

Sasakawa Africa Association and Sasakawa Africa Fund for Extension Education

# ANNUAL REPORT 2016



# "Feeding the Future"







## About SAA and SAFE

The Sasakawa Africa Association (SAA) concentrates its operations on four country programs in Ethiopia, Mali, Nigeria and Uganda. Originally operated as Sasakawa Global 2000 (SG 2000) through a joint venture with the Carter Center of Atlanta, Georgia (USA), SAA served as the lead management organisation while former US President Jimmy Carter and his advisors worked through the Global 2000 Program to provide policy advice to national political leaders in support of program objectives. Funding for SAA comes principally from The Nippon Foundation, whose Chairman is Mr Yohei Sasakawa and President is Mr Takeju Ogata. SAA was founded in 1986 by Mr Ryoichi Sasakawa, Dr Norman E Borlaug and President Carter. SG 2000 is still widely used to describe SAA programs.

SAA relies on the Sasakawa Africa Fund for Extension Education (SAFE) – a legally separate organization also funded by The Nippon Foundation – to provide leadership for building human resource capacity in agricultural extension. These two organizations share a common Board of Directors and work together to harmonize and implement their highly complementary agendas.



A distinguished lineup for SAA's side event at TICAD VI. From right to left: African Union Commissioner, Tumusiime Rhoda Peace; Chairman of The Nippon Foundation, Yohei Sasakawa; former President of Benin, Nicéphore Soglo; President of the African Development Bank, Akinwumi Adesina; Prime Minister of Japan, Shinzō Abe; SAA/SAFE Chairperson, Professor Ruth Oniang'o; President of the World Food Prize Foundation, Ambassador Kenneth Quinn; and SAA/ SAFE Senior Executive Officer, Masaaki Miyamoto

#### **SAA Board of Directors**

(as of December 2016) Ruth K. Oniang'o, Kenya, Chair Jean F. Freymond, Switzerland, Secretary Jiro Hanyu, Japan Katsumi Hirano, Japan Masaaki Miyamoto, Japan Shuichi Ohno, Japan Amit Roy, India Nicéphore D. Soglo, Benin

#### **SAA Founders**

Ryoichi Sasakawa Dr Norman E. Borlaug President Jimmy Carter

Front page: Celebrating the signing of the agreement with the African Development Bank at TICAD VI

#### SAA/ SAFE Principal Staff

#### Management

Masaaki Miyamoto, Japan, Senior Executive Officer

Juliana Rwelamira, Tanzania, SAA Managing Director Deola Naibakelao, Chad, SAFE Managing Director

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**Bidjokazo Fofana**, France, Thematic Director, Crop Productivity Enhancement

Leonides Halos-Kim, Philippines, Thematic Director, Postharvest Handling and Agro-processing

Kebba Ngumba Sim, The Gambia, Thematic Director, Monitoring, Evaluation, Learning and Sharing

**Abou Berthe**, Mali Country Director

Aberra Debelo, Ethiopia Country Director Sani Miko,

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**Roselline Nyamutale**, Uganda Country Director

Antoine Aoga, Regional Program Officer, Postharvest Handling and Agro-processing

**Keffing Sissoko**, Mali Regional Program Officer PPP & Market Access

Shushan Negussie, Regional Administrative Manager, Ethiopia

Asnakech Sisay, Regional Financial Officer, Ethiopia Maki Seki,

Program Officer, Japan

**Sayako Tokusue**, Program Officer, Japan

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#### SAFE Associate Staff from Winrock International

Mercy Akeredolu, West Africa Assa Kanté, Mali and Burkina Faso Jeff Mutimba, Eastern and Southern Africa

## **Report from the Chairperson** *Thirtieth anniversary milestone*

As has been mentioned elsewhere in this report, the year 2016 was indeed a momentous and significant one in the history of the Sasakawa Africa Association (SAA).

It has been 30 years since three remarkable men, with a mission to empower smallholder farmers in Africa, came together to turn this vision into reality – thereby improving the lives of millions of farmers and extension agents - and their families – across our continent. They were, of course, Ryoichi Sasakawa, the renowned philanthropist and Chairman of the Japan Shipbuilding Industry Foundation (later to become The Nippon Foundation); former US President Jimmy Carter; and Dr Norman E Borlaug, Nobel Laureate and father of the green revolution in India and Pakistan.

Indeed it was Ryoichi Sasakawa – and his son Yohei Sasakawa – who underpinned the costs of SAA and its programs through The Nippon Foundation – eventually reaching out to 14 African countries. As has been remarked, no Japanese NGO has worked longer in Africa than SAA. Furthermore, the support of The Nippon Foundation was unique – consistent and unbroken for all those 30 years.

Browsing through the country and thematic reports in this publication will give you an idea of the sheer numbers of farmers who benefit today from SAA programs, although SAA now concentrates on four focus countries, Ethiopia, Mali, Nigeria and Uganda. It also gives details of our sister organization, the Sasakawa Africa Fund for Extension Education (SAFE), which has produced 6,000 mid-career extension graduates from 24 universities in nine African countries in the 23 years since it was founded.

## **Capacity audience**

The 6th Tokyo International Conference on African Development (TICAD) held in Nairobi, Kenya, for the first time ever on African soil - was therefore a good place to promote these achievements. Our official side event, during TICAD, drew a capacity and enthusiastic audience with distinguished speakers such as Akinwumi Adesina, President of the African Development Bank, Ambassador Kenneth Quinn, President of the World Food Prize Foundation, Tumusiime Rhoda Peace, African Union Commissioner for Rural Economy and Agriculture, Chief Audu Innocent Ogbeh, Nigeria's Federal Minister of Agriculture and Rural Development, and, of course, Yohei Sasakawa. We were also honoured by the presence of Japan's Prime Minister, Shinzō Abe, who addressed the meeting, while President Carter sent a special message which was read out to the audience.

A highlight of the meeting was the signing of a memorandum of understanding between SAA and the African Development Bank, witnessed by Mr Sasakawa and



The signing of the agreement by Ruth Oniang'o, Chair of SAA/SAFE, and Chiji Ojukwu, Director of Agriculture and Agro-industry, African Development Bank – witnessed by Yohei Sasakawa and Akinwumi Adesina

## **Report from the Chairperson** *Reaching out to farmers*

Professor Ruth Oniang'o, Chair of SAA/SAFE, talking to a young farmer during one of her regular visits to Ethiopia



Dr Adesina. Our relationship will surely bear fruit in the years ahead.

This defining year in our history also saw the completion of the Strategic Plan 2012-16 and analysis of results. It was good to know that we are broadly on track with targets having been met.

So now we face the challenges of the next 30 years with a new Strategic Plan (2017-2021) to be implemented. But our vision remains – a "more food secure rural Africa with increasing numbers of prospering smallholder commercial farmers."

### Africa – abundant arable land

We also share the views of President Adesina, at our event in Nairobi, when he said: "it is unacceptable that Africa is unable to feed itself. Africa has abundant arable land, cheap labour, lots of water and sunshine. Yet the continent spends \$55 billion a year importing food – food that it can and should produce".

Increasingly we believe that Africa's smallholder farmers are playing their part – and we will continue our work with them.



Hon Professor Ruth K Oniang'o Chairperson of the Sasakawa Africa Association, Chairperson of the Sasakawa Africa Fund for Extension Education, at SAA side event at TICAD VI. In conclusion, I would like to thank my Managing Director Juliana Rwelamira, for her dedicated work – and her team of country and thematic directors and their staff. I must also mention Leony Halos-Kim, our Theme 2 Director, who setup a stall for SAA/SAFE as part of our offering at TICAD VI, which was superbly managed. I applaud the achievements of SAFE, led by Dr Deola Naibakelao. Finally my thanks to the team in Tokyo, headed by Senior Executive Officer, Aki Miyamoto, for their invaluable support.

Prof. Ruth Oniang'o is a Kenyan graduate of Washington State University, Pullman, and University of Nairobi. She has taught in Kenyan universities and is Adjunct at Tufts University, Massachusetts. She spearheaded the completion of Kenya's food and nutrition policy, facilitated the establishment of nutrition departments in Africa and has given a voice to these issues internationally. She served in the Kenyan Parliament; founded Rural Outreach Africa, to serve women smallholder farmers; and founded African Journal of Food, Agriculture, Nutrition and Development, to highlight African issues. She is Board Chair of Sasakawa Africa Association and Sasakawa Africa Fund for Extension Education, stepping into the shoes of cofounder, the late Dr. Norman Borlaug, who was president of SAA and SAFE. She received the 2014 International Food and Agribusiness Management Association (IFAMA) Lifetime Award and is Vice Chair of the Global Forum on Agricultural Research (GFAR). She is now a member of the Board of the Centre for Agriculture and Biosciences International (CABI), which has its headquarters near Wallingford, Oxfordshire, in the UK.

## Sasakawa, the historic years

Japanese philanthropist Ryoichi Sasakawa, Nobel Peace Prize Laureate Dr Norman Borlaug, and former US President Jimmy Carter founded the Sasakawa Africa Association (SAA) in response to the 1984 famine which devastated the Horn of Africa and killed a million people. But their combined response to the crisis was very different.

Food aid, they reasoned, was not a sustainable solution for Africa's millions of smallholder farmers. Nor was slash & burn, the traditional farming method. Far better to put the right technology, supported by good agronomic practices, into the hands of farmers - and ensure that farmers knew how to use it and take ownership of their own destinies, free from the drudgery of grinding poverty. Over the following decades, Sasakawa-Global 2000 (SG 2000), the alliance between SAA and the Global 2000 program of the Carter Center, operated country projects in 14 African states. Led by the indefatigable Norman Borlaug, SG 2000 demonstrated on farmers' fields that the food crop technology existed in Africa to double and triple farm yields - and that farmers were willing, able and eager to intensify production. Working with tens of thousands of frontline extension staff and several million farmers



Norman Borlaug at work in Mexico, where he pioneered the techniques he later brought to Africa through the Sasakawa Africa Association

across Africa, SG 2000 tested higher-yielding technology on farmers' fields for maize, wheat, rice, grain, legumes, roots and tubers developed by African national research organisations in collaboration with international agricultural research centres.

#### **Catalytic role**

SG 2000's role was catalytic - working primarily with national ministries of agriculture to mount dynamic field demonstration programs.

Providing the costs of the program was The Nippon Foundation, a private, philanthropic organisation led, until his death, by Ryoichi Sasakawa. But his son, Yohei, was also there from the beginning. He became Chairman of The Nippon Foundation in 2005, having served as President from 1989 and a trustee from 1981. Over the full 30 year history of SAA, it is estimated that The Nippon Foundation has spent over \$300 million on the program, perhaps unprecedented support by an NGO donor for a development project over so many years.

SAA's Inspirational President, Norman Borlaug, gave his last speech on African soil in Bamako in 2006 – SAA's 20th anniversary. Acknowledging the promise of Africa's farming lands and hardworking farming communities, he used to say, "we need results: you can't eat potential". Even before his death in 2009, plans were being put in hand to face up to the new challenges for Africa's agriculture – and reinvent, revitalise and re-energise SAA. SAA was now concentrating on four focus countries: Ethiopia, Mali, Nigeria and Uganda, with the objective of intensifying operations for more achievable results rather than spreading resources too thinly. There was a new emphasis on women farmers and resource-poor farmers and improving each stage of agriculture's value chain, from production to markets and consumption.

To lead this new era, SAA appointed a Kenvan, Professor Ruth Oniang'o, with a distinguished record as an academic, scientist and nutritionist. Along with Managing Director Juliana Rwelamira, she is a strong advocate for women farmers and the successful agro-processing programs now run by SAA across its focus countries. SAA efforts to support government extension services have been strengthened immensely by the Sasakawa Africa Fund for Extension Education (SAFE), SAA's sister organisation also chaired by Ruth Oniang'o, and run by Managing Director Deola Naibakelao for over 23 years. SAFE incentivises midcareer extension agents to gain academic qualifications in order to advance their career opportunities. These qualifications are obtained through degree courses across a network of participating universities and colleges. From its beginnings at the university of Cape Coast in 1993, the



Celebrating 30 years of Sasakawa in A<u>frica</u>

## Sasakawa, the historic years

program has expanded to 24 universities and colleges in nine African countries. Nearly 6,000 SAFE students have graduated or are taking part in the program, a remarkable capacity building operation for extension.

#### **Milestone reached**

For SAA, a milestone has been reached with the completion of its Strategic Plan from 2012 to 2016 – of which the architect was the late Chris Dowswell, working with SAA's managerial team. A target of 100,000 smallholder farmers for each of the four countries has been reached – which will help to change the face of smallholder farming activity in these countries. SAA is a much changed organisation since those early years – now fully African in its personality, gender sensitive in its policies and staffing and more accurate and accountable in its monitoring and evaluation of results. It has also built close working relationships with many partners to support the expansion and deepening of its activities. It has the benefit of a strong team in Tokyo.

From the beginning, Norman Borlaug worked in farmers' fields – and this has always been the SAA philosophy. As it moves into the future, SAA can draw on the historic legacy of its founders – and the hope and dignity they brought to Africa's smallholder farmers and their determination to escape from hunger and poverty.



President Jimmy Carter, Dr Norman E Borlaug and Yohei Sasakawa in the early days of SAA



Yohei Sasakawa with President Jimmy Carter. In 1991, The Nippon Foundation board, led by Sasakawa, decided to extend SAA's activities for another five years and said SAA should also think beyond that period



President Jimmy Carter (right) and Jean Freymond, Director of CASIN (left), at a CASIN/Sasakawa Global 2000 workshop held in Accra, Ghana in August 1989. Jean Freymond has been Secretary of the Board since the founding of SAA in 1986



Norman Borlaug with a farmer in Blantyre, Malawi in March 2000

## 2016 Management Report from the SAA Managing Director

For SAA, 2016 was a momentous year, bringing to an end our Strategic Plan (2012 - 2016). Throughout the year the SAA team worked successfully to achieve the targets set out in the Plan. Details of the program implementation and achievements are provided under each of our five thematic and four focus countries' reports.

#### Activities

In addition to the Nippon foundation planned activities, extra-core projects were implemented in all focus countries except Mali. Ethiopia implemented four extra core projects, while a further five were run in Nigeria and three in Uganda. Full details of these additional core projects can be found in the relevant country reports.

Several important events that have a bearing on the program also took place in 2016, with two reaffirming SAA's position on the world stage:

- 1. SAA/SAFE's participation in TICAD VI in Nairobi, Kenya, hosting an official side event to celebrate SAA's 30th anniversary of working with African smallholder farmers.
- 2. SAA/SAFE's participation in the World Food Prize (WFP), held in Des Moines, Iowa, USA, where another side event was organized to celebrate SAA's 30th anniversary year. This was facilitated by Ambassador Kenneth Quinn, President of the World Food Prize Foundation

Both events involved the Board Chair of SAA and SAFE, Hon. Prof. Oniang'o, the Senior Executive Officer, Mr. Masaaki Miyamoto, two Board Members and senior members of SAA/SAFE management, and were resoundingly successful.

Internally, SAA organized a retreat to bring together management and staff for program reviews, inter-theme collaboration and to resolve human resource management issues. The meeting took place in Adama, Ethiopia, during the week of 15 -21 May 2016. Senior management took that opportunity to discuss issues related to the end of the 2012-2016 SAA Strategic Plan and to consider the development of the new SAA Strategic Plan (2017-2021).

#### **Climatic conditions**

The climatic conditions in 2016 were irregular with successive dry spells and floods. This seriously affected the establishment and performance of the farmer learning platforms (FLPs) by the Crop Productivity Enhancement (CPE) theme in some focus countries, with subsequent knock-on effects for the work of other themes.

In Ethiopia, rainfall in the Southern Region (SNNP) was very heavy, leading to floods in many woredas. As a result, about 154 demonstration plots were destroyed, with levels

## The vision, mission and strategic goals of SAA

#### **SAA Vision**

A more food-secure rural Africa with increasing numbers of prospering smallholder commercial farmers.

## **SAA Mission**

To transform African extension advisory services in partner countries to assure greater family food security, and more profitable participation in commercial activities along the value chain, while respecting natural resources.

### **SAA Strategic Goals**

- 1. Establish cost-effective Farmer Learning Platforms that improve productivity in smallholder food systems, especially for resource-poor women farmers and those with low levels of technical efficiency, and increase food security and livelihoods.
- 2. Enable smallholder farmers to capture a larger proportion of the economic benefits inherent in agricultural food value chains.
- **3.** Create Public-Private Partnerships that financially support delivery of extension services for enhanced smallholder agricultural development and enhance profitable market access.
- 4. Strengthen agricultural extension systems by building capacity of extension professionals and smallholder farmers to accelerate agricultural productivity and credit more competitive value chains.
- 5. Establish information and knowledge management information systems that enable adaptation, modification and change of technologies and approaches, improve efficiency and impacts, and communicate lessons and best practices for timely evidence-based decision-making.

of damage reported between 5 to 100 per cent. Despite these climate irregularities, with the exception of the Potassium fertilizer scaling up (KCL) projects in Ethiopia, most of the FLPs were successfully carried out. In Mali, the rainy season started later than usual, delaying the establishment of FLPs. Likewise, in Nigeria, the rain arrived late and there were severe dry spells in Kano, Jigawa and Gombe, which hindered the establishment of FLPs, including late fertilizer application and weeding, poor germination and plant population in some demonstration plots. In Uganda, the rainfall pattern was regular throughout most of the country and favoured field establishment, but the lowlands

were affected by floods causing poor germination and establishment of crops. From May to mid-June, dry spells affected crop growth, particularly in Jinja and Mityana districts, to an extent that the majority of farmers in those areas experienced crop failure.

#### General agricultural and economic trends

The four SAA focus countries - Ethiopia, Mali, Nigeria and Uganda, generally had good crop performances in 2016 and over the course of the Strategic Plan. African countries have been working hard to meet their CAADP and Malabo Declaration pledges to finance agriculture more than ever before. There was strong government commitment involving donors, NGOs and the private sector. Agricultural economies were growing around 4-10 per cent annually, spearheaded by Ethiopia with 10.6 per cent broadbased economic growth, but still with a long way to go to achieve total food security and the eradication of poverty. Nutrition remains the leading risk factor in Ethiopia, with 33.1 per cent undernourishment and 41 per cent stunting; made worse by the ever-increasing basic food prices.

Mali's economic development has been relatively positive, with a growth rate of more than 5 per cent in 2014 and 2015. In 2016 food security, gauged by the level of food availability in Mali, was above average as a result of favourable crop production in 2015/2016, which was 25 per cent above the five-year average and created a surplus of 1,635,000 metric tons for markets and households. Planned cereal production for the 2016/2017 season is 8,798,408 tons with an increase of 9 per cent over 2015-2016. The expected rice surplus is 4,800,000 tons, of which 520,000 tons is destined for markets and the rest for consumption.

Oil rich Nigeria has not shielded Nigerians against food insecurity and poverty - not least because of the dramatic collapse of the oil price. The largely subsistence agricultural sector has not kept up with rapid population growth, and Nigeria, once a net exporter of food, now imports a large quantity of its food needs. Perennial challenges include insecurity due to Boko Haram, corruption, weak competitiveness; fiscal instability, persistent inequality; and the impacts of climate change all of which contribute to acute economic stagnation. The above notwithstanding, some perceptions of our SG 2000 program were recorded among key stakeholders; they include: "SG 2000 has helped improve the living standard of the farmers through improved production and agro-processing technologies; SG 2000 is an institution which provides farmers and extension agents with the necessary extension education along value chain agriculture; an institution providing the required capacity building and extension training to farmers and extension agents along the agricultural value chain; and it has a strong partnership program for extension service delivery".

There are still significant challenges in Uganda; 63 per cent of the population are said to be food insecure and 31 per cent are living in poverty. While Uganda has one of the highest soil nutrient depletion rates in the world, its annual inorganic fertilizer application is only 1.8 kg per hectare. Through SG 2000 Uganda, the farmers who have benefited from our program have similar perceptions of SG 2000 as in Nigeria.





Juliana Rwelamira checking grain stored for more than six months at a PICS field day, Tigray Region, Ethiopia

## Evaluation of SAA 2012-2016 Strategic Plan and development of new SAA 2017-2021 Strategic Plan

Analysis of the outgoing Strategic Plan and the development of the new plan starting in 2017 are adequately covered in the Monitoring, Evaluation, Learning and Sharing (MELS) section of this report. It suffices to say that SAA's Program has made positive strides towards achieving its goals of strengthening extension service delivery, improving food security and reducing poverty in the four focus countries. The overall findings of the external evaluation show that the SAA thematic areas and associated objectives are aligned with national priorities and well address the community needs and problems.

The findings and recommendations of the external evaluation were taken into account during the development of the new SAA 2017-2021 Strategic Plan. Many of our key strategic objectives remain unchanged, but with a renewed focus on climate change, people with special needs, women and youth. Throughout the implementation period of the new Strategic Plan, 2017-2021, as SAA-Managing Director, I intend to devote a considerable amount of time towards proper implementation of the organizational objectives, which are mainly focused on raising the profile of SAA and improving its visibility as well as diversification of funding sources to sustain and expand the program. I will also work hard to cultivate effective and motivated staff with minimum levels of staff turn-over. Last, but by no means least, SAA will continue to employ effective financial management with control systems in place to achieve efficiency, effectiveness and accountability.

SAA Managing Director, Dr Juliana Rwelamira



## **THEME 1** CROP PRODUCTIVITY ENHANCEMENT (CPE)

## 1. Technology intervention strategy

The overall objective of the CPE Theme is to increase agricultural productivity while strengthening the capacities and skills of smallholder farmers and national extension systems. The CPE technology intervention strategy consists of establishing simple Farmer Learning Platforms (FLPs) to illustrate scalable, costeffective and productivity-increasing technologies. The main target groups are resource poor women and vulnerable farmers living in fragile, drought-prone and/ or affected agroecological zones. The FLPs involve various demonstrations including Technology Option Plots (TOPs), Women Assisted Demonstrations (WADs), Production Test Plots (PTPs), Community Variety Plots (CVPs) and Seed Multiplication Plots (SMPs). The FLP-concept encompasses four pillars including: (i) participatory community consultation and need assessment, (ii) feed back meetings with participating smallholder farmers and Extension Agents (EAs) for inclusiveness in knowledge sharing and decision making, (iii) improving knowledge and building capacities of EAs and farmers' groups through problemsolving technology demonstration, and (iv) participatory pre-dissemination of productivity-increasing technologies.

In 2016, the CPE Theme succeeded in consolidating its extra-core projects portfolio. In Ethiopia, the Nutritious Maize for Ethiopia Project (NuME) has been extended to the end of 2018, and the Large-scale Potassium (K) Popularization Project up to the end of 2017. In Uganda, a new 2-year project (Vegetable Oil Development Project – VODP) has been launched, and the Agribusiness Initiative Trust Project (aBi - Trust) has been extended to the end of 2018. In Nigeria, ACAI (African Cassava Agronomy Initiative), a BMGF-funded 5-year project, is being implemented in close collaboration with the International Institute of Tropical Agriculture (IITA). The main objective of the project is to validate and disseminate site-specific fertilizer recommendations for increasing cassava production in Nigeria.



Group members listening to advice on proper weed management during a monitoring visit to a maize demonstration in Gulu District, Uganda

## 2. Farmer Learning Platforms: constraints, achievements and success stories

### 2.1 Achievements so far

Despite the climate irregularities recorded in 2016, most of the FLPs were carried out without major setbacks and expected outputs have been achieved. About 986 tons of various fertilizers and 25 tons of seeds from different crops were purchased and distributed to the host farmers for the establishment of FLPs, comprising 436 TOPs, 1,308 WADs, 18,867 demonstration and validation plots, 137 Community Variety Plots (CVPs) and 130 Community Seed Multiplication Plots (SMPs). Overall, average yields of priority crops under full technological packages were significantly higher than women demos (WADs), farmers' practices and national averages. Average yields of priority crops outperformed farmers' practices and national averages. In Uganda for instance, maize grain yield averaged 5,759 kg ha-1 in TOPs and 3,130 kg ha-1 in farmer practice, compared to the national average of 1,500 kg ha-1. Similar trends were recorded for groundnut and maize.

FLPs were used to give need-based technical backstopping to key partner EAs and farmers in relevant crop production technologies. In total, 5,558 partner EAs and Community-Based Facilitators (CBFs) participated in the training of trainers' sessions. About 93,000 farmers (68,769 male and 24,825 female) benefited from the cascade-down training sessions organized by EAs and CBFs. CVPs and SMPs were implemented in remote communities where host farmers are hampered by poor seed quality. About 109 ha of SMPs were used to illustrate the performance of high yield and drought tolerant seed varieties. In addition, various needbased climate-smart technologies were demonstrated (seed priming, conservation agriculture) with primary focus on drought prone and/or affected areas, and less carbon and nitrogen emitting technologies such as micro-dosing (millet) and fertilizer deep placement (irrigated rice).

- 2.2 Key success stories recorded
- 1. Farmers in the desert margin zones testified the superiority of climate smart technologies (seed priming, micro-dosing) coupled with the use of small-scale equipment for line planting and fertilizer point placement
- 2. Community seed multiplication significantly increased quality seed production, created awareness about the benefits of and stimulated more demand for quality seeds of improved high yielding varieties
- 3. Efficient and innovative extension models were successfully used to implement cascade-down training schemes in good agronomic practices



- 2.3 Recurrent constraining factors to Crop Productivity Enhancement in the FLPs
  - 1. Low crop performance, failure due to dry spells, drought, high temperature, floods, pests and diseases
  - 2. Drudgery associated with improved time, seed and fertilizer-saving technologies
  - 3. Poor linkage of SAA extension and research work with identifying and outsourcing science-based productivity enhancing technologies
  - 4. High turnover and unreliability of direct partner extension services
  - 5. Poor farmer linkage to sustainable markets and limited farmer access to inputs and equipment

## **3.** Future strategic action points for alleviating constraining factors to crop productivity

3.1 Building SHF's resilience to climate change

Climate change hazards provide an opportunity for farmers to adopt resilience-building production technologies. Theme 1 will therefore streamline climate change and related knowledge acquisition in its future technology intervention strategy. Human capacity building in climate change will be intensified, initiating community-based extension models for cost-effective, sustainable training across the board. 3.2 Scaling out community-based seed multiplication

The community-based seed multiplication (CSM) has significantly increased quality seed production, demand and use in the hosting farming communities. Theme 1 will scale out CSM to improve smallholder farmers' access to seeds of improved varieties.

**3.3** Supporting small-scale equipment and technologies for improving crop and labor productivity

To address drudgery and labor intensity associated with climate smart and market-oriented production technologies, Theme 1 will introduce small-scale equipment for line planting and fertilizer point/deep placement. Promoting crop productivity-increasing technologies in drought prone areas will require the demonstration of small-scale, cost-effective rainwater harvesting and irrigation techniques.

3.4 Building strategic partnerships with research and extension centers

Theme 1 will build long-term linkages with national and international research and extension centers, and the private sector to popularize promising production technologies. The aim is to address new agricultural challenges and emerging issues with, and identify or create market opportunities for, smallholder farmers within the FLPs.

Table T. Summary of FLPS Activities, Outputs versus Achievements in 2016 for all Projects (NP and Extra-Core Projects (ECPs).								
ACTIVITIES								
Cap	pacity Building	Total Planned	Ethiopia	Mali	Nigeria	Uganda	Total Achieved	Total Realized (%)
Training and Capacity Building								
1.	# of trainings	209	201	4	20	14	239	100+
2.	# of participants	102,767	24,965	4,814	67,158	2,169	99,106	96
2.1	EAs	4,642	4,539	87	663	269	5,558	100+
2.2	Farmers (Total)	97,975	20,280	4,814	66,600	1,900	93,594	96
	* Male	70,449	18,660	2,298	19,911	1,122	41,991	60
	* Female	26,081	1,620	2,516	46,689	778	51,603	100+
2.3	Others	150	146	0	-	0	146	97
Far	mer Field Days (FFD)							
1.	# of FFDs	331	235	120	34	10	399	100+
2.	# of EAs	2,150	2,852	87	275	0	3,214	100+
3.	# of Farmers	73,704	93,566	8,733	3,492	1,727	107,518	100+
	* Male	56,789	74,836	5,290	2,641	742	83,509	100+
	* Female	16,589	18,722	3,443	525	885	23,575	100+
4.	Others	330	718	0	-	0	718	100+
Far	mer Learning Plots (FLPs) #	of Demo Plots						
TOP	<sup>o</sup> s	436	90	120	90	136	436	100
WA	Ds	1,308	270	360	270	408	1,308	100
CVI	<sup>o</sup> s	142	30	50	25	32	137	96
SM	Ps	130	30	50	18	32	130	100
PTPs		10,740	1,350	5,870	1,185	2,040	10,445	97
Demos		18,867	18,398	10	129	346	18,883	100
Validation Plots		283	0	0	283	-	283	100
Oth	iers	107	23	12	65	-	100	93

## THEME 2 POSTHARVEST AND AGRO-PROCESSING (PHAP) EXTENSION

The end of the 2012-2016 Strategic Plan brought many learning experiences in our PHAP promotion in collaboration with partner agencies. Monitoring activities indicated some levels of technology adoption by farmers and processors but need to be verified, and the impact on the overall agricultural development in each country should be assessed.

Challenges still exist which include a general lack of awareness of new and improved techniques, poor technologies for improved postharvest handling and processing, and losses due to storage insects.

In 2016, the team conducted a postharvest loss assessment for rice in Nigeria to gather data which will be the basis for outcome measurements on loss reduction, and to verify the usefulness of field measurement techniques developed in Uganda. For smallholder farmers, the in-field postharvest handling losses for rice is below 10 per cent with component losses from harvesting, threshing and winnowing/cleaning at 4.45 per cent, 1.40 per cent and 0.49 per cent, respectively. Smallholder farmers tend to be more careful in handling their produce, however, qualitative and quantitative losses in storage are higher than 20 per cent due to insect damage and other predators which prompt farmers to sell their produce immediately after harvest.

Technology sourcing through experience-sharing has facilitated the selection of appropriate technologies for different conditions. Adaptation of technologies was necessitated by the need for efficient soybean threshers and rice parboilers in Nigeria; cowpea shellers and a thresher for sorghum and millet in Mali; and grain cleaners and rice harvesters in Uganda. SAA worked with development agencies and manufacturers in adapting the technologies to suit farmers' requirements. Modified machine prototypes had been developed and tested and will be evaluated with farmers in 2017 for feedback on their utility and efficiency.

## Food quality and safety

Food quality and safety has been addressed by the teams considering formulations of nutritious foods (such as quality protein maize (QPM) in Ethiopia, and the potential to develop agro-processing enterprises, especially by women processors in Uganda. Nigeria has also been working with processors in Gombe State and has developed improved processing of the local condiment, dawa-dawa, from African locust beans. The condiment contains 10-21 per cent protein, 8-12 per cent fibre and 2-11 per cent carbohydrate. The priorities have been to make the process more hygienic, reduce the drudgery of processing, and to create a business enterprise for women in Northern Nigeria. Other processors in neighboring areas are also being trained in the new process.

The level of aflatoxin contamination in food produce has been a concern in the region but is not known to many smallholder farmers. SAA has trained extension staff and farmers on how to determine the level of aflatoxin in maize, groundnuts and other products, and explained the causes and prevention techniques of aflatoxin contamination. The awareness campaign has led to the adoption of improved postharvest and storage techniques. Farmers, as well as extension staff, are more careful in handling their produce and managing their stored crops.

The demonstration of hermetic storage facilities, particularly PICS bags in Ethiopia, resulted in early adoption because of the protection from insects and the elimination of harmful chemicals in storage. The country teams, in collaboration with SAA's partnership and market access team, worked with suppliers to ensure demand is met in rural areas. As a result the technology was widely adopted in a short period of time. SAA is strengthening its efforts to work with government agencies, NGOs, and the private sector to link farmers to suppliers of technologies in the SAA focus countries.

## Growth of agro-processing enterprises

While we have been successful in supporting agroprocessing enterprises, especially among women, sustainability is still a major challenge. The scale remains small and is dependent on outside sources because of a lack of operational funds, poor implementation of product standardization, lack of reliable markets and incentives to encourage the processing of good quality products, and a lack of entrepreneurial skills among the processors. SAA will continue to train the processors in terms of technical and entrepreneurial skills, and strengthen market linkages. Improving processors' literacy developed more confidence among the women and will continue through the homeliteracy program as part of the capacity building for women processors.

## Strengthening the private service providers

Private service providers (PSPs) play an important role in reaching more farmers in their homesteads. Smallholder farmers' access to PHAP technologies allows them to process their crops on time, and store them in good condition for market or consumption. Private service provision has been proven as a potential incomegenerating activity in SAA focus countries. Five out-ofschool youth groups in Ethiopia have been given machines and operational training, as well as training in business management, and have started providing threshing/ shelling services in their localities. Young and enterprising individuals in Nigeria and Uganda have also expressed their interest in becoming involved in PHAP service provision.

Although SAA is promoting group investments because of the high startup capital, it was observed that individual ownership is more sustainable.



Theme Director: Engr Leonides Halos-Kim

#### Awards and recognitions

PHAP teams participated in national and regional exhibitions to promote technologies to wider audiences. The Ethiopia team received a Certificate of Appreciation Award from the Federal Cooperative Agency (FCA) for empowering agro-processing women. The Uganda team was also recognized with a trophy for the Best Exhibitor Award (for small-scale technologies) during the National Agricultural Fair. The staff were invited to contribute to workshops related to the promotion of technologies, as well as policy formulation for agricultural mechanization.

### New strategy: towards more comprehensive value chain implementation

The 2016 PHAP Thematic meeting, held in Kaduna, Nigeria, discussed the directions for the implementation of the new SAA Strategic Plan (2017-2021). It called for more integration into the country workplan to reflect the development and implementation of value chain interventions in new project sites. Inter-theme collaboration will be central in the implementation of the program. PHAP will adopt extension strategies that encourage the adoption of technologies. Development of off-farm rural agro-processing enterprises, promoting private service providers, youth empowerment through entrepreneurship and establishing associated support systems are priorities. In the next 5 years, SAA will see more adoption of PHAP technologies and increasing demand for more efficient technologies. Linkages to suppliers of PHAP technologies and associated repair and maintenance services will be strengthened. Quality and food safety will also be emphasized.





## THEME 3 PUBLIC PRIVATE PARTNERSHIPS AND MARKET ACCESS (PPP&MA)

## **Overarching goal**

The overall objective of Theme 3 is to establish publicprivate partnerships in support of extension delivery and smallholder agricultural development through accessing more profitable markets.

## Key achievements:

In order to have sustainable market oriented production and income, various stakeholders, including the public and private sectors, farmer organizations (FOs) and individual producers should work together. Cognizant of this, Theme 3 has mapped out private service providers, including microfinances, private suppliers of farm inputs and services, and agro-processors, and linked them with the farmer organizations and smallholder enterprises. A directory of public and private service providers has been developed and shared, and is continuously being updated in each of the four focus countries, resulting in the established networks of partnerships along value chains in each of the four countries.

Functional farmer organizations are key to improving market access and sustainability. Theme 3 facilitated the organization and mentoring of Commodity Associations (CAs), which were organized around selected commodities and provided with agribusiness management and development training. The FOs are linked to both inputs and outputs markets. Within the Strategic Plan period of 2012-2016, a total of 120,246 individual farmers were trained in various areas of market demand, value chain analysis, business planning, contract negotiations, and collective actions to secure inputs, services and markets. In addition, 870 groups of women and youth farmers were trained in agribusiness management.

As a result of these activities, about 96,891 metric tons of various grains were sold through linkages to up-takers in all four focus countries. In Uganda alone, smallholder farmers obtained \$3,450,720.00 from produce sales in 2016. In Ethiopia, a total of 22,300 metric tons of grains and 366 metric tons of seeds were produced and marketed in the same year.

Further linkages include smallholder farmer-business groups with local banks or Micro Finance Institutions (MFIs). In Ethiopia and Nigeria respectively, a total of 149 and 75 farmer groups received loans through these linkages. A further 420 farmer groups in Nigeria are linked and have accounts with various financial institutions. In Uganda, banks have extended loans to farmers as follows; FINCA Bank \$185,400, Opportunity Bank \$75,620, Post Bank \$955,830, and Centenary Bank \$320,750. In Mali, FOs from Selingué, Niamala, Fanidiama, Kolonto, N'Golognianasso, Kolokoba and Sirimana were able to secure a total credit of \$230,160 for 2,471 farmers, including 750 women. In addition to linkages with banks, Theme 3 has also facilitated additional access to finance for farmer groups through the Voluntary Village Saving and Loan Associations (VSLA) scheme. In Mali, 155 VSLAs were set up, with 90 established in Nigeria, 107 in Ethiopia and 822 in Uganda. Savings by 105 groups in Uganda during 2016 stands at \$370,500 from 13 districts of Bugiri, Ntungamo, Buikwe, Jinja, Tororo, Mityana, Gulu, Oyam, Nakaseke, Palisa, Kamwenge, Kamuli and Lira.

The work of Theme 3 in 2016 also involved the training of 261 groups of women and youth farmer-businesses in group dynamics, leadership and governance, as well as commercializing the farming practices of smallholder farmers.

Throughout the 2012-2016 Strategic Plan, much progress has been achieved in Theme 3 by sustainably linking smallholder farmers to markets, which has resulted in key partnerships involving both public and private partners and FOs that served to develop and strengthen existing partnerships, extending various value chain functions and support to smallholder farmers.

## **Extra-core programs:**

Theme 3 has contributed to the implementation of extracore Projects and Programs within the 2012-2016 Strategic Plan in Ethiopia, Nigeria and Uganda. In Nigeria, Theme 3 led to the implementation of the AGRA-funded Innovative Extension Project and participated in the USAID/ MARKETS II Project. In Uganda, Theme 3 participated in the implementation of Growth for Uganda (GFU/K+S), the SAFE Farmer Based Organizations (FBO), aBi-Trust and Vegetable Oil Development projects. In Ethiopia Theme 3 is fully involved in all extra-core projects implemented in the country.

### **Staff changes:**

Dr. Sissoko Sokona Dagnoko was appointed as new Country Director of SAA in Mali following the retirement of Dr. Abou Berthe, after many years of loyal service. She continues to oversee Theme 3 activities in Mali together with the Theme Coordinator and Program Officer (PO). The PO, Etienne Goita, was recruited in 2016 to strengthen Theme 3's staff in Mali. Theme 3 still lacks coordination at the Regional Office in Addis Ababa by either a Theme Director and or a Regional Program Officer. It is my hope that this gap will be filled very soon.





A Community-Based Seed Multiplication (CBSM) field inspection in Hulbareg Woreda, Ethiopia

Table 1: Theme 3 major achievements for the Strategic Plan period 2012-2016					
DETAILS	ETHIOPIA	MALI	NIGERIA	UGANDA	TOTAL
Databases of service providers/partners (developed/updated)	1	1	1	1	4
Number of partners network (developed)	1	1	1	1	4
Number of Farmer Organizations linked to output markets	411	725	650	822	2608
Farm produce marketed collectively by farmers groups (metric tons)	14,391	30,000	28,000	24,500	96,891
Number of farmers linked to inputs markets	486	725	545	472	2,228
Inputs supplied to farmer groups by private suppliers (metric tons)	779	4,134	2,550	2,100	9,563
Number of revenue generation models developed for farmer groups	5	6	9	8	28
Number of collective action marketing models developed for Farmer Organizations	4	5	14	7	30
Number of business plans developed for various farmer agro-enterprises	72	33	28	33	166
Number of farmers trained/ToTs on commercializing smallholder agriculture	29,679	16,200	65,440	8,927	120,246
Number of farmer organizations linked to financial institutions (for access to credit)	220	36	420	822	1498
Number of Villages Saving and Loan Association schemes (VSLA)	107	155	90	822	1174
ivulliber of villages saving and Loan Association schemes (VSLA)	107	135	90	022	11/4

Source: SAA – External Evaluation Report of the Countries (2016)

## SAFE/THEME 4 SASAKAWA AFRICA FUND FOR EXTENSION EDUCATION

## **Focus countries**

#### **ETHIOPIA**

## Launching of the pastoral oriented mid-career program at Samara University

Samara University launched a pastoral value chain oriented BSc program for mid-career extension professionals in February 2016. Thirty-two students, 28 men and four women, have been admitted for the first intake. This brings the number of universities running the midcareer program in Ethiopia to nine. An official launching workshop of the program was organized at Samara University on 18 April 2016. The workshop was attended by staff from the College of Dryland Agriculture at Samara, and representatives from other universities and colleges.

#### Pastoral-oriented instruction materials writeshop

A writeshop was conducted in March to develop instructional materials for nine courses. The writeshop was attended by 18 instructors from the Jijiga and Samara universities (two writers per course). The official opening of the writeshop was performed by the Director General of the Ministry of Livestock and Fisheries. In his opening remarks, he welcomed SAFE's initiative in coming up with a pastoraloriented curriculum as this was directly in line with the government's "special efforts toward socio-economic development of pastoral and agro-pastoral areas".

#### Establishing resource center at Jijiga University

Jijiga has established a learning resource center equipped with the required teaching materials and equipment. Some equipment was donated by the regional government, while the university provided the rest. The donation by the regional government is a reflection of a true partnership which exists between the university and the employers of the students. With support from SAFE, a drip irrigation family vegetable garden and small-scale poultry production program were established for initiating the enterprise center, which will be used for practical demonstrations.

#### Annual National Forum

A successful Annual National Forum meeting was organized in May and attended by deans, department heads and program coordinators. The objective of the meeting was to review the value chain-oriented curriculum that has been run for the past five years in Ethiopian universities. During the meeting, issues that need to be reviewed were identified, and a task force composed of nine instructors was established to conduct the actual review.

#### MALI

A curriculum review and revitalization workshop was conducted at the University of Ségou in April. The objective of the workshop was to define the means and methods to integrate the value chain approach in the agricultural extension education program. The workshop participants underlined and agreed to apply a value chain approach to all courses. Forty-four Supervised Enterprise Projects (SEPS) were developed and implemented by students on various topics in Mali. The enterprise center at Samanko Center also continued to focus on animal and agricultural value chain commodities in an integrated system.

#### **NIGERIA**

The consistent efforts to get the program mainstreamed into the regular university system finally yielded a positive result in Nigeria as the National Universities Commission (NUC) has approved the accreditation of the SAFE program for universities. This approval will hopefully lead to more adequate funding of the program by the host universities.

The SEPs conducted by students have continued to be the nerve center of the program. Emphasis is now placed more on value chain approach, value addition, agricultural entrepreneurship and gender issues to meet the needs of farmers and extension service systems.

Various efforts were made to expand the activities of the enterprise centers in Nigeria. The University of Ilorin now operates activities along the value chain on fish commodities. The enterprise center has organized training for women Dawadawa (local spices) sellers. They also engaged in bottling juice (orange, pineapple and watermelon) and locust bean processing for sale to the university community. Adamawa State University has revived the honey production enterprise center that was destroyed during the insurgency. Bayero University Kano (BUK) has expanded their fruit orchard to mango and moringa production. In BUK, a rice processing and packaging unit was developed. As part of strengthening the Enterprise Center at Usmanu Danfodio University, Sokoto, a solar drying meat processing center was set up with a kilishi (dried powdered meat) making machine.

#### UGANDA

The accreditation proposal for Bukalassa Agricultural College has been approved by the Senate of Makerere University. The university will now move towards a twotrack program – one that takes only diploma holders (midcareer candidates) and another that admits high school graduates.

## **Regional activities**

### **Annual Retreat**

The annual staff retreat was held in Accra, Ghana, on 29 and 30 June. The agenda items, presentations, and discussions at the retreat mainly focused on: enrollment, graduates, Supervised Enterprise Projects (SEPs), curriculum development, alumni, program expansion, and partnership with governments. It also discussed in depth regional activities, Farmer Based Organizations (FBOs), the new SAA/SAFE communication model and SAFE collaboration with SAA. Preparation for TICAD in Nairobi and the World Food Prize were also discussed from a SAFE perspective.

The retreat recommended the following:

- Engage private farms in the conduct of SEPs.
- Consider organizing pan-African technical networking workshops instead of the alternative regional workshops. The value of a pan-African workshop is that it brings all participating institutions together and allows wider sharing of experiences and opinions.





Managing Director: Dr Deola Naibakelao

Mekele University showing income generating activities undertaken by the university. Ruth Oniang'o is on the right

- The SAA/SAFE communication model should consider alumni associations.
- The Strategic Plan is a living document that should be updated regularly.
- FBOs strengthening activity should place more emphasis on capacity building in the form of training.

#### **Regional Technical Workshop for West Africa**

The West Africa Networking Workshop was organized in Accra on June 27 and 28, 2016. Seventy-five participants were drawn from the universities/colleges and ministries of agriculture from Nigeria, Mali, Benin, Burkina Faso, Ghana and Ethiopia.

#### Workshop theme

Rethinking the Role of Stakeholders for the Sustainability of SAFE Programs.

#### **Background to the workshop**

Recent changes in political, socio-economic conditions and policies, such as dwindling financial resources, decentralization and privatization of extension services in many African countries are affecting the effective implementation of SAFE programs and their overall sustainability. Decentralization in countries is shifting ownership and training of extension staff from the Ministry of Agriculture to local government. The effective implementation of SAFE programs and their overall sustainability hinges on partnerships with stakeholders who have played various roles over the years. It was within this context that the West Africa Regional SAFE stakeholder workshop was held.

#### Purpose of the workshop

The purpose of the workshop was to provide a platform for stakeholders of SAFE programs to reconsider their roles and re-strategize for ownership and sustainability of SAFE programs.

#### **Specific objectives**

The specific objectives were to:

- Discuss the roles of key stakeholders in SAFE programs.
- Analyze possible partnerships and synergies between stakeholders in sustaining SAFE programs.
- Examine ways to mainstream activities of stakeholders into the SAFE programs.
- Discuss ways to improve the sustainability of the program.

## Output from the workshop

#### **Stakeholders and their roles**

• The workshop identified the existing key stakeholders as ministries of agriculture, ministries of livestock and fisheries, the universities, colleges and training centers, students, farmers, frontline extension workers, cooperative agencies, non-governmental organizations, private sector operatives, research institutes, alumni associations, other universities, media, agribusiness personnel and SAFE.

- New stakeholders are agro-processing companies, private universities, ministries of local governments, financial institutions, agricultural input dealers, donors and development agencies, specialized government programs outside extension, FBOs, and women's associations.
- The roles of stakeholders are program evaluation, funding, staff training, employment of graduates after graduation, supervision, curriculum development/ review/implementation, strengthening of linkages and provision of resources (personnel and space).

## The workshop deliberations on challenges of sustaining the SAFE program were around the following key issues.

- The main threat to the sustainability of the SAFE program is funding.
- The decentralization of extension advisory services is a threat due to the inability of local governments to sponsor their staff.

## The workshop agreed to use the following strategies to sustain the program.

- Take advantage of the Vice Chancellors' forum and others to mainstream the SAFE program into the university system to ensure ownership by the university.
- Strengthening the national forum whereby universities and stakeholders meet and exchange ideas of mutual interest.
- Link SAFE program, especially SEPs, with government agricultural development strategies and programs
- Develop proposals to solicit sponsorship from other donors with similar interests
- Joint meetings with stakeholders to plan and share commitments
- Strengthen the alumni associations to foster partnerships with other stakeholders

## Furthermore, SAFE should:

- Develop a road map for the implementation of the workshops' objectives
- Consider using professional journals for the promotion of SEPs.
- Promote in-country SAFE program interactions to address pertinent issues.
- Encourage joint proposal writing among countries to source funding to support SEPs
- Support the commercialization of technology villages.

## Seminar at Egerton University, Kenya

Although SAFE does not operate in Kenya, the Director of Extension in Kenya asked SAFE to share with one of Kenya's agricultural universities, Egerton, the SAFE



Mid-career graduates of Wollo University, Ethiopia

training model – because the Ministry of Agriculture also wants that type of program for its staff. A seminar paper was presented on SAFE's experiences. The university showed interest and will consult with the Ministry of Agriculture and district authorities who employ field extension staff.

## **Curriculum workshop, South Africa**

Following the request of the Director of Agriculture, South Africa, SAFE has shared its curriculum with concerned bodies in the country. This was after the Director expressed concern that they had a lot of degree holders doing extension but without extension training. He then organized a curriculum workshop at which SAFE was to present a keynote paper. The workshop was attended by representatives from the Department of Higher Education and Training, Department of Agriculture, Forestry and Fisheries, universities and agricultural colleges. Participants found SAFE's curriculum appropriate for their needs. A multi-stakeholder task force was constituted to explore options for extension training in South Africa.

## **Alumni associations**

Alumni associations are viewed and considered as key partners of SAFE on the ground. Their key role in promoting the SAFE programs and effective extension delivery systems cannot be overemphasized. They are expected to play an ever active role as leaders and change agents in their respective countries and work places. In this regard, efforts have been made to organize them and equip them with the basic tools to effectively perform. There have been some positive achievements.

They have actively participated in several Training of Trainers (ToT) sessions and workshops on SEPs and postharvest lost management. In Mali, they participated in the curriculum review at Samanko Center. In general, they have participated in the various technical workshops, supervision of students' SEPs, and advocacy for SAFE, etc. Alumni associations of Burkina Faso and Mali have jointly produced a newsletter called the Sahelian Agricultural Extensionist. It is being used as a source of information on extension in the Sahel region.

## Farmer Based Organizations (FBO)

The FBO project made good progress in 2016. The project has been involved in a wide range of capacity building activities during the year and positive changes in the performance of farmers and farmer groups were observed.

About 565 new and 603 existing FBOs were supported during 2016. A total of 1,173 FBOs were supported in four countries (Ethiopia – 78; Mali – 410; Nigeria – 350 and Uganda – 332). More than 20,000 FBO members were trained on different topics.

Special efforts were also made to reach out to as many people as possible with special needs in Ethiopia, Mali, Nigeria and Uganda. Three associations for the physically challenged in Mali were assisted through trainings. The project in Ethiopia has supported 166 farmers with special needs through training on livestock fattening, apiary and animal feed production as enterprises that the groups can engage in. In Nigeria, a total of 25 Disabled Assisted Demonstration (DAD) plots were established and more than 200 physically disabled farmers were trained in crop agronomy and farm management skills.

In 2016, the project in Ethiopia trained 36 new and 42 existing FBOs on best practices for commodities, linked with buyers through contractual agreements. Six "look and learn visits" were also organized. Following these exposure visits, 320 members from five farmer groups have diversified their enterprises (onion, tomatoes and cabbage) and sold their produce to big buyers in nearby regional cities.

In Mali, the project has facilitated the linkage between the National Agricultural Bank of Mali and the Nièna "Multi Actors Value Chain Platform" (MAVCP). As a result, the platform has access to different inputs (1,909 kg of seeds, 328 bags of fertilizer, and 973 liters of pesticides) on a credit basis. The Niena MAVCP sold 39 tons of sesame to the World Food Program (WFP) and received 11,117,900 CFA (about \$18,000). For 2017 production season, the project has facilitated a contract for MAVCPs of Baraouéli and Cinzana MACVPs to process and sell 150 tons of sesame for WFP.

In Nigeria, thirty FBOs in Jigawa, Gombe and Kano States have established an apex called the "Sasakawa Farmers Apex Association". This apex will track the development of FBOs and their members. The Apex will also help each FBO in accessing collective input and output markets and increase groups' access to loans. An additional six MACVPs were established in Nigeria. The platforms are used to bring together all actors of a particular value chain under one umbrella to work in synergy with each other. Financial mediation between FBOs and financial institutions also made it possible for 3 women processors groups to obtain a \$300,000 loan from a micro-finance bank (each group having \$100,000). The project in Uganda supported 150 new and 200 existing FBOs. Members were assisted in identifying and developing viable enterprises. The project has provided a wide range of training including 'Look and Learn Visits' which have resulted in observable improvements. For example, 260 individual farmers have diversified their enterprises to piggery, poultry and passion fruit production. The project also trained 316 FBOs in savings and loans.

## The way forward

The SAFE initiative has demonstrated the importance of forging partnerships both within the universities themselves (across faculties and departments) and with other universities, NGOs, government ministries, as well as with the private sector, both inside and outside the country. One of the most important ingredients for the start-up and sustainability of any innovative program is partnership with other organizations that are concerned about the same problems and committed to the shared vision and mission. Hence, SAFE will continue encouraging partners to use their own resources and mobilize additional funding for scaling up the program.

Concerted efforts will be made to re-engage some key and "defaulting" stakeholders through dialogue. There is a pressing need to bring on board new stakeholders who are willing and committed to be part of the effort towards the training of mid-career extension staff in Africa. This will be systematically done through sensitizing the private sector and others by involving them in seminars, workshops, guest lecturers, and the implementation of SEPs, etc.

Alumni associations are playing a key role in promoting the SAFE initiative as well as supporting the implementation of the program. But not all of them are performing well. SAFE will assist them to improve their effectiveness and efficiency.



A wheat inspection in Lemo Woreda, Ethiopia

## SAFE/THEME 4 SASAKAWA AFRICA FUND FOR EXTENSION EDUCATION



Participants of the West Africa Regional Technical Workshop in Accra, Ghana

The FBO project has supported the emergence of strong and viable FBOs through the provision of wide capacity training programs. However, strengthening and scalingup FBOs' activities needs more funding and cannot be achieved with actors operating in fragmentation with each other. Hence, SAFE will continue facilitating the linkage of FBOs to financial service providers to enable the organizations to expand profitable services and initiate new viable enterprises/services.

### Staffing

Following Dr Jeff Mutimba's retirement, Winrock has recruited new staff and made changes in senior positions. Accordingly, Dr Mercy Akeredolu replaced Dr Mutimba in Addis Ababa, while Dr Oladele Idowu joined as SAFE Coordinator for Nigeria. Dr Oladele Idowu (a Nigerian citizen) becomes a country coordinator for SAFE Nigeria starting in April 2016. He earned his PhD in Agricultural Extension from the University of Ibadan, Nigeria. Between 1997 and 2016, he worked at North-West University (South Africa), University of Botswana (Botswana) and University of Ibadan (Nigeria) in different capacities. He has field level research experience with smallholder farmers in Nigeria, Japan, Ghana, Sierra Leone, Kenya, Uganda, Ethiopia, Botswana and South Africa. Dr Oladele has a strong background in agriculture, technology transfer and innovation systems, with extensive skills in statistics, and analytical techniques and partnership development. He is also highly experienced in the integration of natural and social science methods for resource management decisionmaking and has strong knowledge of policy formulation processes, monitoring, evaluation and linking farmers to markets.

SAFE Student Statistics: 1993 to 2016, as of December 2016					
SAFE Program Universities/					
Colleges and Countries	Graduated	Current	Total		
University of Cape Coast, Ghana (B.Sc.)	550	19	569		
Kawadaso Agric. College, Ghana (Dip.)	585	4	589		
Haramaya, Ethiopia (B.Sc.)	524	79	603		
Hawasa, Ethiopia (B.Sc.)	231	41	272		
Makerere, Uganda (B.Sc.)	393	209	602		
Sokoine, Tanzania (B.Sc.)	955	144	987		
IPR/IFRA, Mali (Maîtrise)	222	68	290		
Samanko Centre, Mali (Dip.)	260	27	260		
Ahmadu Bello, Nigeria (B.Sc.)	186	30	216		
Bayero University, Nigeria (B.Sc)	180	51	231		
Abomey-Calavi, Benin (B.Sc.)	166	57	223		
Bobo-Dioulasso, Burkina Faso (B.Sc.)	133	20	153		
Lilongwe University, Malawi (B.Sc.)	125	25	150		
Bahir Dar University, Ethiopia (B.Sc.)	96	59	155		
Adamawa State University, Nigeria (B.Sc.)	24	75	99		
Illorin University, Nigeria (B.Sc)	43	14	57		
Mekele, Ethiopia (B.Sc.)	107	59	166		
Wollo, Ethiopia (B.Sc)	59	52	111		
Jimma, Ethiopia (B.Sc)	41	70	111		
University of Segou, Mali (B.Sc.)	-	34	22		
Usmanu Danfodiyo Univ., Nigeria (B.Sc.)	-	44	44		
Arba Minch Univ., Ethiopia (B.Sc.)	-	33	33		
Samara Univ., Ethiopia (B.Sc.)	-	32	32		
Jijiga Univ., Ethiopia (B.Sc.)	-	16	16		
Sub-Total	4,880	1,262	5,991		
SCHOLARSHIPS	Graduated	Current	Total		
Diploma	6	-	6		
B.Sc.	33	-	33		
M.Sc.	60	1	61		
PhD	8	6	14		
Sub-Total	107	7	114		
Grand Total	4 382	1 5 3 4	5 916		

## **THEME 5** *MONITORING, EVALUATION, LEARNING AND SHARING (MELS)*

The MELS Theme continued to drive SAA's evidencebased approach by covering all SAA program activities in Ethiopia, Mali, Nigeria and Uganda. Among other tasks, in 2016 MELS successfully led the external evaluation of the concluding SAA Strategic Plan (2012-2016) and coordinated the development of the new strategy (2017-2021).

## External evaluation of SAA Strategy (2012-2016)

The Sasakawa Africa Association (SAA) has implemented its Strategic Plan (2012-2016) in Ethiopia, Mali, Nigeria and Uganda with the vision to improve food security in rural Africa with increasing numbers of prospering smallholder commercial farmers. As program implementation ended in 2016, SAA commissioned an external evaluation focusing on the relevance, effectiveness, efficiency and sustainability of program outcomes. Some of the key findings are summarized below:

**Relevance:** thematic areas and associated objectives have been aligned with national priorities in SAA's four focus countries. These include agricultural productivity enhancement, nutrition and food security, postharvest management practices, access to improved storage facilities, value addition technologies, input and output markets through public private partnerships, and evidencebased program cycle management systems to promote effective documentation of program impact and challenges for wider sharing and learning.

**Efficiency:** findings show that SAA's activities have been carried out as planned. Program interventions in focus countries were selected based on individual contexts

Theme Director: Dr Kebba Ngumbo Sima



with relevant crops identified through need assessments. Interventions like the Women Assisted Demonstrations (WADs) addressed women specific issues. The results show an excellent work environment and good governance within SAA's programs.

**Effectiveness:** the effectiveness of a program is measured in terms of its successful objectives and outcomes. The evaluation indicated that the program implementation resulted in improved food security and reduced poverty for beneficiary households.

**Crop Productivity Enhancement:** the evaluation shows that the program created access to agricultural extension services for more than 400,000 farmers, meeting the target set in the Strategic Plan. About 113,130 farmers participated in technology demonstrations, 787,795 farmers were trained in agricultural technology use and more than half a million participated in field days. Over 70 per cent of the farmers used the training provided to them and most are satisfied with the extension services provided. The results also show that yields of major crops increased on average by 36 per cent in Ethiopia (affected by drought), 90 per cent in Nigeria and Mali, and 42 per cent in Uganda. Compared to non-participants, farmers on the program harvested higher yields by 58 per cent, 133 per cent, 34 per cent and 90 per cent in Ethiopia, Nigeria, Uganda and Mali, respectively.

**Postharvest Handling and Agro-processing:** reducing crop losses by 30 per cent was the overall target for this program. The program trained more than 300,000 farmers, extension agents and agro-processors; and demonstrated storage facilities, postharvest handling and agro-processing. It created 431 agro-processing centers



MELS officers in Uganda working to evaluate the effectiveness of SAA's programs for smallholder farmers

and trained more than 38,000 Farmer Organization (FO) members in agro-processing and value addition. 1,845 Private Service Providers (PSP) (machine service providers, fabricators, technicians and machine operators) were also trained. Linking farmers to the PSPs facilitated access to PHAP technologies. The PSPs also generated income ranging from \$253 to \$1,876 depending on the technology and the country. The survey results show that the proportion of farmers who use improved storage facilities is higher for program participants. Compared to the baseline, postharvest loss on average declined among program participants by 44 per cent, 55 per cent, 77 per cent and 81 per cent in Ethiopia, Nigeria, Mali and Uganda, respectively.

**Public-Private Partnerships & Market Access:** Publicprivate partnerships were developed to support extension delivery and agricultural development through access to more profitable markets. A total of 2,600 FOs have been linked to the market by the program and sold about 97,000 metric tons of grain. They also accessed seeds and other inputs, as well as loans from financial institutions. The program also organized and supported Village Saving and Credit Associations (VSLAs) to mobilize savings among members and facilitate access to credit at village level. The program capacitated 107, 185, 90 and 822 VSLAs in Ethiopia, Mali, Nigeria and Uganda, respectively. Women's groups were also trained to engage in agribusiness and enterprise development. In Ethiopia, Mali, Nigeria and Uganda, training in agribusiness was given to 32, 45, 720 and 75 groups, respectively.

Monitoring, Evaluation, Learning and Sharing (MELS): The unit has accomplished several activities including need assessments, baseline surveys, monitoring activities, in-depth studies/impact assessments, and organized various lesson learning and information sharing events.

**Impact:** The impact of the program has been evaluated in terms of change in household income, per capita income and food security status. The available data indicates that the per capita income of program participants increased compared to the baseline and participants earned 53 per cent, 44.4 per cent and 172 per cent higher than the non-participants in Ethiopia, Mali and Nigeria, respectively. In all focus countries, participants positively evaluated the contribution of the program in terms of household income and food security. The program has resulted in improved food availability and has provided opportunities for improved household nutrition and wealth.

Figure 1: Summary of Key Results of the External Evaluation of SAA Strategy (2012-2016)						
Crop Productivity and Enhancement	Ethiopia	Mali	Nigeria	Uganda	Total	
Number of farmers participated in technology demonstration	32,856	40,633	15,264	24,377	113,130	
Number of farmers trained in agricultural technology usage	410,401	28,162	243,850	105,382	787,795	
Number of farmers participated in field days	410,401	72,547	38,801	11,410	500,000	
Farmers utilized training provided to them (per cent)	84.4	88.4	33.4	51.6	-	
Average increase in yields of major crops (per cent)*	36.1	90	90	42	-	
Average yield harvested in comparison with non-program participants	58	34	133	90	-	
Postharvest and Agro-processing	Ethiopia	Mali	Nigeria	Uganda	Total	
Number of farmers, extension agents & agro-processors trained	230,879	35,565	32,833	33,599	332,876	
Number of agro-processing centers established	30	360	21	20	431	
Number of farmer organizations trained in agro-processing & value addition	1,151	686	1,500	834	4,171	
Number of private service providers (fabricators, technicians, operators)	1,003	94	267	481	1,845	
Average annual income generated by private service providers (\$)	373			1,257	-	
Average decline on post harvest losses (per cent)**	44	77	55	82	-	
Private Public Partnership and Market Access	Ethiopia	Mali	Nigeria	Uganda	Total	
Number of Farmer Organizations (FOs) linked to markets	411	725	650	822	2,608	
Quantity of grains sold by FOs (Metric tons)	14,391	30,000	25,000	24,500	96,891	
Number of Village Savings and Loan Associations (VSLAs)	107	185	90	822	1,174	
Number of women's groups trained in agro-business enterprise development	32	45	720	75	870	
Average volume of loans accessed by FOs		500,000	42,000	240,730	783,230	
Average quantity of seeds and other inputs accessed by FOs	779	4,134	2,550	2,100	9,563	
Impact	Ethiopia	Mali	Nigeria	Uganda	Total	
Average per capita income of program participants compared to baseline (per cent)	109				-	
Average per capita income of program participants compared to non-participants	53	44.6	172		-	

\*The outcome target set was to increase yield by 40 per cent

 $^{\star\star}The outcome target set was to reduce crop losses by 30 per cent$ 

## ETHIOPIA Country Report

SG 2000 Ethiopia implemented five projects in five regional states, covering more than 130 woredas and 880 kebeles in 2016. These projects are; a) Core project, funded by The Nippon Foundation in ten woredas and 30 kebeles; b) Nutritious Maize (NuME) project, funded by the Canadian International Development Agency (CIDA), now known as Global Affairs Canada (GAC), through CIMMYT in 24 woredas and 72 kebeles, C) Digital Green scaling up project funded by DG India in five woredas and 50 kebeles D) PICS project funded by PURDUE university in 31 woredas and 93 kebeles (3,155 villages), and E) Potassium large scale-up project (KCL) funded by AGRA in 64 woredas and 640 kebeles.

## **Crop Productivity Enhancement (CPE)**

In 2016, the CPE theme implemented three projects (Core, NuME and K fertilizer popularization). The theme trained 1,897 extension agents, 26 officials and 8,030 farmers (541 women) on improved crop productivity enhancement technologies and production of nutritious maize. Good agricultural technologies and practices were demonstrated on farmers' field and in Farmer Training Centers (FTCs). A total of 20.161 demonstrations were implemented, of which 1,763 (90 TOPs, 270 WADs, 1,350 PTPs, 23 conservation tillage and 30 seed priming) were through The Nippon Foundation, 195 were on Quality Protien Maize (QPM) and 18,203 were on K fertilizer popularization. Two levels (kebele and woreda) of farmers' field days were organized in all target areas. At woreda level a total of 13,991 (of which 13,500 are farmers) attended and observed field demonstrations, while at kebele level more than 82,200 participants (almost all farmers) observed the demonstration during the field days. Following NuME demonstrations and field days, farmers requested 112 tons of improved varieties of QPM.

The theme, in collaboration with Theme 3, was also involved in supporting eight Community-Based Seed



Mastawet Hailu, a strong mother with special needs, growing cabbages with the support of SAFE FBOs in Ethiopia

Country Director: **Dr Aberra Debelo** 



Multiplication (CBSM) farmers' groups that have 165 members (154 male and 11 female) organized in five regions. The group multiplied seeds of those newly introduced crop varieties to satisfy the demand for further scaling up and ensuring the sustainability of demonstrated technologies. The CBSM group multiplied 178 metric tons of seven different varieties of teff, wheat, sorghum and soybean on 60 ha of land.

### Postharvest and Agro-processing (PHAP)

The PHAP Theme intensified the promotion of multicrop threshers, maize shellers and hermetic storage through demonstrations in 2016. It had conducted 16,978 demonstrations for 196,722 (75,417 female) farmers to create awareness on the use of the technologies and food preparation using QPM. Thirty-six field days, attended by 23,272 (8,569 female) participants, were conducted to reach out to wider farming communities with the active participation of officials from partner organizations.

Training on postharvest handling, storage management and QPM food preparation was conducted for 817 (252 female) extension and development agents (DAs). DAs then trained 189,593 (65,517 female) farmers with PHAP team's technical backstopping and facilitation.

SG 2000 Ethiopia initially introduced PICS bags to farmers in 2013 for on-farm storage. Popularization of the bag by SG 2000 in collaboration with agricultural offices and the supply chain of the bag from production to marketing was supported through Purdue University's PICS Project. According to factory reports, 164,510 bags were distributed to farmers through farmers' cooperative unions and other organizations that scaled up this good practice. As a result, farmers were able to store grain free of chemicals and insects that helped them to consume healthy food and fetch better prices for their produce. Service providers were facilitated to give threshing/shelling services to farming communities. Seven landless youth groups (39 male, 1 female) and one rural women cooperative (97 members), beneficiaries of the WFP-gender program, have acquired a thresher/sheller and provide services to farmers in their localities. To support the service providers, 75 (2 female) technicians were trained on operations, and 20 on repair and maintenance of the PHAP machines and engines. An experience-sharing visit was conducted for 35 youth and 10 members of the women cooperatives to learn from a successful enterprise model. Refresher training was conducted for 74 women on leadership, record-keeping and processing skills. A home-based literacy and numeracy program was conducted for 200 illiterate women. The accessibility of the technologies through private service provision and market linkages improved the understanding of the importance of postharvest handling and storage, hence the increasing number of adopters.

### **Public-Private Partnerships and Market Access**

Partnerships with partner organizations and inter-theme collaboration contributed to the establishment of strong

bonds between smallholder farmers and value chain actors. Revenue generation models were established to link Farmer Organizations (FOs) to value chain actors including assemblers, wholesalers, processors, exporters and financial service providers. This has resulted in the supply of 22,300 metric tons of smallholder produce and 366 metric tons of improved seed from Community Based Seed Multiplication Schemes to market actors.

The theme trained 100 rural women and youth groups on group dynamics and agri-business to enhance job creation and quality standards. 15 women and youth groups (71 male and 21 female) were trained on governance and group dynamics. Similarly, 31 women and youth groups (119 male and 26 female) were trained on agribusiness and enterprise development from eight project woredas in four regional states (Oromia, Amhara, Beneshangul Gumuz and SNNPR). Intensive training was also given to 9,691 smallholder farmers on commodity crops. To engage FOs in viable business opportunities, six business plans were developed and several market studies were conducted. Six FOs accessed loan and credit in cash and in kind amounting to birr 65,000.00 and birr 1.5 million, respectively. This money was used to procure agricultural inputs within the project intervention areas. Eighty-seven Village Saving and Loan Associations (VSLA) were established and supported to make available sustainable small loans at grass root level.

### Promoting video-based extension approach

SG 2000 Ethiopia has been implementing the Digital Green Scaling up Project, in partnership with Digital Green Foundation and agriculture offices of five woredas in Amhara region, since May 2015. The project has trained 112 woreda and zone officials, 20 Woreda Video Production Team members, 208 DAs, HEWs and SMSs on video production and video dissemination, of whom ninety-four (45 percent) were female. To institutionalize the approach, two woreda steering committee meetings were conducted with the involvement of all key regional representatives.

A total of 43 health, nutrition, agronomy, livestock and postharvest technology videos were produced by five project woredas. These videos were screened to targeted development groups and significant numbers have practiced and adopted the technologies. Two joint supervisions with technical support were carried out in 50 kebeles at five woredas. Quality assurance visits were regularly undertaken at woreda, kebele and farmers' levels. A total of 118 QA visits were carried out at all levels during this reporting period.

## Monitoring, Evaluation, Learning and Sharing (MELS)

MELS continued to institutionalize evidence based interventions in SG 2000 Ethiopia programs and projects. MELS monitored program and project performance both at output and outcome levels. Monitoring of outputs involved implementing themes through the use of a web based monitoring system that was launched in 2015. This year, the system is upgraded to integrate the routine paper based reporting requirements and allowed staff to enter all performance information. The system aggregates performance status and reports by individual staff and theme and exports into Word/Excel/Powerpoint. Outcome monitoring surveys done throughout the year revealed the fragile inter-theme collaboration in the field and the result has been discussed with staff and management, where a commodity approach has been identified as a way forward.

The external evaluation of the SAA/SG 2000 Ethiopia Strategic Plan (2012-2016) was conducted as an input to the new country strategy (2017-2021). The evaluation report demonstrated the relevance of the Strategic Plan to the target community and government priorities, plans, strategies, and its effectiveness in terms of achieving thematic level objectives. Three working papers were published focusing on two project evaluation reports and one adoption study result.

## External/donor relations

SG 2000 Ethiopia continued to enjoy a good working relationship with our partners and donors. SG 2000 Ethiopia was recognized and awarded by the Ministry of Agriculture and Natural Resources, Federal Cooperative Agency, and Oromia Bureau of Agriculture for its partnership in promoting the development efforts of the government. Purdue University and AGRA have recognized our genuine partnership and each awarded us a one year no-cost extension and NuME a two year extension. SG 2000 is making a good effort to begin new partnerships with DG Soft, based in UK; the David and Lucile Packard Foundation; and the MasterCard Foundation.

## Staffing

During the gradual phasing out of the NuME project, two staff – one PO from T1 and another PO from T2, terminated their contracts. The Technical coordinator of Theme I and two staff from MELS (Technical Coordinator and PO) resigned during the year. All were replaced immediately so as not to affect the program implementation.



A member of the Sashemene Association of Persons Affected by Leprosy taking care of livestock in Ethiopia – a project supported by SAA/SAFE

## MALI Country Report

## Strategic Plan 2012-2016

Mali is a Sahelian country in western Africa. Early in 2012, Mali faced serious social, political and security issues due to a coup d'état followed by the occupation of the northern territories by armed groups. But the political situation has now normalized with French intervention. This was followed by democratic polls in 2013. The security situation is currently relatively calm with sporadic attacks against the armed forces. The Malian authorities and their partners have since put in place a security warning system in vulnerable zones, to help ensure long-term stability in the region.

From a development perspective, the government of Mali opted for an agriculture-based strategy for economic growth owing to the importance of the agricultural sector to the country's GDP. Among the challenges faced by the development of Malian agriculture are low yields, high postharvest losses, often ranging from 30-60 per cent, low agroprocessing and transformation, weak organization of the value chains, weak access to markets and credit, poor quality, safety and market value of agricultural products, and weak technical capacity of farmers and extension agents.

To assist Mali in overcoming these challenges and achieve food security, SAA started implementing its first Strategic Plan in 2012. The objectives were focused on food security and were perfectly aligned with those of the major agriculture development policies, namely the Agriculture Orientation Law (LOA) and the Agriculture Development Policy (PDA 2013), with the view of transforming Malian smallholder and subsistence oriented farmers into prosperous commercial farmers.

Despite the difficult socio-political and security situation, SG 2000-Mali implemented the Strategic Plan 2012-2016 in four administrative regions, 12 *cercles*, 52 *communes* and 320 villages. This was made possible due to the strategic selection of intervention sites and the support of headquarters, the regional office, the Malian Ministry of Agriculture and other partners.

In late 2016, an external evaluation team, commissioned by SAA, showed that the per centage of rich producers increased from 2 per cent to 21 per cent and that the proportion of poor farmers decreased from 68 per cent to 9 per cent, a fall of 59 per cent. The evaluation also reported the proportion of average farmers has doubled (from 31 to 70 per cent) because of the large number of poor producers who have migrated to this category. Such results need to be up-scaled given that rural poverty contributes over 80 per cent to national poverty.

According to our partners on the ground, access to the new technologies introduced by SAA with extension agents' capacity building are the reasons for the improvement. Approximately 75 per cent of households participating in the program are able to secure their food needs for at least Country Director: **Dr Sokona Dagnoko**<sup>†</sup>



Malian smallholder farmers using maize winnowing techniques to remove dust and debris

11 months. This is encouraging compared with the 34 per cent who are in the same situation in non-participating households.

## SAA/SG 2000 to achieve food security, food safety, and reduce malnutrition among smallholder farmers in Mali

Mali's agricultural potential in terms of land area, livestock, irrigation agriculture, and improved adapted genetic materials is high. Despite this, Mali is not food secure with pockets of food insecurity found in 166 communes, affecting one million people. Food insecurity has been worsened by the 2012 socio-political and security crisis that has led to the displacement of people and rendered difficult the movement of food towards the northern regions of Timbuktu, Gao and Kidal.

Malnutrition also prevails in Mali, especially among children under five with 24 per cent underweight. Malnutrition and anemia are rife.

Interventions in the areas of crop harvesting, postharvest management and agro-processing were conducted by SG 2000 Mali during the current Strategic Plan to achieve food security and food safety, and reduce malnutrition in the targeted regions. Promising postharvest and agroprocessing technologies that can be applied to major agricultural commodities were identified, introduced, demonstrated, tested, adapted as needed and promoted among other activities. Examples of technology include metal silos, cowpea decorticators, mobile maize shellers,





The eighth batch of mid-career extension agents at Samanko College, Mali, emphasising the close collaboration between SAA and SAFE, its sister organisation

groundnut decorticators, multigrain threshers, PICS bags, tarpaulins, and technologies for processing local cereals into juices, malt beverages, cakes, cookies, couscous, pellets for making thin porridge (monicuru), etc. These activities were conducted in the regions of Kayes, Koulikoro, Sikasso and Ségou and gathered together the local authorities, farmers, and SAA/SG 2000 team, reaching 200 women processors.

### **Future directions**

Planning for the next four years is being done with each of the five SAA/SAFE thematic areas, inter-theme collaboration and, most importantly, collaboration with national and international partners and targeted populations - smallholder farmers, processors, traders, extension agents, equipment manufacturers, and private service providers.

The postharvest and trade centers (PH&TCs) business model developed by SG 2000 and its partners during the period 2012-2016 will be at the heart of the new Strategic Plan. In addition, the new Strategic Plan will promote climate-smart agriculture and engage and empower people with special needs, especially women, young people and people with disabilities in agricultural value chains. Emphasis shall be given to monitoring and evaluation to ensure evidence-based interventions have maximum impact.

#### Farewell

**Mr. Amadou Diané** worked for SG 2000 – Mali from 30 April 1997 to 2 May 2016 as coordinator for monitoring, evaluation, learning and sharing theme.

Mrs Sylla Awa Traoré who served SG 2000, Mali, as our office administrator since 3 May 2010, concluded in July 2016.

**Dr Abou Berthe**, who had served as the Country Director of SG 2000, Mali, since 2009 retired in December 2016.

We wish all departed staff every success in their future endeavors.

#### Welcome

**Mr Alou** joined SG 2000-Mali on the 26 of September 2016 as the office administrator. He has a Master's in Human Resources Management and has 23 years of work experience with NGOs, private corporates and state institutions.

**Dr Sokona Dagnoko** joined SG 2000, Mali, on 1 November 2016 as Country Director. She obtained her MSc in animal science from Laval University, Quebec (Canada) and her PhD from Cornell University in Ithaca, New York (United States of America) in plant breeding and genetics.

We wish the new staff every success at SAA/SG 2000, Mali. In conclusion, and as noted above, I am very pleased to have taken up my new position as Country Director.

## NIGERIA Country Report

This year saw various SAA interventions in Nigeria, including the USAIDS-MARKETS II, N2AFRICA, AGRA, the Africa Cassava Agronomy Initiatives funded by BMGF and TAMASA projects. For most of the year the Nigerian Naira (NGN) depreciated by more than 40 per cent, and in December national inflation reached 17.6 per cent, to the detriment of the agricultural sector. Significant increases in the cost of food have diminished purchasing power for households across the country. Currency depreciation has also affected the cost of agricultural inputs, which raised the cost of production significantly. SAA has continued to provide guidance and training in value chain extension through the promotion of sustainable smallholder extension service delivery, supporting the emergence and development of effective farmer organizations (FOs) and promoting business opportunities for FOs. Our workforce has grown following the recruitment of an account clerk under the AGRA project, and we received 21 agricultural students from universities.

## **Crop Productivity and Extension**

The success of any agricultural development program depends largely on decisions by the farmers on what to grow, where to sell, how to sustain and maintain soil fertility, and where livestock is involved, how to feed the animals. Improved technologies and better markets offer farmers new opportunities, but they also require better access to information. To be competitive, farmers need to acquire more knowledge to improve decision making. SAA has continued to partner with relevant institutions to educate and deliver services to smallholder farmers. Thus, training of trainers was conducted with 1,768 extension agents and lead farmers under the USAIDS-MARKETS II program, and an additional 30,000 under the AGRA Project.

Extension agents and lead farmers established 360 demo plots to showcase good agronomic practices, and the performance of demo plots across both core and extracore were impressive. Crop yields increased from 50 to more than 100 per cent; resource-poor farmers, especially women in rural areas, have appreciated the incorporation of inorganic fertilizer into the soil which further improved crop yields. From the economic analysis of the dry season maize production under the USAID-MARKETS II project, net profitability level was N1,349,800 (\$4,354) and N773,020 (\$2,493) per hectare in Kaduna and Kano States, respectively. The JICA collaboration on improved rice production techniques has produced a draft flyer on simple rice production guidelines, which is ready for printing. In the new Strategic Plan, an ambitious 200,000 farmers are being targeted for networking and training.

*Country Director:* **Dr Sani Miko** 





Training in maize flour processing in Gombe, Nigeria

### More work to be done

The driving force behind SAA Nigeria's expansion in the last two years has been the cohesiveness of the team, and the readiness of public extension institutions to collaborate with SAA. However, there is a serious gap in public extension service delivery, especially in terms of the funding and qualified personnel, which provided the grounds for donor agencies to intervene. The scope for SAA to do more in Nigeria remains substantial.

### **Postharvest Handling and Agro-processing**

Postharvest handling has a significant effect on the extent of postharvest losses, final quality, and market value of any agricultural commodity. Proven simple and portable new technologies are emerging which can be applied during harvesting, threshing, grading, packaging, storage, and transportation, and have been found to minimize losses, preserve quality, and improve value-addition. SAA has continued to source local machinery and, where feasible, import and modify to suit the local needs of smallholder farmers. SAA has promoted several agro-processing and storage facilities which reduced postharvest losses. Several farmers are now using the technologies disseminated by the theme in various communities because it increases the value of their outputs.

A total of 19,814 smallholders, out of 20,000 targeted, were trained in storage and value-adding agro-processing technologies within the strategic period (2012-2016).

Type and number of learning platforms implemented in 2016 (Core Activities)					
Farmers' learning platforms Community based platforms:	Number Planned	Number Achieved	Per cent Achieved		
ТОР	90	90	100		
WAD	225	225	100		
РТР	1,350	985	72.9		
Farmers' field days	93	93	100		

Similarly, 28,090 farmers were trained on various postharvest techniques by subject-matter specialists, out of an initial target of 30,000. Some of the challenges identified under the PHAP interventions in Nigeria include expensive machinery and maintenance costs. In an effort to further strengthen established agro-enterprises with women, the theme conducted training on food quality and safety for 43 dawadawa processors in Kano, and improved rice parboiling with 60 women rice processors in both Jigawa and Kano States. The new Strategic Plan (2017-2021) will target 30,000 farmers, 1,500 women processors and 25 service providers.

## **Public-Private Partnerships and Market Access**

With a rapidly growing population, huge investment in agriculture is necessary for sustainable development and poverty reduction in Nigeria. However, due to limited government resources and expertise, innovative partnerships that bring together business, government and development agencies are increasingly being promoted as a mechanism driving growth in agriculture in Nigeria. The Public Private Partnership and Market Access theme led the way in the value chain extension approach of the organization through the promotion of sustainable smallholder extension delivery, supporting the emergence and development of functional and effective farmer organizations (FOs) and promoting business opportunities for FOs. A total of 99 extension agents, 306 farmer groups and 35 women and youth groups were trained on value chain, market access and group management. The extension agents supported lead farmers to train a total of 3,540 farmers. Partnerships with the USAID/MARKETS II Project and AGRA (which are ending in June 2017), have had a positive impact on the skills and productivity of farmers, as well as SAA staff and extension agents.

## Monitoring, Evaluation, Learning and Sharing

Monitoring and evaluation are important management tools employed by SAA to track progress and facilitate decision making. By closely examining our organizational activities, we can design programs that are effective, efficient and lead to powerful results for the target communities. In this context, several monitoring surveys were carried out in all intervention sites under the core and extra-core projects. In-depth study of SAA's crop extension approach, in addition to an economic analysis of dry season maize production under the USAID-MARKETS II Project were conducted by the MELS theme. Of great importance was the leading role the theme played in the conduct of the external evaluation of the 2012-2016 Strategic Plan. as well as the community consultation for the development of the new Strategic Plan (2017-2021). Our weekly radio program, "farming, a basis for wealth creation", is being coordinated and facilitated by MELS, which will widen the scope of SAA's visibility in Nigeria.



Women rice processing group in Kano State, Nigeria

### Conclusion

SAA's Nigeria extension approach brings evidence-based science and modern technologies to farmers, extension agents and community based facilitators, raising productivity and the incomes of smallholder farmers. Through extension, SAA and other development partners reach out to address farmers' needs. By educating farmers on business operations and on modern agricultural science and technologies, SAA contributes to the success of countless farm households, encouraging food security and job creation, especially for women and youth.

## Average yields of crops from Women Assisted Demonstrations (WADs) Tons/ ha in 2016



## **UGANDA** *Country Report*

Around 70 per cent of Uganda's agricultural-led economy is still dominated by smallholder subsistence farmers. The sector's major challenges include an insufficient extension workforce, limited availability of improved production and post-production technologies and agricultural inputs, and difficulties sustaining quality standards for better market results.

The Nippon Foundation (NF) funded core project was implemented in 16 districts; the Farmer Based Organization (FBO) Project continued in 8 districts, the K+S GmbH Germany supported the Growth for Uganda project in two districts, and the Vegetable Oil Development Project (VODP), funded by IFAD and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) in three districts.

New staff included the Deputy Country Director, Theme One Coordinator; two program officers under Theme 3, one for Theme 5, and one for Theme 1; Accountant and Finance officers. Changes also took place at MAAIF that received new Ministers and a Permanent Secretary.

## **Crop Productivity Enhancement (CPE) and extension delivery services**

CPE activities were implemented in 16 Districts, where a needs assessment identified priority crops as maize, beans, soyabean, groundnuts, simsim, millet, cassava and rice. Farmers need access to quality seed and fertilizer, drought resistant crop varieties, and to improve their skills in soil and water conservation, water harvesting technologies, small-scale irrigation and labor saving technologies including planters and weeders. To increase outreach, 34 extension workers (EAs) and 265 Community Based Facilitators (CBFs) were developed as 'trainers of trainers' (TOTs), setting up farmer learning platforms (FLPs), gross margin analysis, and enterprise selection under the NF core project.

A total of 895 farmer learning platforms (FLPs) were established including 138 technology option plots (TOPs,) 384 Women Assisted Demonstrations (WADs), 32 community variety plots (CVPs), 36 seed priming gardens, and 28 seed multiplication gardens under Nippon Foundation funding; 140 one acre maize demonstrations under aBi Trust; 18 rice and soybean seed multiplication and 80 FLPs for maize and soybean under K+S; and 39 one acre demonstrations of soybeans under VODP. Drought tolerant maize was also demonstrated. The farmer field days attracted 1,733 farmers, while 5,217 (3,462 male, 1,755 female) farmers were trained through the Mobile Farmer Training Centre (MFTC) using mainly audio-visual and practical demonstrations.

Over 6,000 copies of information posters on agronomy for rice, maize, beans, cassava, soybean, groundnuts and

Country Director: **Dr Roselline Nyamutale** 



simsim were developed and translated into local languages. Additionally, 340 copies of handbooks on production and 321 on nutrient deficiency were distributed to farmers and EAs.

## Postharvest and Agro-processing (PHAP)

Postharvest losses, food wastage and aflatoxins remain a big challenge in Uganda. A needs assessment, conducted in 10 districts, indicated that 87 per cent of the respondents harvested by hand; 50 per cent dried produce on bare ground; and 50 per cent threshed and 68.4 per cent shelled using sticks. Private service providers (PSPs) for shelling exist within the communities. Major challenges included: inadequate agro-processing centers; poor quality grain products, frequent breakdown of agro-processing equipment; high agro-processing charges, and electricity load shedding.

To build capacity, 148 EAs were trained on PHH and storage practices, management of food wastage, nutrition, cost benefit analysis of PHAP technologies and quality standards and storage management. An additional 113 Extension Agents (EAs) (CBFs, CATs and EAs) were trained in sun-drying, storage as well as pest and pesticide management. In turn, 17,110 (9,210 male, 7,900 female) farmers were trained by EAs while a total of 39 field PHAP technology demonstrations were carried out in 10 districts and attended by 12,198 farmers.

A range of technologies were adopted including manual grain cleaners and threshers, as well as hermetic technologies such as PICS bags (17,286), plastic silos (696), maize shellers (888); in addition to 8 groundnut shellers, 2 cassava chippers, 2 maize and 1 rice mill, 1 moisture meter, 2 aflatoxin testing kits, 2 maize hullers and 387 tarpaulins.

Women and youth agro-processing groups engaged in confectionery using millet, wheat and cassava flour; activities which earned participants a monthly net income from \$50 to \$1,189 a year.

Several enterprises based on postharvest services were established, including an SB-10 rice mill, 10 mobile maize shellers, 2 maize mills, 2 maize hullers, a cassava chipper and cassava grater. The 169 PHAP PSPs established have reached over 50,000 farmers, whose produce has gone on to earn a 15 per cent premium price. One hundred and fortyfour PSPs were provided with training in business skills, while 27 technicians were trained in machine fabrication, 151 in machine maintenance and repair, and 153 on engine repair and maintenance.

A postharvest workshop was held involving key stakeholders, including machine fabricators, technology suppliers, spare-parts dealers, financial institutions, farmer representatives and PSPs, as well as representatives from the Namalere Mechanisation Unit, the Uganda Industrial Research Institute, the National Council of Science and Technology, and Makerere University. The objective was to share experiences, challenges and to develop strong networks and partnerships of actors along the postharvest segment of the value chain.

### **Public-Private Partnership and Market Access**

SAA continues to enhance partnerships that complement our key objectives. Focus was geared towards helping farmers access organized markets, loans, and quality agro-inputs, while strengthening farmer groups and associations. The database was updated to include new partners, including banks, input suppliers, insurance companies and produce buyers.

Thirty-two EAs and farmer leaders were trained as TOTs under The Nippon Foundation, resulting in 105 groups from 13 districts saving an equivalent of \$370,500. Under K+S, 80 CBFs, 26 Commodity Association Traders (CATs) and 13 EAs were trained, who in turn trained 2,592 farmers from 328 groups, that saved a total of \$187,500. This attracted banking institutions that extended loans to farmers worth \$587,770.

To further strengthen the groups, 117 farmers were trained in farming as a business. Market information was provided to CATs and CBFs on commodity prices and the availability of produce. A number of private sector organisations provided training and agricultural inputs.

To facilitate FBOs access to inputs, credit and markets, two stakeholder workshops were organized for 240 participants including banks, agro-input companies; produce buyers, PHAP equipment suppliers, NGOs, CATs, and Extension Workers. Farmers were assured of the market by off takers who gave their targets for various crops. Thirty-three input



Farmer group members during a saving session

stockists and CATs were trained on business skills and the safe use of agro-inputs. As a result, CATS sold \$48,400 worth of improved agro-inputs to farmers.

Look and learn visits were conducted for forty-five farmer group leaders to agricultural projects that practice integrated livestock and crop production, as well as small-scale irrigation. As a result, crop farmers used their savings to diversify into livestock enterprises as an insurance against income losses, especially in times of drought. Forty-five youth farmers were given basic skills in fruit and vegetable growing. Four Japanese Overseas Cooperation Volunteers, in collaboration with JICA, promoted NERICA rice in 4 districts and helped mobilize farmers to save.

## Monitoring, Evaluation, Learning and Sharing (MELS)

MELS conducted baseline evaluations in 8 Districts, which indicated that more men (56 per cent) occupy leadership roles than women. Other differences along gender lines include a higher proportion of male-led households storing their produce in bags and using tarpaulins (61 per cent), compared with women-led households, where shelling was the most popular practice. A needs assessment conducted for 60 FBOs indicated that a large majority (81 per cent) had constitutions.

Other studies included: i) use of promoted fertilizers and improved seed in four districts where there was a 61 per cent response on awareness creation for the varieties and fertilizer promoted by SG 2000-Uganda; ii)Assessment of the level of uptake for the different hermetic storage technologies in six districts revealed that over 53 per cent of farmers were using hermetic storage facilities (super grain bags, PICs bags and PVC tanks); iii) Private PHAP services provision which indicated that training on use or operation was the most important received by the service providers.

The External Evaluation of the Growth for Uganda Project-Phase 1 indicated that the project achieved 90 per cent of its target outputs , with positive impacts on yields, incomes and food security for the participating households. Additional assessments were carried out on the value chain approach in 6 districts, and indicated that use of improved seed varieties and line planting were widely adopted by farmers – as was the practice of drying harvested produce on tarpaulins.

In addition to sharing success stories among stakeholders, consultations were carried out to evaluate success against the targets set out in the 2012-16 Strategic Plan, which included an audit by external consultants. These findings contributed to the development of the SAA 2017-2021 Strategic Plan and the country strategic paper for Uganda.

## FINANCIAL REPORT HIGHLIGHTS FOR SAA AND SAFE US dollars

2015 (reviewed) and 2016 (reviewed)

SAA	2015 (\$US)	2016 (\$US)
Approved budget	\$8,613,000	\$7,742,864
Actual Spending	\$7,974,489	\$9,334,184
Actual Receipt	\$2,086,879	\$2,387,690
Cash balance at the end of the year	\$11,460,477	\$4,550,479
Details of receipts		
NF Grant	\$0	\$0
BMGF Grant (Ethiopia)	\$0	\$0
JICA Grant (Ethiopia)	\$79,328	\$0
CIDA-CIMMYT (Ethiopia)	\$287,188	\$139,642
K+S Kali Grant (Uganda)	\$408,651	\$392,665
Nigeria FMARD (Nigeria)	\$8,192	\$5,865
WAAP (Nigeria)	\$4,686	\$2,395
USAID/MARKETII (Nigeria)	\$606,054	\$399,304
Interest	\$2,260	\$4,275
Other Grants	\$631,363	\$1,335,777
Others	\$59,157	\$107,767
Details of expenditures		
SG 2000 Country Program		
Ethiopia	\$640,881	\$754,965
Mali	\$655,446	\$824,997
Nigeria	\$588,022	\$618,440
Uganda	\$730,311	\$703,173
SG 2000 Thematic Program (Management)		
Crop Productivity Enhancement	\$72,721	\$268,016
Postharvest and agro-processing	\$340,254	\$318,923
Public Private Partnership and Market Access	\$98,665	\$99,071
Monitoring, Evaluation, Learning and Sharing	\$122,355	\$261,924
Corporate	\$1,753,613	\$3,213,950
BMGF	\$932,465	\$4,414
JICA	\$111,866	\$17,187
CIDA-CYMMYT (NUME)	\$274,496	\$217,532
K+S Kali	\$415,676	\$310,242
Nigeria FMARD	\$235,504	\$6,928
WAAPP	\$134,443	\$12,604
USAID/MARKETII	\$134,443	\$12,604
Others (Ethiopia/Mali/Uganda/Nigeria)	\$733,328	\$1,706,139

SAFE	2015 (\$US)	2016 (\$US)
Approved budget	\$2,435,000	\$2,310,000
Actual Spending	\$2,387,146	\$1,319,034
Actual Receipt	\$2,435,000	\$2,310,000
Cash balance at the end of the year	\$161,856	\$353,444
Details of receipts		
NF Grant	\$2,435,000	\$2,310,000
Others	\$0	\$0
Details of expenditures*		
Ethiopia	N/A	\$299,628
Mali	N/A	\$208,821
Nigeria	N/A	\$186,863
Uganda	N/A	\$104,066

\*The details of expenditures are reported on a country office basis from FY2016.

## **PUBLICATIONS**



Annual Report 2015



**PHAP Feeding the Future** 

A boy trying to use the manual maize machine during SAA Uganda's media field day



Mali newsletter 2016

A number of publications are available from SAA.

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## Geneva

c/o D@G – Dialogues Geneva care of Jean F. Freymond 4 chemin des Pessules 1296 Coppet, Geneva Switzerland jeanfreymond@gmail.com Tokyo

SAA and SAFE HQ 5th Floor, Sasakawa Peace Foundation Bldg., 1-15-16 Toranomon, Minato-ku, Tokyo, 105-0001, JAPAN info@saa-safe.org

## Addis Ababa

SAA and SAFE Regional Office Gurd Sholla Daminarof Building, 4th Floor Bole Sub-City, Kebele 13 PO. Box 24135, Code 1000 Addis Ababa, Ethiopia JRwelamira@saa-safe.org



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