**Tanzania Country Profile 2015**

**Produced by the ASHC delivery team**

**supported by George J. Ley**

**OVERVIEW**

Tanzania has the potential to be a food exporter meeting strong regional and international demand, yet currently it struggles to meet even its own food requirements. Productivity is low and the environment is not supportive to business: incentives for the private sector to develop the sector to achieve its potential are weak. The on-going Agricultural Sector Development Strategy aims to address these issues to achieve higher productivity, profitability and farm incomes. However, the majority of smallholdings are small and this is a major impediment to their profitability.

The proposed ASHC Tanzania work programme is potentially the largest and will be the first to get going. Investment from Phase 1.5 is being utilized to ensure we have a viable campaign for the 2015 planting season.

Tanzania represents a good opportunity for lessons on a combination of government and NGO-led extension initiatives. Within the context of a devolved extension system, the major agro-ecological zones of Tanzania also correspond with the government’s national extension strategy. It is therefore imperative that information sharing and dissemination partnerships will be informed by the key cropping and technology priorities of the two major regions, namely Northern zone and Southern Highlands.

Maize, legumes (beans, soybean, pigeonpea, groundnuts) and rice will form a large part of the cropping systems focus in the knowledge sharing campaigns, alongside the more input-led and supply chain approaches for mineral fertilizer and soil fertility improvement approaches such as inoculants for legumes.

Each of these thematic strands are led by a range of partners including N2Africa/IITA (legumes), COMPROII (inoculant) Africa Fertilizer and Agribusiness Partnerships (AFAP; mineral fertilizer supply chain) and Selian Agricultural Research Institute (pigeonpea).

Sokoine University of Agriculture (SUA) and other Agricultural Research Institutes, Optimising Fertilizer Recommendations in Africa (OFRA) and N2A and its partners will provide research inputs for the campaigns.

Tanzania has a rich media and digital media environment offering scope for innovative campaigns. Shujaaz FM, Farm Radio International and Shamba Shape-Up, along with CABI’s D2F SMS service, cover a variety of dissemination channels.

Design, development and implementation of information supply chain improvement campaigns in Tanzania will be undertaken against the background of the government extensions strategy, which encourages pluralistic service provision, but with strong links through the national plan, whose implementation focal point is the Zonal Agricultural Office. Within this context, knowledge and information sharing initiatives will be implemented in close liaison with the ZonalInformation and Extensions Liaison Unit (ZIELU) in the zones. It is imperative that implementation approaches take into account the fully devolved system that includes the Local Government Authorities (LGAs) as key decision-making and implementation nodes of the sector plans. LGAs implement the District Agricultural Development Plans (DADPs)

**BACKGROUND**

**The role of agriculture in national economy**

Rural Population[[1]](#footnote-1) (%) (2014) 71.9

GDP (USD/per capita)[[2]](#footnote-2) (2013 est.) 1,700

Agriculture GDP2(% of total GDP) (2013) 27.6

Agricultural Land1 (thousand ha) (2011) 37,300

Agricultural Land1(%) (2011) 42.1

Female employment in agriculture1(%) (2005-2012) 80

Male employment in agriculture1(%) (2005-2012) 72.7

Median age of population (years)2 (2014) 17.4

Average rural family size[[3]](#footnote-3) (2010) 5.2

Population, total (million people)2 (2014) 49.6

Population density[[4]](#footnote-4) (people per km2) (2013) 55.6

Annual population growth (%)2 (2014) 2.8

Agriculture is the mainstay of the economy, contributing close to 28% of GDP and accounting for 85% of exports. The sector employs80% of the labour force; women contribute more than 90% of the labour (ILO 2012)[[5]](#footnote-5). Tanzania has 37.3 million hectares of arable land1.

The government in Tanzania ownsall land and can issue leases for up to 99 years2.

Tanzania could be a major food-exporting country but currently struggles to meet even its own food requirements due to low productivity and the predominance of subsistence farming. To achieve the transformation of agriculture, the business environment in general and for agriculture in particular has to be improved. Making food crop production profitable is the biggest challenge and requires a significant scale enhancement (Wolter undated)[[6]](#footnote-6).

The Government of Tanzania is currently implementing the second phase of the Agricultural Sector Development Strategy (ASDS) and Agricultural Sector Development Plan (ASDP) that sets the framework for achieving the sector’s objectives and targets.

The Agricultural Sector Development Plan has two objectives:

* to improve farmers' access to and use of agricultural knowledge, technologies, marketing systems and infrastructure, all of which contribute to higher productivity, profitability and farm incomes
* to promote private investment based on an improved regulatory and policy environment.

The geographical coverage of ASDP is132 rural districts of the mainland where about 90% of the poor live. It is estimated that the programme will impact directly on 3 million households, of which approximately 25% are female headed.

With emphasis on empowering local communities through greater consultation and participation in planning and deciding on the type of investment or sub-project/s, the programme methodology will ensure ownership of direct beneficiaries and the sustainability of the developmental results. Agriculture infrastructures (e.g. small-scale irrigation scheme) will increase yields and reduce climatevulnerabilities resulting in secure production and a grain reserve.

It is anticipated thatthe main outputs of the programme will include greater responsiveness and efficiency of research and extension services and increased investment in productive or public assets. These are expected to generate a range of benefits including higher farm productivity and incomes, greater farmer voice in decision-making and more cost effective public expenditures.

By simultaneously reacting to the specific needs of farmers and mobilising more effective service delivery systems and investments, the programme will provide participating communities with the new skills and technologies that best respond to local obstacles and opportunities for growth[[7]](#footnote-7).

**The importance of the B&MGF priority crops**

Six of the top 10 commodities (by value) fit with the B&MGF priorities (Table 1). Four of these align with the crops/cropping systemslikely to be covered in the scale-up campaigns (cassava, maize, rice, beans). In addition ASHC aims to be working with other legumes, especially pigeonpea and soybean.

**Table 1: Top 10 agricultural commodities by value, Tanzania 2012 \*[[8]](#footnote-8)**

|  |  |  |
| --- | --- | --- |
| **Rank** | **Commodity** | **International $ millions** |
| **1** | Meat indigenous, cattle | 783 |
| **2** | **Bananas\*** | 711 |
| **3** | **Beans, dry** | 685 |
| **4** | **Maize** | 668 |
| **5** | Milk, whole fresh cow | 578 |
| **6** | **Cassava** | 570 |
| **7** | **Rice, paddy** | 482 |
| **8** | **Groundnuts, with shell** | 348 |
| **9** | Vegetables, fresh not elsewhere specified | 331 |
| **10** | Sunflower seed | 308 |

\*B&MGF priority crops shown in bold.

Tanzania is a net importer of rice; however, with improved yields, it could fulfilthe growing domestic and regional demand. Furthermore, while Tanzania is largely self-sufficient in its mainstaple crop, maize, it still faces shortfalls in some years due to weather variability and low yields[[9]](#footnote-9).

**ISFM relevant policies**

Fertilizer consumption (2012): 4.4kg per ha of arable land.[[10]](#footnote-10)

A seed and fertilizer voucher program, initiated in 2009 with the assistance of the World Bank, aimed to provide inputs to smallholder farmers, thereby increasing national production and productivity. The program led to a significant increase in the number of agro-dealers to over 4000.

By 2013, however, it was estimated that fewer than 2,000 agro-dealers were still active[[11]](#footnote-11). This is significantly less than in neighbouring Kenya, which has around 10,000 agro-dealers[[12]](#footnote-12).

# Policy environment: Regulation: Section 2 of the Fertilizer Act, 2009 established the Tanzania Fertilizer Regulatory Authority (TFRA). It eventually started trading in May 2012. It provides for regulation of manufacturing, exportation, sale and utilization of agricultural fertilizers and repeals the previous acts.

In this regulatory role, the TFRA is charged specifically with 22 duties, including, to:

* regulate all matters relating to quality of fertilizers, fertilizer supplements and sterilizing plants
* maintain a register of fertilizers, fertilizer supplements and sterilizing plants
* collect, maintain and publish information related to fertilizers and fertilizer supplement
* conduct or cause to be conducted research relating to fertilizers and fertilizer supplements
* to register fertilizer dealers
* tolicense fertilizer dealers

## Fertilizer recommendations and guidelines

The chemical fertilizer recommendations were developed betweenthe 1980s and early 1990s resulting into a manual for fertilizer recommendations for Tanzania.[[13]](#footnote-13)These have been determined by yield responses from fertilizer field trials conducted by different institutions including the Ministry of Agriculture, Kilimo/FAO Fertiliser Programme, Sokoine University of Agriculture and regional integrated development programmes(RIDEPS).

The geographical base for refining the fertiliser recommendations was derived from soils, physiography and agro-ecological zones of Tanzania.[[14]](#footnote-14)

The recommendations were mainly for N and P, based on subsidized prices, for the main cash crops (coffee, cotton, sisal, tobacco and cashew) and food crops (maize, rice, wheat and sorghum).

Recommendations were researcher managed and based on mono-cropping systems, which were not representative of the majority of farmers.

Removal of subsidies from agricultural inputs, coupled with low producer prices and the collapse of credit facilities, severely limited adoption of such technologies, especially for food crops.

The prevailing blanket recommendations neither adequately consider the socio-economic environment of smallholder farmers, nor the variations in the agro-ecological conditions across the country.

Fertilizer recommendations for rice and maize in some key AEZs of the country have recently been updated[[15]](#footnote-15) – see Table 2. Fertilizer recommendation for various mixed, rotation and intercropping systems were not determined.

The past and the present data will not allow the formulation of balanced fertilizers because some of the plant nutrients, such as sulphur and micronutrients, notably zinc, were not included in development of fertilizer recommendations for maize and rice. These nutrients have been identified as deficient in some soils in Tanzania. Sulphur deficiency symptom in maize in the Southern Highlands was confirmed by response of maize to application of sulphate of ammonia.

Maize growth using standard application of DAP at planting and urea thereafter was much improved when sulphate of ammonia was included in the second application of nitrogen (using urea or CAN). Calcium, magnesium and zinc deficiencies have been noted in most of the maize fields in Ruvuma region. It was also noted that these symptoms are reduced when Minjingu fertilizer products (pelleted or Mazao) are used. The Minjingu products have relatively higher contents of these nutrients than DAP or TSP. The fertilizer industry cannot use the present recommendations because of limited information on the other nutrients that have become deficient. Field testing of calcium, magnesium, zinc and sulphur rates need to start before appropriate nutrient balanced fertilizer recommendations can be established.

The fertilizer recommendations are given for each agro-ecological zone. They vary greatly among the agro-ecological zones, depending on the climatic conditions and crop varieties used. Table 2 gives the averages of the recommendations as derived from the works of Mowo et. al. (1993)13and Marandu et. al.(2013)15.

Table 2: Fertilizer recommendations of some crops in Tanzania

|  |  |
| --- | --- |
| **Crop** | **Fertilizer recommendations** |
| Maize | 107 kg N (233 kg urea), 28 kg P (138 kg TSP) |
| Millet | 30 kg N (65 kg urea), 22 kg P (109 kg TSP) |
| Sorghum | 22 kg N (48 kg urea), 16 kg P (79 kg TSP) |
| Irrigated rice | 80 kg N (174 kg urea), 40 kg P (198 kg TSP) |

## Requirements for the registration of new fertilizers[[16]](#footnote-16)

An application for the registration of fertilizers and fertilizer supplements is submitted to TFRA accompanied by:

* The information on the suitability of the fertilizer and fertilizer supplements as to its use and including technical data sheet and directions.
* A sample of the fertilizer, fertilizer supplements and certificate of analysis, if already issued.
* A written declaration that the fertilizer and fertilizer supplements have or have not been banned or restricted in the country of origin.
* Three copies of the label that is intended to be used for the fertilizer and fertilizer supplements to which the application relates and such other information as is necessary to determine the safety, merit and value of such fertilizer or fertilizer supplements.
* Such other information or document as may be required by the CEO.Applicants not resident in Tanzania must have an agent who is permanently resident in Tanzania.

Every fertilizer and fertilizer supplement must have been subjected to testing using analytical methods prescribed in these regulations or, for fertilizers or fertilizer supplements already under use, laboratory test to determine the suitability for use.

New fertilizer or fertilizer supplements undergo laboratory andfield tests for at least three consecutive seasons to determine their suitability for use. The tests are paid for by the applicant.

An application for the registration of a fertilizer or fertilizer supplement shall be refused if there are reasonable grounds to believe that the fertilizer or fertilizer supplement does not conform to the requirements of the Fertilizer Act and regulations.

Registered fertilizers

There are three types of commercial fertilizers currently in the Tanzanian market:

* Inorganic solid fertilizers
* Foliar fertilizers
* Bio-fertilizers.

Most of the inorganic solid fertilizers are registered although a few are not registered. All the foliar formulations currently in the market are not registered although some are under validation by the respective authorities. The presence of unregistered fertilizers in the market is a serious contravention of the Fertilizer Act No.9 of 2009. The quality of such fertilizers and their possible effects to the environment is unknown and cannot be assured. This exemplifies the problem of the application of regulation.

Imported bio-fertilizers include various formulations of compost and some unknown types. Some of the bio-fertilizers contain live microorganisms, some of which are unknown and can pose serious environmental hazards. The major problem is the lack of means of regulating their importation, validation and quality assurance. The guidelines for the registration of bio-fertilizers are available in draft form. They have to be approved by the TFRA board (see section on regulation).

There are at least 79 registered fertilizers. The most common inorganic solid fertilizers are urea, diammonium phosphate (DAP) and various grades of NPK. Recent introductions include Yara and Minjingu fertilizer products.

## National Agricultural Input Voucher Scheme[[17]](#footnote-17)

Since the early 1970s,the government of Tanzania has invested considerable resources to promote the use of fertilizer by smallholder farmers through subsidy. The justification for these investments was, and continues to be, to achieve both national agricultural development and food security objectives.

The government established a parastatal corporation, the Tanzania Fertilizer Company, to manage fertilizer procurement and distribution. The government, working with the Tanzania Fertilizer Company and government-managed crop-marketing institutions, implemented various fertilizer provision schemes through which fertilizer was provided to farmers with significant subsidy.

Consumption levels nationally increased from about 10,000 tonnes annually in the late 1960s, to 30,000 tonnes in the late 1970s, to 45,000 tonnes in the late 1980s.[[18]](#footnote-18)

This was a costly and generally inefficiently implemented programme. As part of broader efforts to reduce the scope of government in the economy and promote private-sector investment, the Tanzanian government withdrew from its monopoly position and liberalized input markets.

Several private firms quickly entered the market, importing stocks from international fertilizer manufacturers and selling from their wholesale depots in Dar es Salaam or through their own up-country depots. Some developed their own retail networks. Several of these early entrants remain important importers and wholesalers of fertilizer.

The Tanzania Fertilizer Company, still government owned, has stayed in business but now faces a competitive market environment. Whilst fertilizer market liberalization in Tanzania has been relatively successful, there appears to have been a falling off in fertilizer consumption through the 1990s, although the data are not consistent.

Following the opening of input markets to the private sector, the government did not strongly intervene in fertilizer supply for several years.

The national agricultural input voucher scheme (NAIVS) started in 2008 and ran until 2013-2014 cropping season. Farmers were selected for the voucher scheme by a village voucher committee using a set of criteria that included, among others, the recipient’s being a full-time farmer with a maize or rice cropping area of less than one hectare and the ability to manage the co-financing required to obtain the subsidized inputs. Given the still significant cash outlay required from beneficiaries, in essence the program targeted middle-income smallholders. Selected farmers were provided with vouchers covering half of the cost of inputs sufficient for application to 0.4 ha (one acre) of maize or rice that they redeemed with local private input dealers.

The vouchers enabled farmers to acquire a 50 % subsidy on the following inputs:

|  |  |  |
| --- | --- | --- |
| Seed options | Basal fertilizer | Top-dressing |
| **Either**   * 10 kg of improved maize seed (open pollinated variety or hybrid)   **or**   * 16 kg of rice seed | **Either**   * 50 kg of DAP   **or**   * 100 kg bags of the Minjingu Mazao blend of MRP | * 50 kg of urea |

Farmers took the vouchers to local input dealers to acquire the inputs. The input dealers then took the redeemed vouchers for reimbursement to a branch of the National Microfinance Bank, which was contracted to manage voucher redemptions.

The NAIVS also sought to strengthen agricultural input dealers in the program areas as well as the input market in Tanzania more generally.

Only dealers who had received business training, technical instruction on proper input marketing and use, and training on crop output marketing through the Tanzania Agro-dealer Strengthening Program, implemented by the Tanzania Agricultural Market Development Trust (TAGMARK) and its international affiliate, the Citizens Network for Foreign Affairs (CNFA), were authorized to accept vouchers and submit them for reimbursement.

Overall, 3,000 dealers received training in the NAIVS program areas during the course of the program. The training certificate was required for agricultural input dealers to obtain loans from commercial lenders to build sufficient fertilizer and seed inventory to respond to demand from the voucher holders.

At the importation and wholesale level, the government, through the National Agricultural Input Voucher Scheme secretariat, the Agricultural Inputs Section of the Crop Development Department of the Ministry of Agriculture, Food Security and Cooperatives, informed the key importers of fertilizer into Tanzania of the expected demand at the district level for fertilizer under the subsidy program for the following season. This ensured that importers could obtain the stocks required and position them accordingly in a timely fashion.

The government of Tanzania has itself not engaged in any procurement or distribution of fertilizer under the NAIVS program. For the added fertilizer demand created by the NAIVS program, at the maximum of 2 million farmer beneficiaries in a program year, 100,000 tonnes of urea and some combination of up to 100,000 tonnes of DAP or up to 200,000 tonnes of the Minjingu Mazao MRP blend is required by the program.

The voucher sales inevitably displaced some sales that would have taken place in the absence of the program, nonetheless the fertilizer used in Tanzania has increased substantially under the program.

The increase in net fertilizer imports of about 100,000 tonnes annually between 2007 and 2009 can be attributed principally to it. This represents a major investment on the part of the government of Tanzania and its development partners, particularly the World Bank. Total annual costs of the project are estimated at US$100 million.

For the three years from 2009/10 to 2011/12, 53 % of the cost of the project was covered by a credit from the World Bank, with the balance coming from the government of Tanzania directly.[[19]](#footnote-19)

The National Agricultural Input Voucher Scheme implementation created challenges:

* Retailers who present for reimbursement to the local National Microfinance Bank branch the vouchers that they have received frequently faced delays of several weeks. This slowed the entire fertilizer wholesaling system, as wholesalers are unwilling to provide retailers with additional stock until any credit is paid on fertilizer provided previously.
* There is some concern about a parallel market having developed for vouchers. For many farmers, the subsidy is not large enough, so they were unable to make up the cash balance for the fertilizer. These farmers may have sought to sell their vouchers to those who can obtain reimbursement for them. Although the parallel market would have benefitted these poor farmers economically, it would not contribute to sustainably increasing agricultural productivity in the country, which was the objective of NAIVS. However, objective evidence of the scale of any such parallel market for vouchers is not available.
* Although farmer selection for NAIVS was seen as quite transparent, some observers mentioned the possibility of political interference in the selection of stockists who could receive the vouchers.
* Finally, some reports were received of delays in program rollout resulting in delays in fertilizers being in place in program areas until after the proper application period at planting.

For the season 2014/15, the government changed the procedure, ending the voucher scheme. Instead, farmers groups, farmer associations and SACCOS are supported to buy fertilizers on credit from fertilizer companies by depositing 20% of the cost of fertilizers on the companies’ accounts as collateral with the government putting a matching fund of 20%.[[20]](#footnote-20)

The farmers were then issued with the inputs and pay the 60% after harvest. Being a new procedure and prepared in haste, some of the targeted groups either did not receive any fertilizers or received it late.

**The importance of the private sector**

Limited financial resources, weak infrastructure and poor policies have not provided incentives for the private sector to develop the agricultural sector. Only 9% of the Tanzania population has access to formal financial services and only 4% have received a personal loan from a bank. Further, the credit squeeze resulting from the global financial crisis was acute in Tanzania’s agriculture sector (USAID 2014)[[21]](#footnote-21).

Tanzania’s is ranked 131th of 189 countries in terms of ease of doing business (World Bank 2014)[[22]](#footnote-22).

There is, however, some private sector activity in agro input dealing. The following categories of fertilizer dealers are currently registered with the Tanzania Fertilizer Regulatory Authority (TFRA).

Table 3: Fertilizer dealers in Tanzania[[23]](#footnote-23)

|  |  |
| --- | --- |
| **Fertilizer dealer category** | **Number** |
| Manufacturers | 5 |
| Importers | 56 |
| Distributors | 63 |
| Agro-dealers | 791 |

There are about 100 agro-dealer associations with an estimated 3,000 agro-dealers in the country. This suggests that only about 26% are registered with TFRA.

There are 5 fertilizer companies operating in the country, including the Tanzania Fertilizer Company Ltd, Yara Tanzania Ltd and Minjingu mines.

Over the past seven years there have been a number of agro-dealer development programs Typically training has included: soil and soil fertility, soil fertility evaluation, fertilizer use and management, organic matter use and management (including integration of legumes, economics of fertilizer use, improved maize seed, pests and disease control) and business development and management. In some cases agro-dealers have been encouraged to establish fertilizer demonstration plots. [[24]](#footnote-24) In the past these plots have been successful because supplier companies provided the inputs and the extension service supported the management of the sites.

The Tanzania Agrodealer Strengthening Program is credited with:

* More than tripling agro-dealers’ working capital, from US$1,920 to US$6,410 per agro-dealer, reflecting effectiveness of credit guarantee schemes.
* Increasing fertilizers sales by 330%, from 50,000 tonnes to 214,867 tonnes annually.
* Widening agricultural inputs supply base as the number and type of inputs sold increased.
* Creating an improved ratio of 9,852 farmers per agro-dealer per annum.
* Reducing the average distance to an agro-dealers from 50 km to9.9 km

The African Fertilizer and Agribusiness Partnership (AFAP) is an AGRA-supported initiative that works with the public and private sectors to invest in fertilizer markets for the benefit of African smallholder farmers. AFAP works to make fertilizer accessible and affordable for African smallholder farmers; bolster capacity and incentive for fertilizer use; and fosters responsible fertilizer use to increase crop yields and decrease food insecurity. AFAPs overarching goal is to increase the number of fertilizer users by 15% and at least double total fertilizer use in countries where it works.

There are a number of private sector seed companies,a number of which are in receipt of AGRA grants:

* Tanseed International Limited working with Sokoine University of Agriculture on seed marketing.
* International Center for Tropical Agriculture - Pan Africa Bean Research (PABRA): Recently funded by AGRA-Scaling Seed and Technology Partnership on common beans.
* Aminata Seeds and consultancies: Newly released maize hybrids, common beans and soybean varieties.
* Kilimo Markets Limited: Has some common bean varieties but also focus on pigeonpea, chickpea and other crops.
* Export Trading Group: New seed company branch on common beans, soya, pigeon peas, groundnuts and other crops.

With a focus on common beans anticipated for the first ASHC campaigns in phase 2, seed companies will be important partners.

Mtandaowa Vikundivya Wakulima Tanzania (MVIWATA) [National Network of Small-Scale Farmers Groups in Tanzania] is a national farmers organisation that brings together smallholder farmers from all regions of Tanzania to support their economic, social, cultural and political interests. MVIWATA can support training, facilitate access to input and output markets and credit.

**KNOWLEDGE SHARING ECOSYSTEMS**

**The structure of national extension services**

Number of extension staff in country[[25]](#footnote-25) (2012) 10,891 (of whom 6,925 are crop specialists; 3,966 livestock)

Number of farming families in country [calculated]1 6.86 million

Extension staff (crop & livestock): farming households Range 1:469 to 1:2,307 (see Table 4)

National average is 1:630

Since 2007, the government of Tanzania has implemented a range of policy measures to rejuvenate the extension system and improve the agricultural service delivery to farmers. One measure has been to increase the number of agricultural personnel to work with farmers at village level. The results have been positive with doubling of extension staff in some regions and districts since 2007.

The government targetis one extension officer to every village in Tanzania by 2015 (MAFC, 2009), corresponding to 15,802 extension officers.The process started in 2007 by increasing enrolment of students in the Ministry of Agriculture Training Institutes and private institutes to about 3,500 students each year.

In 2012, the most recent data available,there were 10,891 extension officers in Tanzania: 6,925 crop-focused and 3,966 livestock-focused (see annex 1 for a breakdown by district and region). Available information does not disaggregate data by gender but it is estimated that 75% of the extension staff is male.[[26]](#footnote-26)

Generally, extension officers in Tanzania have large numbers of households to attend to with. The extension-farmer ratios varying greatly among districts: in two studies these varied from 1:469 to 1:2,307; the national average, calculated by dividing the number of farming families by the 2012 figure for all extension workers, is 1:630.

Table 4: Extension-farmer ratios in some districts in Tanzania

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Extension workers** | **Households/Extension worker** | **Reference** |
| Kyela | 49 | 617 | Elifadhili (2013)[[27]](#footnote-27) |
| Morogoro rural | 63 | 1320 | Elifadhili (2013) |
| Songea rural | 94 | 469 | Elifadhili (2013) |
| Mbeya | 97 | 767 | Hella (2013)[[28]](#footnote-28) |
| Arusha | 64 | 1127 | Hella (2013) |
| Mbozi | 112 | 850 | Hella (2013) |
| Ulanga | 37 | 1462 | Hella (2013) |
| Mtwara | 32 | 2307 | Hella (2013) |

Taking in consideration that one extension service provider is mandated to serve 700 households, studies have shown that most districts in Tanzania have deficits in extension service providers; in some districts, however, this target is exceeded.

These unfavourable extension-farmer ratios imply that most farmers have little access to extension service. The situation is compounded by inadequate means of transport, funds and other working facilities. The study by Hella (2013)28 suggests that extension service providers reach only 10% of the farming households in Tanzania.

The extension service providers do not supply inputs but provide knowledge and information of their use.

With the introduction of the decentralisation policy, the Ministry of Agriculture, Food Security and Cooperatives (MAFC) is now responsible for policy, ensuring standards, providing guidelines and monitoring and evaluation. The MAFC provides technical support to the local authorities and an enabling environment for extension services to function at the farm level (GFRAS website accessed January 2015)[[29]](#footnote-29). At the local level, extension is executed by the District Agricultural Extension Officer (DAEO)[[30]](#footnote-30).

Within MAFC, the directorate of national extension is a section of the Crop Development Department: within extension there are units dealing with farmer education, methodology, linkages and procurement and finance.

The Farmers Education and Publicity Unit, part of the directorate of national extension, exists to ensure that research results generated from the different zones are packaged and disseminated – usually once a year. The unit has some facilities including film vans and airtime slots (every Tuesday) on national radio to send out priority messages to farmers. Production expertise is available in the unit.

The Zonal Extension Information Liaison Unit (ZEILU) is an important entry point for information and dissemination activities in the zones. It is directly under the guidance of the director of respective zonalresearch centres, e.g. theSelian Agricultural Research Institute (SARI)for Northern Zone and National and Uyole Agricultural Research Institute (Uyole-ARI) for Southern Highlands. ZEILU facilitates information sharing between research, extension and farmers, although it suffers fromstructural and resource constraints.

With regard to extension services, the relationships between the MAFC, regional government and the local governments need clarification and strengthening.

The results of a 2010 study in Kilosa district, Morogoro region found that farm and home visits, farmer field schools and demonstrations were the major methods used by extension agents. Contacts that extension agents made per year were minimal: many farmers were not reached by extension services and those who had access to services were superficially served. Extension methods that attract attention and stimulate desire for further information, such as farmers’ field days, agricultural shows, folk media and film, cinema or film shows and brochures/leaflets distribution, were not commonly used in the study area[[31]](#footnote-31).

An example of a successful extension initiative concerns a new variety of irrigated rice (Saro 5) that was developed by Ifakara Research Institute. Uptake had stalled, despite the potential for a three-fold yield increase that it offered. An integrated campaign involving on-farm demonstrations, farmer training, print and media was used to raise farmers’ awareness and resulted in a large increase in uptake and production: this success raised the issues of access to output markets[[32]](#footnote-32).

Facilitated participatory approaches that empower farmers with knowledge are now favoured by the extension directorate. This includes farmer-to-farmer learning models that were successfully used with the Saro5 rice variety roll out. In this, after training of trainers sessions, the lead farmers were tasked to reach a minimum number of farmers.MAFC supports the training of the lead farmers whilelocal government extension takeover mentorship, follow-up and support to the lead farmers. This is sometimes referred to as the Kilimanjaro Agricultural Training Centre model.

A value chain approach is increasingly encouraged by the extension directorate in extension work. This means that production and productivity enhancing information should be combined with other relevant values chain information, including post-harvest and output markets. Such an approach should prevent reoccurrence of the experience from the Saro5 rice, when outputs markets were only considered as an afterthought following the success of increasing production.

Public extension providers account for more than 95% of extension services in Tanzania. A number of NGOs provide extension service in organization and cooperatives or with individual farmers. Private agencies, such as commodity research institutes, have their own extension service providers or system delivering more effective and relevant service. Participatory research and use of expert farmers and farmer research groups promise to partially replace, complement, or at least relieve the conventional extension system.

**Media penetration**

***Literacy rates (% of population)2 (***2010)

Literacy Rate 67.8

Male Adult 75.5

Female Adult 60.8

Male Youth (15-24 years) 76.5

Female Youth (15-24 years) 72.8

Mobile phone subscription (per 100 people; 2013)[[33]](#footnote-33) 56

Internet users (per 100 people)33*(2013)* 4.4

Households with a radio (%) [[34]](#footnote-34)*(2011-2012)* 63

Households with a TV (%)34*2011-2012)* 18

FM radio and mobile phone are the two most powerful technologies in rural Africa.

**Telephone:** By2013there were 27.6 million fixed and mobile lines, 61 per 100 persons[[35]](#footnote-35). Trunk service was provided by open-wire, microwave radio relay, tropospheric scatter and fiber-optic cable with some links being made digital.

The Ministry of Agriculture, Food and Cooperatives, in a joint venture with Zantel Tanzania and Sibesonke Limited, has launched ZKilimo, amobile phone serviceto get relevant advanced farming information to reach the 33 million Tanzanian farmers. ZKilimo is an SMS-based application that utilises mobile phone capability and ubiquity to provide farmers in the country access to comprehensive farming methods.

The service will offer farmers information on soil preparation, fertilizer, weather forecast, crop varieties and cultivation, as well as give them a platform to discuss with other framers on agricultural issues. Farmers can access the service by dialing \*149\*50#, the menu screen will display a list of general information on the daily weather forecast, details on soil management, pest control methods and information on livestock knowledge and bird flu. The number of farmers being reached by this initiative is not known.[[36]](#footnote-36)

Launched in 2012, the Connected Farmer Alliance is a three-year partnership among the U.S. Agency for International Development (USAID), Vodafone and TechnoServe that aims to increase the productivity, incomes and resilience of 500,000 smallholder farmers, including 150,000 women, in Kenya, Mozambique and Tanzania.

By developing sustainable business models that serve the interests of a broad range of private sector stakeholders, the program seeks to prove the commercial viability of mobile solutions for smallholder farmers. It will also improve supply chain efficiency and increase the ability of farmers to access payments and other financial services, initially building on the M-Pesa payment platform.

The first partnership, with the Kilombero Plantations Limited in Tanzania, was to test how mobile technology can support the company’s engagement with 600 smallholder rice farmers. The platform will offer them notifications on prices, collection days and quality reminders, and a loan management system to track settlement of loans and outstanding amounts[[37]](#footnote-37).

**Broadcast media:**

**Radio:** According to a 2011 report, currently there are close to 47 FM radio stations.

With funding from AGRA, Farm Radio International supports radio stations to leverage the power of ICTs to engage with listeners. The radio stations include:

* Bomba FM: Mbeya (azola)
* Baraka FM: Mbeya (intercrop beans/maize)
* Abood FM: Morogoro (intercrop beans with beans)

The coverage for these radio stations is fairly wide. It is estimated that Abood FM can reach 2.3 million people in total radio coverage, 50% of whom are from rural areas. The information requested includes weather and inputs with a farmer feedback facility.

The approach uses the ‘missed call’(beeps) feature of the mobile phone; for example listeners leave a missed call to request for weather information, immediately call back and obtain two messages for weather forecast and advice. Within a period of 9 months, Farm Radio International managed to make 82,000interactions (35,000 ‘beeps’ and 47,000 SMS sent).[[38]](#footnote-38)

Television: a dozen television stations and 25 cable television operators in Tanzania (Tanzania Media Fund 2012)[[39]](#footnote-39).

**Internet users:**In 2014 there were 7.6 million internet users in Tanzania (15% of the population). It is ranked 49th in the world and amongst the highest for African countries[[40]](#footnote-40).

**Print:** There are 537 registered newspapers in Tanzania.

The Ministry of Agriculture, Food Security and Cooperatives has two newsletters as outlets for dissemination of agricultural information in Tanzania (including the best practices). These are *Ukulimawa Kisasa* and Tanzania Agricultural Research and Training newsletters. The *Ukulimawa Kisasa* was widely distributed to all district administrative offices but there was no strategy to get it to the farmers. The old releases can be found in heaps in these offices. Because of budget cuts, these two newsletters are no longer published. There are efforts now to revamp the Research and Training newsletter.[[41]](#footnote-41)

There are two youth media publication, Femina Hip and Shujaaz FM. Shujaaz currently has a circulation of 70,000 which will increase to 500,000 in June 2015.

**Media preference focus groups**

In 2014, ASHC worked with the Farm Inputs Promotional Services Africa (FIPS-Africa) marketing team. Through a series of meetings with farmer focus groups, preferred ways of receiving agricultural information were identified. In unprompted discussions, radio emerged as the most preferred source (mentioned by 15 of the 20 focus groups). Other popular sources were: demonstration plots (10), talks/seminars (8), films (7), farmers groups/meetings (7), mobile phones (6), comics (5), field visits (3) and posters (3).

The groups, of home approximately 50% were women and 50% under 40 were also asked questions about Shujaaz (an abridged version of a comic targeting youth that had been circulated). Groups liked the comics and said they are a good way to learn, that they are **not** just for the young and that they **would** follow useful advice set out in a comic

**Youth initiatives**

Population aged between 15-24 years[[42]](#footnote-42) (2014): 19.5%

Youth represent the majority of the population and are a growing group: 64% of the population is 24 or under and the media age is 17.4 years.

They are chronically under-employed especially in rural area: for the whole country, 7% of 15-24 year olds are unemployed2. Where they engage in agricultural production they often lack access to information and suffer huge losses, including post-harvest losses.

Young people are more literate than older members of the population; this means they are easier to service with information.

Extension work targeting youth has a strong focus on irrigated production systems. This is part of the incentives approach to make agriculture more attractive as a short-term and lower risk business for youth (they are averse to rain-fed systems due to perceived risk).

A government programme; ‘Youth Programme for Agriculture’ is undertaking youth targeted promotion of agriculture that links with the Rufiji Basin Development Authority. This is linked to the governments ‘Big Results Now’ campaign that aims to bring together 78 irrigation schemes.

Sokoine University has a Tanzania Graduate Farmers initiative that aims to popularize agriculture as a business for the youth. Marketing Infrastructure Value Addition and Rural Finance Support (MIVARF) program also has a youth component that focuses on agribusiness development through linkages with microfinance institutions (personal communication, Mrs Joyce Mvuna, Directorate of National Extension - Tanzania, 2014).

There are an encouraging number of youth and enterprise initiatives working at scale in agriculture and green technologies, and some youth enterprise projects with a long time to run.

FIPS are active in Tanzania with support from a variety of investors, which could be a potentially an entry point.

The SNV (Netherlands Development Organisation) scheme has most potential for ASHC: we may be able to work on young people, agriculture and access to finance, showing how ISFM could improve the profits of young people and make them better able to repay loans. This would be an extension beyond young people as a conduit for information into smallholder farming households;it would be young people accessing ISFM as a means of increasing their incomes, food security and access to nutrition.

Access to the formal schoolcurriculum could also be a possible avenue for further exploration, but the channel to distribute this isnot yet clear. The FAO initiative of Junior Farmer Field Schools was funded to 2009 and may be a useful starting point.

Initiatives such as Shujaaz, and to a lesser extent Shamba Shape-Up, give real opportunities for cross media platforms to deliver ISFM and enterprise messages to young people through established and emerging partnerships.

Other youth initiatives in Tanzania include**,** Opportunities for Youth Employment (OYE).OYE,funded by the Mastercard Foundation and implemented by SNV, is working with 20,500 rural, out-of-school youth through skills training in a way that fuels their own aspirations as well as the needs of local agriculture and renewable energy markets. OYE matches skilled youth with labour market opportunities and contributes to the establishment of new youth-led enterprises[[43]](#footnote-43).

**PARTNERS**

**Potential development partners**

There are some strong synergies between the partners with Foundation grantees and priority crops.

COMPROII has a remit to develop awareness and uptake of rhizobium inoculants. ASHC has collaborated with both SARI and N2Africa on legume promotion projects and in the scoping study explored taking these going to scale.

One of the key intermediaries for phase 2 will be agro-dealers. The African Fertilizer and Agribusiness Partnership (AFAP) project is strengthening agro-dealers, specifically looking at maize in the north and rice in the south of Tanzania.

A new project is currently being developed with IFAD (the project has already been selected under the ICT Challenge program organised by USAID) by Farm Radio International in partnership with CABI, looking at reaching a million farmers with messages on good agricultural practices relating to maize, sorghum, cassava, beans, soybean and pigeonpea. Technologies targeted include ISFM-related technologies and the project aims to influence uptake of new agricultural techniques in 150,000 farming families.

**African Fertilizer and Agribusiness Partnership (AFAP)**

The African Fertilizer and Agribusiness Partnership (AFAP) is an AGRA-supported initiative that works with the public and private sectors to invest in fertilizer markets for the benefit of African smallholder farmers.

AFAP works to make fertilizer accessible and affordable for African smallholder farmers; bolster capacity and incentive for fertilizer use; and fosters responsible fertilizer use to increase crop yields and decrease food insecurity. AFAPs overarching goal is to increase the number of fertilizer users by 15% and at least double total fertilizer use in the countries where it works.

In Tanzania,AFAP is heavily involved in agro-dealer and fertilizer supply chain development. Some of the key interventions include capacity building in business management skills for agro-dealers, brokerage of and linkages with fertilizer suppliers, support for supply chain infrastructure development including water housing and knowledge and information dissemination to down-stream and grassroots fertilizer markets, such as rural agro-dealers and smallholder farmers.

In 2013-2014, AFAP's fertilizer markets development initiatives received policy support and attention, including an audience with the parliamentary committee on agriculture and input into the presidential 'Big Results Now' initiative[[44]](#footnote-44).

A key strand of AFAP’s approach in Tanzania is building and strengthening networks of agro-dealers and farmers by developing a cadre of the Hub-Agro-dealers. These are financially stable and able to deliver support in the regions and mentor smaller rural agro-dealers and their outreach to smallholder farmers.

In addition to the capacity building work, AFAP is also involved as a dissemination partner in the COMPROII projectto promote promising and proven technologies, including commercial products such as rhizobium inoculant for legume production. Other technologies include local fertilizer blends such as Minjingu Mazao for cereals and cereal-legume intercrops and rotations. AFAP is increasingly a key stakeholder providing brokerage services between fertilizer manufactures and suppliers and the agro-dealer fraternity in Tanzania.

**Likely role in campaign:**Initially to facilitate links with private sector agro-dealers to enable improvements to point-of-sale materials to inform farmers about technologies and options. To help the campaign cluster to understand the information needs of intermediaries along the input supply chain with a view to making improvements to packaging design, packinformation and instructions in farmer-friendly language.

**COMPROII**

**Funder of program:** B&MGF

**Crop/ technology**: Promotion of rhizobium inoculation for legume crops

**Project duration:** to 2016

COMPROII is a project managed by the International Institute for Tropical Agriculture (IITA) and funded by BMGF and operates in six countries in sub-Saharan Africa. The five year project was set up to strengthen regulatory and quality control and monitoring for commercial products, with a goal to ensure that commercial products benefit smallholder farmers by increasing productivity. A key goal is to support the promotion of commercial products that demonstrate yield increase of up to 30% for target crops.

In Tanzania, the COMPROII project works through a number of partnerships, with the Tanzania Fertilizer Regulatory Authority (TFRA) providing leadership in regulatory environment issues for commercial products. AFAP is the lead partner in dissemination of proven and promising commercial products including rhizobium inoculants. Partners collaborating on COMPROII work in Tanzania include N2Africa, Agricultural Research Institute (ARI-Mlingano) and limited private sector collaboration from MEA Limited, a Kenyan fertilizer company seeking to roll out inoculants technology in the Tanzanian market.

Inoculant products in Tanzania are currently available through limited channels including Legumefix (imported for research), NitroSUA (limited commercial production by Sokoine University) and Biofix, also imported for research.

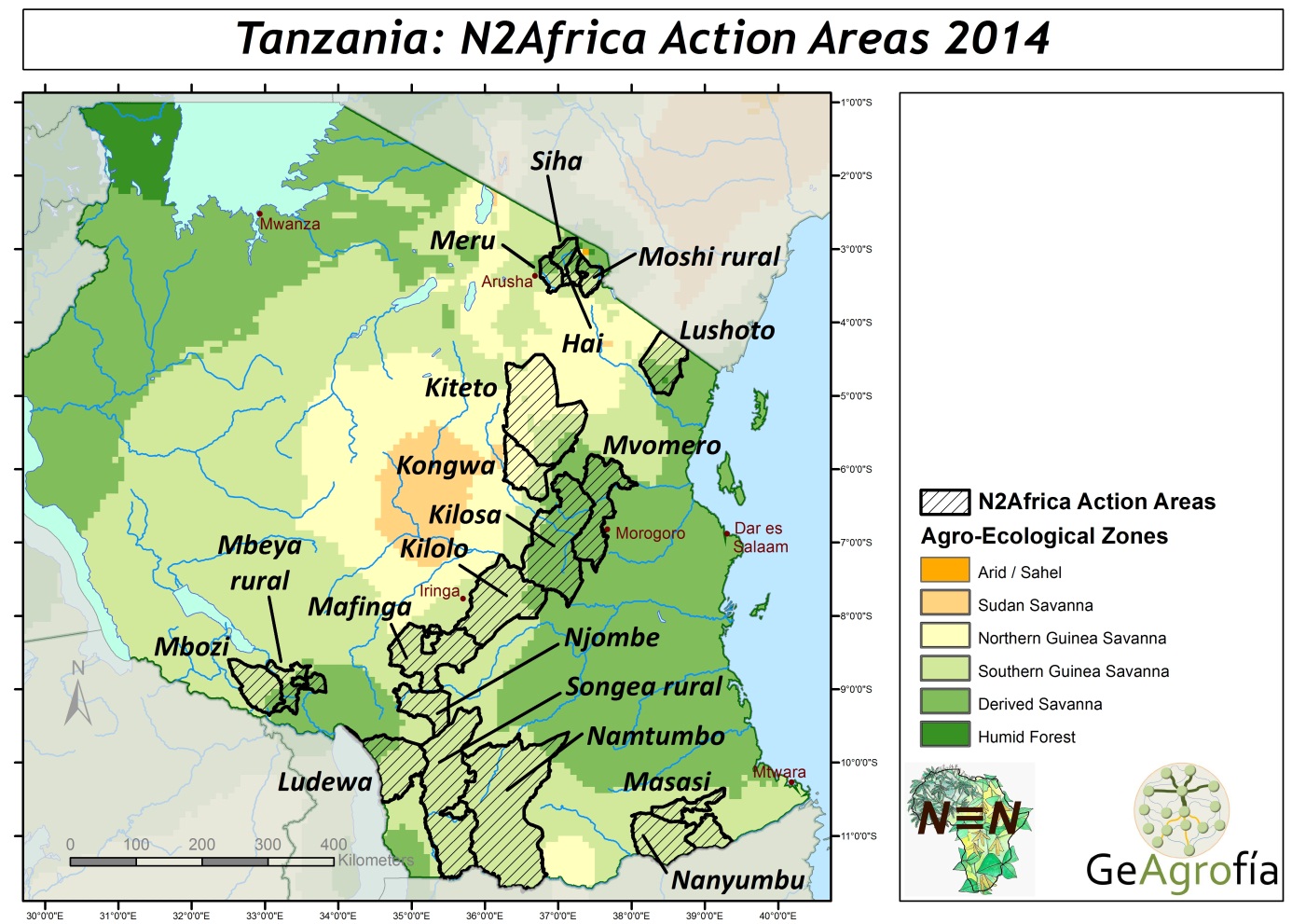
**Likely role in campaign:** COMPRO II is led by IITA. We anticipate some technical backstopping around COMPRO II technologies, especially the use of inoculant on legumes. Specific roles will likely include: horizon scanning of technologies being approved for use in Tanzania, especially Legumefix, and fixing supply chain issues and links to policy that impact on farmers’ ability to access rhizobia based technologies.

**N2 Africa**

**Funder of program:** B&GMF

**Crop/ technology:** Promotion of legume productivity improvement with soil fertility management principles

**Project duration**: to 2018



N2Africa is a large scale, science-based research-in-development project focused on putting nitrogen fixation to work for smallholder farmers growing legume crops in Africa. N2Africa’s vision is to build sustainable, long-term partnerships to enable African smallholder farmers to benefit from symbiotic N2-fixation by grain legumes through effective production technologies, including inoculants and fertilizers.

N2Africa is funded by Bill & Melinda Gates Foundation and is implemented in Ghana, Nigeria, Ethiopia, Tanzania and Uganda (Core countries), and in DR Congo, Rwanda, Kenya, Mozambique, Malawi and Zimbabwe (Tier 1 countries). Key implementing partners in the project include Wageningen University, International Institute of Tropical Agriculture ([IITA](http://www.iita.org/)) and International Livestock Research Institute ([ILRI](http://www.ilri.org/)).

In Tanzania, N2Africa is involved in a wide a range of activities to promote legume production and value including soybean, common bean and groundnut.

The project is collaborating with AfricaRice to promote the growing of cowpea after rice has been harvested – for the legume to utilise the residue moisture as well as fix nitrogen for the next rice crop. This could enrich one of our campaigns that will intensify a legume/rice cropping system and also benefit from additional knowledge from AfricaRice (which is represented in the current ASHC TAG and with whom some rice information materials have been produced).

ASHC supported the design and development of five N2Africa materials in phase 1. N2Africa is also working on a legumes manual/cropping guide. N2Africa has backstopped quality on all ASHC legume materials.

**Likely role in campaign:** To provide technical backstopping to media organisations working on the campaign. To link promotional activity to work on the ground in the Northern Highlands in first campaign and to other suitable work on the ground in subsequent campaigns.

**MEA Fertilizer Ltd (MEA)**

MEA Fertilizer Ltdis Kenyan a private company established in 1977 to supply farm inputs to farmers for the purpose of improving crop production. MEA operates a factory in Nakuru, Rift Valley province, for bagging and blending of fertilizers. The factory is the onlyone of its kind in Eastern Africa and has the capacity to blend fertilizers in various formulations to suit a whole range of crops grown under different soil types and agro-ecological zones. The blending equipment has a production capacity of 1,200 tonnes a day.

MEA's growth and expansion programme has seen it develop interests in product marketing and manufacturing in Kenya, Nigeria and Ethiopia, where physical factory infrastructure has been build. Growth and expansion plans exist for Tanzania and Uganda although these are still under development.

MEAs product range is diverse and covers common fertilizers like DAP,CAN, urea, sulphate of ammonia and NPK. In addition the company is developing newer products including legume-specific fertilizer blends such as *Sympal*. Other specialized products include rhizobium inoculants for legumes under the brand name *Biofix*.

MEA maintains a wide range of research and development partnerships, such as with the University of Nairobi, N2Africa and other actors in the agricultural value chain. MEA has also recently signed an MOU with the COMPROII project to provide necessary private sector support for supply and R&D collaboration for commercial products, such as inoculants. MEA also partnered with ASHC in 2014 to produce a pack insert leaflet for its Biofix brand.

**Likely role in campaign:**Collaboration in 2016 campaign to build market for rhizobia based technology as one of the private sector partners.

**Farm Radio International (FRI)**

**Funder of program: Irish Aid and others**

**Crop/ technology:** Maize, sorghum, cassava/Irish potatoes, beans and soybean/pigeonpea; target technologies include seed, rhizobia, fertilizer and conservation tillage.

Farm Radio International is a Canadian NGO involved in use and promotion of participatory Radio approaches for development initiatives in Africa.

In Tanzania, FRI together with CABI are developing a project for IFAD funding as a preferred bidder. The project was selected as part of the USAID coordinated ICT Challenge program. The project proposes to look at radio and SMS campaigns. The project will target USAID priority crops (the only crop not fitting with B&MGF priorities is Irish potatoes).ASHC is already written in as a partner with some complementary funding included and the objective would be to leverage funding by aligning work in this project as activities in a Tanzania scale-up campaign.

**Likely role in campaign:** a) To supply a number of 16-week radio program series on appropriate stations to reach identified target smallholder farmer audiences and to provide lessons on promotion of ISFM technologies through radio; b) To work with the partnership cluster to acquire additional investment in promotional and campaign activity to 2019.

**CABI D2F**

**Funder**: DfID and others

**Crop/ technology:** SMS and voice message development for mobile phone platforms

CABI is developing Direct2Farm (or D2F), a mobile-enabled agriculture infomediary service, aimed at making high quality information readily accessible to farmers, thus empowering them to solve their everyday farming problems.

CABI’s expertise in indexing and managing vast amounts of complex data, combined with its experience in agricultural best practice, soil health, plant pests and diseases, will provide the basis for developing a powerful core of farming information. The Direct2Farm service will synthesize this data into short SMS and voice messages, which can be delivered via mobile phones. The information transmitted on agricultural issues will help smallholder farmers to improve their profitability and consequently their livelihoods.

The model being developed enables factsheets to be turned into small packages of information in the local language and then delivered directly to farmers via SMS and voice messaging. Farmers will be able to consult a virtual helpline, the cloud contact centre.

CABI is creating the core information product, a database of factsheets known as the agro-extension information repository. This includes administrative functionality such as allowing input and updating, accepting weather and agricultural market data, and outputting in a range of formats, which will be delivered to end-users by external organizations. CABI will work in partnership with mobile service providers as well as extension services, NGOs and agribusiness support.

**Likely role in campaign:** In partnership with local telecoms providers, produce a series of farmer-friendly, actionable ISFM SMS and voice messages guides in line with the developing thrusts of the cluster campaigns (common bean cropping systems, legumes + inoculant).

**Well Told Story - Shujaaz Tanzania**

**Funder of program:** B&MGF (and others)

**Crop/ technology:** WTS is delivering agricultural value chain messages

Well Told Story has brought the successful Shujaaz format to Tanzania from Kenya. ASHC has done pilot activity with the comic and found promising results. The production of the comic in Tanzania started in March 2015 and full distribution will be in place from June 2015.

**Likely role in campaign:** To lead on the youth media aspects of the campaign producing two stories, one based on selection of improved varieties and the other on good agricultural practices. These will be supported by radio and social media.

**ICRISAT Tropical legumes 2**

**Funder of program:** B&MGF

**Crop/ technology:** Develop and promote legume varieties including pigeonpea in Tanzania

Tropical Legumes-II is a joint initiative between ICRISAT (chickpea, groundnut and pigeonpea), IITA (cowpea & soybean) and CIAT (common bean) that aims to increase productivity and production of legumes and the income of poor farmers Africa by 15 % with improved varieties occupying 30% of the total area planted by some 57 million poor farmers in the coming 10 years. It is expected that this will result in an additional value gain of more than US$ 300 million during that period.

The project’s strategy is to fast-track testing and adoption of existing varieties and advanced breeding lines for use by famers; generate new farmer- and market-preferred varieties and hybrids with desirable traits (high yields, tolerance to moisture stress, and resistance to pests and diseases); and establish decentralized, pro-poor seed production and delivery systems.

The Tanzania pigeonpea programme is carried out by: Selian Agricultural Research Institute (SARI)**.**SARI is a national research institute based in the northern zone of Tanzania. In a discussion with a representative of the Extension Directorate, SARI was mentioned as having done well in supporting extension information dissemination in the northern zone; for example current AGRA supported work on maize-pigeonpea promotion. SARI has considerable expertise in pigeonpea and is currently working on pigeonpea with support from an ICRISAT-led, B&MGF funded Tropical Legumes project. Linking with SARI, which hosts ZEILU, in the northern zone could present opportunities for designing pilot action research dissemination activities. ASHC has worked with SARI on the development of some basic pigeonpea promotional material. A representative attended an ASHC write-shop in Naivasha and a number of materials for this project were produced in English and Kiswahili.

**Likely role in campaign:** To work alongside N2Africa and COMPRO in developing and devising campaigns from 2016 onwards – subject to agreement on the development of suitable technologies and supply chain issues being addressed.

**Potential knowledge partners**

**Optimising Fertilizer Recommendations in Africa (OFRA)**

**Funder of program:** AGRA

**Crop/ technology:** Fertilizer optimization recommendations in maize, sorghum, finger millet, rain-fed rice, beans, soybean and cowpea.

**Project duration:** to 2016

OFRA aims to maximize returns from the use of fertilizers in an ISFM framework. It is implemented in 13 countries, including all five ASHC phase 2 priority countries. Uganda provided the inspiration for OFRA. Working with the Grameen Foundation and others, OFRA in Uganda will be able to:

* Develop fit-for-purpose communication materials for promoting fertilizer recommendations
* Develop, test and adopt an app for use on mobile phones
* Develop materials and use them to train extension workers

**Other NGOs and initiatives active in Tanzania in related areas**

**NGOs**

NGOs are involved in various types of agricultural extension programmes, either as a major activity in itself, or as part of integrated rural development programmes. Most NGOs have the region and the district as their entry points, while some even operate at divisional and ward levels. The extent of NGO involvement in rural development in general, and agricultural extension in particular, varies from one region to another. There appears to be concentration of NGOs in high potential areas like Arusha and Mbeya. Some of the NGOs which are seen to be doing an effective job include RUDI, RECODA and Inades Formation Tanzania.

## Rural Urban Development Initiatives (RUDI)

*(Source: Frank C. Mhando)*

RUDI is based in Dar es Salaam but operates in all regions of Tanzania. The NGO is working with micro-small enterprises and farming communities through improved market linkages and distribution channels for their products.

RUDI activities are targeted to building strategic partnership and strong business associations, especially within farming communities that can:

* Formulate and advocate policy reform measures
* Improve market linkage through information sharing
* Facilitate access to credit and
* Expand crop/product production through business skills management training

RUDI works through small partnerships, sharing their goals of stimulating trade with stakeholders in private and public sectors and working towards stimulating trade, productivity, market linkages, capacity building and economic development.

## RECODA

RECODA [[45]](#footnote-45) is an NGO established in Tanzania in 2000 to bridge the technology gap in development through research, consultancy, capacity building and facilitation of community-based projects.

In the beginning, RECODA’s main activity was consultancy work carried out for various development organizations engaged in implementing community development projects. This work included organizational development, evaluations and surveys.

By 2009 RECODA had 15 full-time, highly qualified staff (7 women and 8 men). The team has been trained in areas related to community economic development and includes agronomists, soil scientists, social economists, community development specialists, animal health specialists and business administration experts.

RECODA has been participating in the Rural Initiatives for Participatory Agricultural Transformation (RIPAT) project funded by Rockwool Foundation, Denmark since 2006. These are economic development interventions that aim to close the agricultural technology gap as a means to improve livelihoods and self-support among impoverished small-scale farmers in Tanzania. The RIPAT intervention was intended to find sustainable, low-cost solutions to the challenges faced by small-scale farmers by providing proper tools, techniques and information in a participatory help-to-self-help approach**.**

Through the RIPAT project, farmers are offered a range of improved farming methods and technologies (basket of options) using a Farmer Field School approach.

**The Eastern Africa Agricultural Productivity Programme (EAAPP)**

The Eastern Africa Agricultural Productivity Programme (EAAPP), funded by the World Bank, seeks to address issues of agricultural productivity and development in rice, cassava, wheat and dairy commodities across the region. A five year Phase I (2010/11-2014/15) involves four participating pilot countries, namely Tanzania, Kenya, Uganda and Ethiopia, which host Centres of Excellence for rice, dairy, cassava and wheat, respectively.

The overall goal of EAAPP is to contribute to economic growth through increased agricultural productivity, value added and competitiveness of the sub-regional agricultural system. However the program objectives are to strengthen and scale up regional cooperation in technology generation, training and dissemination programs for priority commodities geared to:

* enhanced regional specialization in agricultural research
* enhanced collaboration in agricultural training and technology dissemination
* increased transfer of agricultural technology, information and knowledge across national boundaries.

***Centre of Excellence for rice in Tanzania***

Low rice yields have been implicated by employment of poor production and management options against biotic factors (diseases Rice yellow mottle virus, bacterial leaf blight and blast; insect pests African rice gall midge and stem borers, and weeds) and abiotic factors (drought, cold, soil fertility/nutritional disorders). In order to optimize yields and ensure grain quality attributes, integrated production and management options for rice diseases, insect pests, weeds, soil fertility and water management in major rice farming systems become imperative in the region.

The Centre of Excellence for rice, through various institutions, is coordinating a number of ISFM-related projects in Tanzania, Kenya and Uganda. The projects include:

* Improving productivity in rice ecosystems through integrated soil fertility and water management.
* Enhancing the productivity of the rice-based systems: Verification and promotion of crop and nutrient management options.
* Enhancing rice productivity through development of integrated management of major abiotic stresses (focussing on salt affected soils) with exploitation of diversified rice products in Eastern Africa.
* Enhancing adoption of rice technologies in different ecosystems in Eastern Africa.

The dissemination approaches include training, establishment of demonstration plots and field days and development of extension materials.

The EAAPP project is under review for possible extension to the second phase.

## Inades Formation Tanzania[[46]](#footnote-46)

Inades Formation Tanzania is a non-governmental organization affiliated to the international association Inades Formation. It has been operating as an independent entity in Tanzania since 1994.

The main approach in information dissemination is training targeting farmers and farmer groups, trainers, development agents, extension agents and other NGOs. Training activities are carried out in Dodoma, Mbeya, Singida and Morogoro. Correspondence courses can be offered on a demand basis in all regions of the country.

The following are examples of projects undertaken:

* Back-up of rural communities in semi-arid central Tanzania on climate change adaptation and enhanced food security for their improved livelihoods.
* Good seed initiatives.
* Combining local innovative capacity with scientific research.
* Enhancing resilience of communities through integrated climate change adaptation and risk management in Bahi District.
* Enhancing rural communities towards economic empowerment and food security in semi-arid central and Southern Highlands of Tanzania.

**Indicative scale-up campaign**

**Common bean cropping system**

Promotion of common bean cropping systems through a cross platform, mixed media campaign designed with appropriate intermediaries to ensure message are engendered and hit different members of smallholder farming households with appropriate, memorable and actionable messages. Youth through Shujaaz, families through Farm Radio International, innovative farmers through SMS, heads of household through point of sale displays in agro-dealership and all clients of FIPS-Africa and government extension in specified regions through better support materials and briefing sheets for front line staff.

Specific messages will cover new varieties, purification of seed, the regeneration role of legumes in intercrop and rotation, the value of P blended fertilizer, safe use of pesticides and dealing with pests and diseases, making ridges, adding organic matter – all good agricultural practices and post-harvest storage options.

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