000 tons each. Importers, like other actors in the supply chain, frequently suffer from inadequate capital and have little detailed knowledge of the international fertiliser market. This limits the size of the consignments they bring in, and therefore increases the unit cost of their fertiliser.

Current local borrowing rates vary from 20% to over 30%, depending on the lender. In addition, the commercial banks’ demand for collateral is usually beyond the capacity of many importers,

² For example, since 1998 the small-scale outgrowers of the Kilombero Sugar Company have increased their delivery of cane from 100,000 tons to over 500,000 tons; the number of outgrowers has risen from 2,760 to 5,060; the area under smallholder cane has more than doubled; and sucrose levels of delivered cane have increased by over 260% (Source, Korongo, 2005).

³ Estimates vary between 500 to 1,000; compared with approximately 5,000 in Kenya

and certainly small-scale farmers and traders.⁴ There is, however, increasing attention being given to alternative sources of rural credit through SACCOs and other sources; although SACCOs' ability to provide the size of loans required by importers is, for the time being, rather limited.

As fertiliser moves inland, transport costs dramatically increase prices. Road transport costs within Tanzania are high, and could add US\$50 to US\$100 per ton for delivery within the country. The railway network is not working well at the moment, and there are only a few covered wagons which protect bagged fertiliser from theft during transit. Furthermore, while the main trunk roads are generally in reasonable condition, many of the smaller roads are not. This further increases the price of fertiliser delivered to retailers. Additional investment in rural infrastructure would improve both input delivery and output marketing.

Dockside bagging generally costs between US\$ 10 to 15 per ton. There are currently a number of difficulties with the existing system in Dar es Salaam, and considerable opportunity for improvement. In Zambia, Nigeria and Malawi there is an additional charge of about 15% for packing fertiliser in bags smaller than 50 kg. This can be very important in providing affordable bags to farmers who can not get access to credit to enable them to buy a cheaper 50 kg bag. This does not happen in Tanzania at the moment, and retailers will sell loose fertiliser to customers from an opened 50 kg bag.

2.5 Fertiliser Types

The use of blanket recommendations – 'one type fits all soils' - results in considerable amounts of fertiliser being wasted, as is it is not suitable for local soil conditions. This is particularly a problem where, as in much of Tanzania, the soils are highly heterogeneous, varying considerably within even a relatively small area. On the other hand, site-specific application requires higher consumption rates than those found in Tanzania at the moment. Despite the agronomic advantages, producers and importers consider it is too costly to apply highly detailed site-specific 'smart' fertiliser recommendations at this stage in the development process. A compromise may therefore be necessary in order to have the widest impact. As skill and consumption levels increase, it will be possible to introduce more sophisticated options. This requires further attention.

2.6 Fertiliser Production

The Tanzania Fertiliser Company, which once had the capacity to produce 125,000 tons, stopped operations in 1991. Rock Phosphate is mined at the Minjingu Mine, some 100 km southwest of Arusha. At its peak it produced 25,000 tons, though production is now at a much lower level (925 tons in 2001). However, the majority of this is exported to Kenya, and is not used in Tanzania.

⁴ Frustration with the lack of willingness of the highly-liquid commercial banks to invest in agriculture unless there is very little risk has led some to suggest the establishment of an Agricultural Bank. Experience elsewhere in SSA, however, indicates that this is not the best solution; and it is preferable to find innovative ways of mobilising the funds in the existing banks.

Economies of scale and access to cheap supplies of energy are critical for efficient fertiliser production. Africa currently provides only about 1% of total global production. It is not, and is unlikely to become in the medium-term, a major player in this field.⁵

3. THE PROGRAM CONCEPT

The program originated from discussions between Yara and the Tanzanian Government in Dar es Salaam in 2004. At that time, Government asked Yara International to assist in providing a stable supply of chemical fertilisers. Yara consequently sent a team to Tanzania which met with senior officials in the technical ministries, the Prime Minister and the then President, His Excellency Benjamin Mkapa.

These discussions led to the opening of a Yara office in Dar es Salaam. It was also realized that the program needed to extend beyond fertiliser supply. As the Government was already committed, additional private sector partners were sought to join in the program and to broaden the capacity and resources available for implementation. In doing so, the program became a commercial development operation with business, economic, social and environmental aspects.

The Program Concept will be developed to respond to needs in as a creative and innovative way as possible. Where necessary, new approaches will be explored and new systems tested. This will be done in the name of doing business as **unusual** – a cornerstone of the country’s Agricultural Sector Development Programme (ASDP).

3.1 The Vision

The vision of the Government’s National Fertiliser Strategy (MAFC, 2006) is:

‘to improve agricultural productivity in order to increase economic growth, reduce rural poverty, improve food security and recognise the crucial role of improved fertiliser use by farmers in addition to other productivity enhancing inputs to meet the national targets for agricultural production and poverty reduction by 2015.’

There is no reason why the Partnership should not adopt this vision. Of particular importance for the proposed program will be to ensure that the primary target group are poor farmers. This will have the greatest impact on poverty reduction.

3.2 A Private-Public Partnership

The program will establish an effective and profitable Private-Public Partnership. This will involve several different private sector operators, with complementary skills and comparative advantages.

⁵ Despite this, it is interesting to note that at Athi River in Kenya two types of locally produced fertiliser sold under the brand name of MUVANO, and (using Tanzanian phosphate, are achieving excellent results. It is 15% cheaper than the imported equivalent and is producing good yield increases.

Background information on the current Partners is presented in Annex 3. It will be important that the concept and the practice of a partnership is maintained throughout implementation. This will require diligent work and cooperation from all parties.

3.3 Program Goals and Objectives

The twin goals of the program are:

- (i) achieving a developmental and commercial structure as a benchmark for best practices in Africa, and
- (ii) initiating a program to achieve these goals and reduce poverty

The program's objective is to establish a platform that provides a blend of commercial and developmental support to establish sustainable agriculture in Tanzania, and support the alleviation of poverty through remedial actions on all relevant parts of the value chain including retailers. In quantitative terms, the Program would aim to facilitate improved production on 2 to 3 million ha of maize, on 500,000 to 700,000 ha of rice and on 250,000 ha of cotton.

There are two particularly innovative factors in the current project concept. First, the intimate and coordinated twinning of commercial and development, non-commercial, objectives at a national level is a new approach – especially for a private-sector led Public/Private Partnership. Second, the attention given to the full length of the value chain will provide an unusually holistic approach to stimulating production and reducing poverty. If successful, this approach could be replicated elsewhere in Africa.

3.4 Program Components

The proposal is that all parties will work together to formulate an action plan to alleviate the systemic problems in the supply chain, through technical support, and possibly credit and if applicable risk mitigating instruments and products. The project should be developed based on The National Fertilizer Strategy Report for Tanzania (April 2006) and other agricultural policies in partnership with the Tanzanian Government. In order to achieve these goals and objectives, there will be four, interlinked components :

Component 1: Establishment of a strategic buffer stock of suitable fertiliser, and other commercial arrangements to ensure effective and reliable fertiliser supplies, especially to small-scale farmers,

Component 2: Provision of short-term credit, especially to small-scale farmers for the purchase of fertiliser and other inputs,

Component 3: Support to output marketing to farmers and farmers' organizations receiving credit and fertiliser, and

Component 4: Training and capacity building for farmers, retailers, service providers and policy makers.

3.5 Regional Perspective

Currently the formal cross-border trade in fertiliser is poorly coordinated, and there is no region-wide approach to fertiliser supply to land-locked countries.⁶ The program will offer opportunities to develop and expand fertiliser supply systems into neighbouring, land-locked countries. This will have both developmental and commercial benefits. Using a mix of the advantages of economies of scale, the experience of the Partnership and the increasing skills and knowledge of local and international traders operations could expand into neighbouring countries, and elsewhere into East and Central Africa⁷.

3.6 Sustainability

The program's economic and financial sustainability will principally come from its commercial character and the fact that, if successful, the operation will continue on private sector, business principals. This, in turn, will feed the social sustainability. The operation will not require continued external support beyond, perhaps, some continued technical training and capacity building. Environmental sustainability will depend on the extent to which effective complementary soil management techniques that maintain organic matter and other characteristics can be introduced.

4. FIELD OPERATIONS

Details of the operations and management of the program will be determined during the Program Preparation period following the Abuja Conference. At this stage it is possible only to establish the general approach that might be used for each of the components and to identify some complementary activities. The specific roles of local and central government, as well as each of the other partnership members, will be determined during detail program design. Each partner, including the Government, would be responsible for financing their own activities in the program.

⁶ On the other hand, there is a sizeable illegal cross-border trade of fertiliser, especially where there are price differentials due to subsidy.

⁷ For example, it has been calculated that it would be US\$50 per ton cheaper to move fertiliser from Dar es Salaam to Kasawa/Kapiri in Zambia than by the current route from Johannesburg: US\$90 vs US\$140 per ton (World Bank, 2006c).

4.1 A Buffer Stock

The establishment of a Buffer Stock in Tanzania is part of the draft National Fertiliser Strategy (MAFC, 2006). It would be a temporary, but very significant, practical way of providing the ‘kick start’ that is needed to promote the market. This will have the impact of shifting the supply curve to the right (SSCR), with a consequent reduction in the price, which is a valid option for stimulating use (IFDC, 2005). It has been shown that under the right circumstances, increases in supply chain efficiencies can lower production costs by 25% and raise yields, also by 25% (World Bank, 2006 c). It is, however, important to stress that the vision of the program extends well beyond the relatively straightforward physical task of ensuring reliable fertiliser supply.

The import and management of the buffer stock will be based on Yara’s global fertilizer expertise and accountability as the largest fertilizer company in the world. Monthly minimum stock levels and actual costs of import and distribution will be established. This will lead to sales parameters for the buffer stocks that will encourage the growth of other wholesalers and enable existing operators to stay and expand in the business. All fertilizer importers would continue their commercial activities and compete with the buffer stock for sales to distributors and farmers. In order to ensure competitive pricing, the optimum size of fertilizer import shipments is 20,000 to 25,000 tons. Competitive, commercial terms will be applied to the sale of all fertiliser under this program.

The establishment of a fertilizer buffer stock will have the following advantages:

- a) To ensure there is always a minimum fertilizer stock level in the country, helping to facilitate agricultural development and to reduce the volatility of prices. This will help balance supply and demand over the application cycle.
- b) To provide confidence to retailers and farmers that it would be possible to invest when they want fertiliser. Only by knowing that reliable supplies will be available will the key actors be prepared to plan for their use.
- c) To provide access to competitively priced fertilizer by smaller Tanzanian traders who do not have the working capital to import ship-loads of this vital agricultural input. Due to restricted capital, very few opportunities exist for domestic importers to achieve these economies of scale.⁸ This would therefore establish the basis for a competitive market to bring in other traders into the supply chain.
- d) To improve efficiencies through a decrease in lead times in sourcing fertilizer
- e) To enable the Government of Tanzania to reorient the partial fertilizer subsidy it currently provides, which in its present form is not sustainable and not supportive of the growth of the private agro-dealer network in the country.
- f) To provide a basis for demonstrating an improved regulatory and quality control system, through establishing streamlined procedures and processes for inspection.

The selected fertiliser for the buffer⁹ would be imported at the same time as commercial Yara stock at the same CIF value. Through an agreed open-book costing system, a sale price for the

⁸ SubSaharan Africa uses less than 1% of global fertiliser supply

⁹ Probably DAP-Urea to start with, with NPK being introduced later.

buffer stock would be established that would include a reasonable profit margin (probably between US\$20-30 per ton on a cash sale).

The existence of the Buffer Stock and the prices being charged would need to be widely publicised, and offer an opportunity for small scale traders to draw from it. Minimum and maximum purchases from the buffer will be set to encourage growth in the wholesale and distribution network, ensuring that smaller input suppliers are not excluded. Auditing of the buffer stock and associated accounts will be carried out by appointed independent auditors. All sales would be on a cash sale basis, financed by the buyer.

The buffer stock program will be deemed a success if, after a few years, sales from the stock drop to zero, or near zero. This will mean that the Tanzanian fertilizer market is being adequately supplied with more competitive stock through commercial channels. More details of how the Buffer Stock might be managed are presented in Annex 4.

4.2 *Short-Term Credit*

The objective of this component is to ensure that farmers, retailers and traders active in the Fertiliser Value Chain have safe access to reliable credit at a reasonable price. The focus would be on supporting the credit needs of farmers through various long and short-term instruments, and providing technical assistance in mobilizing farmers into farmer associations/joint liability groups to help attract loans for inputs and other assets required for commercial farming. Competitive commercial terms would be applied to the financing of all aspects of credit.

With worldwide experience in financing agricultural operations, Rabobank is already involved in providing finance through its shareholding of the National Micro-finance Bank (NMB). Norfund also has extensive experience of, and technical expertise in, commercial development finance and micro-finance systems. The focus of this component would be on supporting the credit needs of farmers, distributors and stockists through various long and short-term instruments, and providing technical assistance in mobilizing borrowers into joint liability groups to attract loans for inputs and other assets and activities required for commercial farming and profitable fertiliser-related agri-business.

Expansion and consolidation of local SACCOs to become more effective and larger credit providers is one option that is being explored: this will be further developed with support from the multi-donor supported Financial Sector Deepening Trust (FSTD). This component will also liaise with the Government's Agricultural Inputs Trust Fund. So far this Fund has not been able to reach out to the rural areas and has had very limited impact. More details of a possible approach to small-scale farmers' credit is given in Annex 5.

4.3 *Output Marketing*

This component will be designed to ensure that farmers benefiting from improved fertiliser supplies will be able to sell their output at a reasonable price. Connecting farmers to viable markets will be an essential aim of the programme. Not only will this enable them to finance their credit,

but it will give them the confidence to continue to invest in fertiliser use in the future. This is essential to the sustainability of the operation. Linking activities to ongoing programmes that are already addressing market access constraints will be explored.

Rabobank has extensive global experience in structured trade finance and inventory financing, financial products that would form central roles in large scale commodity funding. Furthermore, from an output perspective it would also be able to establish contracts for produce both domestically and internationally between end users or exporters using, for example, commodity derivatives to establish equitable purchase and sale and supply agreements between parties. Rabobank has already established effective operations of this sort with coffee and cashew in Tanzania.

4.4 Training, Capacity Building, Information and Communications

This component will work to improve the technical, business and managerial skills, and institutional capacity, of key local and national, private and public institutions involved in critical aspects of the fertiliser supply chain. It will also work to improve general awareness and understanding of the aims and operations of the Program. This is a development area of critical importance to the long-term success of the program. It is expected that NORAD will, in conjunction with its other activities in Tanzania, be able to support elements of this component.

Inadequate experience, technical, financial and business skills and awareness of private sector enterprise opportunities are major constraints to improved fertiliser supply. This occurs at all levels: from the dockside to the farmers' field. The development of human capital is also a major priority for action in the Government's own fertiliser strategy, with particular focus on helping dealers and retailers, but also includes importers and wholesalers.

The program would work with local trainers and training institutions already in place and, where appropriate, send people for short-courses and work-experience overseas. Among those who might be considered are:

- Leaders and officials of participating farmers Groups
- Retailers
- Private Sector Extension and Marketing Service Providers
- Local and national political leaders and policy makers

Helping to increase the capacity of emerging local private sector institutions – especially farmers' organisations, retailers' organisations, advocacy groups and agricultural apex organisations, will be critical to the long-term sustainability of improved fertiliser use. The program would therefore liaise with ongoing programmes (such as the multi-donor Business Environment Support for Tanzania (BEST) Programme).

Working through a proposed IFAD financed program for rural micro, small and medium enterprises, 'MUVI'¹⁰ the program would liaise with radio stations in each region and communicate a range of messages and information through rural Radio Programmes. The program

¹⁰ MUVI is an amalgam of *Muunganisho Ujasiriamali Vijijini*, translated as Connecting Village Entrepreneurs.

would also use the popular agricultural ‘soap’ programme *Pilika Pilika* serial and consider establish a number of annual national competitions for improved fertiliser supply and use.

4.5 Complementary Activities

There is a series of supplementary activities that will not be undertaken directly by the Program, but through ongoing operations, which will be critical to the long term success of efforts to improve fertiliser use in Tanzania. The activities might include:

- Policy development
- Market Information
- Inland control of quality
- Weather Forecasting
- The Image of Agriculture¹¹

These very important activities will be identified in detail during program design. They will be developed in conjunction with the Government, and include the establishment of a long-term dialogue between the government and the partners on issues such as policy, legislation, regulations and enforcement procedures.

4.6 Management Structure

The structure of the management system for this program is essentially work for the detailed design phase. However, it will be important that the structure is independent, yet responsive to the needs of the programme: accountable, yet not excessively burdened with administration: outside central and local government, yet responsive to national policies and where the government has a voice. It would be a small, temporary structure whose key functions might eventually be replaced by, or absorbed into, a perennial national, independent organisation supporting wise and profitable fertiliser use in Tanzania.

Any institutional structure would need to be simple and transparent: complex structures do not work well in these types of situation. The management structure might have a Partners’ Committee, as the apex organisation, with public and private sector membership. This would oversee the operation and the evolution of the activities and institutions. Under this would be a Program Management Unit¹², for which no institutional point of attachment is immediately clear. It could therefore be established as an independent legal entity in Tanzania – perhaps a not-for-profit company or Trust. The advantages and disadvantages of the options would be analysed during detailed design. In addition, an independent National Fertiliser Advisory Committee made up of farmers’ and traders’ representatives, researchers and other independent parties will provide objective advice and guidance to the program.

¹¹ This is a critical but delicate issue. Agriculture in Tanzania does not project a positive, exciting image. Rather it is seen as a dreary, unimportant activity. If agriculture is to be taken seriously in the 21st century, and attract capable and well qualified Tanzanians into the sector, this image needs to change.

¹² Current development fashion is to avoid PMUs. This is mainly due to a concern to avoid lack of sustainability. As will be shown, this will not be an issue for this program and the establishment of a small, temporary PMU is justified.

4.7 Governance and Corruption

In line with government policy, the program will be designed to maximise transparency and good governance. In the past, the movement and distribution of fertiliser has been subjected to a range of bad and corrupt practices. The program will take these risks into account and ensure that high standards of accountability and governance are maintained.

5. PARTICIPATING INSTITUTIONS

This section will briefly identify some of the existing institutions and projects, and planned projects, that may have a role in cooperating with the Program and supporting its activities. The issue of ‘ownership’ of the program requires further clarification. As a mixed commercial/development operation there is a range of different, but complementary, interests and objectives. As a result there can not be a single point of ownership or responsibility. As with any value chain operation, each link has a critical part to play, and no one player controls all the steps. It will therefore be important that the management structure (see Section 4.6) is effective and efficient, as well as capable of responding to the varied concerns of a range of participants in the chain.

5.1 The Partnership

The initial members of the Partnership are presented in Annex 3. Additional partners – most especially the Government of Tanzania – are expected to join as planning progresses. For the partnership to work effectively, each member must have a clear role that does not excessively overlap with the others, and which makes the best use of their comparative technical, financial and geographic advantage. The general areas of specific expertise are clear, and shown in the Table below. However, further detailed work will be required during preparation to establish distinct accountability, within a system of joint responsibility and risk sharing. Bringing their own experience and expertise, each partner will add value and resources to the program.

Of particular importance will be defining the roles of Central and Local Government. The concept of PPPs have not yet been widely developed in Tanzania, and this program offers an opportunity to develop effective systems and appropriate structures. Critical responsibility with central government will be in policy, legislation, regulation, enforcement and oversight. It is not envisaged that either central or local government would have a direct part to play in daily implementation. This is in conformity with current policy.

The Specific Areas of Activity of the Partnership

INSTITUTION	SPECIFIC ACTIVITIES
Yara	<p>Import and distribution of fertiliser, management of buffer stocks, provision of expert technical advice on fertiliser use. Specifically:</p> <ul style="list-style-type: none"> • Import and supply competitively priced fertilizers, in line with international market references. • Assist in the optimization of port operations at DSM. Develop a platform for the storage of a fertilizer buffer stock, to respond to planned agricultural development, besides the normal stock required for Yara commercial operations. • Supply quality fertilizers, in adapted pack sizes for the various market segments, and sell to all solvent parties in the value chain towards the farmer. • Support with advice on agronomic "best practice"
Rabobank and National Micro-finance Bank	<p>Credit and microfinance, output marketing support, establishment of joint-liability groups to enhance access to markets, structured trade and inventory finance, commodity derivatives. Specifically:</p> <ul style="list-style-type: none"> • Structuring supply chains for farm inputs and outputs, involving both domestic and international actors, like processors, supply and marketing companies and exporters. Considering the usage of various instruments, such as commodity derivatives to establish equitable purchase, sale and supply agreements between parties, structured trade finance and inventory finance. • Investigate and supply credit to eligible farmers and/or supply chain organizers through various instruments, and/or providing technical assistance in mobilizing farmers into joint liability groups.
Norfund and NORAD	<p>Risk capital investment in private sector, support business activities in emerging markets, contribute to international cooperation,. Specifically: Explore financing and funding for the implementation of the program. Specifically:</p> <ul style="list-style-type: none"> • Support in facilitating and coordinating the project and financing consultants • Follow up with the Government of Tanzania on how to include them in the proposed partnership
Government of Tanzania	<p>Not yet a formal partner. Expected role to be support in policy, legal and regulatory reform, enforcement of rules and standards, oversight and monitoring.</p>

5.2 *Other Institutions and Projects*

The Program will need to work with a number of critical public and private institutions. The national Agricultural Sector Development Program (ASDP) will be a critical cooperating organisation which is aiming to support improved service delivery. Well supported by bi-lateral and multi-lateral donors, ASDP will be working to improve capacity at national and district levels.

As already mentioned, many districts have only limited technical and administrative capacity. It will therefore be important to maintain realistic expectations and to carefully define and agree on expected results at the local level – and to make alliances with a range of different local operators. At the same time, the extensive experience and skill base of the members of the Partnership will provide a source of knowledge and skills that can contribute to formal and informal capacity building. More details of the institutions and projects with which the Program might work are given in Annex 5. These include:

- Farmers' Organisations
- Retailers and Retailers' Organisations
- Private Sector Apex Organisations
- Local and Central Government
- 16 Donor-funded Projects and Programmes

During the detailed preparation of the programme farmers, traders and stockists will be consulted to provide input to the design of the delivery and marketing systems. Similarly, the Agricultural Council of Tanzania (ACT) would be approached to organise field days and competitions to support the program's activities.

6. THE NEXT STEPS

6.1 *Program Document Preparation*

A provisional Action Plan is set out below which suggests a series of benchmarks that would need to be followed if Program Preparation was to be finished by Mid-October. Of course, a great deal depends on the level of detail required by the Partnership before starting Field Operations. It is highly likely that a number of Field Operations would be able to start implementation well before the Program Document is finalised.

ACTION PLAN FOR PROGRAM PREPARATION

ACTIVITY	COMPLETION DATE 2006
Abuja Fertiliser Conference	June 6
Government of Tanzania Joins Partnership	June 6
Terms of Reference for Program Preparation Approved	June 15
Initial Meeting of Fertiliser Advisory Group, Dar es Salaam	June 20
Consultant Contract for Program Preparation Signed	June 30
Recruitment of Local and International Consultants Completed	July 15
Mobilisation of Full Consultant Team in Field	August 1
Inception Report to Partners	August 10
Field Work for Program Preparation Completed	September 1
Review of Draft Proposals by Fertiliser Advisory Group and Partners	September 5
Draft Program Document to Partners	September 25
Oslo Conference: African Green Revolution	September 30
Finalisation of Program Document	October 15

A proposed outline for the Program document is presented in Annex 7. This requires considerable review and discussion by the Partners and other stakeholders before the work starts.

6.2 *Issues for Future Analysis*

The approach proposes a relatively new type of development in Tanzania. It is inevitable that there are gaps in information, knowledge and understanding. During Program Preparation it will be necessary to start work to fill some of these gaps. Implementation, however, should not be delayed until there is almost perfect knowledge of all issues. Some of the most important issues that require further attention are described in Annex 8. These would need to be included in the Terms of Reference for the preparation of the Program Document.

The documents consulted during the preparation of this Program Concept and Process Note are listed in Annex 9.

6.3 *Partnership Progress*

The next steps that have been identified by the initial signatories to the Partnership MOU are:

Step 1:

- Establish a budget for the development and implementation of the program.
- Seek from the Tanzanian Government their support for the initiative of this project and their partnership in this PPP program.

Step 2:

- Investigate the viability of the initiative, determine the supply chains that can be targeted, determine quantitative requirements, structure credit needs, investigate investment needs and develop 5 year business plan

Step 3:

- Implementation.

After each step a go-no-go decision will need to be taken by all relevant parties.

Annexes

ANNEX 1 – FERTILISER STATISTICS FOR TANZANIA 1995 - 2006

FERTILISER STATISTICS FOR TANZANIA 1995/96 TO 2005/06

Source: Ministry of Agriculture, Food and Cooperatives,
Inut Unit
Dar es Salaam, 2006

FERTILISER DEMAND 1995/6 TO 2005/6

Fertiliser Type	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
S/A	48,960	25,000	25,000	25,000	20,000	20,000	6,000	6,500	6,500	11,690	11,690
CAN	60,650	35,000	35,000	35,000	30,000	30,000	19,300	10,000	10,000	33,400	33,400
UREA	71,460	60,000	60,000	55,000	55,000	55,000	77,000	80,000	80,000	202,640	202,640
TSP	19,355	15,000	15,000	15,000	15,000	15,000	20,000	20,000	20,000	16,700	16,700
DAP	10,000	10,000	10,000	10,000	15,000	15,000	27,500	30,000	30,000	50,100	50,100
MOP/OTHERS	700	1,000	1,000	1,000	1,000	1,000	0	1,000	1,000	1,670	1,670
NPK 6:20:18	28,620	26,000	26,000	30,000	27,000	27,000	29,767	30,000	30,000	48,739	48,739
NPK 25:5:5	9,750	7,000	7,000	4,000	3,000	3,000	3,700	3,550	3,550	7,482	7,482
NPK 4:17:15	2,000	0	0	0	0	0	0	0	0	2,000	2,000
NPK 20:10:10	8,505	8,000	8,000	5,000	4,000	4,000	5,100	4,500	4,500	10,579	10,579
Total	260,000	187,000	187,000	180,000	170,000	170,000	188,367	185,550	185,550	385,000	385,000

FERTILISER SUPPLY 1995/6 TO 2005/6 (TONS)

Fertiliser Type	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
S/A	72,600	52,820	38,339	29,830	22,209	17,000	21,050	18,345	17,416	7,408	7,000
CAN	38,300	19,866	24,836	20,200	25,662	28,983	13,850	24,946	16,487	29,145	32,782
UREA	54,700	38,926	35,105	50,405	43,574	44,681	40,149	40,986	37,237	51,576	85,850
TSP	8,300	3,955	4,515	3,400	10,110	8,500	5,400	6,279	5,511	2,487	7,117
DAP	4,300	9,780	5,596	7,783	7,847	12,000	11,128	15,872	11,626	5,666	12,345
NPK 20:10:10	8,300	575	32,557	400	1,500	20,000	320	21,098	15,667	6,803	7,908
NPK 25:5:5	-	750	1,710	3,700	4,646	2,575	4,530	2,567	2,386	1,795	3,576
NPK 6:20:18/10:18:24	22,100	28,719	4,200	39,682	10,501	3,600	13,067	3,853	423	18,515	32,176
MOP/SOP	900	1,050	580	750	1	358	240	1,617	2,880	1,012	5,944
Other	-	1,147	800	2,541	-	-	2,600	3,372	1,392	1,246	364
Total	137,626	157,588	148,238	158,691	126,050	137,697	112,343	138,935	111,025	125,653	195,062

FERTILISER USE 1995/6 TO 2005/6 (TONS)

Type of Fertiliser	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/2004	2004/2005
SA	18,016	31,923	20,524	22,431	15,369	11,040	11,905	12,674	12,600	4,099	2,593
CAN	20,971	10,058	14,779	9,892	9,134	15,460	8,149	16,455	12,577	21,494	12,680
UREA	25,680	35,327	21,140	28,756	14,758	18,390	27,293	30,379	30,334	36,150	54,674
TSP	7,115	2,464	2,342	2,134	2,913	3,731	3,566	3,504	309	2,313	2,479
DAP	2,444	4,058	2,594	3,441	3,949	4,035	3,576	8,242	6,515	3,897	10,551
NPK 20:10:10	7,493	558	1,300	388	204	2,002	78	2,028	186	5,611	168
NPK 25:5:5	-	48	485	3,544	1,470	2,004	4,517	1,003	264	1,134	7,236
NPK 10:18:24	8,760	23,001	19,841	32,825	13,187	10,508	10,228	3,976	11,725	16,199	18,624
NP K 4:17:15	-	1,113	257	512	-	-	-	-	-	-	0
MOP	824	1,018	475	630	33	174	-	685	2,498	941	2,007
Other	-	-	-	1,940	272	-	1,228	1,990	549	820	41
Total	91,303	109,568	83,737	106,493	61,289	67,344	70,540	80,936	77,557	92,658	111,053

ANNEX 2 - VALUE CHAIN ANALYSIS

Commodity value chains are being increasingly recognised as providing a solid framework for the analysis of the players (or value chain “participants”) and the performance of specific markets.

Interest in systemic, whole value chain approaches has been growing rapidly, based on understanding of whole markets and economies rather than individual elements within them. Value chains and their analysis are being seen as useful tools to tackle issues of an economic and social perspective. Also, value chains with high potential impact on rural development are being recognised as targets for donor interventions where benefits also have a public interest such as poverty alleviation.

Value chain development requires donors to concentrate on being change agents for whose concepts and activities that have the best chances for a sustained effect on poverty. They might not necessarily need to exclusively interact with the poorest value chain participants. They also need to be aware of the constraints and issues along other parts of the chain as the market intermediaries are more likely to be the engine of value chain development. Creative partnerships and room for cooperation with the private sector is therefore crucial for value chain development.

The donor who is concerned with supporting pro-poor mechanisms can support farmers directly or through engaging with larger companies (manufacturer; exporter; outgrower-schemes). Furthermore, linkages through product markets allow agricultural growth to stimulate the non-agricultural sectors.

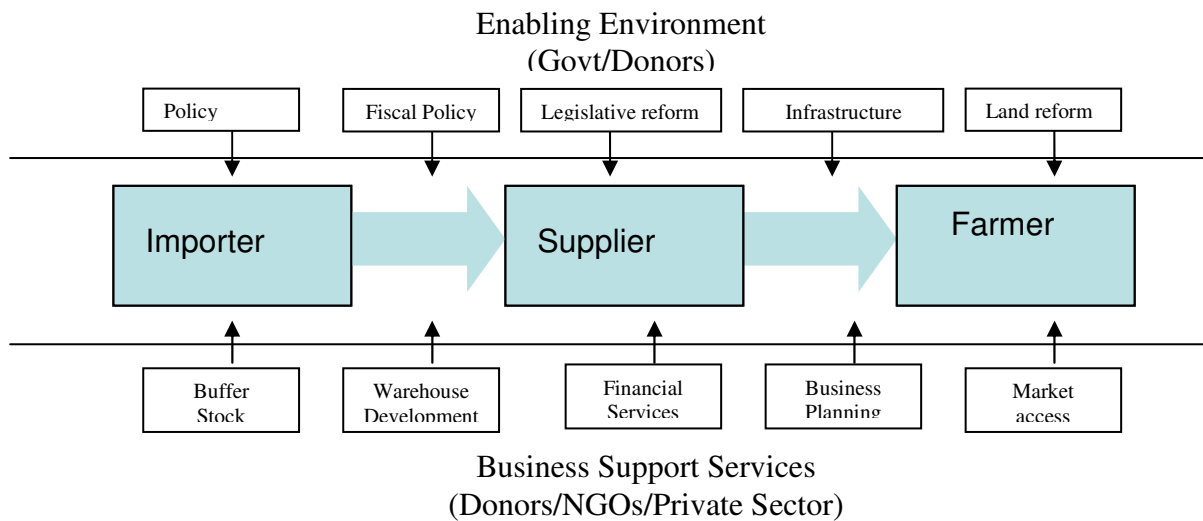
As the diagram below shows, the role of the partners within a value chain are distinct and require clear and specialist skills. The identification and coordination of value chain activities are core requirements in value chain analysis. So too is the development and efficient targeting of specialist service provider input and the support of an enabling environment are all requirements for effective producer-to-market linkage development.

A structured analysis of value chains is becoming an integral part of any programme of support. This has been driven primarily by the interlinked nature of the market intermediaries and the need to understand the impact of market demands or key policy implications by Government. Programmes are also emerging where the coordination and communication between the intermediaries is an important component of work. This work initially looks to develop trust and ultimately common objectives to help evolve and develop sustainable market linkages. Value chains analysis will form a central component of work in the next phase and primarily will involve:

- mapping the value chain involved in the fertiliser sector: the different types of activity, geographical location and partners in different roles at different levels.

- following up with quantitative and qualitative research investigating the relative distribution of 'values ' and the reasons for inequalities and/or inefficiencies and constraints in the chain.
- based on this analysis: identification of potential “investments” or activities for supporting or upgrading the chain as a whole and/or providing effective fertiliser access to smallholders.

The value chain partnerships



The table below indicates a general example of a typical value chain analysis for a fertiliser market. It should be stressed that this is only an initial 'sketch', and further detail, and corrections, will be added during the Program Design Phase.

Constraints Analysis Generic Imported Fertiliser Supply Chain

Manufacturer	Importer	Wholesaler	Retailer	Farmer
Constraints	Constraints	Constraints	Constraints	Constraints
<ol style="list-style-type: none"> 1. Insufficient clarity on GoT policy towards fertiliser market development 2. Weak regulatory framework for fertilisers in Tanzania 3. Little enforcement on protection of brands 4. Limited market information to plan ahead to address shortfalls/carryover stocks 5. Concern that GoT through TFC) will introduce further fertilizer subsidy programmes 6. No formal development of cross-border trading strategy (Rwanda/Zambia/Malawi) 	<ol style="list-style-type: none"> 1. Poor market information to plan ahead to address shortfalls/carryover stocks 2. Depreciating exchange rates 3. Concern that GoT through TFC) will introduce further fertilizer subsidy programmes 4. Poor business relationship with wholesaler/retailer 5. Only one main port (Dar-es-Salaam) for importing fertilisers 6. No clear development of cross-border trading strategy (Rwanda/Zambia/Malawi) 7. State intervention – often ineffective means/targeting and leakages 8. Procurement/distribution delays 9. Weak analysis of options for subsidy use in fertiliser markets. (infrastructure?) 	<ol style="list-style-type: none"> 1. Large distances to retailers 2. Poor road infrastructure 3. Inadequate storage/ warehouse availability 4. Limited market information 5. Weak business relationship with importer /retailer 6. Limited use of TFC warehouses (few bonded warehouses for collateral for input business loans) 7. Strict collateral requirements ensure low percentage of loans to the agricultural input business 8. Lack of economies of scale in procurement 9. Lack of mechanisms for contract enforcement in rural areas 10. Poor enforcement of standards of quality and measurement (brand weakening) 11. No development of formal cross-border trading strategy (Wholesaler Mbeya to Mbale/Kasama – Zambia or Karonga/Chipita - Malawi) 	<ol style="list-style-type: none"> 1. Small numbers of input dealers (no integrated dealer networks) 2. Dealers concentrated in district/regional capitals only 3. High price of fertiliser 4. Poor accessibility to fertiliser supplies (infrastructure) 5. Little training in fertiliser marketing (from importer/wholesaler) 6. Poor business skills 7. Difficult physical access to finance (limited rural outreach by banks) 8. High interest rates 9. Microfinance loans too small to help in business development (limited size of orders to wholesaler) 10. Small fertiliser purchases (low stock) 11. High transaction costs limiting investment in market development (e.g. extending credit to farmers and tech/delivery support) 12. Inability to establish linkages with the private sector (large sellers of fertilisers) 13. No business relationship with importer/wholesaler 	<ol style="list-style-type: none"> 1. Limited knowledge in fertiliser use 2. Economic constraints limit fertilizer application (particularly basal fertilisers) 3. Little use of soil analyses (poor extension support) 4. High price of fertiliser 5. Limited opportunities for crop diversification and markets 6. Weak smallholder capacity to develop strategies or alliances to respond to changing markets (lack of farmer associations) 7. Poor accessibility to fertiliser (infrastructure) 8. Poor accessibility to fertiliser (distance) 9. Difficult physical access to finance 10. High interest rates 11. Weak interlinked input/output markets to ensure credit repayment 12. No specialized use of fertilisers 13. Limited farmer confidence in fertiliser “mini-packs” 14. High fertiliser prices precludes use on non-traded crops 15. Difficulty to establish linkages with private sector buyers

Notes:

1. The importers role can be replaced by Export Crop Processors or NGOs buying directly from manufacturers and selling on to farmers groups.
2. Cooperatives can also buy directly from importers and sell on to farmers (members).
3. When Governments intervene a Procurement Agency can purchase directly from a manufacturer and use a Distribution Agency to provide subsidised fertiliser to extension services or cooperatives (who then sell to farmers.)

ANNEX 3 - THE PARTNERS¹³

This Annex summarises the main characteristics of the Partners who have so far committed themselves through agreeing to sign the Memorandum of Understanding. The addition of the Government of Tanzania is expected in the near future and additional partners, such as the Rockefeller Foundation, may join later.

Yara International ASA

Yara is a chemical company with inorganic fertilizer at its core. Listed separately from its oil and chemicals parent company Norsk Hydro, it is the world's largest fertilizer company measured in revenues, which exceeded \$7 billion in 2005. Yara maintains a local presence in 50 countries worldwide and sells over 20 million tons of mineral fertilizers in more than 120 countries. It is a major corporate client of Rabobank's and the only global fertilizer-industry player with a direct presence in Africa, where it has been active for over 25 years. As a part of Yara's centennial celebration in 2005, it established the Yara Foundation to award an annual prize in recognition of exceptional efforts to reduce hunger and poverty in Africa. The next Yara Africa Green Revolution Award will be awarded during its Sept 1-3, 2006 Oslo Conference on Africa.

Yara established a domestic marketing presence in Tanzania to sell fertilizer within the country.

Norfund (Norway's development financial institution, DFI)

The Norwegian Investment Fund for Developing Countries, Norfund, facilitates economic growth and poverty reduction by investing risk capital in profitable businesses in developing countries. Norfund invests risk capital in profitable private enterprises in most countries of Africa, Asia, Latin America and the Balkans. Any country with a GNI per capita of less than US\$ 5,285 is eligible for these investments ([OECD DAC-list](#)). Norfund will contribute to the realization of viable projects, which balance economic, social and environmental considerations. Norfund supports the African initiatives set out by both Yara and Rabobank, and is committed to supporting the business activities of Norwegian and non-Norwegian private corporate entities in emerging markets where commercial and development interests can be combined.

NORAD

The Norwegian Agency for Development Cooperation (Norad) is a directorate under the Norwegian Ministry of Foreign Affairs (MFA). Norad's most important task is to contribute in the international cooperation to fight poverty. Norad's activities are based on the following five goals of development cooperation:

1. To combat poverty and contribute towards lasting improvements in living standards and quality of life, thereby promoting greater social and economic development and justice nationally, regionally and globally. In such development, priority must be given to employment, health and education.
2. To contribute towards promoting peace, democracy and human rights.
3. To promote responsible management and utilisation of the global environment and biological diversity.
4. To contribute towards preventing hardship and alleviating distress arising from conflicts and natural disasters.

¹³ Source: Partners' Memorandum of Understanding, June, 2006

5. To contribute towards promoting equal rights and opportunities for women and men in all areas of society.

Rabobank Group

Rabobank is a global financial services leader providing institutional and retail banking and agricultural finance solutions in key markets around the world. From its century-old roots as a Dutch financial cooperative, Rabobank has grown into the world's 25th largest bank with over \$600 billion in total assets and operations in 38 countries. Rabobank is the only private bank in the world to be awarded the highest credit ratings from both Standard & Poor's (AAA) and Moody's (AAA), and it is ranked the third safest bank worldwide by Global Finance magazine. Rabobank has summoned numerous donor, corporate and NGO partners during the past year to commit to helping improve access to financial services in developing countries, particularly by way of creating models for financing agricultural producers in rural areas.

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ANNEX 4 - BUFFER STOCK MANAGEMENT

As an element of response to the National Fertilizer Strategy, it is proposed that the import and subsequent management of the buffer stock will be based on Yara's global fertilizer expertise and accountability as the largest fertilizer company in the world. Working with key stakeholders, the monthly minimum stock levels and actual costs of import and distribution will be established. This will lead to sales parameters for the buffer stocks that will encourage the growth of other wholesalers and enable existing operators to stay and expand in the business.

The selected fertiliser for the buffer would be imported at the same time as commercial Yara stock at the same CIF value. The buffer stock would be handled in exactly the same way as, and be physically inseparable from the commercial stock. Through an agreed open-book costing system, a sale price for the buffer stock would be established that would include a reasonable wholesale profit margin: probably between US\$20-30 per ton on a cash sale.

The existence of the Buffer Stock and the prices being charged would need to be widely publicised, and offer an opportunity for small scale traders to draw from it. Minimum and maximum purchases from the buffer will be set to encourage growth in the wholesale and distribution network. All sales would be on a cash sale basis, financed by the buyer.

Yara will be responsible for the Buffer Stock committed to its care, within agreed loss and handling parameters. For this service Yara will receive a fee of US\$ 10.00 per ton. Yara would account for the stock, with buffer stock accounts kept separately and sales made on different paper to show the difference with sales from the local commercial Yara company.

Yara and other fertilizer importers will continue their commercial activities and compete with the buffer stock for sales to distributors and farmers. At the time when additional commercial stock is brought in by Yara, the price of the buffer stock will be reset to the same CIF value of the new Yara stock. This is to prevent the buffer stock becoming either too cheap or too expensive relative to other supplies and thus distorting the market (when too cheap) or sitting idle (when too expensive).

Auditing of the buffer stock and associated accounts will be carried out by appointed independent auditors.

Because the buffer stock will comprise fertiliser that is imported over and above the normal commercial quantities imported by existing fertilizer companies, the cost of the additional stock will need independent financing. A number of donors and potential partners will be approached to fund the buffer stock, including the World Bank, Rockefeller Foundation's Investment Arm for Small Scale Enterprise Development, USAID, NORAD, Rabobank Tanzania and the Government of Tanzania.

Yara will be held accountable for the buffer stock under its care. However, once in the country, fertilizer importers, including Yara itself, will compete with the buffer stock for sales. Indeed, the

buffer stock is meant to supplement existing import and distribution channels and in a competitive and adequately supplied market should be the sale of last resort. Thus it is likely that inventory days will be higher for the buffer stock than for competing commercial stock.

Due to global market fluctuations, the buffer stock carries with it both the risk and potential reward of adjustment in price to that of new Yara commercial imports. In theory, over the long term upward and downward price movements will balance out. However, global fertilizer markets are currently at medium-term highs and there is a bigger chance of downward than upward price movements in the next few years. This means that losses on the initial buffer stock due to downward price movement could well be incurred.

The buffer stock program will be deemed a success if, after a few years, sales from the stock drop to zero, or near zero. This will mean that the Tanzanian fertilizer market is being adequately supplied with more competitive stock through commercial channels.

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ANNEX 5 - SMALL SCALE FARMER CREDIT

1. Introduction

Trends in the Tanzanian banking sector indicate that the sector has grown and developed over the past ten years. The number of banks has increased and competitive pressures are beginning to emerge. Some banks are voluntarily beginning to target alternative markets and in particular the rural-based small business sector. This is being witnessed by the initiatives of some of the commercial banks, such as CRDB and Akiba. Their rural finance programmes and links with SACCOs (e.g. lending/deposit initiatives supported by programmes such as IFAD's Rural Financial Services Project) are encouraging moves forward. Likewise, NMB, since its recent acquisition by a number of financial institutions including Rabobank, is putting in place an extensive credit training programme. Its aim is to expand and better utilize its extensive national branch network and build on this strength to more effectively target rural-based clients.

There are a large number of initiatives in the country targeting support at financial delivery to the commercial farming sector (see box). Not only are support initiatives focusing on financial institution capacity building but also the policy and regulatory framework that is maintaining the competitiveness of the industry.

Given the support already in place, it is believed that the most effective approaches to developing farmer credit services will be through support and coordination of initiatives at the interface of financial sector and value chain strengthening.

SME Finance - Support Initiatives	
Activities Supported	Major Donors
Policy related research in the MSE sector and informal economy	ILO, USAID
Support to Micro-Finance Institutions	NORAD, SIDA, ADB, UNDP, ADF
Policy/regulatory reforms in Micro-Finance	World Bank
SME Policy development	DFID, UNIDO, USAID, ComSec
Technical training for MSE operators	GTZ, UNIDO
Training in business and entrepreneurship skills	UBIDO, ILO, GTZ, British Council
Financial Sector Deepening Trust; focusing on initiatives to increase capacity of financial sector to broaden outreach to the poor	DFID, CIDA, SIDA, RNE, DANIDA, GoT
Capacity building of grassroots SACCOs; strengthening of service providers, warehouse receipts.	IFAD
Wholesale lending facility for SACCOs and micro-finance institutions	Office of the Vice President/African Development Bank

The Microfinance industry in Tanzania is still in a process of evolution. It is readily apparent that the Government is committed to economic and financial reforms. Many of the Government's reforms have been directed at the traditional banking sector. Despite some of the gains from these reforms, the Government is aware of the limitation of the traditional banking sector's ability to mobilize and capture savings from and extend credit to poor people in rural and urban areas. This vulnerable population has a weak financial resource base and is in need of financial services that cater for their unique circumstances.

Somewhat outdated but still relevant data¹⁴ shows that there is a large, unmet demand for micro finance with 82% of households

saving in their homes, 79% of households were willing and able to save if appropriate products

¹⁴ The demand for and supply of financial services in Tanzania – K-Rep, 1997

and saving mechanisms were available and 94% of households were willing to borrow more if resources and appropriate methodologies were available as well as viable investment opportunities. Other data (2006) estimates demand¹⁵ for SME credit at 2.5 million borrowers with only about 50,000 borrowers being served currently.

Today, some 1,800 institutions are registered and are providing a range of financial services to rural and urban-based individuals and businesses in Tanzania. Unfortunately, very little information is available on the number of clients these institutions are serving, the nature of the services they are providing, or the sustainability of the structure through which the services are being provided. Insufficient information is a major and well recognized weakness of the industry and it limits the sector's support and development. Programmes have recently been set up to address this, including the Financial Sector Deepening Trust's recent implementation of a country-wide financial sector census.

2. Traders and Retailers' Credit

A study of the Uhuru Corridor¹⁶ identified the current sources of capital for small business. The study data shows 85% of small businesses had not accessed credit from commercial sources. Only 6% of the total had accessed credit from either a micro-finance institution or a commercial bank. Since the survey it is likely that these figures will have improved, particularly due to the expansion in lending by NMB that now has about 140,000 loan clients compared to less than 20,000 three years ago. Even with this expansion, the majority of enterprises still do not have access to formal credit.

An aversion to risk-taking by most commercial banks in Tanzania, coupled with an inadequate legal framework for the use and recovery of collateral, compounds the problem: as does the poor reputation of rural communities for debt repayment in the past.

While large numbers of SMEs have not accessed credit, a key ingredient to access is the ability to repay formal loans which is reflected in the turnover of the business. A recent paper¹⁷ estimated that commercial banks were serving less than 40,000 commercial SME clients. The paper assumed that an SME loan would be between TShs 1 million and 20 million and that assuming a leverage of not more than 20% amongst firms, annual turnover for SMEs should be more than TShs 5 million. Some 304,000 enterprises currently have turnovers above this figure showing that there is significant room for expansion in the market if banks were able to tailor appropriate products and services to potential clients.

From a commercial bank's perspective, they are lending to small businesses particularly below TShs. 250 million. However, the bulk of this lending is to retail clients (up to 70-80%). Standard Chartered for example, lent Tshs. 35 billion in 2004 to clients requiring Tshs. 1-250 million. Out of this only Tshs. 3 billion (about 8%) was lent to SMEs. CRDB also estimates that SMEs constitute about 20% of its total portfolio of about Tshs. 120 billion. However, while there is

¹⁵ SME Map, World Bank 2006e

¹⁶ KAS/SwissContact Baseline Survey Dec. 2002 extrapolated nationally

¹⁷ IFC Tanzania MSME Access to Finance, August 2005

much talk about SMEs, careful analysis of portfolios reveals that there is minimal (albeit growing) lending to them. Most banks target established firms and there is stiff competition for these clients. Large businesses constitute either government parastatals or multinational companies. There are only a handful of large local companies. There are also very few medium sized enterprises. Although no quantitative data exists the analysis suggests that most medium sized businesses (staff size of more than 50) do not have major problems accessing credit and constitute the bulk of existing SME clients for commercial banks. The more established and formalized small firms are also able to access credit although the bulk still faces constraints. There is increasing competition amongst banks to offer loans to these medium sized businesses and interest margins will decrease. There will also be increased pressure to move down-scale and offer tailored financial products to smaller business.

3 Constraints to Commercial Bank and MFI Lending to Rural Businesses

Commercial Bank Lending

The key constraints limiting bank expansion of efficient and effective provision of financial services to rural businesses include:

- *Risk-averse lending policies and practices.* Aversion to lending to rural businesses is, in many respects, a legacy of previous credit programmes which had very poor loan repayment rates and high levels of defaults. In addition, high rates of return on government securities have had a ‘crowding out’ effect on new lending, as these government investments provide an attractive interest income with negligible risk. As a result, the primary form of risk assets for many Tanzanian banks is investments in government paper, rather than loans.
- *Few suitably trained personnel in loan appraisal/management.* Many banks are instigating ambitious training programmes. However, there is a continued widespread need for bank personnel to be adequately trained in appraising loan applications and supervising loan projects. Assessing small businesses and their ability to repay loans out of cash generated by sales is seen as a key training activity. Also, there is insufficient experience in client follow-up and loan monitoring, especially problem loans.
- *Poorly developed Loan Tracking / Portfolio Management MIS Systems.* Banks in Tanzania, with the exception of the largest commercial banks, have poor loan tracking MIS. This weakness prevents effective loan monitoring and follow-up, and impedes bank management from using information to monitor and manage in a pro-active manner the overall loan portfolio.
- *Inadequate knowledge of the agribusiness sector.* Banks perceive agri-lending as “too risky” when in many cases it is a lack of knowledge of the (different) risks involved. If banks are to move into the small business market, where, invariably, many are involved in some form of agricultural or rural-related production, training in agribusiness finance will become a necessity.
- *High Collateral requirements.* The process of collateralized lending is burdensome and many banks do not use collateral substitutes. Land is of low value and the use as collateral

(1999 Land Act and Village Land Act) is risky. There is no difference in statutory collateral requirements for short and long term loans. Fully secured lending require 125% collateral. The BFIA allows banks to lend up to 5% of the core capital to an unsecured individual loan, 10% of the core capital to a partially secured individual loan, and 100% of the core capital to a fully secured individual loan. The combined exposure for the individual loans should not exceed 25% of the core capital. Total loan to deposit ratio should not exceed 80%. Experience show that few banks take advantage of unsecured lending options.

The lending limits are generally inappropriate and overly strict with respect to typical rural credit facilities, where the borrower may not have access to sufficient collateral in the form acceptable to banks. The conventional loan guarantee systems used by banks do not recognise alternative collateral, such as group guarantees or personal security. Furthermore, banks try to avoid handling credit below USD 1 000 for reasons of efficiency. The natural risk inherent in agriculture is an additional argument for excluding this sector from banking services. For small businesses in remote areas, they are restricted to a small number of banks having branches in rural areas, and as a result, most of the Tanzanian rural population are excluded from needed financial services and are obliged to rely exclusively on the informal sector and family support.

MFI Lending

The main issues/constraints related to rural business access to micro-finance include:

- SME knowledge: Limited skills of small business operators towards the use of finance;
- Cost: Low SME coverage by MFIs. Operational costs (mostly travel) tend to limit the coverage areas. Large scale (regional) lending is prohibitive without extensive branch network;
- Collateral: Strict requirements (similar to commercial banks) that include need for licensed/registered business, fixed asset collateral, attendance at weekly meetings/have deposit account, credit history etc.;
- High MFI interest rates (20 – 35%), SACCOs charge between 18-20% which is above the commercial lending rate (9-19%). This is an important disincentive to long-term borrowing;
- Loan size: Loans made available by MFIs are often insufficient for required small business investment. All informal financial institutions provide small and short-term loans (typically rising in stages from Tshs 50,000 to 500,000 per small rural business recipient or loan group);
- Repayment terms: Short repayment time (and therefore no opportunity for long-term investments). This is an important issue for small businesses particularly those involved in agribusiness that would like to diversify but cannot afford to plant a different crop or process a particular commodity where the start-up of revenue/cash flows would take more than 9-12 months, (the normal period when MFIs are requiring loans to be repaid).

4 Opportunities for Rural Lending

Despite the above constraints, the prospects remain relatively good for rural outreach by financial institutions:

- Government recognition and support of the micro-finance sector and the operationalisation of the National Micro-finance Policy (2000);

- The existence of a large unmet demand. Over 300,000 small businesses currently have turnovers over Tshs 5 million showing that there is significant room for expansion in the market if commercial banks were able to tailor appropriate products and services to potential clients. If the MFI lending sector could offer smaller loans but adapt financial products to match small business longer term investment requirements small business with turnovers over TShs 2 million could be approached. This untapped market would then rise to some 1.5 million small businesses;
- Commercial bank recognition that there is a large un-tapped market in small business finance. Relatively successful initiatives in the use of local semi-informal/MFIs as a channel for finance by commercial banks;
- Emphasis on the development of rural infrastructure, i.e. under the Highly Indebted Poor Countries Initiative of the World Bank and the IMF;
- The development of a number of relatively successful initiatives that have focused on demand driven processes and supporting small businesses to exploit identified (export, local or regional) markets. This is in contrast to historical, supply driven initiatives that supported production led processes;
- The realisation amongst donors of the need to tackle small business constraints in a more integrated and coordinated manner (e.g. Financial Sector Deepening Trust).

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ANNEX 6 - INSTITUTIONS, ORGANISATIONS, PROJECTS AND PROGRAMMES

This Annex briefly outlines the range of private and public sector organisations and projects with which the Program could work and liaise.

1. Farmers and Farmers' Organisations

Farmers' organisations are only just beginning to emerge as players of note in the agricultural sector in Tanzania. The Agricultural Council of Tanzania is in the process of establishing itself as the apex institution for private sector agriculture. There is increasing public sector interest in supporting the development of farmers' organisations in Tanzania, and at the same time they are becoming consolidated under a number of independent networks: these include the network established by MVIWATA¹⁸ and professional organisations¹⁹.

The Program will not work directly with individual small-scale farmers. It will, however, aim to work very closely with farmers' organisations – and through retailers' organisations where appropriate – to ensure that the farmers' voice is heard in the supply chain, and that their real constraints are taken into consideration. Where necessary, the program would help stimulate the formation of local organisations.

2. Retailers and Retailers' Organisations

Retailers will not be able to drive either the supply or the demand side of the fertiliser chain in Tanzania. They do, however, have the critical position of being the key agents in the chain. Most agricultural input retailers are, in effect, Small and Micro Enterprises (SMEs) and suffer from the classic problems of most SMEs in Tanzania: limited skills, inadequate finance, high costs of administration and of doing business legally, and harassment by local government officials.

3. Private Sector Apex Organisations

For a long time the Tanzania Chamber of Commerce, Industry and Agriculture was the only private sector apex organisation in Tanzania. This situation is now changing, with a number of new organisations, including the Agricultural Council of Tanzania (ACT) which focuses specifically on farming and farmers' needs, and the Confederation of Tanzanian Industry (CTI).

There is also an emerging focus for national private sector advocacy, the Tanzanian Private Sector Foundation (TPSF). Although only just becoming established, TPSF is well funded and

¹⁸ *Mtandao wa vikundi vya wakulima Tanzania*

¹⁹ These include, but are not limited to: Tanzanian Society of Animal Production (TSAP), Tea Association of Tanzania (TAT), Tanzania Association of Women Leaders in Agriculture and Environment (TAWLAE), Tanzania Milk Producers Association (TAMPRODA), Sisal Association of Tanzania (SAT), Tanganyika Coffee Growers Association (TCGA), Southern Highlands Farmers Association (SHFA), Tanzania Smallholder Tea Growers Association (TSTGA).

will administer important components of the World Bank financed Private Sector Competitiveness Project.

4. Local and Central Government

It is still unclear to what extent the District Agricultural Development Plans (DADP) will be able to support private sector initiatives in the field²⁰. There remains considerable mistrust between the two camps, and it is not certain that district staff are yet trained in facilitating private sector-driven activities (Korongo, 2005). On the other hand, public sector extension staff will be working through the districts. It will therefore be important that the Program liaises effectively with them, and supports appropriate extension activities. The ways in which this can be effectively done will be determined during detailed program planning.

On the other hand, the overall role of Central Government is clear. They will support the establishment of an enabling policy and regulatory environment, enforce standards and regulations, and monitor progress. The specific details will be determined during detailed program preparation.

In addition, the Tanzania Investment Centre (TIC) will be able to provide advice and support to the program on the development of private sector investment processes in the fertiliser supply chain. This will be important in ensuring the attractiveness of investment options to both Tanzanian and international investors interested in this sector. Although in the past TIC was seen as an organisation to help large-scale investors, it is now increasingly looking to support smaller-scale investors.

5 Networking with Projects and Programmes

5.1 Projects and Programmes

A detailed network of projects and programmes will be established during program preparation. Possible contacts include:

- Business Environment Support for Tanzania (BEST) - for policy reform discussions,
- Tanzania Financial Sector Deepening Trust (TFSDT) - to support micro-finance through NMB, EXIM and other micro-finance institutions,
- International Fund for Agricultural Development (IFAD) - support for Rural Small and Medium Enterprises through 'MUVI', which is being appraised in July, 2006. In addition, IFAD is supporting rural marketing and rural finance support programmes in a number of selected regions. These will all be important sources of support for the fertiliser program.
- World Bank – for the Private Sector Competitiveness Project, Rural Infrastructure²¹, BEST. Also the World Bank-supported PADEP supported is having a mid-term review in

²⁰ The 'O&OD' planning system used at the district level strongly favours public sector social infrastructure investment. Little attention is given to private sector, commercial production and marketing operations.

²¹ Tanzania currently has 18,465 kms of registered roads, of which 3,904 are tarmac. There are 1,860 kms of railway under the Tanzania Zambia Railway Authority (TAZARA) and 2,707 kms under the Tanzania Railway Corporation (TRC). The limited availability of covered wagons increases the risk of theft during transit.

June, 2006. One component, Community Agricultural Development Projects (CADS) is developing methodologies for farmer-based input procurement. The findings of the review will be of great interest.

- Food and Agricultural Organisation (FAO) and International Fertiliser Development Council (IFDC): for technical advice on fertiliser issues
- Tanzania Private Sector Foundation (TPSF) as overall apex organisation and the Agricultural Council of Tanzania (ACT) as agricultural sector apex organisation
- The Gates Foundation – for support to agro-dealers’ development,
- Sokoine University of Agriculture (SUA) and University of Dar es Salaam Entrepreneurship Centre (UDEEC) – technical analysis, enterprise training and consultancy services
- Tanzania Investment Centre (TIC), in the Office of the President (OOP) for national and international investment organisation support,
- MVIWATA²² as national network for farmers’ and farmers’ groups. Also the Danish NGO,
- MS Tanzania, is very active in supporting the development of farmers’ organisations.
- Small and Micro-Enterprise Competitiveness Facility(SCF): - is designed to support product quality improvement and trade development for export-oriented MSMEs through matching grants.
- Private Agriculture Sector Support (PASS): A DANIDA-supported programme. It works with SMEs to support investments in primary agricultural production and agro-business
- European Union supported Everything Except Arms for support for output marketing,
- USAID-supported operations and organisations working on private sector agriculture include DAI-PESA, TechnoServe, ACIDI/VOCA and EnterpriseWorks. These have extensive experience in a range of activities that will be of relevance.

5.2 *The Donors*

The donor community exercises a strong central influence on the agricultural sector, especially through the ‘Basket Funding’ process and policy dialogue with the government. It will be necessary for the program to liaise with the donors, to ensure maximum cooperation for field operations and support for key policy issues. This task would principally be the role of the Government partners in the program, who are responsible for coordinating donors under the Joint Assistance Strategy..

²² Mtandao wa vikundi vya wakulima Tanzania – Tanzania Farmers’ Group Network

ANNEX 7 - OUTLINE OF CONTENT OF PROGRAM DOCUMENT

Executive Summary

Acronyms

- 1. Introduction**
- 2. Background**
 - 2.1 The development context in Tanzania
 - 2.2 Overview of Agriculture in Tanzania
 - 2.3 Private Sector Development
- 3. Fertiliser Use and Supply In Tanzania**
 - 3.1 Historical Use of Fertiliser
 - 3.2 Demand and Use by Small Scale Farmers
 - 3.3 Demand and Use by Large Scale Farms
 - 3.4 Supply and Distribution
 - 3.5 Technical Issues relating to fertiliser use
- 4. The Program**
 - 4.1 The Concept and Program Preparation Process
 - 4.2 Goals and Objective
 - 4.3 Target Groups and Program Area
 - 4.4 Component 1: Buffer Stock
 - 4.5 Component 2: Short-Term Credit
 - 4.6 Component 3: Output Marketing
 - 4.7 Component 4: Training, Capacity Building, Information and Communications
 - 4.8 Program Management
 - 4.9 Supporting Activities
 - 4.10 Monitoring and Evaluation
- 5. Management of Field Operations**
 - 5.1 Buffer Stock Management
 - 5.2 Short Term Credit
 - 5.3 Output Marketing Support
 - 5.4 Training, Capacity Building, Information
 - 5.4 Social and Environmental Impact
 - 5.5 Financing, Accounts and Audit
 - 5.6 Procurement, Disbursements and Financial Flows
 - 5.7 Monitoring and Evaluation
 - 5.8 Components Coordination
 - 5.9 A Regional Perspective
- 6. Institutions**
 - 6.1 The Partnership
 - 6.2 Farmers and Farmers' Organisations
 - 6.3 Importers, Distributors and Retailers
 - 6.4 Private Sector Apex Organisations
 - 6.5 Local and Central Government
 - 6.6 Cooperating Projects and Programmes
 - 6.7 Available Managers and Trainers

7. Analysis of Special Issues

- 7.1 Farmers' Risk Management
- 7.2 Value Chain Analysis
- 7.3 Cost/Benefit Analysis
- 7.3 A New Fertiliser Bill
- 7.4 Research Topics
- 7.5 Taxes and Tariffs
- 7.6 Sustainability
- 7.7 Critical Assumptions

Annexes

- 1. Program Costs
- 2. Fertiliser Statistics for Tanzania, 1995/6 to 2005/6
- 3. Fertiliser Types and Responses
- 4. Input and Output Markets and Marketing
- 5. Rural Financial Services
- 6. Private Sector Service Providers
- 7. Documents Consulted

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ANNEX 8 - ISSUES FOR FURTHER ANALYSIS

The Preparation Phase will need to cover a wide range of issues related to the Program. Among the most important are:

1. Clarification of the market and background statistics on fertiliser supply and use

Further analysis of the market and its imperfections and opportunities are needed. Also, it is essential that data on fertiliser supply and use are checked, and properly understood. Currently, there appears to be large differences between supply and use indicating oversupply in all years, not just the 2005/06 season which is understandable. The real situation needs to be well understood as a critical point of departure for the program.

In addition, the extent of farmers' current knowledge levels of fertiliser use needs to be better understood.

2. Sensitivity Analysis of risks and returns to farmers

More work is needed to determine the factors influencing risk to farmers, the impact of different rainfall patterns on crop response to fertiliser, and on farmers' decision making process. It has been proposed elsewhere (World Bank 2006a) that there could be three different Strategic Levels of activity. At Level 1 there will be high value export crops with reliable markets and good management. At Level 2 there would be fertiliser responsive crops, such as hybrid maize under reliable rainfall or irrigated rice, with weak or risky markets. At Level 3 are crops with both low fertiliser responses and low output prices. This approach would target the level intensity of activity with the level of risk faced by the farmer. Levels 1 and 2 require less extension input, but more support for input management. Level 3 requires a low input farming approach with more focus on extension.

3. Fertiliser Subsidy

A critical policy issue in fertiliser supply is the wisdom and sustainability of fertiliser subsidies. This is seen by the Government as a tool for direct poverty alleviation in rural areas. The Government reintroduced subsidies in 2003/04 to cover transport costs and a part of the price to consumers. This was after twelve years without subsidy, and has not yet stimulated the anticipated growth in use. In 2005/06 the subsidy ranged from US\$0.68 to US\$9.80 per bag of 50 kg. The subsidy is paid by the government. There is no donor support. The on-off application of subsidies has caused considerable disruption to the dealer networks.

It is the intention of the proposed program to help establish such an efficient and cost-effective supply system that subsidies would not be necessary. Detailed analysis shows that in general subsidies create distortions that lead to inefficient application, 'capture' of benefit by the elite and unsustainable impact (see for example, IFDC, 2004, World Bank, 2006 a,b,c and d). There are, perhaps, instances where the limited use of support for demand could be justified in the context of poverty alleviation. In such circumstances the use of Vouchers is proposed.

4 *Poverty Analysis*

There are already many studies on rural poverty and the possible impact of different development initiatives on the livelihoods of farmers and their families. During preparation it will be necessary to use this information to clarify the potential impact of improved fertiliser use on farm families and to glean lessons from the existing literature on how best to address poverty alleviation through improved fertiliser use through targeting, effectively reaching farmers with credit, the use of vouchers for the poorest families, and other possible approaches.

5 *The Policy Framework*

Further analysis of the policy framework relating not only to fertiliser use, but also to land use, environmental and social impact and sustainability factors is needed to guide the final design of the program.

The taxes and tariffs relating to fertiliser import and distribution require continued review to ensure that they will not constrain increased use by farmers. While there are no direct tariffs or duties imposed on fertiliser import itself, other charges, some of which incur VAT (TBS Inspection Fee, Radiation Certificate, and Port Charges) add significantly to the cost. The program will provide field-based information on the impact of the existing regime and, where possible, make recommendations for improvements – such as refunding VAT on all costs away from the quayside.

6 *A New Fertiliser Bill*

Control of fertiliser use is legally provided for under the Fertilizer and Food Stuffs Act of 1962. The Government is currently drafting a new Fertiliser Bill. The Partnership would be available to contribute ideas and comments, based on extensive international commercial experience. It will be particularly important that responsible representatives of the different parts fertiliser supply chain – from importers to farmers – are able to contribute to the formulation of regulations and professional standards.

7. *Program Management*

As indicated in the main text, the details for program management need to be determined during the final design. The opportunity to be innovative and creative is available, and should be taken. At the same time, however, it is important that the key members of the partnership are comfortable with the design and believe it would be effective. Some general characteristics have been proposed in the main text, but more work is required to prepare a detailed recommendation to the full set of partners – which will need to include the Government.

8 *Research Priorities*

Although not a direct input expected from the program, it will be important to identify supporting research topics that will require attention in the coming years. The required work is applied, not pure, research as all the basic work has been done and is well-recorded. However, the practical

aspects of fertiliser use - such as calibration, factors effecting farmers' decisions etc.- need to be better understood. These include:

- Fertiliser response to rainfall
- Resilience of soil fertility to degradation and recovery techniques
- Farmers' risk management strategies with fertiliser use
- Use of organic matter in combination with inorganic fertiliser

9 Local Consultancies

The preparation work will include a series of short-term technical consultancies. These would include:

- Mapping the distribution and retail network
- Mapping output markets for the main agricultural commodities
- Institutional Development, Training Needs and Capacity Building for Farmers' Organisations, Retailers, Extension Workers, Local Government Officials and Central Government Policy Makers
- Economics of fertiliser use: review of existing data including farmers' sensitivity analysis (elasticity of demand, Basal/Top dressing etc..)
- Farmers' and Traders' Input to design
- Regulations, Levies, Taxes and Duties from central and local government
- Input Costs, Finance and Credit
- Information and Communication

10 Critical Assumptions

Several key assumptions underpin the successful implementation of the program. The most important of these, which require further review during preparation are - that there will be:

- Continued government commitment to market liberalization and private sector leadership in commercial fertiliser import and distribution
- Maintenance of national policies that enhance effective and profitable marketing of agricultural output
- Available pool of potential SME retailers throughout the target areas who can be trained in technical and business skills and establish efficient commercial outlets for fertiliser
- Market demand for agricultural commodities – small-holder produced food and cash crops - and will justify widespread and sustained use of chemical fertiliser in Tanzania

11 Benefit Analysis

The real costs of decline in soil fertility are very difficult to measure, so it is difficult to ascribe accurate figures to the benefits which can be derived from reducing or stopping the decline. Nonetheless, it is useful to determine the possible benefits which might come from improved use of fertiliser in Tanzania. There are several types of benefit that would come from this program:

Financial Benefits: Increased net income flows to those in the Value Chain – from importer to farmer

Economic Benefits: Increase real income flows for the economy and society overall

Environmental Benefits: Intrinsic benefits to the natural resource base and reduction of land degradation

Social Benefits: Most especially poverty alleviation, but also increased business skills and organisational capacity

Political Benefits: Through demonstration of the impact of an effective Public-Private Partnership, and establishing a model for other programs to follow

12 Environmental and Social Impact

There are arguments against the extensive support for the use of chemical fertiliser –such as might be encouraged by a large subsidy – as it reduces interest in more sustainable land use practices such as the use of organic matter, minimum tillage and low input agro-forestry (Donavan, 2004). Organic fertiliser and land husbandry techniques will be important complementary activities to support the ecological sustainability of the fertiliser input supply process.

13. Mindset Change

Although not traditionally considered as a program issue, the current mindset – especially among some senior civil servants – is not always supportive of private sector development. An additional constraint is that some policymakers do not have faith in the efficacy of the private sector and therefore call for a return to distribution of subsidized inputs. This is seen to have been reinforced by the poor response of the private sector to new opportunities resulting from liberalisation.

Furthermore, the agricultural sector is not perceived as worthy of the importance and attention it so badly needs to be given. None of these are direct policy issues, but they are areas where high level national leadership and effective ‘champions’ are needed to stimulate change in public perception and cultural.

Significant improvements to the overall public sector institutional culture are starting to appear with the Fourth Phase Government, but more active support is needed. The Public-Private Partnership approach to be used for this Program should be one effective way of helping to break down some of these barriers. Constant, effective and forceful leadership is required if the mindset change is to take place within the span of one generation.

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