



TECHNOLOGIES FOR AFRICAN AGRICULTURAL
TRANSFORMATION (TAAT)

Building Resilient Food Systems in Africa

2020 ANNUAL REPORT

POIDS : 40 KG

POIDS



Mme Matroma, a TAAT beneficiary and wholesaler at Yopougon market in Abidjan shows off her stock of rice varieties

Building Resilient Food Systems in Africa



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TRANSFORMATION (TAAT)**

2020 Annual Report

Building Resilient Food Systems in Africa A 2020 Annual Report



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ABBREVIATIONS

AATF	African Agriculture Technology Foundation
AEZ	Agro-Ecological Zones
AfDB	African Development Bank
CAADP	Comprehensive African Agricultural Dev. Programme
CAGR	Compound Annual Growth Rate
CAR	Central African Republic
CCO	Community Cooperative Organisations
CCBP	Community-Based Breeding Program
CIAT	International Centre for Tropical Agriculture
CIP	International Potato Centre
CGIAR	Consultative Group on International Agriculture Research
COMESA	Common Markets for East and Southern Africa
CSA	Climate-Smart Agriculture
DACO	District Agricultural Coordinator
DRC	Democratic Republic of Congo
EAC	East African Community
ECOWAS	Economic Community of West African States
ENABLE-TAAT	Empowering Novel Agribusiness-Led Employment
ETB	Ethiopian Birr
FAO	Food and Agricultural Organization
FARA	Forum for Agricultural Research in Africa
FAW	Fall Armyworm
FCR	Feed Conservation Ratio
FD	Fortenza Duo
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GEM	Grain Quality Enhancer, Energy-efficient and Durable Material
HIB	High Iron Beans
ICARDA	International Centre for Agriculture in Dry Areas
ICRISAT	International Crop Research Institute for Semi-Arid Tropics
IFDC	International Fertilizer Development Centre
IITA	International Institute of Tropical Agriculture
ILRI	International Livestock Research Institute
IPM	Integrated Pest Management
ISFM	Integrated Soil Fertility Management
ITRA	Institute Togolais de Recherche Agronomique
IWMI	International Water Management Institute
M&E	Monitoring and Evaluation
MEL	Monitoring, Evaluation and Learning
MT	Metric Tonnes
NARS	National Agricultural Research Systems
NARES	National Agricultural Research and Extension Systems
NGO	Non-Governmental Organization
PABRA	Pan Africa Bean Research Alliance
PADECAS	Projet d'Appui au Développement des Chaînes de valeurs Agricoles dans les Savanes
PIA	Priority Intervention Areas
PICAGL	Integrated Agricultural Growth Programme in the Great Lakes
PPP	Public-Private Partnership
RMCs	Regional Member Countries
RTDI	Regional Technology Delivery Infrastructure
SNNPR	Southern Nations Nationalities and Peoples Region
USDA-FAS	United States Department of Agriculture – Foreign Agricultural Service



Foreword



Dr Chrys Akem
TAAT Programme Coordinator

Message from Dr Chrys Akem

– TAAT Program Coordinator

For the past three years (2018-2020), the Technologies for African Agricultural Transformation (TAAT) programme has been a vital engine focused on boosting farmer productivity and livelihoods through the deployment of proven agricultural technologies. What makes the program even more unique is the framework by which it operates, bringing together a consortium of Consultative Group on International Agriculture Research (CGIAR) and non-CGIAR partners to move proven technologies forward across a broad ecosystem of strategic partners intended to provide sustainable and cost-effective solutions to farmers.

While the 2020 implementation of TAAT was undoubtedly impacted by the COVID-19 pandemic and the subsequent government mitigation measures, TAAT has been resilient through this by continuing to accelerate existing efforts affecting farmer productivity and livelihoods not only continent-wide but worldwide.

This report highlights some of the ways the TAAT program continued to accelerate long-term sustainable agricultural interventions that enhance agriculture delivery, maintain food supplies, and boost local production in ways that do not allow the pandemic to win. Through TAAT, agricultural transformation will continue on the continent – putting farmer productivity and livelihoods at the forefront of the pandemic.

As we have seen, with the reduction in imports to the continent, fragility to food access requires that now more than ever, we have effective value chain systems that support the whole agricultural sector, including smallholder farmers and large-scale producers.

TAAT looks forward to continuing the momentum in years to come.

Message from Dr Innocent Musabyimana

- Head of TAAT Clearinghouse

In 2020, the scaling of TAAT technologies was addressed by ensuring TAAT technologies were linked to sovereign country loans awarded by development banks. The Clearinghouse's role in the planning and execution of this linkage has provided an added element to the success of transformation on the continent. This report tracks the programme's efforts at building food systems resilience across Africa in a year of uncertainties.

The TAAT Clearinghouse has continued on its path of fostering partnerships between the various actors within the TAAT ecosystem while facilitating linkages with other development initiatives and country programs for African agricultural transformation. A critical part of these direct interactions involved participation in the missions of development banks to backstop the role of modern technologies in the formulation and implementation of sovereign country loans as a critical mechanism for scaling and delivering impact.

TAAT had to rapidly pivot in response to Covid-19 interruptions, thus prompting rounds of discussion of alternative ways forward, including directing efforts to build resilience in the continents' agriculture sector using TAAT technologies. As we all look forward to building back better in 2021, the TAAT Clearinghouse restates its focal commitment to deploying path-breaking technologies and innovative partnerships and linking them to country priorities to transform African agriculture. We are committed to making this happen through every possible means.

We thank our donors and partners for their continued support and understanding.

Foreword



Dr. Innocent Musabyimana
Head of TAAT Clearinghouse

Executive Summary

The Technologies for African Agricultural Transformation (TAAT) programme, funded by the African Development Bank (AfDB), aims to increase agricultural productivity in Africa by deploying proven and high-performing agricultural technologies to rural communities across the continent. Since 2018, the programme's partners have accelerated technology deployment along priority commodity value chains. The efforts address the challenges of low yields by tackling transversal problems that have plagued the agriculture sector for decades. These include: deployment of input-based technologies, untapped irrigation and water management technologies, coordinating and advocating agricultural research initiatives, strengthening the policy and enabling environment to spur market incentives, attracting African youth into the agriculture sector, and helping farmers respond to transboundary plant pests and diseases such as the Fall Armyworm.

During 2020, the third year of implementation, TAAT partners embraced a more focused approach of building pathways to getting the right agriculture technologies into the hands of farmers, the national extensionists who support farming communities and the public-private partners giving sustainability to agriculture delivery infrastructures. TAAT continued efforts at the grassroots level by deploying proper irrigation technologies to intensify the use of farm labour, facilitating year-round cultivation, improving crop response to fertilisers and improved seeds, and promoting the adoption of modern crop varieties and their accompanying good agricultural practices. The multidimensional nature of the programme is what we believe to be the needed avenue for creating a sustainable pathway to transforming African food systems.

The 2020 COVID-19 pandemic that hit the continent in March 2020 certainly impacted programme implementation. However, amid governmental restrictions on movement, group gatherings stymied with controlled hours of work, and curfews, a "new normal" was defined. The TAAT ecosystem of partners swiftly adapted to the new way of doing business by shifting to virtual implementation in locations shut down by restrictions in order to continue the pace of getting knowledge of technologies into the hands of farmers.

This report highlights success stories of how farmers and value chain partners were able to continue building value chain systems through the program despite interruptions caused by the pandemic. From deploying new varieties of Sorghum and Millet seed to farmers in Nigeria to accelerating the deployment of nutritional crops across the continent, TAAT continued steadfast in its mission to bring experts together to educate farmers on modern agriculture farming at an accelerated pace, and getting seed and good farming knowledge into the hands of rural communities.

The program's achievements in 2020 are exhibited through success stories showing how TAAT is building a pathway to transformation and resilience through the deployment of proven agricultural technologies for large scale adoption across the continent and by building sustainable knowledge infrastructure with public partners. The information highlights tangible results and first-hand accounts of how TAAT is helping rural farming communities

TAAT Programme Achievements in 2020 Infographics

TAAT 1.3: Number of new government policies, laws, and regulations revised, approved, and adopted for implementation contributed by TAAT



TAAT 2.4: Number of people trained with improved skills on agriculture enterprises development



TAAT 1.10: Finance leveraged from other independent initiatives (donors, public sector, private sector), in-kind, and cash-based contributions to TAAT activities



TAAT 2.5: Number of functional multi-stakeholder platforms for learning, knowledge generation, and dissemination technology delivery-support



TAAT 3.4: Number of farmers or primary processors with access to and use of market facilities

9,154 Farmers & primary processors with access to and use of market facilities



TAAT Funded- 100%

TAAT 3.8: Number of final beneficiaries engaged in commercial agribusiness supply chains

2,356 Beneficiaries engaged in commercial agri-business supply chain



TAAT Funded - 57%; Leverage - 43%

TAAT 3.7: Number of farmers using improved post harvest technologies

8,231 Farmers using improved post-harvest technologies



TAAT Funded-100%

TAAT 3.9: Number and type of campaigns or promotional activities organised

5,317 Promotional & outreach campaigns organized



TAAT Funded- 64%; Leverage - 36%

128 Technologies deployed in targeted specific agro-ecological zones



TAAT Funded- 88%; Leverage - 12%

314 New Partnerships Formed



TAAT Funded 77%; Leverage 23%

8,197,676 Beneficiaries



TAAT Funded- 74%; Leverage - 26%

Overview of TAAT Achievements in 2020

Milestone 1: Number Of Beneficiaries Reached

Beneficiaries of TAAT interventions largely represent farmers who have benefited from TAAT technologies through on-site demonstrations, training and workshops, farmer field days etc. Through a network of over 200 public and private partners spread across 27 countries, accelerated capacity building and crop campaign activities have improved the availability and access to knowledge of productivity-enhancing technologies. TAAT's focus on accelerating and stimulating farmer access to productivity-enhancing agricultural technologies serves as the basis for transforming Africa's agriculture sector since, without productivity, there can be no sustainable transformation.

The impact of the COVID-19 pandemic on programme delivery certainly slowed down TAAT's technology deployment and dissemination activities, thus resulting in fewer field activities and beneficiaries reached during the year. Provided below is an overview of the achievements of selected TAAT compacts and the number of beneficiaries reported in 2020. Overall, progress towards meeting the beneficiary target is at 59.72%, with 8,197,676 beneficiaries reported to have been reached as of December 2020. Figure 1 provides the breakdown by TAAT Compact of the beneficiaries reached in 2020.

The multifaceted nature of TAAT requires a constant learning curve, continuously adjusting to a dynamic learning and feedback

mechanism made available to improve implementation processes and take timely remedial actions. The bridge between the national partners and TAAT Compacts serves as the primary feedback mechanism for beneficiary data reported. Activities and lessons learned are documented and shared in quarterly technical progress reports published on the TAAT knowledge management platforms.

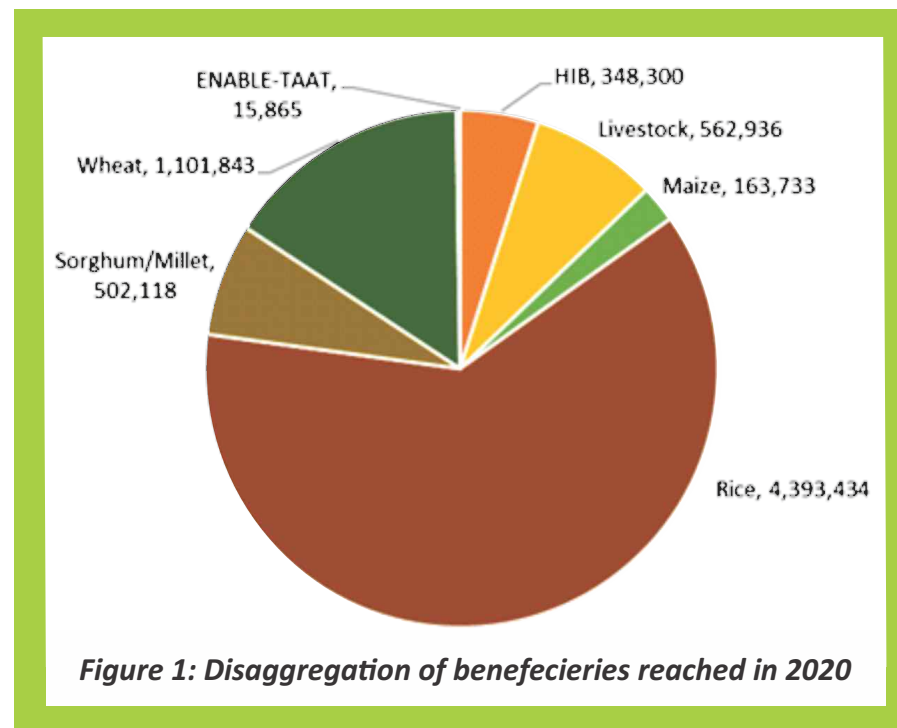


Figure 1: Disaggregation of beneficiaries reached in 2020

Milestone 2: Volume Of Seeds Produced And Disseminated

The development of national seed systems is a flagship for the programme, considered vital to improving food system resilience and livelihoods sustainably. Availability of high-quality seeds is critical to achieving high crop productivity for a food-secure continent. Yet, access to and use of improved seed remains one of the big challenges facing African farmers. Despite the region having a huge potential to maximise its agricultural productivity by leveraging countries with advanced and robust seed systems, there is a needed effort to assist countries collectively with their seed systems. While not an initial programme target, corrective actions by the donor required that seed system development and deployment be introduced into the programme monitoring framework as a critical requirement needed to put countries on a pathway to food resilience.

Activities supporting seed system development were based on a collaborative effort between TAAT Commodity Compacts, contracted seed companies, National Agricultural Research and Extension Systems (NARES), agro-dealers, and strategically identified development partners (donors). Effective seed systems help reinforce productivity aspects of the value chain and agriculture markets. Markets without increased productivity give rise to food imports due to insufficient supply. Assisting countries with the distribution of quality seed through agro-dealers networks and extensionists is one focus area of TAAT intended to stimulate productivity and help countries prepare for the onslaught of the food system challenges. Additionally, to support the seed system delivery through ongoing efforts of the Policy Enabler compact on seed

regulation and certification in Regional Economic Communities (RECs), TAAT is creating the necessary enabling environment that gives farmers access to high-quality seeds capable of increasing yields well ahead of planting seasons. A summary of the volume of seed distributed through TAAT is included below. Table 2 highlights the detailed disaggregated data.

- Overall, compacts have produced 2,831.4 MT for Foundation seeds, 9,522.1 MT for basic seeds, 191,947.4 MT of certified seeds, 8,873.2 MT for Quality-Declared Seeds, and 2 MT for Hybrid seeds. By commodity and across types of seed, the distribution is as is tabulated in Table 2;
- On fodder and forage, seeds distributed by the livestock compact amount to 300 kg of fodder seeds, 750kg of Dual-purpose seeds (sorghum, cowpea, groundnut), 25,000 legume tree seedlings, and 81,000 Brachiaria Splits.
- Aquaculture has produced 94,920,360 Tilapia fingerlings and 64,403,596 catfish fingerlings totalling 159,323,955 fingerlings disseminated to fish farmers.
- For roots and tubers, the following was produced: 81,315 bundles of cassava (500 bundles, each with 50 stems are required to plant 1 ha), 20,328,750 foundation cassava cuttings managed by farmers, and 47,065 cassava breeder Plantlets produced using SAH technology. On the other hand, the Orange-Fleshed Sweet Potato compact has produced 32,995,950 potato vine cuttings.

Table 2: Volume of seed produced and disseminated

Compact	Foundation Seed	Basic Seed	Certified Seed	Quality Declared Seed (QDS)	Aquaculture Fingerlings	Foundation Seed Stems	Foundation Seed (Managed by Farmers)	Breeder Seeds (Plantlets using SAH technology)	Potato Vine Cuttings
HIB	-	3,533.30	10,300.45	-	-	-	-	-	-
Maize	-	27.70	20,111.00	-	-	-	-	-	-
Millet	103.00	4.04	858.30	-	-	-	-	-	-
Rice	209.10	10.00	565.81	-	-	-	-	-	-
Sorghum	2,519.30	8.58	1,486.80	-	-	-	-	-	-
Wheat	-	5,938.50	158,625.00	8,873.20	-	-	-	-	-
Tilapia	-	-	-	-	94,920,360	-	-	-	-
Catfish	-	-	-	-	64,403,596	-	-	-	-
Cassava	-	-	-	-	-	81,315	20,328,750	47,065	-
OFSP	-	-	-	-	-	-	-	-	32,995,950
Total	2,831.4	9,522.1	191,947.4	8,873.2	159,323,956	81,315	20,328,750	47,065	32,995,950

Milestone 3: Validating And Measuring Outcomes Against Programme Objectives

The activities and outputs continue to support the development objectives of TAAT. This is focused on increased income, increased productivity, increased employment, increased food production, increased food and nutrition security. These are aggregated to show how the program is on track to achieving agricultural transformation and improving farmer livelihoods. The outcome case studies conducted in 2020 (derived from programme outputs) highlight how TAAT is on a pathway to achieving its developmental objectives.

The recent analysis of outcome data indicates a substantial impact on eight commodities; rice, wheat, maize, sorghum, millet, cassava, sweet potato and beans (**Table 3**) achieved through accelerated deployment of technologies by TAAT across 28 countries. Productivity results have shown an average yield increase of +58% ranging from 10% (rice) to 262% (cassava), and when adjusted for moisture contents and coverage amounts to $1.33 \pm 0.27 \text{ MT ha}^{-1}$. Overall, these results have shown that 3,893,647 ha have been established using TAAT technologies, resulting in more than 12,012,238 tons of additional food valued at USD 763 million. At the household level (**Table 4**), the results show that about 10,616,372 adopters (of which 49% are maize adopters) have applied TAAT technologies on an average land hectare of $0.37 \text{ ha} \pm 0.16$ with the least average area covered by beans (0.13 ha) and the largest by millet (1.92 ha). As the results of the 2020 outcome case study suggest, household beneficiaries have generated on average an increased income of USD 127 ± 72 with an average of $1.14 \pm 0.46 \text{ MT hh}^{-1} \text{ y}^{-1}$ of additional food per household, thereby enhancing their food security on an annual basis (Woomer et al., 2021).

¹By end of September 2020, TAAT has reached 19,943,751 beneficiaries of which 10,616,372



Kouli Djibo, a millet farmer in Falwel, Niger poses with her harvest. (Photo A. Diama)

Table 3. Increased crop productivity, production and value resulting from technology deployment by the TAAT Program.

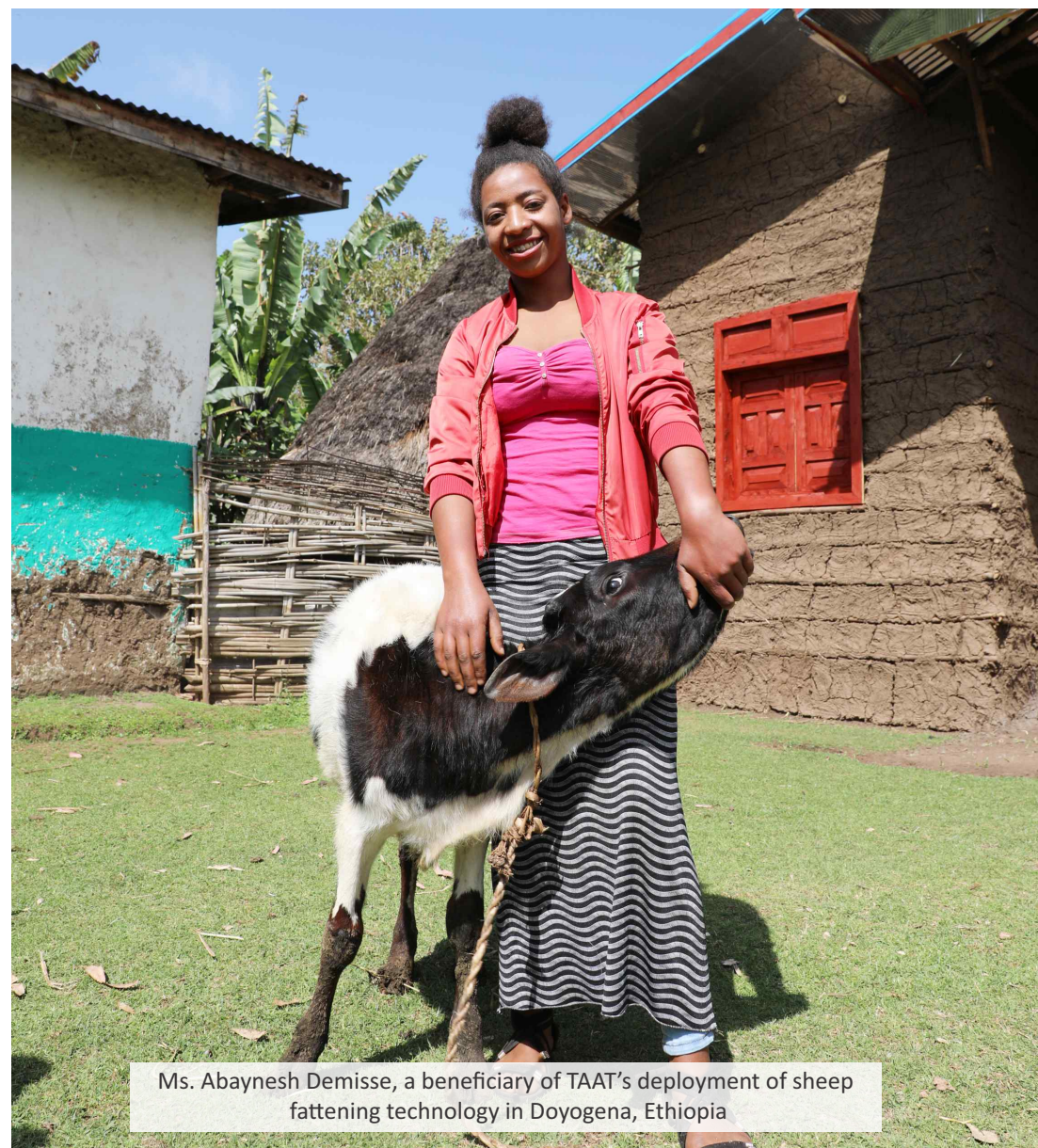
TAAT Commodity	Increased Productivity ¹	Crop Coverage	Increased Production	Increased Value ²
Compact	MT ha ⁻¹ (%)	ha	MT y ⁻¹	\$ y ⁻¹ x 10 ⁶
Rice	0.21 (10%)	705,822	148,223	55.9
Wheat	0.80 (36%)	1,800,000	1,440,000	290.9
Maize	0.75 (50%)	841,240	630,930	107.3
Millet	1.0 (133%)	23,765	23,765	4.5
Sorghum	1.75 (140%)	100,098	175,172	37.7
Cassava	24.2 (168%)	344,100	9,462,750	217.6
Sweet Potato ³	5.3 (106%)	19,798	104,927	34.6
High Iron Bean	0.45 (56%)	58,842	26,471	14.7
Total (mean⁴)	1.33 (58%)	3,893,647	12,012,238	763.2

¹ Based upon improved vs baseline yields (% increase in parentheses). ² Based upon January 2021 international prices. ³ Promotion of the Orange Fleshed Sweet Potato. ⁴ Mean (0.133) is normalised by dry matter content and coverage-weighting, Standard Error of the Mean ± 0.76 .

The objectives of the TAAT Outcome Case study looking at the benefits of sheep fattening activities in Ethiopia were to: (i) validate results and outcomes as reported by the Livestock compact through Interviews, Focus Group Discussions, Observations on the development results (outcomes), (ii) document evidence-based results, (iii) document the technology delivery processes (for scaling), (iv) capture lessons learnt and best practices and (v) generate a body of evidence of the milestones attained.

The TAAT Livestock Compact partnered with ICARDA and local NARES between September 2018 to March 2019 to provide sheep fattening technologies to farmers. Through the collaboration, TAAT provided startup capital for each youth farmer to be supplied with a 6-12-month-old ram to start fattening, one salt-lick block, and a set of feeding and watering containers. Beneficiaries contributed one ram each, making a total of two rams. All rams provided as startup were ear-tagged, castrated, vaccinated, and dewormed. The sheep were then fattened following guidance from NARES training for ~90 days to be ready for the holiday buying season. The beneficiaries received technical and business entrepreneur training sponsored by the NARES team working on sheep fattening programs. During the seven months of the partnerships, it was clear that the capital provided by TAAT helped to kick start positive knock-on impacts that showed how the one free ram translated to the procurement of more rams by farmers.

Overall, it was observed that youth are savvy entrepreneurs seeing the benefits of keeping their sheep healthy and fattened. They consistently maintained sheep fattening cycles during 3-month periods in order to be ready for the quarterly festive seasons when



Ms. Abaynesh Demisse, a beneficiary of TAAT's deployment of sheep fattening technology in Doyogena, Ethiopia



Mrs Ashebir and her son with their fattened sheep in Bonga, Ethiopia

market forces are conducive and where they can get the highest price for fattened sheep. It was demonstrated that the consistent sheep fattening cycle had helped farmers climb the livestock ladder and ascend the assets ladder. Modern sheep fattening techniques have increased income and shifted consumption patterns. The cost of buying a young ram was ~2,600ETB (USD80.7) in 2018, while fattened rams were sold at ~6,000ETB (USD186) as of March 2020, with an increased income of over 230% to families within the intervention sites of the Compact. The youth and women are seeing an increase in income and are part of the income-earning family. While they remain the caretakers of the family, women feel empowered with their financial contributions to the families by managing the sheep fattening programme.

Together with their husband's added income through farming, they can buy clothes for their children and more food for their families. Farmers in the intervention areas lack the technical and business knowledge to manage improved sheep fattening and understand the value of engaging women and youths in the family's sheep fattening activities. Younger farmers who desire to engage in farming to continue in their parent's footsteps are unable to turn farming into a lucrative and viable income-generating business due to the inheritance-based land tenure system. TAAT's intervention as a partner with ICARDA and Inter-Aide is helping to address these gaps and stimulate interest in transforming the livestock agriculture in these rural communities.



A TAAT beneficiary in Ethiopia poses with her baby

Table 4. Household, adoption area, increased food supply and income impacts of technology deployment within the TAAT ecosystem to date

TAAT Commodity Compacts	Beneficiary households (hh no)	Adoption area (ha hh-1)	Increased food supply ¹ (MT hh-1 yr-1)	Increased Income ² (USD hh-1)
Rice	2,257,987	0.31	0.06	25
Wheat	1,777,845	1.01	0.70	164
Maize	5,174,965	0.16	0.11	21
Millet	12,403	1.92	1.69	364
Sorghum	71,217	1.41	2.16	529
Cassava	817,314	0.42	3.62	266
Sweet Potato ³	54,641	0.36	0.67	634
High Iron Bean	450,000	0.13	0.05	33
Total (mean)	10,616,372	0.37 ± 0.16	0.75 ± 0.41	128 ± 72

¹ Dry matter yield increase takes different Compact adoption areas and moisture contents into account, overall mean is weighted by coverage, ± Standard Error of the Mean. ² Based upon January 2021 international prices, overall mean is weighted by number of adopters, ± Standard Error of the Mean across eight commodities. ³ Promotion of the Orange Fleshed Sweet Potato only.

Additionally, an example of an outcome case study field visit undertaken to review and validate activities is provided below. The case reviewed the Livestock compact's activities in Ethiopia, which leveraged and provided additional resources for TAAT interventions. This project was implemented in Ethiopian highlands through a partnership between the International Livestock Research Institute (ILRI), International Centre for Agriculture in the Dry Areas (ICARDA) and Inter-Aide.

1. *Promotion of sheep fattening* - TAAT leveraged an existing project implemented by ILRI in close collaboration with ICARDA, Community-Based Breeding Program (CCBP) in Bonga and Doyogena, Southern Nations Nationalities and Peoples Region (SNNPR) and in Menz, Amhara region of Ethiopia to achieve programme objectives.
2. *Partnership fit for purpose* – A partnership with InterAide incorporating forage production into soil and water conservation structures was executed through the ILRI and ICARDA partnership for erosion control, improved fodder production, enhanced feed availability and improving livelihood.

Milestone IV: Volume Of Finance Leveraged From Other AfDB-Funded Country Programs

In 2020, the advent of a global COVID-19 pandemic, which shook the very foundations of African food systems, reinforced the imperatives of establishing and deepening the roots of innovative partnerships and mechanisms for linking TAAT technologies into country programs. In 2020 TAAT accelerated efforts linking technologies to country loans in a strategic manner, involving engagements with multilateral development banks funding projects within countries for linking TAAT technologies into country programs where scaling takes place.

Through the focus of the TAAT Clearinghouse, the team was able to accelerate the deployment of TAAT technologies at scale to national partners through development projects funded by the AfDB. This was achieved through an extensive collaborative framework established between the Bank, TAAT, and relevant country teams involved in preparing and formulating projects across Regional Member Countries (RMCs).

In 2020, TAAT technologies for Cassava, Sorghum, Rice, High Iron Beans and Maize were linked to AfDB loans in the Central African Republic (CAR), South Sudan, Togo and Democratic Republic of Congo (DRC) with a total of \$3,322,200 leveraged (and committed) across these five value chains (Table 5).



Beneficiaries of GEM Rice parboiling technology at the TAAT Innovation Platform in Malanville, Benin

Table 5. Volume of finance leveraged from other AfDB-funded Country Programs

TAAT Compacts	African Development Bank Country Project	Country	Amount leveraged to link TAAT Technologies to country Programs (USD)
1. TAAT Commodities			
Cassava	Projet d'Appui au Développement des Chaînes de valeurs Agricoles dans les Savanes (PADECAS) en République Centre Africaine (RCA)	CAR	519,300
Sorghum	Agricultural Infrastructure and Value Addition project	South Sudan	501,000
Rice	Projet d'Appui au Développement des Chaînes de valeurs Agricoles dans les Savanes (PADECAS) en République Centre Africaine (RCA)	CAR	329,300
HIB	Projet d'Appui au Développement des Chaînes de valeurs Agricoles dans les Savanes (PADECAS) en République Centre Africaine (RCA)	CAR	276,800
Maize	Projet d'Appui au Développement des Chaînes de valeurs Agricoles dans les Savanes (PADECAS) en République Centre Africaine (RCA)	CAR	501,800
Maize	Projet de transformation agro-alimentaire au Togo	Togo	175,000
2. TAAT Enablers			
Enable TAAT	Projet d'Entrepreneuriat des Jeunes dans l'Agriculture et l'Agro-Business en République Démocratique du Congo (RDC)	DRC	1,019,000
TOTAL			3,322,200



A Beninese farmer harvesting pro vitamin A cassava variety deployed by TAAT

TAAT has established strong linkages to country loan programmes and development initiatives that embed high-performing agriculture technologies into national programmes for sustainability. Further examples of ongoing engagements where TAAT hopes to link technologies to sovereign projects/loans for agricultural transformation include:

The WB's Resilience Food Systems for Africa (RFSA)

This is an initiative involving collaborative engagement with TAAT. This explores opportunities to leverage TAAT's impact into more country loans from development banks. RFSA focuses on increasing productivity for food security while building resilience against climate change and other vulnerabilities. The West Africa startup component on the RFSA is called the "Food Systems Resilience Program" (FSRP), and is implemented by ECOWAS and other regional entities like West and Central African Council for Agricultural Research and Development (CORAF) and Permanent Interstate Committee for Drought Control in the Sahel (CILSS). TAAT facilitates overall engagement in this programme for West Africa.

Nigeria

TAAT engages through a WB project called the Ogun State Economic Transformation Project (OGSTEP). TAAT's engagement with regards to a WB-supported project- Agro-Processing, Productivity Enhancement and Livelihood Improvement Support (APPEALS) project, covers five states in the country. In Ogun State, IITA signed an MoU with the State government in July 2020. On this basis, a project on capacity development for youth is being developed while there is active engagement to have IITA as the lead technical implementer of the State's WB project, with TAAT technologies playing a major role.

Democratic Republic of Congo

- The "Programme National de Développement Agricole (PNDA)", is a World Bank (WB) project promoting agricultural productivity at the farm level facilitating smallholder farmers' inclusion into agriculture supply chains. PNDA is funded by an International Development Association credit in the amount of US \$500 million for five years. In addition to the PNDA, the WB has two active agricultural development projects, the "Projet d'Appui à la Réhabilitation et la Relance du Secteur Agricole (PARSSA)" for the period 2016-2021 and the "Programme Intégré de Croissance Agricole dans la Région des Grands Lacs (PICAGL)" for the period 2018-2021 that have expressed interest in a partnership with TAAT
- Presidential Initiative on Cassava for Bread Making in DRC: TAAT is engaged in this significant presidential initiative to expand the incorporation of cassava flour for bread making in the country. It is foreseen that the experience of this high-level engagement, promoting the use of Cassava-4-Bread, will reduce the importation of wheat flour while increasing the demand for cassava flour.



Cassava processing building in Kalambo, DR Congo.



RESILIENCE THROUGH SUSTAINABLE PARTNERSHIPS

Bountiful wheat harvest in Sudan

Partnerships for change

Agriculture remains Africa's key driver for economic transformation and development. With more than 60% of the world's arable land accounting for about 15% of the Gross Domestic Product (GDP), Agriculture is Africa's biggest employer, providing up to 60% of all jobs on the continent, making it the primary source of livelihood for 10% -20% of urban households.

Despite this huge potential, Africa's food system is far from being sustainable, with about 246 million people going to bed hungry in 2020. The advent of COVID-19 only helped exacerbate an already tense situation, made worse by locust invasion, droughts, flooding, and conflicts that have slashed livelihoods, bringing hunger to many in the continent. The imperatives of building back better in light of the 2030 Agenda for sustainable development behove that all stakeholders work together to bridge innovative partnerships for sustainable agriculture transformation to end hunger and prevent the onslaught of malnutrition in the next ten years. While this is ambitious, it is no doubt achievable as food systems become resilient to shock and food supplies remain uninterrupted and accessible by all.

TAAT in 2020 focussed on activities that continued to strengthen its extensive partnership network building strong collaborations capable of addressing gaps in value chains to improve the economics of technology adoption and food resilience. TAAT strengthened its partnerships with a range of food system stakeholders at regional, national and local levels, fostering Africa's institutional innovations required to support sustainable food system development while positioning itself as a leading partner in the transition to more resilient and sustainable food systems.



Nigeria's Agric Minister, Mohammed Nanono, receiving millet seeds donated by TAAT and partners.



La Paysanne, a brand of aromatic rice being promoted by Natasha, A TAAT rice compact beneficiary in Bouké

In line with the AfDB's resource mobilisation efforts at assisting the Bank's RMCs in mitigating the effect of the COVID-19 pandemic on African food systems, the TAAT partnership framework was deployed to strategically engage and guide the Bank's response to the food crisis expected to add 200 million more people into poverty on the continent over the next few years. As a programme with the objective of increasing agricultural productivity and farmer livelihoods through the deployment of technologies and partnerships across the continent – TAAT in 2020 accelerated efforts in facilitating the deployment of successful technology interventions through Feed Africa initiatives across the continent. This was achieved through the programme's priority commodities: Sorghum & Millet, Maize, Rice, Cassava, Wheat, High Iron Beans, Orange Flesh Sweet Potato, Livestock and Aquaculture.

Key partners in this accelerated seed delivery initiative included Regional Member Countries of the AfDB, the AfDB's country office teams, the TAAT Ecosystem and critical value chain stakeholders. Benefitting countries through this initiative in 2020 included Gabon, Sierra Leone, DR Congo, Mali, Nigeria, Cote d'Ivoire, and Benin. Others are Kenya, Tanzania, Zimbabwe, Zambia, Malawi, Mozambique, Namibia, Cote D'Ivoire, Guinea, Niger, Burkina Faso, Cameroon, Tchad, and Angola. Interventions at the country levels continue to gain traction and show results for sustainable agriculture transformation.

Addressing MALNUTRITION IN MALAWI

In Malawi, children under five years suffer malnutrition, with the national prevalence of under-five stunting at about 37%. Additionally, about 34% of women of reproductive age are suffering from anaemia. To address this, TAAT High iron bean varieties were deployed in the country to help address these micronutrient deficiencies. Several bean varieties have been developed over the years to address low bean productivity in Malawi.

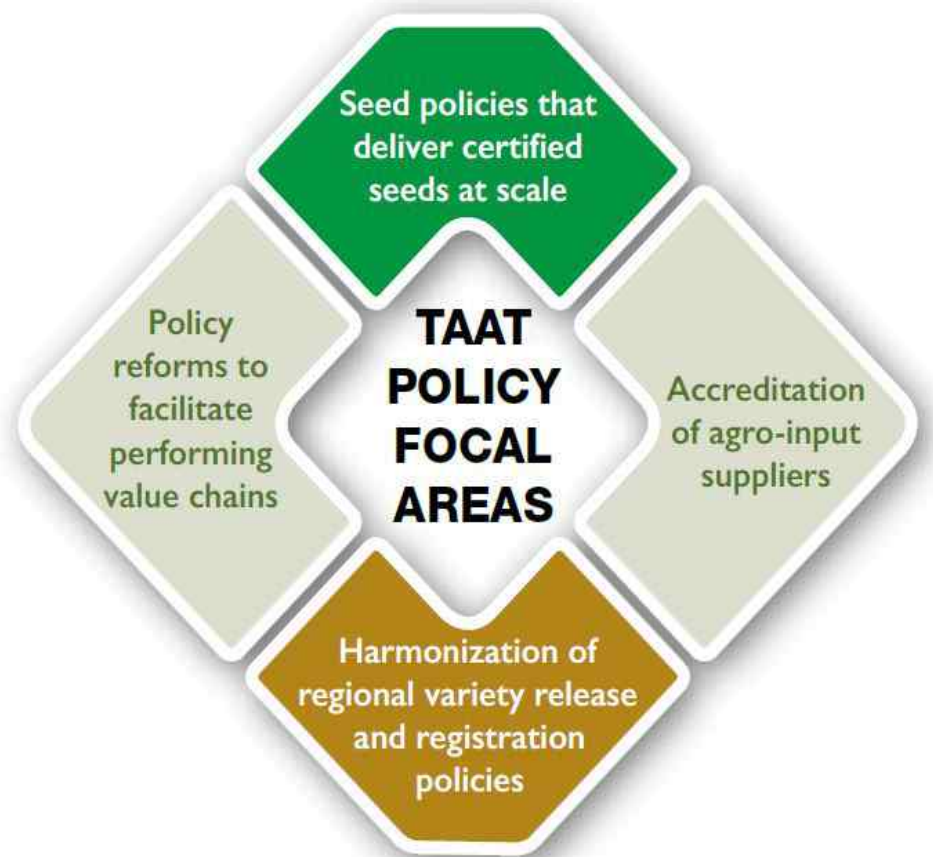
With support from the TAAT High Iron Beans Compact, various partnerships were forged in 2020 to ensure that smallholder farmers have access to resilient HIB technologies, thus expanding interest and adoption by rural farming communities. The TAAT High Iron Beans Compact (THIBC) focused its efforts on scaling Good Agricultural Practices (GAP) technologies and capacity building of processed high iron bean flour and pre-cooked beans from the three HIB varieties in Malawi.

The TAAT Malawi partnership was successful due to an innovative partnership network comprising Alliance of Bioversity-CIAT (ABC), the Department of Agricultural Research Services (DARS), farmer organisations such as the National Smallholder Farmers' Association of Malawi (NASFAM) and Women in Agribusiness in Sub Saharan Africa (WASAA). Other partners included Seed companies like Multi-Seed Company Ltd (MUSECO), Afriseeds, Global Seeds, Mgomera, and Pindulani. Others were Demeter, Kasungu market Resource Centre, Bheda Farms and Association of Smallholder Seed Multiplication Action Group (ASSMAG), Seed Services Unit, Ministry of Agriculture (Farm Input Subsidy Program), and Ministry of Health, Department of Agricultural Extension Services (DAES)

To boost food system resilience in Malawi in the wake of the pandemic, THIBC also partnered with development partners such as HarvestPlus, GIZ and Catholic Development Commission in Malawi (CADECOM), Self Help Africa, Catholic Relief Services, CARE Malawi, Concern Worldwide, Land O'Lakes). Off-takers and processors like AgrocimAgrocomm, Trans Globe, Agricultural Commodity Exchange, and Walusiya Enterprises were not left out of the extensive partnership network.



Improving The Enabling Environment Through Policy Interventions



TAAT Policy focal areas

TAAT engages in activities to create an enabling environment for technology deployment that reaches farmers and improves access to a robust market system. This is achieved through support for policy, regulatory and institutional reform interventions to help build effective food systems at both national and regional levels. These systems hasten registration/certification and variety release to the market and facilitate access to quality inputs through the accreditation of agro-input dealers, spurring market incentives and efficiencies along agricultural value chains.

Through its Policy Enabler Compact (TAAT-PEC), TAAT in 2020 championed reforms towards building robust institutional and policy frameworks capable of helping farmers in the region access technologies that can help them deal with emerging shocks such as COVID-19, drought and crop pests and diseases. Specifically, the program focused on supporting policy and regulatory reforms in agro-inputs such as seeds and pesticides.

With regards to policies that facilitate access to efficient pest control products, it would be recalled that most African farmers recently faced enormous challenges associated with invasive pests such as the Fall armyworm and desert locusts. During the most recent invasion, about 300 million HA of cropland were invaded, leading to loss of crops worth USD 750 million and affecting over 3.3 million households in the horn of Africa.

When such invasions occur, emergency control is needed as well as accelerated access to effective pest control products. More often, some of the best pest control products may not be registered in the country where the invasion occurs; therefore, farmers may not be able to use such products on time, resulting in more damages to their crops. For this reason, TAAT, working with partners such as the

United States Department of Agriculture – Foreign Agricultural Service (USDA-FAS), the East African Community (EAC) secretariat, and others, facilitated the development of Regionally Harmonised Guidelines for Testing and Registration of Pesticides and Biopesticides. The guidelines were adopted by the EAC Council of Ministers responsible for Agriculture and Food Security towards the end of 2019.

By 2020, TAAT, in collaboration with the EAC Secretariat, supported advocacy efforts, including the provision of technical assistance that resulted in a commitment by the EAC Partner States towards domestication and implementation of the harmonised guidelines. To this end, Kenya is at an advanced stage of finalising revised Regulations for Pesticide Registration. At the same time, Tanzania has commenced processes aimed at the amendment of Pesticide Regulations to align with EAC harmonised guidelines.

A similar effort commenced in 2020 in Burundi, Uganda, and Rwanda to revise agrochemicals laws and regulations. Further, more than five pesticide companies have already applied for the registration of new pesticides under the harmonised guidelines that will help to fight the emerging pests.

Drought and low yields are the other challenges that farmers have been grappling with for many years. Appropriate agricultural technologies hold vast potential for farmers. To facilitate access to quality seeds with high-yielding and drought tolerance attributes, TAAT sustained support for domestication and implementation of regionally harmonised regulations in the Common Markets for East and Southern Africa (COMESA) and the Economic Community of West African States (ECOWAS) regions. In COMESA, efforts were focused on incentivising seed companies to register varieties on the regional variety catalogue for them to be able to access the broader regional seed market. Plans were further intensified to support the private sector on using COMESA seed labels that will facilitate the trade of seeds in the region. In the ECOWAS region, technical assistance provided by TAAT resulted in the development of a Regional Quarantine Pest List that will be useful in catalysing regional trade in seed and plant products.



Getting seed to Nigerian Farmers



TAAT Sorghum and Millet Compact's Dr Hakeem Ajeigbe addressing Nigeria's Agric Minister, Mohammed Nanono at the seed donation event



A view of the TAAT seed support initiative

Over 10,000 farmers across thirteen states in Nigeria received improved seeds of sorghum, pearl millet, cowpea and rice. The farmers received this support on the heels of an initiative to cushion the pandemic's impact on food systems in Nigeria. The implementing agency for TAAT Sorghum and Millet Compact, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), led a host of agricultural research institutes and projects in a partnership that made this possible.

The partners included Nigeria's Federal Ministry of Agriculture and Rural Development (FMARD), the Centre for Dryland Agriculture at the Bayero University Kano (CDA-BUK), and the Syngenta Foundation. Other partners in the initiative were: Harnessing Opportunities for Productivity Enhancement for Sorghum and Millets (HOPE II), Accelerated Varietal Improvement and Seed Delivery of Legumes and Cereals in Africa (AVISA) and Agricultural Transformation Agenda Support Program (ATASP-1) projects.

To mitigate the impact of COVID-19 and contribute to building sustainable food systems and food security, ICRISAT developed a three-phase response plan in partnership with the governments that included Recovery and Coping Phases, an Adaptive Phase and Transformative Phase in West and Central Africa. Implementation of the three-phased response led to procurement and dissemination of seeds to support 10,000 farmers. This was achieved through a coordinated delivery infrastructure in close partnership with the NARES and private sector. Seed delivery was done in preparation for the subsequent planting season.

Seed support initiatives are part of the coping and recovery phase of TAAT's interventions, which prioritises increasing agricultural production through an adequate supply of targeted breeder seed to ensure continued support in producing quality certified seed in partnership with governments and other partners in the region.

Increased HIB Seed Production In Malawi

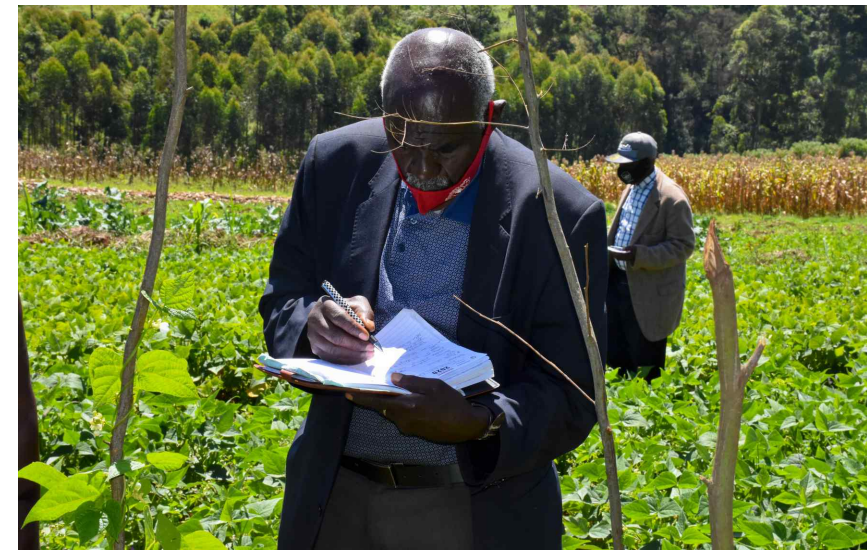
To achieve a significant increase in High Iron Beans (HIB) production in Malawi, THIBC worked with farmer groups to increase seed production at all levels from breeder, pre-basic, basic, certified seed and improve monitoring of biofortified grain production. Together with the Department of Agricultural Extension Services (DAES) and the Department of Agricultural Research Systems (DARS), THIBC in 2020 created awareness on HIB varieties, trained farmers on GAPs and established farmer groups for seed and grain production.

More than 1,500 on-farm demonstrations were organised in partnership with government projects, including Malawi Government's Seed Industry Development Project (MSIDP). To successfully achieve wider adoption of high iron beans across the country through the TAAT intervention, an additional nine farmer groups comprising 20 members were established to expand the scope of knowledge on farming. These newly established groups received seed from DARS to plant on 0.4ha of land to produce basic seed. The farmer groups were then linked to seed companies who agreed to purchase their seed. This linkage between farmers and seed companies stimulated a more robust delivery infrastructure that introduced farmers to an established market and ensured a mechanism for provisional seed availability in the community.

Seed credit among farmers was also given a significant boost in 2020. Through the TAAT intervention, 200 farmers were each given 3kg of HIB at the beginning of the season. They were able to return 6kg of HIB at the end of the season. The seed was then shared with another group of farmers who also doubled their yields. During the 2020 season, approximately 400 farmers were given high iron bean seeds. The farmer groups comprising 200 farmers and other individual farmers were trained on seed production and good agronomic practices to help and ensure maximising productivity. Other complementary programmes through the government, such as the Fertilizer and Input Subsidy Program (FISP) by the Ministry of Agriculture, Irrigation and Water Development, distributed HIB seeds reaching about 80,000 smallholder farmers complementing the TAAT intervention and taking to scale HIB farming among rural communities.



Farmers are taken through the different varieties of beans on the farm



A farmer takes notes during the field day

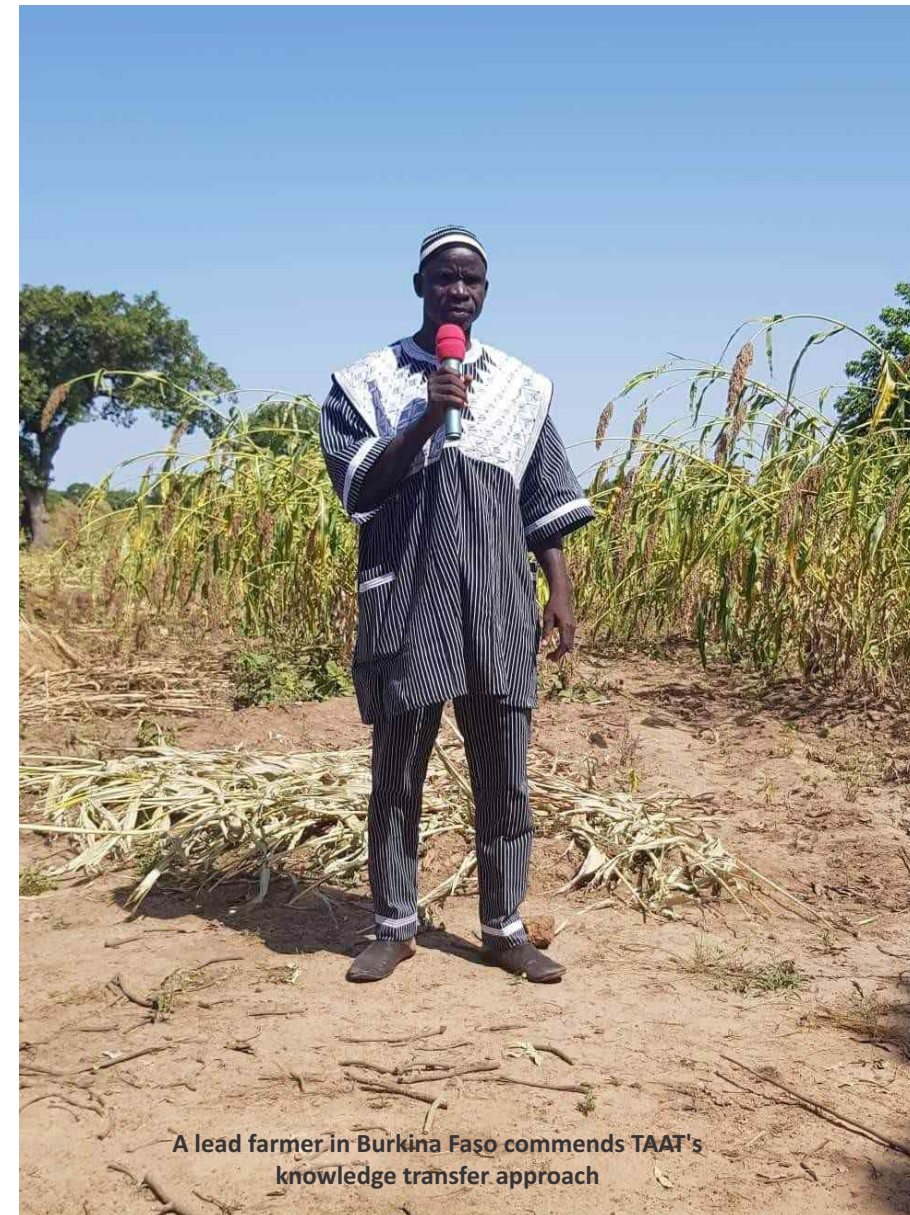
Building Capacity Through Accelerated Crop Campaigns

In 2020, the TAAT program, through its Capacity Development and Technology Outreach Enabler compact (CDTO), organised communities into multi-stakeholder groups, also known as Innovation Platforms. These platforms became one of the veritable ways of reaching farmers and processors in the face of restrictions. The program in 2020 made this approach broadly available to value chain actors within the nine commodity compacts. Led by the Forum for Agricultural Research in Africa (FARA), the CDTO helped in building the capacity of all TAAT partner institutions and within key priority intervention areas and their value chains.

Through the CDTO, the TAAT program engaged national policymakers and decision-makers from ten target countries, conducted Capacity Audits at the national level, involving 58 Innovation Platforms, grouped into commodity clusters representing a membership of 5,000 people with a reach of 114,000 farmers. These audits assist in assessing the capacity of the innovation systems and platforms on specific TAAT technologies and their capacity to go to scale.

As a result of the audits, CDTO, through capacity building, deployed Training of Trainers (ToT) tools to 365 trainers from 17 countries in order to extend knowledge and skills through the establishment and management of innovation platforms to respond to the capacity audit findings. The trainers, in return, have conducted step-down-trainings to a total of 443 trainers in 2020. The CDTO also facilitated dialogue between researchers within the TAAT Commodity compacts and the Agricultural extension network in Africa in an effort to promote the adoption of a standard template for designing and packaging outreach materials. These were field-tested and made widely available to extensionists and IP facilitators to scale up proven technologies. All parties adopted the template.

To complement these efforts, the CDTO compact also organised a series of technical webinars focusing on the commercialisation of proven technologies from each commodity compact, especially among women-led and youth-led agri-enterprises. Discussions were facilitated on the CDTO electronic discussion forum and community of practice. Through the webinars, CDTO online community reached over 1300 stakeholders involved in some way or another with agricultural transformation on the continent.



A lead farmer in Burkina Faso commends TAAT's knowledge transfer approach



BUILDING RESILIENT FOOD SYSTEMS

With a program objective aimed at harnessing proven technologies to raise agricultural productivity in Africa; mitigate risks and promote diversification and processing in 18 agricultural value chains within eight priority intervention areas, it should come as no surprise that the Bank champions TAAT as a significant continent-wide initiative designed to boost agricultural productivity across the continent by rapidly delivering proven technologies to millions of farmers. To focus on growing agriculture on the continent, it is also essential to focus on strengthening food systems as an integral part of building resilient infrastructure. A well-functioning food system brings families, communities and markets together. TAAT's value addition is bringing the relevant agriculture experts together alongside national public and private partnerships to help countries develop food systems and focuses on value chain development and intensifying the production of safe and nutritious food to meet demand. It is also enabling careful management of land, soils, and water; increasing the contribution of local food producers and suppliers and reducing post-harvest losses.




Celebrating one of the beneficiaries of TAAT's market-oriented initiatives in Cote d'Ivoire

Strengthening value chains

The TAAT Theory Of Change focuses on ensuring mechanisms are in place to help farmers increase production and shift to commercial farming where they farm to feed themselves and improve their family's livelihoods, thereby increasing household incomes. Markets without increased productivity give rise to food imports due to insufficient supply. TAAT works to reinforce productivity aspects of the value chain and agriculture markets and aims to help countries add an estimated 120 million MT of food to Africa's food production, valued at US\$1.71 to US\$2.8 billion. Reinforcing productivity aspects of the value chain require the need for accelerated technology deployment through partnerships fit for the purpose that stimulate production increase. Examples of how TAAT has done this are highlighted below.

- In 2020, the TAAT Maize Compact (TMC) focused its efforts on scaling up TAAT maize technologies through demo establishments, farmer field schools, processing of maize grain to sifted flour ready for marketing and consumption. It is the post capacity building efforts that play a role in the TAAT Maize value chain development. According to the Leader of the TAAT Maize compact, *"the Compact's pathway to scaling up is visible in its work with private seed companies for impact. This is hinged on its belief that seed companies occupy a strategic position along the maize value chain, ensuring that farmers get high-quality seed to increase productivity and improve on their livelihood mechanisms."* Value chain development for TAAT Maize focus areas include: development -the role of seed companies in scaling out the maize technologies; an out-grower scheme linked to an off-taker in one of the implementation sites to showcase a model of value chain analysis likely to be promoted; and the role of women and youth empowerment within the maize value chain as promoted by farmer groups. Bridging these links on the value chain are recipes that stimulate value chain growth.
- In 2020, the TAAT Fall Armyworm Enabler Compact deployed Integrated Pest Management (IPM) -based Fall armyworm technologies to enhance the livelihoods of smallholder farming communities in Africa. Key implementing partners of the FAW Enabler Compact include the NARES (the principal implementers), agro-input suppliers (seed and agrochemical companies) and commodity compacts. Working with the agro dealer networks and Included within this effort is the FAW Rapid Response, for which a toolkit was devised and distributed. This action links youth, product manufacturers and agro-dealers to the war on FAW by providing practical, mobile solutions to invasion outbreaks and provides a business model for diversification of agribusiness services in maize production areas.



Joy Okonkwo, One of the ENABLE TAAT beneficiaries in her farm in Onne, Rivers State, Nigeria

Accelerated Seed Delivery and Access

Seed defines the upper limit of what farmers can get. If that genetic bar is set low at planting due to poor quality or recycled seed (aka grain) of improved varieties or low yielding unimproved farmer varieties, there is absolutely nothing that can be done to increase productivity and achieve the targets of TAAT. To Feed Africa, all TAAT commodity compacts must work towards improved access to locally adapted and quality certified seed of high-yielding varieties by smallholder farmers"- Dr Martin Fregene, Director of Agriculture and Agro-Industry, African Development Bank

.The above quote from Dr Martin Fregene sheds light on a renewed shift in programme priorities that were accelerated in 2020 in response to food pressures caused by the COVID-19 pandemic. With this push from the donor, seed delivery in TAAT evolved into something that became more than just buying seed. Instead, seed delivery provided a more sustainable solution through seed system development. Accelerating seed system development in TAAT stimulated through seed distribution creates a rapid (and sustainable) response to food insecurity by mobilising resources and the right technical experts working to develop 2-3 year roadmaps and coordination of procurement and distribution across countries in preparation for planting seasons. As part of the initiative, TAAT developed a strategy for helping countries, using eight steps to assess the seed system readiness. Interventions are then packaged based on the country's needs

- Identifying challenges and gaps in the seed sector
- Identifying processes for variety development and release
- Identifying processes for seed production from EGS to certified seed
- Understanding how much of each seed type is needed for planting each year
- Identifying the processes for seed processing, distribution and storage
- Identifying the seed quality assurance mechanism
- Identifying how the seed is marketed and distributed
- Identifying the partners needed to ensure a gradual increase in production



Resilience through accelerated seed delivery

Improving Smallholder Farmers' Access to Nutrition

Approaches that complement each other are being employed in TAAT to address the complex problem of micronutrient deficiencies. With the explicit incorporation of increasing crop production and nutrition as a TAAT objective, the programme's pathway is designed to promote nutrition through technology deployment activities. One approach is increasing crop and livestock productivity through sustainable biofortification in crop value chains such as Orange-Fleshed Sweetpotato, High Iron Beans, Yellow Cassava, Orange Maize, Sorghum, and Millets rich in Zinc and Iron, and Fish/Small livestock for animal source proteins and minerals. These agricultural technology interventions rolled out through thousands of crop campaigns over the past three years have focussed not only on encouraging and teaching farmers about good agricultural practices that lead to increased yields but also on the importance of nutrition consumption at the household level. Accelerated crop campaigns and outreach programmes bring experts together to educate farmers on the importance of cultivating and consuming foods with high vitamin and mineral content strengthened with nutrition messaging.

In 2020, this approach became very effective in addressing micronutrient malnutrition. TAAT has completed over 10,000 of such crop campaigns. Another approach is the deployment of the food basket concept that supports dietary diversity by making available a variety of biofortified crops and fish and meat to address nutritional deficiencies among vulnerable populations. While the approaches are tailored to each specific country context, it is evident that TAAT technologies help improve and increase the food available to households, enhancing the households' ability to buy high nutritious foods. Two of such examples are highlighted below.

Farmers and processors across 42 villages in Benin responded in songs of joy and appreciation, commending the TAAT programme for introducing yellow cassava as well as making the nutritious variety accessible to them. While almost all cassava in Benin is currently white-fleshed, pro-vitamin A cassava, which



Mme Eugenie Faizoun, a TAAT beneficiary in the Benin Republic, harvesting fish from her farm

produces yellow-fleshed roots (popularly referred to as yellow cassava) with nutritionally significant concentrations of carotenoids that produce vitamin A in the human body, continues to be poorly deployed. To address this challenge, a behavioural change communication model involving the transfer of planting materials of pro-vitamin A cassava varieties from IITA Nigeria to Benin alongside extensive sensitisation campaigns in key villages, was adopted by the TAAT Cassava Compact and partners. Funded by TAAT and driven by partners such as INRAB, Université d'Abomey Calavi, and BIORAVE (with support from the CGIAR RTB Programme), the sensitisation campaigns had in attendance, men and women farmers, including youth who received free pro-vitamin A cassava plantlets and pledged to use same to improve their nutritional intake and income.

Fish and fishery products play an essential role in food and nutritional security around the world. Fish consumption offers unique dietary and health benefits and is considered a key element in a healthy diet. TAAT increases attention to fish as a source of essential nutrients in diets, not only high-value proteins but, more importantly, also as a unique source of micronutrients and long-chain omega-3 fatty acids. Good nutrition in animal production systems is essential to economising the production of a healthy, high-quality product. In fish farming, nutrition is critical because feed typically represents approximately 50 per cent of the variable production cost. TAAT, through its Aquaculture Compact, acknowledges these; hence the programme decided to build the capacity of fish feed producers on efficient and cost-effective ways of formulating and producing quality fish feed capable of attaining good Feed Conversion Ratio (FCR) and increasing productivity. Fish feed accounts for 60-70% of operating costs for fish production in semi-intensive and intensive systems.

In 2020, TAAT organised a Capacity Development Training Programme on fish feed formulation and nutrition. The training, which was held virtually but separately for Anglophone and Francophone countries due to COVID-19 restrictions, succeeded in familiarising participants with the basic principles of fish nutrition while strengthening the skills of fish farmers and feed producers in the 12 countries. Participants learned to identify quality feed ingredients, understand the nutrient requirement of fish feed ingredients, and feed formulation and production. The training programme equally comprised group discussions and knowledge sharing on the challenges facing fish feed producers and the identification of potential opportunities that can enable them to transform aquaculture in Africa through the low-cost quality fish feed.



Romaric Aizonou, a TAAT youth beneficiary in Benin, displaying fish harvested from his floating cage

How Youth Are Helping Countries To Build Resilient Food Systems

Youth are Africa's most significant assets for its agricultural transformation and growth. Africa's youth population is rapidly growing and is expected to double to over 830 million by 2050. Home to over 420 million young people, the continent currently boasts of the world's most youthful population. Young African men and women are critical to transforming agriculture on the continent and ensuring food security. Youth and women represent a driving force for Africa's food system due to their relative importance. The vibrancy and energy of the youth constitute veritable tools for addressing constraints and challenges to food system resilience. Africa will enjoy increased productivity, enhanced food production system, and increased agricultural incomes by leveraging African youth's energy, strength, enthusiasm, and dynamism and channelling these into more profitable, productive, and competitive agribusinesses.

In pursuit of the above imperative, TAAT, through its youth compact, known as ENABLE-TAAT (Empowering Novel Agribusiness-led Employment), provides capacity building and technical assistance to establish and expand youth-led agribusiness enterprises across the continent. As part of its approach to stimulating youth-led agribusiness enterprises along agricultural commodity value chains, TAAT engaged African youth in agribusiness training, focusing on imparting technical skills in all its target countries.

In Nigeria, TAAT partnered with the Oyo state government in South-West Nigeria to revitalise the Rural Community Development Centre in Awe, known as Oyo state-IITA Youth Agribusiness Incubation Park Center. The purpose of the partnership was to transform the centre into a functional agribusiness incubation centre where young people can be trained on various agricultural value chains, have experiential learning through pilot enterprises established at the centre, and convert the centre into an agricultural hub in the state. In 2020, over 100 youth were trained on the selected commodities and exposed to soft skills for business management. After the training, the youth developed bankable business plans that qualified them for linkages to credit facilities for their business startups individually or in groups.



ENABLE-TAAT beneficiary in Uganda poses with his livestock



ENABLE TAAT Representative carrying out routine evaluation of the livestock cluster in Rivers state, Nigeria



Ayotomiwa Ogunsua, the banker-turned-poultry farmer at work

One of the beneficiaries in this regard is Joy Okonkwo. Joy is one of the female beneficiaries of the TAAT's poultry training in Onne, Rivers State, South-South Nigeria. With the knowledge she gained through her participation in the training, she established a poultry farm with a 1000-bird capacity. As a mother of two, Joy was determined to help her household financially and support her husband. Prior to the training, she had no experience in the poultry business. She had gained some knowledge by watching relatives and neighbours rear broilers, but she had no knowledge about layer production. She had studied Business Administration, and upon graduation, Joy sought employment to no avail. She later decided to thread the path of agribusiness entrepreneurship and applied for the ENABLE-TAAT poultry production and management training in February 2020. By November 2020, Joy had already developed her own layer production enterprise, rearing a thousand birds. Initially, she began her enterprise with personal funds but was later linked up with a loan from the Central Bank of Nigeria to continue to expand her poultry business. As the CEO of 'Richfarms', a layer production farm at Tai Local Government Area of Rivers state, Joy is happy and fulfilled. "I'm grateful for not missing this opportunity," she said. She is determined to grow her agribusiness enterprise to a competitive standard. She hopes to become one of the largest employers of labour in Rivers state and a major supplier of eggs and chicken in Nigeria very soon.

"I am better off as a Farmer" ...the story of a Banker turned Poultry Farmer

After graduating from the university, Ayotomiwa Ogunsua got a job with a Microfinance Bank in Ibadan, Oyo state in South-West Nigeria. At first, it seemed like a breakthrough, being the dream of many of his colleagues. Shortly after, he participated in a poultry training organised by TAAT; life never remained the same for Ayotomiwa. The knowledge and hands-on experience he gained at the training led to the establishment of his startup comprising 250 birds. Since then, his enterprise has continued to expand. Ayotomiwa is already expanding his knowledge in agribusiness and venturing into other commodities such as Orange-fleshed Sweet Potato (OFSP) and rabbit farming. He has two support staff and exports his product across Africa and the United States.

YOUTH MENTORSHIP IN AGRIBUSINESS RECORDS SUCCESS IN KENYA

Evelyne Mwendu, a young lady in Kibwezi, Kenya, is passionate about agriculture. Shortly after participating in a TAAT agribusiness incubation programme, Evelyne launched her livestock business with 50 birds in 2020. Evelyne sold the 50 birds at Ksh 500 (\$5) per piece translating to Ksh 25,000 (\$250). After the sales, she restocked 100 birds for rebreeding. She later expanded her business to include the sale of eggs. Beyond producing chicken, Evelyne has taken her passion to another level.



Evelyne at one of her training sessions

She now mentors other poultry farmers within Kibwezi, building their capacity in good agricultural practices. She equally trains women and youth entrepreneurs for medium-scale poultry enterprises to deliver.

TAAT-ENABLED AGRIPRENEURS RECORD THEIR FIRST MILLION IN POULTRY BUSINESS



The birds at table-size in Richfarms, Rivers state, Nigeria

A team of agripreneurs trained by TAAT recorded a gross profit of over ₦1,000,000 (about \$2,580) after two live-broiler production cycles in 2020. The agripreneurs made a return on investment of about 45% in 8 weeks. They attributed their success to the technical delivery of the agribusiness park initiative and the programme's backstopping and monitoring activities. TAAT designed the agribusiness park initiative to backstop clustered agripreneurs during the early days of their business startup. The backstopping may be in the form of infrastructure, services, mentoring and linkage. After their training, the team of agripreneurs leveraged the facilities at the incubation park for their startup. This poultry cluster, comprising three youth – Apawarisia Samuel, Obarijima Onyomi and Vivian Okuboyeio-has completed two live broiler production cycles with resounding success.

The huge profit motivated the agripreneurs, who are now convinced that agribusiness is indeed profitable. They expressed their appreciation of TAAT's model of engaging youth in agribusiness, which helps to break the significant hurdle of uncertainties associated with startups. According to the agripreneurs, the model boosted their confidence in taking calculated

Boosting Youth-led Enterprises through Food Basket Outreach

One of its recent approaches is the food basket outreach. Through this mechanism, TAAT links with its partner groups to facilitate youth participation in agribusiness and community nutrition along the nine commodity value chains of TAAT. In Zambia alone, TAAT organised 11 food basket demonstrations during the 2020-2021 farming season. The demonstrations were established through TAAT's partnership with eight youth groups involved in agribusiness in the Southern African country. With each of these groups comprising 10 to 15 members, the youth were mobilised to actively participate in land preparation, planting and management of demo fields such as weeding, fertiliser application and Fall Army Worm (FAW) control. The food basket demonstrations have so far been well managed despite challenges such as FAW infestation, which is currently being controlled through the use of appropriate insecticides.

Five demonstrations were established in the Kaoma District of Western Province of Zambia, four in Central Province, one in Lusaka and one in Southern Province. Some of the crops that have been included in the food basket demonstrations include Pro-Vitamin "A" Orange Maize, Sorghum, Cassava, High Iron Beans (HIB), Orange-fleshed Sweet Potato (OFSP) and Soybean. TAAT reached over 500 farmers through field days and field visits linked to these demonstrations.

In Imo State, South-East Nigeria, two agribusiness parks were created to enable the youth to run their businesses. G1 Enterprise, a poultry agribusiness group that operates within the ENABLE-TAAT Uratta agribusiness park, performed very well, generating an income of over N 1.8 million (about \$4,700), proving that their business model is profitable and could launch in a larger production of table-size birds. Aquifine Enterprise, involved in aquaculture, also launched their second campaign while Agro-Cart Enterprise, involved in OFSP, made a good harvest and sale. These enterprises and many more operating within the two agribusiness parks in Imo state created about 30 new jobs for the youth in 2020.



ENABLE-TAAT presents cassava-based products to President Edgar Lungu of Zambia



President Lungu receiving the hamper from ENABLE TAAT

Looking forward

The momentum behind the agricultural transformation in Africa is at an all-time high. The promotion and adoption of improved, climate-smart and high-yielding varieties has ushered in a new era of agricultural productivity intended to put the continent on a pathway to food system resilience. Notable achievements in improving seed availability and harmonising policy frameworks across agro-ecological zones has been key in 2020. With the support of our partners and donors, TAAT has been able to accelerate momentum in addressing transversal issues in African agriculture improving soil fertility, discovering the untapped potential for improved water management, coordinating and advocating agricultural research initiatives, providing the necessary policy support, attracting African youth in agribusiness, and helping farmers respond to transboundary plant pests and diseases such as Fall Armyworm.

Our technologies and deployment models are creating a pathway forward by strengthening value chain delivery infrastructures ultimately intended to make farming cost-efficient and effective for farmers in Africa. In the coming year, we will scale up our work to support country engagement, technology brokerage, policy formulation, nutrition security and unhindered access to proven technologies. We will also pay attention to cross-cutting and strategic areas like gender, fragility and climate change. We will intensify efforts in helping countries mobilise resources to build resilience in their food systems. We will work with governments, research and academic institutions, the private sector and civil society to increase skills and capacity in African agriculture. TAAT will continue to prioritise inclusion and sustainability in all our work and build cross-cutting and strategic issues into our operations to help drive agricultural transformation and achieve a food and nutrition-secure Africa.

Join us on this path to feeding Africa!



Diana, an ENABLE TAAT beneficiary in Uganda

TAAT consolidated statements of sources & application of funds (US \$) YEAR END 31 DECEMBER 2020

TAAT Consolidated Statements of Sources & Application of Funds (US\$)							
	2020	2019	2018				
<i>Source of Funds:</i>							
AFDB	7,273,491	15,416,842	6,300,114				
Other Donors:							
Bill and Melinda Gates Foundation (BMGF)	3,252,110	1,220,822	1,139,762				
TOTAL FUNDING FOR THE YEAR	10,525,601	16,637,664	7,439,876				
		ADB/ADF				BMGF	
<i>Application of Funds:</i>	2020	2019	2018	2020	2019	2018	
Component 1: Creation of Enabling Environment for Tech. Adoption							
Works	0	0	0	0	0	0	0
Goods	544	1,168	8,245	0	0	0	0
Services	221,589	285,204	566,824	0	0	0	0
Personnel	0	0	0	0	0	0	0
Recurrent	33,490	45,327	81,921	0	0	0	0
SUBTOTAL	255,623	331,698	656,993	0	0	0	0
Component 2: Regional Technologies Delivery Infrastructure (RTDI)							
Works	0	0	0	0	0	0	0
Goods	136,193	20,136	125,959	0	0	0	0
Services	422,201	1,002,210	1,055,234	0	0	0	0
Personnel	1,200	-	30,197	0	0	0	0
Recurrent	94,648	175,897	150,142	0	0	0	0
SUBTOTAL	654,242	1,198,242	1,361,531	0	0	0	0
Component 3: Deployment of Appropriate Technology (DAT)							
Works	0	0	0	0	0	0	0
Goods	145,605	5,586,633	152,962	0	0	0	0
Services	1,300,449	4,309,642	1,224,788	0	0	0	0
Personnel	-	0	44,839	0	0	0	0
Recurrent	296,948	474,672	219,503	0	0	0	0
SUBTOTAL	1,743,002	10,370,947	1,642,092	0	0	0	0
Component 4: Project Management							
Works	0	0	0	0	0	0	0
Goods	39,125	81,249	134,392	0	0	0	52,451
Services	836,268	973,380	572,618	59,415	86,595	263,030	
Personnel	2,989,146	3,079,156	1,539,230	559,704	221,547	955,860	
Recurrent	364,237	706,485	251,123	496,102	2,351	18,330	
SUBTOTAL	4,228,776	4,840,270	2,497,364	55,445	310,492	1,289,671	
TOTAL FUNDS APPLIED	6,881,643	16,741,158	6,157,980	1,170,666	310,492	1,289,671	

Who's who in the TAAT Program in 2020

PROGRAMME STEERING COMMITTEE

Members:

Mr. Gaston Cossi DOSSOHOU	<i>Chairperson</i>
Dr. Mary A. MGONJA	<i>Vice-Chairperson</i>
Dr. Dunstan S.C. SPENCER	<i>Vice-Chairperson</i>
Dr. James Ambrose AGONA	<i>Member</i>
Dr. Stella Ama ENNIN	<i>Member</i>
Dr. Sophia E.N. MLOTE	<i>Member</i>
Prof. Abdourahmane SANGARE	<i>Member</i>
Dr. Abdou TENKOUANO	<i>Member</i>
Dr. Noe WOIN	<i>Member</i>
Ms. Maria Z. ZALOUMIS	<i>Member</i>

Ex officio members (non-voting)

Dr. Kenton DASHIELL	<i>Rep., Executing Agency</i>
Dr. Ramadjita TABO	<i>Rep. the Implementing Agencies</i>

PROGRAMME MANAGEMENT UNIT (PMU) STAFF

Chrysantus AKEM	<i>Programme Coordinator</i>
Sabra LEWIS	<i>Programme Administrator</i>
Seyi FASHOKUN	<i>Programme Accountant</i>
Monsuru BAKARE	<i>Procurement Specialist</i>
Chidozie AGBAKWURU	<i>Procurement Officer</i>
Kikelomo ADEKOYA	<i>Accounting Officer</i>
Becca OLAMUYIWA	<i>Accounting Officer</i>
Ebenezer ADENEKAN	<i>Executive Assistant</i>
Tarhyel AYUBA	<i>Driver</i>

CLEARINGHOUSE (CH) STAFF

Innocent MUSABYIMANA	<i>Head of Clearinghouse</i>
Oluwatoyin ADETUNJI	<i>Value Chain Specialist</i>
Rachel ZOZO	<i>Monitoring & Evaluation Specialist</i>

Atayi OPALUWAH	<i>Communication Specialist</i>
Paul WOOMER	<i>Technical Adviser</i>
Fidelia BABADJIDE	<i>Executive Assistant</i>
Rollande HOUNSINO	<i>Senior Accountant</i>
Welissa MULEI	<i>Technical Assistant</i>
Boris ADOUGAN	<i>Driver/Messenger</i>

TECHNOLOGY DELIVERY COMPACTS

Rice Compact (led by AfricaRice)

Ernest Asiedu	<i>Compact Coordinator</i>
Abiba Omar MOUSSA	<i>Technology Transfer Officer</i>
Kevin KOUADIO	<i>Accountant</i>

Maize Compact (led by AATF)

Jonga MUNYARADZI	<i>Compact Coordinator</i>
Samuel ANGWENYI	<i>Project Officer</i>
Fredah NYAGA	<i>Accountant</i>

Sorghum & Millet Compact (led by ICRISAT)

Dougbedji FATONDJI	<i>Compact Coordinator</i>
Boubakary CISSE	<i>Technology Transfer Officer</i>
Madeleine NKOLNDENG	<i>Accountant</i>

Wheat Compact (led by ICARDA)

Zewdie BISHAW	<i>Compact Coordinator</i>
Hassan Mahmoud	<i>Accountant</i>

High Iron Beans Compact (led by CIAT)

Josey Kamanda	<i>Compact Coordinator</i>
Justin MACHINI	<i>Tech. Transfer Officer</i>
Jesika ODUOR	<i>Accountant</i>

Who's who in the TAAT Program in 2020

Cassava Compact (led by IITA)

Adebayo ABASS *Compact Coordinator*

Orange-Fleshed Sweet Potato Compact

Paul DEMO *Interim Compact Coordinator*

Daniel MBOGO *Technology Transfer Officer*

Livestock Compact (led by ILRI)

Samuel Adeniyi ADEDIRAN *Compact Coordinator*

Getachew FEYE *Technology Transfer Officer (Ethiopia)*

Sidi TOUNKARA *Technology Transfer Officer (Mali)*

Ermyas SEBSIBE *Accountant*

Aquaculture Compact (led by WorldFish)

Bernadette FREGENE *Compact Coordinator*

Ajibola OLANIYI *Technology Transfer Officer*

Toyin EMMANUEL *Accountant*

Fall Armyworm Compact (led by IITA)

Peter CHINWADA *Compact Coordinator*

Enable-TAAT Compact (led by IITA)

Noel MULINGANYA *Compact Coordinator*

Idowu OSUN *Business Development Officer*

Soil Fertility Compact (led by IFDC)

Jean Ekwe DOSSA *Interim Compact Coordinator*

Hortense ZOUNGRANA *Accountant*

Water Management Compact (led by IWMI)

Sander ZWART *Compact Coordinator*

Richard APPOH *Technology Transfer Officer*

Seth NKETSIAH *Accountant*

Capacity Development & Technology Outreach Compact (led by FARA)

Krishan BHEENICK *Compact Coordinator*

Benjamin ABUGRI *Knowledge Management & Technological Outreach*

Belinda KASEI *Accountant*

Karen Munoko *Agribusiness Expert*

Policy Support Compact (led by AATF)

Francis NANG'AYO *Compact Coordinator*

Daniel Kyalo WILLY *Programme Officer*

Mary Asorit *Finance Assistant*





Beneficiaries of GEM rice parboiling technology at the TAAT Innovation Platform in Malanville, Benin Republic



For more information, please contact:

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PARTNERS:

