Innovations to help our country grow
Table of Contents

A Message from the Prime Minister 7
Foreword 9
The Importance of Agriculture 11
Transformation Agenda Overview 12
Production & Productivity 14
Environmentally Sustainable & Inclusive Growth 18
Agri-business & Markets 24
Enhanced Implementation Capacity 28
Agricultural Commercialization Clusters 32
  Amhara 34
  Oromia 36
  Southern Nations, Nationalities, and Peoples 38
  Tigray 40
Looking Forward 43
List of Acronyms 44
A Message from the Prime Minister

Agriculture is critical for many reasons – the sector presents important opportunities not just to continue to grow our economy and advance our industry, but also to productively employ a growing population and proactively meet our national food security needs in the face of erratic climate conditions. Given the sheer size of the contribution that agriculture makes to Ethiopia’s economy (accounting for a bit less than two-fifths of our GDP and a bit more than three-quarters of our employment), the sector is central to the country’s aim to become more manufacturing- and industrially-oriented as it reaches middle-income country status by 2025. This requires the agriculture sector to transform, rather than to just grow.

As we approach the midway point of the second Growth and Transformation Plan (GTP II), it is highly encouraging to see some of these transformation features emerging with the support of the Agricultural Transformation Agenda. Such initiatives include a host of important new agriculture-sector specific strategies and policies that have been developed, not least of which are a market-oriented extension strategy (that will ensure that farmers are able to access more commercially-oriented guidance and support) and a set of livestock breeding strategies (that will ensure important improvements to the genetic stock of priority species).

Plans developed over the past year aim to scale irrigation, mechanization, and horticulture, while engagements with the private sector will need to be accelerated in the coming years. Advances in livestock interventions have also been made that provide the building blocks for accelerated development of this important sub-sector during the remainder of GTP II. Moreover, export of agricultural commodities (which account for four of Ethiopia’s top five exports) are expected to rise in coming years as we enhance the quality of our products and expand our agro-processing capacity.

Despite the gains that have been made, there is far more that needs to be done. The Transformation Agenda provides the roadmap to prioritize interventions and systematically support their implementation. Most importantly, the execution and delivery capacity of our various implementation partners must be enhanced and all actors must be held accountable for their commitments to transform the sector.

I am encouraged by the level of commitment that all actors in the sector — public, private, civil society, and others — have given to Transformation Agenda priorities. Such commitments must only be strengthened going forward if we are to meet our goals of enabling the development of vibrant, modern, and globally-connected farming and livestock value chains.

Hailemariam Dessalegn,
Prime Minister, FDRE
Foreword

Agriculture – both farming and livestock rearing – has been at the heart of Ethiopia’s development ambitions for decades. Articulated in successive government plans and strategies since the 1990s, this ambition was most clearly expressed in the Agricultural Development-Led Industrialization (ADLI) strategy. Launched in 1993, the ADLI continues to provide the backbone for agriculture sector plans. With the introduction of Ethiopia’s three successive five-year Growth and Transformation Plans (GTPs) in 2010, increasing production and productivity of both crops and livestock, as well as modernizing domestic and export marketing systems, has been at the forefront of these efforts.

Though the vast majority of agricultural production is still conducted by subsistence-based smallholder farmers and pastoralists, the agriculture sector has contributed significantly to the country’s economic growth. Over the past decade, Ethiopia committed an average of 14% of its national budget to agriculture and achieved an average of 7% agricultural growth per annum. These notable figures put Ethiopia on the path toward achieving food security, eliminating poverty, and increasing prosperity, but more remains to be done.

Agriculture will continue to play a crucial role in the coming years as Ethiopia consolidates its food security gains and expands its footprint on the global economy with value-added exports, many of which will be agriculture-based. This requires transforming the sector from its traditional subsistence orientation to one that is market-focused and more commercialized. This, coupled with the need to prioritize critical interventions to address structural bottlenecks in the sector, led to the formulation of the Transformation Agenda, which provides the roadmap to transform Ethiopia’s agriculture sector.

A number of successes can be credited to the activities of the Transformation Agenda over the past year, though it has not been without its challenges. Erratic climate conditions, budgetary limitations, the slow adoption of new practices, and the need for the government to respond to emerging issues all had an impact on this year’s progress. Nevertheless, in the area of crops, interventions are underway to diversify smallholders’ output to include high-value crops, promote the appropriate use of yield-enhancing inputs, strengthen market linkages, and tap into export markets. Critical livestock activities are focusing on improvement of feed and feeding, health services, and processing of meat and dairy products. Geographic clustering of agricultural interventions in 24 Agricultural Commercialization Cluster (ACC) areas is already demonstrating impressive results.

Overall, we are encouraged by the progress to-date and optimistic that the remaining years of GTP II will yield even more fruitful results. The role that our development partners play in providing financial support and critical thought partnership remains as essential as always. Finally, we are confident in the perseverance of the millions of smallholder farmers who form the bedrock of Ethiopia’s agricultural system; it is they who will determine the successful outcome of our endeavors to transform the sector.
The Importance of Agriculture

Agriculture continues to dominate the national economy of Ethiopia, accounting for 72.7% of employment and 36.7% of overall GDP. As Ethiopia moves towards a more modern and diversified economy, agriculture’s share in overall employment and GDP has slowly begun to decline, while the service and industry sectors have grown. Nevertheless, agriculture continues to be one of the major drivers of the economy’s consistent double-digit annual growth over the past decade. In addition, steady increases in crop and livestock production and productivity will be important towards enhancing food security and raising the incomes of the nearly 12 million smallholder farmers in the country. In this regard, the agriculture sector has contributed to nearly halving the percentage of the population living in poverty between 2000 (44%) and 2015 (23.4%).

More than 79 million people in Ethiopia rely on agriculture for their livelihoods, across all steps in the crop and livestock value chains. Cereals are widely grown, traded, processed, and consumed, with primary grains including maize, wheat, and teff. A variety of pulses, oilseeds, and horticulture crops add nutritional value and diversity to the Ethiopian diet. Cattle, sheep, goats, and poultry are found throughout the nation, supplying meat, dairy products, and eggs for household consumption and markets.

In a country that is still in the early stages of mechanization, oxen, horses, donkeys, mules, and camels provide crucial farm labor and serve as pack animals. Outside of gold, Ethiopia’s top five exports are all agricultural products: coffee, sesame, fruits and vegetables, and leather. Thus, both domestically and internationally, agriculture remains at the heart of Ethiopia’s development.

Despite the major gains that have been made over the past decade there is still much work to be done. Shifting smallholder farmers from subsistence-based production towards market orientation by modernizing tools and techniques is a primary objective for the sector. For long-term success, this shift must be done while simultaneously bolstering resilience toward climate change and ensuring environmental sustainability. In addition, the inclusion of women and youth across the value chain is necessary for development to be broad-based and inclusive. By facilitating the accelerated and inclusive growth of agriculture, the sector will make a major contribution towards Ethiopia’s goal of reaching middle-income country status by 2025.

4 National Planning Commission, 2015
Transformation Agenda Overview

The Agricultural Transformation Agenda was introduced in 2013 during the first Growth and Transformation Plan (GTP I) in order to provide a platform to address the most critical systemic bottlenecks in the agriculture sector. While it was recognized that there are a myriad of different interventions that are necessary to grow the sector, Prime Minister Hailemariam Dessalegn felt that a different mechanism was necessary to prioritize, implement, and track a narrow set of interventions designed to address the most important bottlenecks and catalyze transformational change.

In its first iteration under GTP I, the Transformation Agenda included 84 priority interventions (Deliverables) with particular attention paid to critical agricultural systems (soil, seed, markets), crop value chains (wheat, maize, tef, pulses, and oilseeds) and crosscutting issues (gender, climate, and monitoring, learning, and evaluation). In GTP II, the scope and orientation of the Transformation Agenda has expanded in order to provide greater support to the livestock sector and include focused attention to markets, agri-business, and the private sector. In addition, the concept of the Agricultural Commercialization Cluster (ACC) Initiative was introduced as a mechanism to integrate the interventions prioritized in the Transformation Agenda within specific geographies targeting a limited number of high-value commodities.

In total, the Transformation Agenda during GTP II includes four thematic pillars and 30 program areas, with a combined 55 Deliverables identified between them. In each of these program areas, all key stakeholders were engaged in a deeply consultative process to identify the most critical systemic bottlenecks and the necessary interventions to unlock each of them. For 25 of the 30 program areas, stakeholders identified 2-3 major Deliverables and 3-5 key workstreams (Sub-deliverables). To ensure accountability, each Deliverable is owned by a State Minister or agency head and each Sub-deliverable, of which there are 188, is owned by an implementation coordinator. Five of the 30 programs (Climate Change Adaptation & Mitigation, Gender, Nutrition, Targeted Livelihood Support and Biodiversity) are crosscutting issues that are mainstreamed across the Transformation Agenda and do not have their own Deliverables or Sub-deliverables.

The Transformation Agenda in 2016-17

Although there have been many successes, progress on the Agricultural Transformation Agenda during 2016-17 has been mixed. Changes at the leadership level of both the Ministry of Agriculture & Natural Resources (MoANR) and the Ministry of Livestock & Fisheries (MoLF) required considerable time and effort to align all levels of both Ministries on the concept of the Transformation Agenda, as well as the specific Deliverables and Sub-deliverables that have been prioritized for GTP II. Given that two of the five years of GTP II have elapsed, this process was also used as an opportunity to review, and as necessary revise, the Deliverables and Sub-deliverables to ensure that they sufficiently address the most critical bottlenecks in the sector.

In parallel to the process of reviewing and refining the overall Transformation Agenda, there has also been a concerted effort to accelerate the actual implementation of prioritized Deliverables and Sub-deliverables. This has led to considerable progress in interventions such as the Ethiopian Soil Information Systems (EthioSIS) digital soil mapping and Shallow Groundwater Mapping projects. Both initiatives are critical investments that will have long-term payoffs for the sector, as they equip farmers and experts alike with up-to-date and accurate information that is vital for optimal utilization of the country’s natural resources. In addition, interventions which are expected to bear more immediate results such as Cooperative-Based Seed Production, which enables farming communities to generate their own high-quality seeds, and efforts to design a control strategy for foot-and-mouth disease, which will enable increased beef export, have been accelerated.

Transformation Agenda targets are set at the beginning of each Ethiopian financial year, and progress against targets is routinely tracked and reported to the Transformation Agenda’s governing body, the Transformation Council. All Sub-deliverables are categorized as either ‘completed’, ‘on track’, ‘slightly delayed’, ‘significantly delayed’, or ‘not started’. In total, 94% of the Sub-deliverables that were scheduled for implementation during 2016-17 were started. However, only 29% of these were considered to be on track or completed. Another 37% were considered to be slightly delayed and 27% were considered to be significantly delayed. The variations in performance between the different pillars have been a function of the varied capabilities and unique circumstances of the partners that are implementing each Sub-deliverable. There are, however, some common challenges that have been identified by partners across all pillars. Primary among these are:

- Competing priorities of day to day responsibilities and the inevitable emergency issues faced by the implementation owners such as the fall army worm crisis
- Budget and human capacity limitations that restrict the ability to fully undertake all of the activities necessary to make meaningful progress
- Lack of clear institutional owners and accountability of Sub-deliverables that required many partners to work collaboratively
- Integration between federal and regional institutions on interventions that require higher level coordination but implementation on the ground
Improving production and productivity of both Ethiopia’s crops and livestock has long been a primary aim of agricultural development in the country. Given long-standing investments from successive development plans and in the Transformation Agenda during GTP I, efforts related to the crops sector within the Production & Productivity pillar have arguably been the most advanced. The livestock sector is a new area of focus in the Transformation Agenda and, as such, much of this year’s work has focused on laying strong foundations in key livestock areas in order to accelerate advances in the years ahead.

In terms of actual performance of Deliverables and Sub-deliverables prioritized by this pillar, on the whole, the programs in the Production & Productivity pillar have performed on par with the overall Transformation Agenda. Compared to the overall average of 23% of Sub-deliverables classified as completed or on track during the past year, this pillar had 28% of its Sub-deliverables in these two categories. Similarly, while 35% of the overall Sub-deliverables were either significantly delayed or not started, this pillar had a proportional percentage in these two categories.

However, when analyzed at the program level, there is significant variation in performance. Some programs such as Demand-Driven Research (65%), Seed Supply & Distribution (44%) and Livestock Markets (45%) had a higher than average percentage of Sub-deliverables that are either completed or on track. On the other hand, programs such as Rural Financial Services (67%), Livestock Feed & Feeding (57%) and Market-Oriented Extension (56%) have a disproportionately high percentage of Sub-deliverables that are either not started or significantly delayed.

Crops
This year’s most significant production and productivity strides have been in scaling efforts to improve farmers’ access to inputs, with seeds and fertilizers as the two primary areas of focus within the Transformation Agenda. These two programs account for a combined total of four Deliverables and 13 Sub-deliverables. Plant health is the focus of the remaining crop-specific program, which has two Deliverables and eight Sub-deliverables.

Among other things, these Deliverables make addressing high-level seed regulatory issues a priority, and over the last year, directives were developed for endorsement by the MoA/NER for seed marketing and for competency of certification of seed producers, as were guidelines to establish the National Seed Advisory council. Additionally, the Fifth National Platform for Seed Quality Control was held to bring together those involved in seed regulation at both federal and regional levels to harmonize efforts and share best practices.

Transformation Agenda efforts to improve seed production and distribution have also included support to strengthen the role of non-public sector actors. This has included support to the Direct Seed Marketing (DSM) initiative, which scaled this year to include agents in 135 woredas. Nearly 800 marketing agents actively participated in seed distribution in 2016-17. Additionally, 11 cooperative-based seed producers (CBSPs) received physical capacity building support and training on seed business.

Access to improved fertilizers has also been a focus of the year. Efforts to improve Ethiopia’s fertilizer blending and production capacity has resulted in an agreement with Morocco’s Office Cherifien des Phosphates (OCP), the world’s largest phosphate exporter, for a 3.7 billion USD investment to develop a fertilizer production plant over the next five years near Dire Dawa. The project, agreed this year with the GoE, is one of the largest joint ventures between developing African nations and constitutes an important step forward for the overall sub-sector.

At the same time, a new fertilizer procurement modality that was introduced last year (which involves procuring directly from manufacturers and importing in multiple rounds) has led to a significant reduction in fertilizer costs; on average, the price of urea reduced by 20% and the price of NPS reduced by 30% in regional capitals. These savings have been passed on to farmers, who purchased 15% more fertilizers in the 2016 planting season as they had in the previous year, amounting to one of the country’s lowest recorded fertilizer carry-over rates between seasons.

Parallel to seed and fertilizer efforts, important progress in the two plant health Deliverables was made in 2016-17. Two information systems were tested and piloted – one to manage pesticide importation in multiple rounds (which involves procuring directly from manufacturers and importing in multiple rounds) has led to a significant reduction in fertilizer costs; on average, the price of urea reduced by 20% and the price of NPS reduced by 30% in regional capitals. These savings have been passed on to farmers, who purchased 15% more fertilizers in the 2016 planting season as they had in the previous year, amounting to one of the country’s lowest recorded fertilizer carry-over rates between seasons.

Among other things, these Deliverables make addressing high-level seed regulatory issues a priority, and over the last year, directives were developed for endorsement by the MoA/NER for seed marketing and for competency of certification of seed producers, as were guidelines to establish the National Seed Advisory council. Additionally, the Fifth National Platform for Seed Quality Control was held to bring together those involved in seed regulation at both federal and regional levels to harmonize efforts and share best practices.

Transformation Agenda efforts to improve seed production and distribution have also included support to strengthen the role of non-public sector actors. This has included support to the Direct Seed Marketing (DSM) initiative, which scaled this year to include agents in 135 woredas. Nearly 800 marketing agents actively participated in seed distribution in 2016-17. Additionally, 11 cooperative-based seed producers (CBSPs) received physical capacity building support and training on seed business.

Access to improved fertilizers has also been a focus of the year. Efforts to improve Ethiopia’s fertilizer blending and production capacity has resulted in an agreement with Morocco’s Office Cherifien des Phosphates (OCP), the world’s largest phosphate exporter, for a 3.7 billion USD investment to develop a fertilizer production plant over the next five years near Dire Dawa. The project, agreed this year with the GoE, is one of the largest joint ventures between developing African nations and constitutes an important step forward for the overall sub-sector.

At the same time, a new fertilizer procurement modality that was introduced last year (which involves procuring directly from manufacturers and importing in multiple rounds) has led to a significant reduction in fertilizer costs; on average, the price of urea reduced by 20% and the price of NPS reduced by 30% in regional capitals. These savings have been passed on to farmers, who purchased 15% more fertilizers in the 2016 planting season as they had in the previous year, amounting to one of the country’s lowest recorded fertilizer carry-over rates between seasons.

Parallel to seed and fertilizer efforts, important progress in the two plant health Deliverables was made in 2016-17. Two information systems were tested and piloted – one to manage pesticide importation in multiple rounds (which involves procuring directly from manufacturers and importing in multiple rounds) has led to a significant reduction in fertilizer costs; on average, the price of urea reduced by 20% and the price of NPS reduced by 30% in regional capitals. These savings have been passed on to farmers, who purchased 15% more fertilizers in the 2016 planting season as they had in the previous year, amounting to one of the country’s lowest recorded fertilizer carry-over rates between seasons.
Livestock

While crop work advanced, this year was an important one for laying stronger foundations to support sustained productivity gains in the livestock sector. Investments across the Transformation Agenda’s livestock programs – which focus on genetic improvements, feed, health, and markets – primarily targeted national-level gaps in livestock strategies, information systems, and human and organizational resources.

As such, a group of experts came together to draft genetic improvement strategies for five different livestock species critical for advancement in the sub-sector: beef cattle, dairy cattle, small ruminants (sheep and goat), poultry, and camel. This is the very first of 24 Sub-deliverables spread between the four livestock programs and their affiliated eight Deliverables. Coupled with a new breeding policy released this year, these set the stage for improving the genetic stock of Ethiopia’s diverse livestock. Other strategy work, particularly in the area of feeds and feeding, has not advanced significantly this year but is expected to do so before the end of GTP II.

Meanwhile, a number of important information systems were put in place as part of multiple livestock Sub-deliverables owned and implemented by the MoLF. Notably, dairy herd performance recording expanded to Mekele and Bahir Dar milked feed, with 3,200 herds and 5,150 animals registered this year. A database for improved breed stock tracking system has been established, and a system for woreda-level analysis and assessment of feeds (using a FEEDBASE software) is being designed with piloting due before the end of 2017. A livestock identification and traceability system (LITS) database is also being developed to support the expansion of livestock markets, though budget limitations have delayed plans to develop a more comprehensive livestock and fisheries market information system.

Trainings for nearly all of these systems have started alongside other efforts to strengthen the capacity of livestock actors to deliver against Transformation Agenda objectives. For example, trainings were developed and deployed during 2016-17 on two important approaches for improving animal feed: 1) turning crop residue into feed, and 2) irrigating household plots to grow forage year-round, including during dry seasons. Over 2,900 farmers (of which 22% were female) were trained on treating crop residue. Likewise, much attention has been given to building the capacity of Ethiopia’s livestock sector to improve animal health, including training for 26 lab experts on diagnostic capacity and a quality management system (QMS). Two of Ethiopia’s regional veterinary labs have been supported in improving their overall QMS, and four have been provided laboratory diagnostic equipment that improves their ability to test for and identify antigens and antibodies in different samples.

While crop work advanced, this year was an important one for laying stronger foundations to support sustained productivity gains in the livestock sector. Investments across the Transformation Agenda’s livestock programs – which focus on genetic improvements, feed, health, and markets – primarily targeted national-level gaps in livestock strategies, information systems, and human and organizational resources.

As such, a group of experts came together to draft genetic improvement strategies for five different livestock species critical for advancement in the sub-sector: beef cattle, dairy cattle, small ruminants (sheep and goat), poultry, and camel. This is the very first of 24 Sub-deliverables spread between the four livestock programs and their affiliated eight Deliverables. Coupled with a new breeding policy released this year, these set the stage for improving the genetic stock of Ethiopia’s diverse livestock. Other strategy work, particularly in the area of feeds and feeding, has not advanced significantly this year but is expected to do so before the end of GTP II.

Meanwhile, a number of important information systems were put in place as part of multiple livestock Sub-deliverables owned and implemented by the MoLF. Notably, dairy herd performance recording expanded to Mekele and Bahir Dar milked feed, with 3,200 herds and 5,150 animals registered this year. A database for improved breed stock tracking system has been established, and a system for woreda-level analysis and assessment of feeds (using a FEEDBASE software) is being designed with piloting due before the end of 2017. A livestock identification and traceability system (LITS) database is also being developed to support the expansion of livestock markets, though budget limitations have delayed plans to develop a more comprehensive livestock and fisheries market information system.

Trainings for nearly all of these systems have started alongside other efforts to strengthen the capacity of livestock actors to deliver against Transformation Agenda objectives. For example, trainings were developed and deployed during 2016-17 on two important approaches for improving animal feed: 1) turning crop residue into feed, and 2) irrigating household plots to grow forage year-round, including during dry seasons. Over 2,900 farmers (of which 22% were female) were trained on treating crop residue. Likewise, much attention has been given to building the capacity of Ethiopia’s livestock sector to improve animal health, including training for 26 lab experts on diagnostic capacity and a quality management system (QMS). Two of Ethiopia’s regional veterinary labs have been supported in improving their overall QMS, and four have been provided laboratory diagnostic equipment that improves their ability to test for and identify antigens and antibodies in different samples.

While direct support was provided to catalytic interventions designed to address some of the immediate barriers limiting the potential of meat and livestock exports. For example, this year a pilot focused on reducing the incidence of foot-and-mouth disease (FMD) in cattle has been developed because high prevalence of the disease in Ethiopia’s herds has made it difficult to access export markets. As part of the project, a comprehensive mapping exercise to identify the prevalence of the disease has been designed and made ready for rollout in 2017-18. The project will also identify FMD strains and make recommendations on control measures that can be taken to reduce prevalence, focusing on strategic geographic areas.

These efforts have happened in parallel to commitments to strengthen the new MoLF, including increasing the number of state ministers from two to three with the addition of a Livestock Marketing State Minister. When the Transformation Agenda Deliverables were refined in 2017, the livestock-related Deliverables in particular were revised to better reflect the current strategy of the Ethiopian government, as outlined in the Livestock Master Plan (LMP). This year the LMP also became the basis on which a new World Bank funding mechanism has been designed to provide support to developing the potential of Ethiopia’s livestock population (the largest in Africa) for domestic consumption as well as for export. Once launched, this investment will provide the basis through which additional activities targeting livestock improvements will be able to roll-out during the remainder of GTP II.

Alemitu Hordofa, Bako Farm Service Center owner

The Commercial Farm Services (CFS) project is one of the interventions in the Production & Productivity sector that supports Miller Farms by providing them with access to high quality inputs through one-stop-shops. Of the 20 FSCs set up through this project, two are owned by women. Alemitu Hordofa is one of these. As the first entrepreneur to inaugurate an FSC through the CFS project, Alemitu occupies an influential position among other FSC owners of both genders, particularly as she is the only woman from rural communities who can become one of the right inputs. Combining this knowledge with a BSc in Management Information Systems, she opened a small shop selling agricultural inputs in Bako, Oromia in 2011. The launch of the CFS project in 2013 presented the opportunity and management training she needed to expand her emerging business into the modern FSC located in Bako, Oromia. Within one month of operations, the Center served 3,381 customers and supplied over two million ETB in sales, establishing itself firmly as a reliable source of improved seeds, agricultural chemicals, veterinary drugs, and agricultural advice.

The community (with close to 40,000 farmers in Bako Tibe and neighboring woredas) has received the FSC with overwhelming positivity. In fact, the FSC witnesses so much traffic during the cropping season that Alemitu’s staff of eight (three women often have to work through their lunch breaks and after hours. Always forward-thinking, Alemitu sees in her emerging business into the modern FSC located in Bako, Oromia. Within one month of operations, the Center served 3,381 customers and supplied over two million ETB in sales, establishing itself firmly as a reliable source of improved seeds, agricultural chemicals, veterinary drugs, and agricultural advice.

Alemitu’s chief challenge is financial. Center are established on a cost-sharing basis and she was expected to supplement the 1.1 million ETB grant she received with her own capital. However, the cost of transporting her old input store into a modern FSC exceeded her expectations. Even with strong driving business in her name, financing the wholesale purchase of inputs can be difficult, and she relies on her long-standing relationships with input suppliers to occasionally provide products on credit.

In the coming year, Alemitu has high hopes to sell mechanized implements, which are frequently requested by farmers. Never to express her optimism, Alemitu believes strongly that the FSC must continue to receive close monitoring and support in order for the project to reach its true potential. The first four months of operation were a whirlwind of activity for Alemitu, who opened her shop just before this cropping season, but she has drawn important lessons from these experiences, which are sure to help her propel her project for next year.

Information, Services, and Tools for Crops and Livestock

Access to financial services, particularly to credit, is critical for farmers to adopt new inputs and practices across both farming and animal rearing. In 2014 an Input Voucher Sales (IVS) system was introduced to address some of the challenges in accessing input credit. Though the share of credit-based input sales remains low compared to cash sales, the system is having an impact by improving input delivery efficiency. IVS roll-out has expanded over the last year to cover all woredas in Amhara, nearly all of Tigray, and significant portions of Oromia and SNNP. In the 2016-17 planting season alone, the system reached more than 4.8 million smallholder farmers purchasing over six million quintals of inputs worth 7.2 billion ETB. A pilot for the use of e-vouchers to improve the system has already recorded more than 65,000 transactions.

The release this year of a new market-oriented extension strategy, as part of the Deliverable designed to tailor extension services to be more market-oriented and context specific, has also created opportunities to continue improving the type of information that is made available to smallholder farmers. To further strengthen face-to-face information flows, support has also been provided to the upgrading of Farmer Training Centers, with a focus on access to climate-smart and gender-sensitive technologies. Guidelines to improve the career pathway and incentive structures for Development Agents have also been developed.

Information disseminated to farmers primarily originates from Ethiopia’s agricultural research system, which is also a focus of the Transformation Agenda. Important capacity building initiatives, including bringing retired senior researchers to train over 500 researchers and mentor 150 junior researchers, were carried out throughout the year. In addition, 12 new research strategies for a range of crops and farming practices have been published, which were complemented by new training modules, field manuals, biotechnology frameworks, and other regulations and guidelines.

Additional attention has been given to tf, with a wide range of capacity building provided around this staple crop, including the development and release of three improved varieties.

These achievements mean that more intensive focus can now shift towards other important Transformation Agenda components related to improving production and productivity (while continuing to make gains in above areas). High priority commitments of Deliverables focusing on improving access to both mechanization technologies and irrigation solutions, to overcome labor-related and rain-relevant limitations of traditional agricultural practices.
Environmentally Sustainable & Inclusive Growth

During 2016-17, the Environmentally Sustainable & Inclusive Growth pillar has advanced Deliverables and Sub-deliverables in both of its core areas. That is, those intended to ensure that agricultural transformation considers both short and long-term environmental perspectives and those that seek to more fully integrate traditionally marginalized populations, such as women and youth, into the transformation process. Long-term investments such as the Ethiopian Soil Information Systems digital soil mapping and the Shallow Groundwater (SGW) Mapping project have been prioritized this year while other strategic interventions have also been initiated. These include: 1) considerations of agricultural risk management, 2) strategic linkages between bio-physical investments to protect the environment and income generation activities, and 3) establishment of legal, policy, and institutional frameworks for sustainable land-use planning.

In terms of performance, it is important to recognize that of the nine programs in this pillar, five are mainstreamed throughout other programmatic areas, and thus do not have their own Deliverables and Sub-deliverables. The remaining four programs have performed better than average when compared to the overall Transformation Agenda results. Across the Transformation Agenda, 29% of all Sub-deliverables were completed or on track during the past year; within these four programs the number was 30%. Across the Transformation Agenda, the average number of Sub-deliverables that were either significantly delayed or not started was 33%, but for this pillar it was 15%.

When analyzed at the program level, there is significant variation in performance. Some programs, such as Soil Health & Fertility, have a higher than average percentage of Sub-deliverables that are either completed or on track (63%) and significantly lower percentage of Sub-deliverables in either the significantly delayed or not started categories (0%). However, programs such as Irrigation & Drainage have a noticeably lower percentage of Sub-deliverables in the completed or on track categories (9%) but a higher percentage in the not started or significantly delayed categories (27%).

Environmental Sustainability and CCAM

Implementation of the Transformation Agenda in this pillar during 2016-17 has seen the greatest activity along five broad interventions under programs focusing on natural resources management and Climate Change Adaptation & Mitigation (CCAM):

1. Promoting optimal fertilization to enhance soils and reduce greenhouse gas (GHG) emissions from crop production
2. Developing sustainable irrigation to promote efficient use of water, develop water resources for irrigation, and enhance farmers’ capacity to adapt to climate change
3. Strengthening research and extension to support integration of climate information in advisory services and natural resources management
4. Building mainstreaming capacity and knowledge base for climate smart agriculture (CSA)
5. Promoting sustainable farming through strategy development

In addition to these five priority intervention areas, ongoing efforts over the last year also targeted the following Transformation Agenda objectives:

1. Improving mechanization and post-harvest handling to substitute animal power as a means for reducing GHG emissions from agriculture and for reduction in post-harvest losses
2. Elaborating Transformation Agenda objectives under the two newest program areas: Land Use Planning & Administration and Watershed & Agro-forestry Development

Optimal fertilization

Improving soil health and fertility is the focus of two Deliverables, the first of which targets improving the knowledge base to provide farmers with site-specific fertilizer recommendations. To this end, soil surveying carried out under the Ethiopian Soil Information Systems (EthioSIS) project was finalized this year, with soil samples collected in 748 woredas by June 2017. Preliminary fertilizer recommendations based on findings, which take into account local nutrient deficiencies and soil health, have already been fed into the extension system and are helping to improve productivity. As a result, prior to this past planting season, 3.6 million farmers accessed 228,000 quintals of blended fertilizers.

The project, which began five years ago, has been the first step to developing fertilizer recommendations tailored to differing soil health and fertility conditions, but it is only the beginning of a system that requires continued commitment. Two specific Sub-deliverables within the Transformation Agenda that are designed to take EthioSIS recommendations forward are progressing well, with important emerging results. In particular, research centers have been involved in extensive efforts to test crop response rates to EthioSIS recommendations by analyzing specific crop responses to nutrient deficiencies under different agro-ecological and soil health conditions. Testing has been completed in 75% of test locations. Future efforts must continue refining tailored fertilizer recommendations and work with agricultural input supply initiatives to ensure that the recommended fertilizer inputs are available to farmers.
Sustainable irrigation

Within the Transformation Agenda during GTP I and in the first years of GTP II, significant resources went into developing, trialing, and refining an affordable, accurate, and reliable methodology for mapping Ethiopia’s shallow groundwater (SGW) potential for irrigation purposes. Having finally settled on an effective approach, mapping of Ethiopia’s SGW resources was scaled this year, from pilots in 156 woredas in Oromia and SNNP to an additional 94 woredas in Amhara, Benishangul-Gumuz, and Tigray—a total of 44,491 square kilometers within the Tarmaber-Maichew and Tana-Beles basins. Combined with the 12,317 square kilometers mapped during the pilot phase, nearly 100,000 square kilometers have been mapped to-date, identifying potential SGW reserves of over 3.6 billion cubic meters. This can irrigate over 121,000 hectares, serving more than 460,000 households. Over the coming two years a total of five basins will be mapped which will increase the amount of land covered by this project to 200,000 square kilometers.

Priorities across the 11 Sub-deliverables related to irrigation and drainage are not only focused on identifying SGW resources, but also on building the capacity of communities to regulate the development of water resources and sustainably capitalize on them. To this end, 56 woreda, zonal, and regional experts have been provided with GIS supported SGW information and trained on their use to regulate SGW development. At the same time, 13 drilling small businesses have been established and trained to sustainably dig wells that can draw SGW resources and make them available for irrigation. Of the 313 wells dug drawing on information in SGW maps, 94% have been productive.

At the same time, a set of 31 comprehensive guidelines on small-scale irrigation infrastructure design and construction, which ensure proper standards and incorporate social and environmental safeguards, have been developed. In addition to continued scaling of SGW mapping exercises and development of capacities to sustainably utilize the findings, an overarching irrigation strategy that safeguards, have been developed. In addition to continued scaling of SGW mapping exercises and design and construction, which ensure proper standards and incorporate social and environmental safeguards, have been developed. In addition to continued scaling of SGW mapping exercises and development of capacities to sustainably utilize the findings, an overarching irrigation strategy that safeguards, have been developed. In addition to continued scaling of SGW mapping exercises and development of capacities to sustainably utilize the findings, an overarching irrigation strategy that safeguards, have been developed.

Two Transformation Agenda Sub-deliverables target ways to make weather-related information more readily available to farmers for use in agronomic decision-making. The first focuses on generating agronomic information. For this purpose, 50 automatic weather stations (AWS) with high-power meteorological sensors have been installed at Farmer Training Centers (FTCs) around the country, complementing ongoing efforts to expand Ethiopia’s AWS infrastructure. The second relates to building capacity to interpret and use the information in agronomic decision-making. For that reason, installation and generation efforts were done alongside capacity building initiatives on maintaining the stations, translating the meteorological data into forecasts and advisories, disseminating the forecasts and advisories, and then making use of them in agronomic decision-making. Monthly and ten-day advisories are now available at the zonal level nationwide. Several platforms have also been established to disseminate these advisories to value chain actors (farmers, traders, aggregators, and exporters) to assist them in making informed decisions. This year’s efforts to improve climate information advisories culminated with an International Conference on Agro-meteorology held in Addis Ababa in July 2017. The meeting pulled together policymakers, researchers, non-profits, scholars and private companies from Ethiopia, the United States of America, South Africa, Norway, and Rwanda to share experiences on improving the production, interpretation, and dissemination of agro-meteorological information.

Building mainstreaming capacity

Within the Deliverable that is focused on enhancing capacity to mainstream crosscutting concerns into agricultural sector initiatives, two Sub-deliverables target ways to increase the potential of crop and livestock actors to mainstream CSA considerations into their efforts. To this end, a CSA technical manual has been designed and a ToT on CSA practices was provided for 80 woreda level agricultural experts. Alongside this work, a compilation of CSA practices in Ethiopia has been developed and a GHG emission measurement framework has been piloted in Oromia by an interministerial team of experts.

Promoting sustainable farming

As Ethiopia makes strides in developing the systems required to rehabilitate its natural resources and better protect against risks associated with erratic weather conditions – mitigation and adaptation initiatives – it must also work on changing long-held practices that are unsustainable in the face of current trends, including population growth and climate change. Developing a sustainable agricultural production strategy is part of the effort to fill this gap. The strategy, which will cut across multiple Deliverables, has six areas that align with Transformation Agenda programs, and will be a focus for the Transformation Agenda in the year ahead.

---

**Improved Farming Practices Promoted through Sustainable Agriculture Strategy**

1. **Soil health and fertility**
   - Integrated soil fertility management
   - Conservation agriculture
   - Acidic and vertisols management

2. **Sustainable land management**
   - Agro-forestry and perennial for sloped lands
   - Appropriate use of crop and grazing lands

3. **Improved livestock management**
   - Zero grazing and feed management

4. **Improved crop management**
   - Increasing protective ground cover and reducing erosion
   - Reducing pre- and post harvest losses

5. **Efficient energy use along value chains**
   - Renewable energy sources
   - Energy saving technologies in agriculture, agro-processing and irrigation

6. **Efficient water use in irrigation**
   - Water saving technologies

---

**Building mainstreaming capacity**

Within the Deliverable that is focused on enhancing capacity to mainstream crosscutting concerns into agricultural sector initiatives, two Sub-deliverables target ways to increase the potential of crop and livestock actors to mainstream CSA considerations into their efforts. To this end, a CSA technical manual has been designed and a ToT on CSA practices was provided for 80 woreda level agricultural experts. Alongside this work, a compilation of CSA practices in Ethiopia has been developed and a GHG emission measurement framework has been piloted in Oromia by an interministerial team of experts.
Inclusion

While advances were made in natural resource management and climate mainstreaming, issues of inclusion have also been at the forefront of the Transformation Agenda’s work under this pillar, primarily targeting the needs of women and youth and ways in which to bring them more solidly into agricultural transformation. These efforts are mainstreamed throughout the Transformation Agenda, and as such do not have specific Deliverables or Sub-deliverables.

Gender and Nutrition

Transformation Agenda efforts this year to ensure that gender issues are considered throughout the sector’s development activities focused on both policy development and capacity building of various actors to mainstream gender considerations in routine planning and monitoring. A Gender in Agriculture Strategy was drafted, and an ongoing networking platform for women in agriculture, organized by the MoANR, has been maintained. The network focuses on creating platforms to share and enhance knowledge and understanding of gender issues in agriculture. It organized two national network meetings during the year, one of which was dedicated to issues of female-friendly technologies. An additional four open forums were organized to discuss a range of other topics. A total of 60 participants from the GoE, NGO partners, and research centers attended these forums, about two-thirds of whom were female.

Likewise, a Gender Mainstreaming Guideline has been drafted and is ready for validation. SNPN actors were the recipient of the most targeted mainstreaming capacity building efforts, where trainings on gender analysis and mainstreaming, and gender and vermi-compost were organized alongside sharing visits for a total of 4 experts (25 of whom were female).

In addition, building on the strong synergies between women’s household roles and nutrition, a strategy for Nutrition-Sensitive Agriculture has also been developed that recognizes and builds on the role of agriculture to increase access to, and consumption of, diverse, safe, and nutrient dense foods. In addition to the sector-wide strategy, Transformation Agenda actors have also articulated a framework through which nutrition issues will be integrated across Deliverables, identifying a four-pronged approach that aims to: 1) increase production of diverse nutrient dense products; 2) increase dietary diversity among rural households through greater gender equality; 3) develop agricultural markets that integrate nutrition considerations; and 4) enhance the enabling environment for nutrition-sensitive agriculture.

Targeted Livelihood Support focusing on youth

Similar to the progress on nutrition, Transformation Agenda work on youth on this year has focused on developing a national strategy for rural job creation, as well as articulating the approach and transformational interventions vis-à-vis youth inclusion. The emphasis is primarily on developing employment opportunities. A study conducted as part of this process identified horticulture, irrigation and water supply, on-farm mechanization, and rural finance services as the four priority areas for employment opportunities. A study conducted as part of this process identified horticulture, irrigation and water supply, on-farm mechanization, and rural finance services as the four priority areas for employment opportunities. A study conducted as part of this process identified horticulture, irrigation and water supply, on-farm mechanization, and rural finance services as the four priority areas for employment opportunities. A study conducted as part of this process identified horticulture, irrigation and water supply, on-farm mechanization, and rural finance services as the four priority areas for employment opportunities.

To support farmers undertaking such activities, in 2016 the MoANR launched the Integrated Household Irrigation (IHI) value chain initiative to improve input supply, increase adoption of technologies, enhance production and post-harvest activities, and improve market linkages in 21 woredas of Ethiopia’s four agricultural regions. Irrigation helps farmers to stabilize production, produce multiple times annually, and diversify into high-value crops. Specifically, HHI makes it possible for smallholders to access water reservoirs and water fitting technologies at a reasonable scale. In 2016-17, in SNPN alone, 9,024 farmers were trained to irrigate 11,580 hectares of farmland and access water resources at a reasonable cost. In 2016-17, in SNPN alone, 9,024 farmers were trained to irrigate 11,580 hectares of farmland and access water resources at a reasonable cost.

Four years ago, Mahbuba became a member of the Initiative for Irrigation Development Association, which provided an avenue for Mahbuba to take a proactive role in decisions concerning her family’s livelihood. Mahbuba states that her family’s income has significantly improved since she joined the community irrigation association may also help Mahbuba resolve the irrigation challenge caused by the new road. Mahbuba believes that the determination and commitment of the community irrigation association has been instrumental in ensuring that all women need to take part in making decisions that impact their family’s livelihood. Whereas the affairs of the farm were previously managed by her husband, irrigation has provided an avenue for Mahbuba to take a proactive role in decisions concerning her family’s livelihood.

In areas where surface water is not readily available to farmers, alternative irrigation methods are being sought. A project running paralldel to the HHI value chain initiative has been identifying and mapping SGW resources at a depth of up to 30 meters in SNPN and Oromia. In early 2017, the two separate but related initiatives were merged into one Transformation Agenda Deliverable for smoother execution of overlapping activities. Both are now part of supporting Mahbuba to find alternative irrigation opportunities for the four priority job areas. In addition to acquiring such technical skills, the training has taught Mahbuba that women are as integral to farming as men, and that a sentiment shared by her husband, who is pleased to work alongside his wife in managing their farm.

In addition, building on the strong synergies between women’s household roles and nutrition, a strategy for Nutrition-Sensitive Agriculture has also been developed that recognizes and builds on the role of agriculture to increase access to, and consumption of, diverse, safe, and nutrient dense foods. In addition to the sector-wide strategy, Transformation Agenda actors have also articulated a framework through which nutrition issues will be integrated across Deliverables, identifying a four-pronged approach that aims to: 1) increase production of diverse nutrient dense products; 2) increase dietary diversity among rural households through greater gender equality; 3) develop agricultural markets that integrate nutrition considerations; and 4) enhance the enabling environment for nutrition-sensitive agriculture.

Targeted Livelihood Support focusing on youth

Similar to the progress on nutrition, Transformation Agenda work on youth on this year has focused on developing a national strategy for rural job creation, as well as articulating the approach and transformational interventions vis-à-vis youth inclusion. The emphasis is primarily on developing employment opportunities. A study conducted as part of this process identified horticulture, irrigation and water supply, on-farm mechanization, and rural finance services as the four priority areas for employment opportunities for youth, with eight additional areas identified for further consideration. The study mapped job opportunities across relevant value chains and considered both the interdependencies and sustainability of the jobs in order to make recommendations based on those sub-sectors that were the most strategic for the agriculture sector as a whole, had the largest employment potential, and were most sustainable.

Ultimately, this pillar ensures that, as the agriculture sector transforms, developments are future-oriented and designed to ensure that gains are equitably distributed, capitalize on the labor force, and utilize natural resources efficiently, strategically, and sustainably.
Agri-business & Markets

During 2016-17, the Agri-business & Markets pillar has advanced Deliverables and Sub-deliverables that are focused on creating a strong enabling environment for the development of vibrant agricultural markets. In this regard, senior policymakers were actively engaged to strengthen policy and regulatory frameworks to enhance the contractual linkages of smallholder farmers to domestic and international markets. In addition, specific interventions to enhance both the physical and human infrastructure related to market information systems and aggregation mechanisms were prioritized.

In terms of actual performance of Deliverables and Sub-deliverables prioritized by this pillar, it is important to recognize that two of the six programs in this pillar (Commercial & Contract Farming and Agro-processing & Value Addition) have robust workplans and reporting platforms that link directly with the Prime Minister’s Office and are thus not tracked in the Transformation Agenda. Where the remaining four programs, this pillar has performed slightly behind the Transformation Agenda’s overall average. Where 29% of all Sub-deliverables in the overall Transformation Agenda were considered to be completed or on track during the past year, only 26% of Agri-business & Markets Sub-deliverables were in this category. In the categories of significantly delayed or not started, Sub-deliverables in this pillar measured 46% of the total, compared to an average of 33% across the entire Transformation Agenda.

As with other pillars, when analyzed at the program level, there is significant variation in performance. Some programs, such as Domestic & Export Markets, had a higher than average percentage of Sub-deliverables in the completed or on track categories (50%). The Domestic & Export Markets program also had a lower than average percentage (17%) of Sub-deliverables in the not started or significantly delayed categories. In contrast, programs such as Market Infrastructure (17%) and Market Services (13%) had lower than average percentages of Sub-deliverables in the completed or on track categories and higher than average percentages (58% and 62% respectively) of Sub-deliverables in the significantly delayed or not started categories.

Performance Summary of Sub-deliverables

**Programs**

- **Market Infrastructure**: 14% Completed, 29% On Track, 29% Slightly Delayed, 14% Significantly Delayed, 12% Not Started
- **Market Services**: 15% Completed, 26% On Track, 29% Slightly Delayed, 14% Significantly Delayed, 12% Not Started
- **Domestic & Export Markets**: 55% Completed, 17% On Track, 25% Slightly Delayed, 13% Significantly Delayed, 12% Not Started
- **Cooperatives**: 29% Completed, 25% On Track, 25% Slightly Delayed, 14% Significantly Delayed, 12% Not Started

**Overall**

- 18% Completed
- 28% On Track
- 28% Slightly Delayed
- 12% Significantly Delayed
- 12% Not Started

Faye Tessema, model malt barley contract farmer

Faye Tessema has gone from poverty to successful malt barley farming, and he has three excellence awards from the MoANR to prove it. He lives in Bekoji, Oromia, in the malt barley belt that accounts for 65% of the nation’s barley production, where he grows beans, peas, potato, garlic, and carola in addition to malt barley.

Faye’s initial malt barley yields were low when he began farming in 1993 – only about 13 quintals per hectare. Comparatively, he now reaps upwards of 60 quintals per hectare after joining Heineken’s out-grower farming scheme four years ago. The scheme engages 20,000 farmers in Ethiopia and is part of the European Cooperative for Rural Development (EUCORD), funded jointly by the governments of the Netherlands and Heineken. It aims to increase the quantity and quality of barley malted locally while helping to raise farmers’ incomes. Heineken supplies participating farmers with seed, fertilizer, and agro-chemicals, and buys the malt barley after harvest. The agreement is flexible, leaving farmers free to sell their crop to the highest bidder.

Given his enterprising mindset and capacity for leadership, Faye was identified to coordinate the activities of 160 out-grower farmers, who produce about 2,700 quintals of the total 10,000 quintals of malt barley grown in the kebele annually. Heineken’s activities are supported jointly by the AFA and MoANR to connect farmers with other value chain actors to shift them toward greater commercialization. The majority of barley grown in the district ends up at Assets Malt Factory, which controls a 70% share of the country’s malting capacity. With malt barley demand set to outstrip current supply, opportunities for farmers like Faye are ripe.

By investing strategically and taking calculated risks, Faye has multiplied the resources at his disposal to build a warehouse for aggregating produce and a new home for his wife and four children. He also aspires to open a local shop, but he is challenged by the lack of electricity. Perhaps a more important challenge is the limited availability and high cost of mechanization. Faye is obliged to set aside parts of the 12 hectares he owns with his wife as grazing land for the 120 animals that provide the bulk of his farm labor. The existing farming practice also requires considerable manpower, Faye believes that helping farmers to access mechanization (for example, by providing long-term loans from the government) will contribute to agricultural transformation by saving farmers’ time and money, and enabling them to maximize the use of their land.

Yet another challenge is the risk that farmers may sell their produce as food barley whenever the price is higher, potentially leading to a shortage of barley for malting. Keeping such challenges in mind, the AFA supports contract farming arrangements with well-articulated policies that encourage the growth of the sub-sector while ensuring that agreements are executed in a manner that benefits both smallholders and large buyers. Contract farming is proving a vital strategy in Ethiopia to bridge the gap between the current dominance of subsistence farming and greater commercialization of Ethiopian agriculture in the future.
creates linkages with predictable markets, including agro-processing. To-date such agreements have been governed by Ethiopia’s overarching contract law, which places significant weight on the mutual negotiation powers of both contracting parties. This new proclamation recognizes the power imbalances in most contract farming arrangements and sets out detailed legal recommendations for protecting both buyers and sellers, including an articulation of the minimum mandatory components that should be included in any contract farming agreement.

In parallel, Ethiopia’s social and environmental code of practice for responsible land-based agricultural investments was updated to ensure that investments made in the sector are inclusive, sustainable, transparent, and responsible.

**Modernizing Domestic Markets**

These frameworks all help to align and guide additional work being done to develop the systems required for the emergence of modern, structured domestic markets. Structured markets are expected to support the ecosystem of actors – private, public, cooperatives – to shift towards a more market-oriented approach in their domestic and export market engagements. To support these modernization initiatives, a National Market Information System (NMIS) has been designed, with piloting and launch planned for the coming year, as one of three Sub-deliverables that focus on creating modern market information systems for agricultural commodities. The NMIS is an ICT-based system intended to enable farmers, buyers, policymakers, and decision-makers to get up-to-date information on pricing so that they can make economically sound decisions on issues related to production, marketing, and policy development.

Relatively, a due diligence study of the management, maintenance, and service delivery of market centers was conducted this year, with the aim of modernizing agricultural market centers that could serve as a good platform to source data and information to feed into the NMIS. The study, conducted in mid-2017, assessed a sample of primary, secondary, and terminal markets in three regions and found that the majority lacked critical facilities and services for both buyers and sellers. It also found that market center management, which usually falls to local governments, is often under-resourced. The study recommended a pilot effort to focus first on improving facilities and services and then on making management and governance more inclusive of market users.

Additional assessments and strategies have been developed this year in support of improving the performance of Ethiopian markets. These have included an assessment of local and international market incentives instruments and a report on price stabilization and market linkages, as well as a draft domestic sourcing strategy for large public and private sector demand sinks.

As plans are being designed to better modernize markets, there have also been important efforts over the past year to improve the capacity of key agriculture actors to enable and engage with structured markets. This has included support to improve the capacity of cooperatives as a key player in the aggregation, storage, and marketing of agricultural commodities. Two Deliverables explicitly address cooperative needs, aiming to transform cooperatives into more competitive and efficient business entities and build their human, institutional, and infrastructural capacity. Under these Deliverables, training has been provided to nearly 2,300 cooperative leaders and employees, and an additional 225 leaders participated in practical exposure visits to learn more about cooperative engagement. In parallel, infrastructure support projects have led to the construction of over 40 cooperative storage facilities and offices.

**Improving Export Potential**

**Revised quality standards**

While work is being done on the domestic front to improve markets, serious attention within the Transformation Agenda has also been committed to developing the regulatory mechanisms required to help Ethiopian commodities be globally competitive and penetrate new markets. One of the two Deliverables that deal with this has a Sub-deliverable focused on improving Ethiopia’s quality standards for priority crops. Accordingly, quality standards for eight commodities (of which three are mandatory) have been revised to align to international expectations. The mandatory standards have been developed for tef, sorghum, and mung bean, in response to quality issues identified for the three commodities in the local market place. The five voluntary standards are for three varieties of haricot bean, chickpea, and soybean, which have to meet the standards when being exported. A pilot project is also being designed to develop a micro-level grades and standards certification system for domestic wheat, which would link farmers who produce wheat to this standard with local millers. As such, it will help to improve the quality of domestic supply by creating a greater incentive structure for meeting quality standards. Though currently delayed, the next steps under the Deliverable that guides this work will be to develop, institutionalize, and raise awareness about the benefits of improved traceability and certification systems for priority agricultural commodities.

**Review of export bans**

The work to ensure that Ethiopian commodities are globally competitive can only be impactful when those commodities can reach export markets via transparent and appropriately signaled channels. This principle has underpinned Transformation Agenda research done over the course of the year to assess the costs and benefits associated with Ethiopia’s intermittent export bans on cereals over the last ten years. It found that Ethiopia’s export bans have largely lacked transparency and predictability, making it very difficult for market actors to respond, and providing limited incentives to produce sufficient surplus of cereals for export. The report further found that the bans had generated no notable economic benefit and proposed a set of recommendations that Ethiopia could adopt to improve their transparency and predictability, as well as a set of alternative measures the government can consider in its efforts to increase the supply of cereals on the domestic market.

**Targeted commodity support**

As these systemic issues are being addressed, ongoing and tailored support has been provided to continue developing emerging export opportunities for Ethiopian commodities. For example, as part of the Deliverable that aims to strengthen and advance Ethiopia’s agricultural trade policies and strategies, specific support was provided to a number of Ethiopian producers and associations to participate in this year’s Gulfoods Trade Show, held in Dubai in early 2017. The fair is an annual trade and sourcing platform that connects food commodity exporters with buyers from around the world. This year’s show attracted more than 95,000 trade visitors from over 120 countries. Ethiopia’s pavilion hosted more than 100 exporters who showcased Ethiopian meat and livestock, pulses, oilseeds, spices, tef, honey, and coffee. Nearly 80 million USD in export contracts were signed or committed, far surpassing the Ministry of Trade’s target of 28 million USD. The second Deliverable related to domestic and export markets is designed to strengthen the ability of market actors to increase the volume and value of commodities marketed in domestic and export markets. In support of this, plans are being designed to develop a marketing and branding strategy for priority Ethiopian commodities, focusing first on the apiculture (honey and wax) industry.
Enhanced Implementation Capacity

During the past year, Transformation Agenda efforts falling under the umbrella of the Enhanced Implementation Capacity pillar focused on introducing and testing new tools and approaches that Ethiopia can leverage, outside of its conventional practice, to spur transformation of the sector. This has primarily meant introducing technologies that can support the sector in leapfrogging various developments and making faster, more-informed decisions. It has also entailed efforts to make it easier and more transparent to engage the private sector as a partner in economic growth and a potential major contributor to agricultural transformation.

In terms of performance of Deliverables and Sub-deliverables, in aggregate, this pillar has performed at around the average for the Transformation Agenda as a whole. Compared to the overall average of 29% of Sub-deliverables achieving either a completed or on track status, 30% of the Sub-deliverables in this pillar fall into these two categories. Similarly, compared to 33% of the Sub-deliverables considered to be significantly delayed or not started in the overall Transformation Agenda, 37% of the Sub-deliverables in this pillar are likewise significantly delayed or not started.

When analyzed at the program level, there is significant variation in performance. For example, ICT for Agricultural Services and Private Sector in Agriculture had better-than-average percentages of Sub-deliverables that are considered completed or on track (75% and 62%, respectively). Moreover, both of these programs had a slightly lower percentage of Sub-deliverables in the completed or on track categories (22% and 23%, respectively). However, the other two programs in this pillar, Organizational & Human Resource Capacity and Evidence Based Planning & MLE had a slightly lower percentage of Sub-deliverables in the significantly delayed or not started categories compared to the Transformation Agenda as a whole.

Leveraging ICTs

Information communication technology (ICT) solutions are increasingly being recognized for their role in Ethiopia’s development, as evidenced by the country’s first ever ICT Expo in July 2017. The event brought together a range of actors from all key sectors to discuss the potential of various ICT approaches to address some of the country’s most pressing challenges. The agriculture sector was no exception, and over the past year the sector has focused on scaling or deploying various platforms designed or piloted in the first years of GTP II.

Priority attention has been given to the roll-out of a set of systems designed to speed-up and improve the reliability of information flows between agriculture actors and decision-makers. The toll-free hotline, 8028, first launched in 2014 to provide information on agronomic best-practice, reached 20 million calls and expanded its topics to include agro-meteorological advisories, for example, while introducing a help-line function. This Interactive Voice Response/Short Message Service (IVR/SMS) system is now being considered as a model for similar projects across sectors.

Leveraging this IVR/SMS platform, in 2016-17 an Input Tracking System (ITS) was redesigned to provide real-time views of how inputs are supplied and distributed throughout the country. The 156 storekeepers who participated in the pilot used the IVR/SMS system to provide daily updates about their inventories. Users could then access the system to track input stock and movement, identifying potential overstock or shortages before they happen. The system also helped link supply to reliable demand assessments, reducing wastage and improving the timeliness of deliveries.

Two additional ICT platforms have scaled this year, also aimed at tracking important data, though at the macro-investment and agronomic level. The Agricultural Investment Mapping (AIM) tool, first developed in 2015, centralizes and visualizes data on investment portfolios of 130 major donors and GoE projects, reflecting over four billion USD in commitments to the agriculture sector from 2004 to 2020. The system provides a comprehensive picture of who is doing what, with whom, and where, helping to improve coordination and alignment with GTP II priorities. The Agricultural Planning Tool (APT) has been similarly designed to collect and visualize more than 1,000 data points from an initial 251 woredas on a range of topics critical for agricultural decision-making, project design, research, and monitoring. These have all been rolled-out under the auspices of the two Deliverables that belong to the ICT for Agricultural Services program.

At the same time, this year saw the introduction of a range of ICT solutions developed as components of bigger projects, aimed at overcoming many of the limitations the projects were facing. For example, an e-voucher solution is being integrated into the Input Voucher Sales (IVS) system to help increase access to finance for agricultural inputs. A National Market Information System (NMIS) has been designed to improve market transparency. An Agricultural Investment Information Management System (AIIMS) has also been designed to ensure that information on commercial and contract farming arrangements is less fragmented, better updated, and more reliable for farmers, businesses, and decision-makers.

All of these efforts are ultimately aimed at ensuring that agriculture sector actors have the right information at the right time to make strategic decisions about resource allocation and market engagement.
Engaging the Private Sector

While faster, more transparent information systems were being developed over the last year, simultaneous effort was going into initiatives intended to bring the private sector more solidly into transformation of the sector – in particular into value addition industries. As outlined in the Transformation Agenda, these efforts have taken two primary tracks: 1) improving the policy environment that enables investment; and 2) increasing the capacity of the public sector to proactively target and encourage investors to engage in priority value addition industries.

In partnership with the Ethiopian Investment Commission (EIC), work on policy strengthening has targeted four areas critical to encouraging foreign investment in Ethiopia’s agriculture sector:

- Improving the support eco-system for investors interested in agro-processing or value addition opportunities
- Improving transparency in the process of land acquisition and utilization
- Improving access to, and clarifying requirements around, foreign exchange
- Improving incentives for investment, including financial and human capital supports

As these overarching systemic issues are addressed, profile documents for ten specific investment opportunities developed in the first two years of the GTP II Transformation Agenda provided the anchor for direct outreach to potential foreign investors. This has resulted in a number of new foreign investments, including board approvals for two greenfield investments in new malting facilities valued upwards of 100 million EUR with backward-linking arrangements by Soufflet and Boortmalt, two of the worlds’ largest malting companies. Additional investments of over 150,000 USD have been committed for honey processing, and potential investments in poultry and soybean processing are at advanced stages and could result in FDI inflows of 45 million USD.

Parallel to foreign investment, an Ethiopian Agri-business Acceleration Platform was launched this year with a focus on enterprise development, starting with small and medium enterprises in the apiculture – honey and wax – value chain. The platform provides targeted services and support that are highly tailored to the requirements of each enterprise, with business support activities that focus on facilitating access to four core services – finance, markets, expertise, and talent. Apiculture has been prioritized because of its comparative advantage, strong potential for multiplied economic and social impact, and supportive policy environment.

Strengthening the Public Sector

While information systems and the private sector will play an increasingly large role in the transformation of Ethiopia’s agricultural sector, the public sector will nevertheless continue to be a key player. The current challenges of agricultural development in the country, as well as the numerous areas where market failures exist, both require support from government institutions if they are to be overcome, as has been the case in every country that has undergone rapid transformation of its agriculture sector. The public sector must be focused on creating a more enabling environment for the private sector to engage and providing needed support to other partners to catalyze the development of a modern and vibrant agricultural sector.

Several areas of the Transformation Agenda target enhancing the capacity of the public sector to play these roles, along interrelated areas of focus. The first is the development of robust platforms for evidence-based decision making and policy development. Given the breadth and diversity of the sector’s geography and activity, this requires enhancing the mechanisms for policymakers to access reliable and timely data. In addition, the capacity of individuals within key institutions to provide analytic and policy advice at both federal and regional levels must be strengthened in order to properly utilize and interpret available data.

Three different Deliverables focus on strengthening the evidence-based planning and monitoring and evaluation (M&E) capacity of the GoE, looking at its structures, as well as M&E and knowledge management systems. Efforts this year within these Deliverables have resulted in a clear articulation of the sector’s overarching strategic objectives, alongside a hierarchy of results, contributing programs, and related outputs all pulled together with a consolidated set of indicators for measuring progress. Similarly, a management information system (MIS) concept note and action plan has been developed and endorsed by senior officials at the MoA to organize data within multiple databases for resource mapping and measuring outcome/output indicators. A pilot of the elements of the system is underway in 74 woredas.

Robust platforms must also be developed for the public sector to effectively engage all stakeholders in the sector. Some important work has been done in this regard, including development of the Rural Economic Development and Food Security Platform (RED&FS) and institutionalization of quarterly management meetings between federal and regional policymakers, though the functionality of these platforms must be enhanced. In addition, platforms created at both the expert and local levels to engage farmers must be strengthened.

A final area critical to public sector strengthening has to do with improving the physical and regulatory capacities of key institutions. Given the focus of the government to encourage a greater and more active role for the private sector in agriculture, the public sector must begin to shift some of its focus from service provision to oversight and regulation. In addition, as has been true elsewhere, Ethiopia must ensure that its public research institutions maintain a high level of competence in order to identify and introduce new technologies that are adapted for the context of local smallholder farmers. The strengthening of regulatory and research capacity require enhanced investments at human and institutional levels.
Agricultural Commercialization Clusters

The Agricultural Commercialization Clusters (ACC) initiative emerged from a request originally made by Prime Minister Hailemariam Dessalegn in December 2013 to identify a means through which geographically-targeted interventions could be integrated to ensure rapid, sustained, and inclusive development of priority agricultural commodity value chains. The ACC approach in GTP II is modeled on successes from countries around the world that deployed geographically-focused strategies to transform their agriculture sectors and drive rural industrialization, incorporating lessons learned from Ethiopia’s experience with similar initiatives in the past. The ACC initiative contains 24 clearly defined geographic clusters specializing in 12 priority commodities across the four major agricultural regions of the country. Although all four regions have initiated efforts to create broader clusters that cover agricultural producing areas, these ACC clusters are intended to act as Centers of Excellence (CoEs), where regions will be supported to maximize production and productivity while integrating commercialization activities. They will become models for learning as Ethiopia intensifies the ACC approach and scales up best practices across the country.

Planning and Monitoring

The 24 clusters and 12 commodities identified for the ACC initiative were determined following a three-step process that included: identification of primary and priority commodities where Ethiopia has a comparative advantage, identification of appropriate woreda groupings for these commodities that could be ‘clustered’, and final woreda selections based on additional market factors. Six commodities were in full implementation this year: haricot bean, maize, malt barley, sesame, tef, and wheat. Of the remaining six, five additional horticulture crops (onion, tomato, avocado, banana, and mango) have been identified as either primary or priority crops, while aphis control (also known as races or pests) and the use of insecticides (also known as pesticides) have been used to control pests and diseases in crops. With the implementation of these interventions, we are seeing an increase in productivity and quality of crops.

Governance and Oversight

To govern and coordinate ACC implementation, Regional Transformation Councill (RTCs), chaired by Regional Presidents, were established in each region and have been supported during the last year to hold regularized meetings. Alongside the RTCs, this year a new structure, the Project Management Office (PMO), was also established to oversee the successful implementation of prioritized interventions. Key tenets of the PMO include continuous implementation monitoring and rapid escalation of potential problems to tackle any points of congestion. This platform is expected to considerably cut information asymmetry while emphasizing accountability.

Priority Interventions and Preliminary Results

Each of the 24 clusters is at a different stage of development, with the implementation focus during the 2016-17 planting season on the 15 clusters of the first six primary crop Commodities. Alongside intensive activities in these clusters, planning and design activities were initiated in the remaining nine clusters that are focused on agriculture and horticulture and will move into full implementation in the year ahead.

Efforts this year emphasized building the capacity of smallholder farmers to focus their planting on the high-value commodities identified for their clusters. This involved distribution of improved seeds, chemical fertilizers, and different types of demonstrations – referred to as Large Scale Plot Demonstrations (LSPDs) – to showcase the benefits of the new approaches being promoted. Farmers were likewise supported in selling their crops and establishing market linkages with other value chain actors. As part of this, 18 Value Chain Alliances (VCAs) have been established throughout the ACCs to create platforms at the local level for joint problem identification and solving. Contract farming arrangements have been negotiated for several commodities, and other supports have been put in place to bring surplus production to domestic and export markets.

Building on the experience of testing an Integrated Delivery Scale-up (IDS) initiative in 20 woredas last year, a revamped IDS initiative has been designed this year to include 10 interventions that will be implemented in 82 woredas across the ACCs. These interventions include: conducting full package demonstrations, customizing extension packages and providing supplemental Development Agent training, strengthening supply chain management activities (seed, fertilizer and agrochemicals), building the capacity of cooperative-based seed producers, supporting the establishment of Direct Seed Marketing agents, expanding the Input Voucher Sales system, providing cooperatives storage, and training and facilitating contract farming and market linkages.

Preliminary results from ACC implementation in all regions are promising and provide both proof of concept as well as the foundations on which to improve. All clusters reported increased production and productivity in their most recent harvests and made clear productivity gains relative to non-cluster woredas in the same areas. All crops reported similarly impressive productivity improvements across the regions, contributing to the production of 21.6 million quintals of overall marketable cereal surplus in the 2016-17 harvest season. From this surplus, 3.5 million quintals were sold for 3.6 billion ETB in market linkages that connected producers, aggregators, and processors to more than 40 buyers. Relative strengths in each region all indicate the importance of local ownership and commitment in making the ACCs function effectively.

Despite their successes, ACC efforts are only amplifying the need to address more structural challenges of the sector, including increasing the availability of mechanization and irrigation machinery and services. Access to timely, quality inputs also remains a struggle, with limited opportunities to disburse risk across multiple crops if smallholder farmers are focusing on the commercially viable high-value commodity.

Redae Hailu, model wheat cluster farmer

Redae Hailu is a model wheat farmer who lives in the town of Amba Alagie in the heart of Tigray’s bread wheat cluster. In 2016, his farm was selected as a Center of Excellence (CoE) on which demonstrations take place to assist farmers in adopting yield-enhancing improved farming packages as part of the work of the ACC initiative. ACC farmers are encouraged to adopt new inputs through large-scale demonstrations on model farmer’s fields, which showcase the comparative benefits of improved inputs versus conventional inputs. Model farmers such as Redae Hailu bottoms their stories about the advantages and potential risk of failure of trying new approaches with publicly exemplifying the benefits of innovations.

In 2016, Redae bravely experimented with the ACC recommended package (despite the apprehension of his wife and three sons with positive results. He planted improved varieties of bread wheat, Chefe and Kingbird, on half a hectare, then applied a mixture of leguminous cover crops, fertilizer, herbicide, and Rotovator to prevent wheat rust. At harvest time, he harvested 63 and 41 quintals of grain of Chefe and Kingbird respectively, compared to 40 and 31 quintals per hectare with his old method. The cluster average wheat productivity is 30 quintals. Demonstrations conducted last year on Redae’s farm and 38 other plots around the country have also just seen farmers’ other crops benefit from the use of herbicides. Redae’s farm was selected as a CoE because of its efficiency of herbicides, for which costs 3,000 ETB for a quantity sufficient to remove the weeds on Redae’s three-hectare farm, is almost 2,000 ETB cheaper than paying 80 laborers the daily rate of 60 ETB to remove the weeds manually.

Redae is also a member of the Emberta-Atsela cooperative, which works with the ACC to incentivize farmers to grow quality grain by purchasing broad wheat at 131 ETB per kilogram, a more attractive price than the nine ETB per kilogram being offered on the market. This constitutes part of the effort to strengthen linkages between the 11 clusters by creating VCAs throughout the clusters. Of the total 1.4 million quintals of broad wheat produced by the cluster in 2016-17, market linkages have been made for 1.4 million quintals, primarily through unions and cooperatives, contributing to increasing domestic revenue from wheat products and raising farmers’ incomes.

Redae’s most important takeaway from his engagement with the ACC is the knowledge that investing in quality inputs leads to tangible results in increasing crop yield, improving disease resistance and increasing household incomes. With two sons in university studying veterinary medicine and agriculture, and a third set to follow in their footsteps, it is clear that Redae’s well-informed farming approach and direct innovation is paying off for his family. With no initial amount of pride, Redae acknowledges that he is already setting an example in his community, and other farmers in his area are now aspiring to be CoEs as well.
Amhara

Work in Amhara’s five ACC clusters this year focused on improving input supply, from scaling the Input Voucher Sales (IVS) system to improving fertilizer distribution mechanisms. Maize productivity was particularly impressive, with ACC clusters yielding 56.6 quintals per hectare, an increase of nearly 19 quintals per hectare above the regional average of 37.8.

Additional emphasis went into coordinating the activities of implementing actors, from aligning the Regional Transformation Council (RTC) members to supporting Value Chain Alliances (VCAs) to perform more effectively. The RTC identified domestic and international markets for cluster commodities and established marketing steering and technical committees. Fertilizer supply, which was delayed due to problems between import and distribution, was discussed and a decision was reached to use a network of unions to transfer fertilizer to farmers. Seeing that input financing through the IVS system was effective in the Western and Eastern Amhara zones, the RTC decided to strengthen IVS adoption by farmers across the region. Recruiting priorities of RTC members posed a scheduling challenge, so it was only possible to conduct three of the planned four quarterly meetings.

The VCAs established for the five cluster commodities performed exceptionally well in strengthening relationships between stakeholders. Workshops engaging 1,331 stakeholders were held to discuss input and credit supply, production and marketing performance, and to set preconditions for 2017-18. However, VCAs were challenged by a lack of alignment and coordination among actors working on each commodity value chain.

Input supply efforts in Amhara successfully identified the seed varieties demanded by the market and developed site-specific fertilizer recommendations. Improved seed utilization was lower than expected, with the exception of crops that use hybrid seeds. Though overall fertilizer use increased this year, fertilizer application in Amhara clusters was lower than targeted: only 48% of the fertilizer distributed to woredas actually reached farmers on time. The use of agro-chemicals was still lower at only 20% of the planned amount.

The occurrence of fall army worm was a major challenge for the region, particularly so because of a delay and shortage of agro-chemicals. Other challenges include limited amounts of improved seed for sesame; poor uptake of improved inputs and practices (especially on sesame); and lack of mechanization (especially for teff, wheat, and malt barley).

On the other hand, 92% of Large Scale Plot Demonstrations were successfully executed, of which 12 were on farmers’ Centers of Excellence plots, and two were on sesame commercial farmers’ clusters. Cluster farmers were further engaged in 711 field days reaching 32,419 participants.

Outside of some difficulties with facilitating contractual agreements and networks, market linkages were strong, especially on producing quality-standard crops and aggregating and storage. The lion’s share of the grains purchased by unions through such agreements went to cereals (84%), followed by pulses and oilseeds. Nearly 1,500 private traders and 40 cooperatives came together to form 63 marketing centers for sesame aggregation, the majority of which was sold to the Ethiopian Commodities Exchange. The Ethiopian Trading Businesses Corporation was a major buyer of maize and wheat grain, while teff grain was sold predominantly to universities, and malt barley was sold almost exclusively to Gondar Mall Factory. The Commission Based Marketing modality was in effect for wheat grain.

Whereas the region has well-established barley malting capacity, a significant challenge for maize, sesame, and teff was the absence of agro-processing firms. At the same time, limited output financing and storage capacity of cooperatives posed difficulties for all clusters.

**Spotlight on Amhara: Input Voucher Sales System**

Amhara has had the most impressive results with the IVS system, which is now operationalized across the entire region, including all of the cluster woredas, and implemented via the Amhara Credit and Saving Institution (ACS). This is largely because regional authorities bought into the system early on and supported its rapid expansion, as well as the plotting of a more spiral approach to improve on the original paper-based model. ACC woredas account for three-quarters of all IVS transactions in the region, which had increased by more than 30% of the total system traffic across the country in Amhara more than 2.6 million smallholder farmers (12% of whom were women) used the IVS system to purchase 3.4 million quintals of inputs in the 2016-17 season, valued at more than 4.6 billion ETB. About 25% of these sales were made available via credit, and just over half of the farmers accessing credit services were female. Loan return rates in the region have been close to 99%, demonstrating the potential of the system to reliably, and at limited risk, increase access to credit for smallholder farmers.

Cumulative Voucher Sales

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Total Vouchers Issued</th>
<th>Average Vouchers per Householder</th>
<th>Top 100 Householders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>237,500</td>
<td>11.3</td>
<td>200,700</td>
</tr>
<tr>
<td>Bread Wheat</td>
<td>379,000</td>
<td>17.7</td>
<td>300,000</td>
</tr>
<tr>
<td>Tef</td>
<td>89,000</td>
<td>16.3</td>
<td>100,000</td>
</tr>
<tr>
<td>Malt Barley</td>
<td>104,530</td>
<td>11.5</td>
<td>120,000</td>
</tr>
</tbody>
</table>

**Sesame**

6 woredas covered
224,861 hectares of cultivated land
101,431 households cultivating crop
237 large scale demonstrations conducted
1,146,791 quintals produced
5.1 Qtls avg. productivity/hectare in cluster
8.99 Qtls regional avg. productivity/hectare for crop
1,045,192 Qtls of marketable surplus produced
1,758,000 quintals of crop for which market linkages made.

**Maize**

10 woredas covered
152,449 hectares of cultivated land
258,932 households cultivating crop
877 large scale demonstrations conducted
56.6 Qtls avg. productivity/hectare in cluster
37.9 Qtls regional avg. productivity/hectare for crop
3,105,596 quintals of marketable surplus produced
383,000 quintals of crop for which market linkages made.

**Bread Wheat**

10 woredas covered
153,181 hectares of cultivated land
179,930 households cultivating crop
302 large scale demonstrations conducted
56.6 Qtls avg. productivity/hectare in cluster
37.9 Qtls regional avg. productivity/hectare for crop
5,153,197 quintals produced
45.4 Qtls avg. productivity/hectare in cluster
23.8 Qtls regional avg. productivity/hectare for crop

**Tef**

12 woredas covered
137,000 hectares of cultivated land
18,646 households cultivating crop
700 large scale demonstrations conducted
51,599 quintals produced
22.9 Qtls avg. productivity/hectare in cluster
16.99 Qtls regional avg. productivity/hectare for crop

**Malt Barley**

12 woredas covered
2,013 hectares of cultivated land
3,753 households cultivating crop
217 large scale demonstrations conducted
51,993,330 quintals produced
30.8 Qtls avg. productivity/hectare in cluster
18.79 Qtls regional avg. productivity/hectare for crop
81,400 quintals of crop for which market linkages made.
Regional Transformation Council (RTC) meetings in Oromia this year focused on aligning all critical stakeholders on the value and priorities for the ACC initiative. Though slow to be regularized, RTC leadership is now committed to meeting routinely with a particular focus on improving monitoring, timely supervision, and reporting.

Value Chain Alliances (VCAs) were highly effective across all regional commodities and these gains are expected to be built upon in the 2017-18 cropping season. In the upcoming year, VCAs have agreed to address contract farming issues; strengthen stakeholder collaboration; facilitate input financing through micro-finance institutions, agro-industries, and the Input Voucher Sales (IVS) system; enhance output financing; and continuously follow up market linkage implementation. Market linkages for commodities also performed well, with the exception of maize, although output financing remains weak. In order to alleviate this, pre-financed input credit was arranged for malt barley farmers by agro-processors, with four companies providing input credit in the amount of 36 million ETB.

Regarding input supply and distribution, representatives of the regional Bureau of Agriculture and Natural Resources, regional Cooperative Promotion Agency, and the ATA discussed seed demand allocation and reached consensus on prioritizing seed allocation to ACC and Integrated Delivery Scale-up woredas. Consequently, input distribution performed well, with seed distribution almost reaching the planned amount and fertilizer slightly exceeding expectations. The Direct Seed Marketing modality was utilized during the cropping season for the distribution of maize seed. A primary inputs-related challenge was the shortage of early generation seed, hence, regional coordination and frequent follow up of input supply and distribution, establishment of a Regional Seed Core Team, as well as contract-based seed multiplication with cooperative-based seed producer unions will be important to solving this problem.

Despite challenges with output financing, market linkages showed positive results. Contract farming agreements were signed between nine farmer cooperative unions, 67 primary cooperatives, five agro-processors, two colleges, and three commercial farms. Malt barley and bread wheat did especially well, with 91% and 86% of the planned grain having been aggregated and supplied to buyers; durum wheat did moderately well with 67% aggregation; and maize performance was somewhat low at 16% of the expected amount.

Throughout clusters in the region, a shortage of early generation seed impacted application of recommended inputs. Lack of agricultural mechanization (teff, wheat, and barley row planters; maize shellers; and tef threshers) posed a significant challenge. Farmers were further discouraged from applying the recommended farming package by the absence of price signals before planting, which made it difficult to determine whether their investments would pay off after harvest. A final area of improvement for the upcoming year is to enhance the engagement of all stakeholders in implementing the ACC approach. The outcomes of this year’s interventions have demonstrated both the need for more intensive monitoring support from regional leadership and the positive impacts to be made when adequate guidance and technical support is provided.

**Spotlight on Oromia: Market Linkages**

Establishing market linkages for smallholder farmers is one of the primary goals of the ACC initiative in all regions. Platforms that bring together buyers and sellers, usually farmers cooperatives, have been set up in all regions to connect incentives for producing marketable surplus and to ensure a better match between supply and demand. These efforts have been particularly successful in the malt barley value chain in Oromia, where malting and brewing industries and cooperative unions have collaborated to see that nearly half a million quintals of malt barley produced by farmers was bought by domestic-based actors. This accounts for 84% of ACC malt barley sales across the country. These results are largely due to the strong integration between buyers, sellers, and producers, who work collaboratively to grow the improved varieties as available, standards are upheld, and innovative practices are introduced to ensure that productivity and quality is increased in the region.
Southern Nations, Nationalities, and Peoples

The first phase of the ACC initiative in the SNNP region focused intensively on implementing two of its four priority commodities – wheat and haricot bean. A number of initiatives are underway in these clusters with the goal of increasing production and productivity while maintaining quality, as well as creating market linkages for the end products. Both crops performed better than the regional average when it came to yield per hectare, though bread wheat significantly outstripped non-cluster figures, with 42 quintals per hectares compared to the regional average of 26.

The SNNP Regional Transformation Council (RTC) meeting is conducted twice yearly to follow up on progress, address challenges, and guide implementation of the ACC. Based on a review of the year’s performance, the RTC recommended capacitating input suppliers to alleviate issues in input supply, and linking smallholders with crop insurance to mitigate the risks of mono-cropping.

Three Value Chain Alliance (VCA) meetings were conducted, new stakeholders were introduced (ECX, EACWSE and CHEMTEX), and a new apiculture VCA was established. VCAs have been particularly effective at creating a common understanding among stakeholders, but some work remains to be done on ensuring accountability and clarifying roles and responsibilities. Additionally, VCs have undertaken to improve access to output financing, which was a challenge, as were the inability of sellers to meet market quality requirements, unsteady market prices, inadequate warehouse management, and limited access to quality storage facilities.

Input distribution produced mixed results: fertilizer performed remarkably well with a 110% utilization of the intended rate, while the use of improved wheat seed was acceptable at 60%, and use of improved haricot bean seed was very low at 14%. Nonetheless, there was an increase in the demand and supply of improved seed since last year, due to the establishment of three seed-producing and marketing unions, support provided to existing seed producing unions, and facilitation of access to input credit. Enough wheat rust prevention agro-chemicals to cover 30% of cultivated land were distributed, but the high costs and illegal trade in chemicals have presented challenges. Attempts to address this include linking with recently-opened FSCs in Halaba and Soddo for reliable input supply.

Farmers’ past preferences for local varieties of seed led to a lack of interest on the part of seed producers to multiply improved seeds, in turn leading to a shortage in these types of seeds. The ACC is bridging this gap by raising farmers’ awareness on the varieties demanded on export markets and creating market linkages with international buyers. Moreover, late onset of the rainy season resulted in rainfall, discouraging farmers from purchasing seed ahead of planting dates, which created a bottleneck when farmers finally began requesting seeds. The belg rains also arrived late, which delayed planting of haricot bean as the land was still occupied with belg crops.

Conversely, the performance of Large Scale Plot Demonstrations was excellent, achieving 99% of the target. This undertaking was supported by trainings provided to 725 woreda experts, 2,755 Development Agents and 602,616 farmers on agronomy, crop protection, soil fertility and health, market-oriented extension and contract farming.

Contract agreements signed between 11 farmers’ cooperative unions (FCUs) and eight buyers (including ACOS Ethiopia, South FCU Federation, Guts Agro Industry, flour factories, and ETBC) have so far only yielded 8% of planned wheat and 21% of planned haricot bean transactions. This is due to a combination of mutual failure to adhere to the agreements, limited capacity of cooperatives to aggregate produce, and lack of technologies to prepare crops for marketing. To alleviate some of these challenges, well-equipped storage facilities are being constructed and primary cooperative and FCU staff are being provided trainings. The ACC is supporting two cooperative unions, Sidame Ello and Damota Wolaita, to enter the haricot bean export market.
Tigray

Tigray has three clusters in the ACC initiative, covering 27 woredas and more than 416,000 households that focus on the high-value crops of bread wheat, sesame, and tef. Tef and wheat are consumed domestically while the majority of sesame is exported. While tef and wheat both exceed regional averages for productivity, sesame yields were lower than envisioned, due to the combined effects of late rains and limited fertilizer application in Quafa Humera woreda, which produces 75% of the region’s sesame crop.

During this year, the Regional Transformation Council (RTC) in Tigray initiated three operational surveys and assessments to identify major challenges along the region’s three ACC priority commodity value chains. Accordingly, assessments were conducted on the status of agricultural technology adoption; credit and saving needs; and the status and challenges of contract farming implementation. In response to findings, the RTC decided that the region should work aggressively on creating linkages between mechanization suppliers and farmer cooperative unions and scale up the Input Voucher Sales system (which has been successful in pilot woredas) throughout the region. The mandate of the Tigray Agricultural Marketing Promotion Agency (TAMPA) was also clearly identified, the need to better capacitate the institution agreed upon, and the Agency was clearly directed to work on market linkages for contract farming arrangements.

In Tigray, a regional working group was also established to support planning and target-setting at the woreda and kebele levels, as well as to undertake joint supportive field supervision and technical backstopping for Development Agent (DA) and farmer trainings, water harvesting, and planting operations. Trainings to support Integrated Delivery Scale-up (IDS) in 207 kebeles were successful in reaching 99% of the targeted subject matter experts, 98% of DAs and 90% of farmers. The farmer trainings are expected to be particularly effective because they engaged all members of the farming households. Challenges with regard to IDS are the limited availability of mechanization and low rate of input use, especially in the sesame cluster. Sesame is typically low yielding, even with improved inputs, and cultivated by commercial farmers with large landholdings, which would be costly to cover with recommended inputs.

With regard to enhancing production and productivity, input distribution was successful in reaching farmers with 208,082 quintals of fertilizer, 61,024 quintals of improved seed, and 28,331 liters of agro-chemicals in tef, wheat, and sesame cluster woredas. However, there have been challenges both in accurately determining farmers’ input demands in advance, as well as in the adoption of improved inputs by farmers. An additional challenge has been the limited supply of early generation seed.

Value Chain Alliance (VCA) meetings were conducted for wheat, tef, and sesame, and VCAs for each commodity have been assigned to identify and solve challenges encountered in contract farming arrangements, many of which require serious consideration. Although 11 modern cooperative storage warehouses have been constructed to facilitate aggregation and 13 farmers’ cooperative unions are contracted to supply wheat grain to seven flour factories, the amount of grain transacted was low at 12% of the target. This was similar with sesame, where the Selit hulling and Dipasa processor received only about 30% of the planned volume of crop.

The challenges to aggregation and marketing are predominantly systemic. Subsidies on imported wheat drive down the price and discourage processors from sourcing from local farmers, which is exacerbated by the fact that imported wheat tends to be of higher quality. Hence, parties often default on their contractual agreements, and further attention is needed to establish stronger contract enforcement mechanisms, as well as to incentivize all parties to adhere to their agreements.
Looking Forward

During the first two years of GTP II, important progress has been made in the implementation of the Deliverables and Sub-deliverables in the Transformation Agenda. Nevertheless, there is increased pressure on the partners in the agriculture sector to show quick and tangible impact across all interventions. This will require all partners working on the Transformation Agenda to consolidate the gains made over the past two years as well as to accelerate the implementation of other high-impact interventions.

One of the areas in which significant gains are expected to be seen in the coming years relates to crop production, productivity, and marketing. This is an area where major investments have been made both within and outside the Transformation Agenda. Going forward, additional investments will be necessary on production and supply chain issues related to improved seeds and location-specific fertilizers. In addition, more efforts are necessary to strengthen the markets side of the equation with particular focus on contract farming, aggregation, and development of more effective linkages to agro-processors, especially the Integrated Agro-Industrial Parks under development. At the same time, special focus will be required to direct the investments currently underway or planned in irrigation towards well-designed horticulture cluster initiatives that enable smallholder farmers to diversify their production to high-value commodities with linkages to domestic and international markets.

Another major area of focus in the remaining three years of GTP II will be the livestock sector. Beginning with the creation of a Livestock Directorate under the MoANR in 2013, which then evolved into its own Ministry of Livestock & Fisheries (MoLF) in 2015, massive investments are underway from both the GoE and its development partners in this area. Similarly, although livestock was not a major area of focus for the Transformation Agenda in GTP I, the first two years of GTP II have laid important foundations on addressing the systemic bottlenecks in the sub-sector which must be accelerated in the coming years.

A final area of focus for the Transformation Agenda in the coming years is the enhancement of the implementation capacity within the MoANR, the MoLF, as well as other public sector organizations. This will be critical if the ambitious plans in both the Transformation Agenda and the overall GTP II are to be realized. While many development partners are providing valuable assistance in this regard, the GoE is also utilizing the concept of Delivery Units to enhance the planning, problem solving, and reporting capacity of the public sector as it relates to the Transformation Agenda. Parallel investments in data collection and analysis as well as infrastructural investments in critical areas such as agricultural research must also be considered.

Ultimately, the issue of addressing the systemic bottlenecks in the agriculture sector through the Transformation Agenda mechanism will require the collaboration of many partners, including the public sector, the private sector, and development partners. It will also require close alignment of stakeholders from the federal all the way to the kebele levels. Given the significant levels of political commitment and support provided to this initiative from the highest levels of government at the federal and regional levels, the focus in the coming years will be directed towards implementation and execution in order to show tangible results for the smallholder farmers of the country.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>Agricultural Commercialization Clusters</td>
</tr>
<tr>
<td>ACOS</td>
<td>Agricultural Commodity Supplies</td>
</tr>
<tr>
<td>ACSI</td>
<td>Amhara Credit and Saving Institution</td>
</tr>
<tr>
<td>ADLI</td>
<td>Agricultural Development-Led Industrialization</td>
</tr>
<tr>
<td>AIIMS</td>
<td>Agricultural Investment Information Management System</td>
</tr>
<tr>
<td>AIM</td>
<td>Agriculture Investment Mapping</td>
</tr>
<tr>
<td>APT</td>
<td>Agricultural Planning Tool</td>
</tr>
<tr>
<td>ATA</td>
<td>Agricultural Transformation Agency</td>
</tr>
<tr>
<td>AWS</td>
<td>Automatic Weather Stations</td>
</tr>
<tr>
<td>BoANR</td>
<td>Bureau of Agriculture and Natural Resources</td>
</tr>
<tr>
<td>CBM</td>
<td>Commission Based Marketing</td>
</tr>
<tr>
<td>CBSP</td>
<td>Cooperative-Based Seed Producers</td>
</tr>
<tr>
<td>CCAM</td>
<td>Climate Change Adaptation and Mitigation</td>
</tr>
<tr>
<td>CNFA</td>
<td>Cultivating New Frontiers in Agriculture</td>
</tr>
<tr>
<td>CoE</td>
<td>Center of Excellence</td>
</tr>
<tr>
<td>CSA</td>
<td>Climate Smart Agriculture</td>
</tr>
<tr>
<td>DA</td>
<td>Development Agent</td>
</tr>
<tr>
<td>DSM</td>
<td>Direct Seed Marketing</td>
</tr>
<tr>
<td>EACWSE</td>
<td>Ethiopian Agricultural Commodities Warehousing Service Enterprise</td>
</tr>
<tr>
<td>ECX</td>
<td>Ethiopian Commodities Exchange</td>
</tr>
<tr>
<td>EGS</td>
<td>Early Generation Seed</td>
</tr>
<tr>
<td>EIC</td>
<td>Ethiopian Investment Commission</td>
</tr>
<tr>
<td>ETB</td>
<td>Ethiopian Birr</td>
</tr>
<tr>
<td>EthioSIS</td>
<td>Ethiopian Soil Information Systems</td>
</tr>
<tr>
<td>EUCORD</td>
<td>European Cooperative for Rural Development</td>
</tr>
<tr>
<td>FCU</td>
<td>Farmers’ Cooperative Union</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
</tr>
<tr>
<td>FMD</td>
<td>Foot-and-Mouth Disease</td>
</tr>
<tr>
<td>FSC</td>
<td>Farm Service Center</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GHG</td>
<td>Green House Gas</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>GoE</td>
<td>Government of Ethiopia</td>
</tr>
<tr>
<td>GTP</td>
<td>Growth &amp; Transformation Plan</td>
</tr>
<tr>
<td>HHI</td>
<td>Household Irrigation</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td>IDS</td>
<td>Integrated Delivery Scale up</td>
</tr>
<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
</tr>
<tr>
<td>LSPD</td>
<td>Large Scale Plot Demonstrations</td>
</tr>
<tr>
<td>ILRI</td>
<td>International Livestock Research Institute</td>
</tr>
<tr>
<td>ITS</td>
<td>Input Tracking System</td>
</tr>
<tr>
<td>IVR/SMS</td>
<td>Interactive Voice Response/Short Message Service</td>
</tr>
<tr>
<td>IVS</td>
<td>Input Voucher Sales</td>
</tr>
<tr>
<td>LITS</td>
<td>Livestock Identification and Traceability System</td>
</tr>
<tr>
<td>LMP</td>
<td>Livestock Master Plan</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>MIS</td>
<td>Management Information System</td>
</tr>
<tr>
<td>MoANR</td>
<td>Ministry of Agriculture &amp; Natural Resources</td>
</tr>
<tr>
<td>MoLF</td>
<td>Ministry of Livestock and Fisheries</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NMMIS</td>
<td>National Market Information System</td>
</tr>
<tr>
<td>OCP</td>
<td>Office Cherifien des Phosphates</td>
</tr>
<tr>
<td>PMO</td>
<td>Project Management Office</td>
</tr>
<tr>
<td>QMS</td>
<td>Quality Management System</td>
</tr>
<tr>
<td>RED&amp;SFS</td>
<td>Rural Economic Development and Food Security Platform</td>
</tr>
<tr>
<td>RTC</td>
<td>Regional Transformation Council</td>
</tr>
<tr>
<td>SGW</td>
<td>Shallow Groundwater</td>
</tr>
<tr>
<td>TAMPA</td>
<td>Tigray Agricultural Marketing Promotion Agency</td>
</tr>
<tr>
<td>ToT</td>
<td>Training of Trainers</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollars</td>
</tr>
<tr>
<td>VCA</td>
<td>Value Chain Alliance</td>
</tr>
</tbody>
</table>
About the ATA

The Ethiopian Agricultural Transformation Agency (ATA) was established by Federal Regulation in December 2010 to catalyze positive, transformational, and sustainable change in the agriculture sector. Its mandate includes the responsibility to lead in developing, supporting, tracking, and reporting on the Transformation Agenda, which includes the production of this publication, an annual report of Transformation Agenda’s progress. In addition, the ATA also provides policy and strategy advice to key counterparts in the sector and implements about 20 of the Transformation Agenda’s 188 Sub-deliverables. These are Sub-deliverables that are run by the ATA as projects because they either have no natural owner within the sector, are pilots to introduce and test new innovations, or need to happen more quickly than other actors are able to respond.
The Ethiopian Agricultural Transformation Agency (ATA) was established by Federal Regulation in December 2010 to catalyze positive, transformational, and sustainable change in the agriculture sector. Its mandate includes the responsibility to lead in developing, supporting, tracking, and reporting on the Transformation Agenda, which includes the production of this publication, an annual report of Transformation Agenda's progress. In addition, the ATA also provides policy and strategy advice to key counterparts in the sector and implements about 20 of the Transformation Agenda's 188 Sub-deliverables. These are Sub-deliverables that are run by the ATA as projects because they either have no natural owner within the sector, are pilots to introduce and test new innovations, or need to happen more quickly than other actors are able to respond.