Project Cluster Evaluation of the AfDB’s Technology for African Agriculture Transformation (TAAT) Program – Phase I

Executive Summary

May 2023
Executive Summary

Background

This summary report presents the key findings, lessons, and recommendations of a project cluster evaluation of the African Development Bank Group (AfDB or ‘the Bank’)’s Technologies for African Agricultural Transformation (TAAT) Program, Phase I (TAAT-I). The evaluation was part of Independent Development Evaluation (IDEV)’s 2022-2024 work program and was conducted after TAAT-I ended in September 2022.

IDEV’s evaluation of TAAT-I had originally been planned to inform decisions about the second phase of the TAAT Program (TAAT-II). However, the evaluation took place during a period of unprecedented global change, as a result of which the Bank expedited its approval of the African Emergency Food Production Facility (AEFPF) in May 2022 and of TAAT-II in July 2022. As a result, IDEV’s evaluation will inform not the approval but the implementation of TAAT-II, as well as the implementation of other Bank initiatives in the sector.

The main goal of TAAT-I was to deploy proven agricultural technologies to raise the productivity and production of selected agricultural commodities. The program also sought to mitigate risks and promote diversification and processing in 18 agricultural value chains; to harmonize national, regional, and transnational border protocols for the introduction and release of improved seed varieties and breeds; to synchronize seed system protocols across countries and regions, especially for the production of foundation seeds; to combat the spread of destructive pests and diseases affecting crops and livestock across borders; and to create an enabling environment for entrepreneurship and private sector activity.

TAAT’s overall objective was to increase food output by 120 million tons and lift 40 million people out of poverty by 2025. To do this, the program developed compacts for nine commodities: maize, rice, wheat, cassava, high-iron beans, orange-fleshed sweet potato, sorghum/millet, livestock, and aquaculture. The nine commodity compacts were supported by enabler compacts that addressed six areas of intervention: soil fertility management, water management, capacity development, policy support, youth in agribusiness (Enable TAAT), and the response to fall armyworm. TAAT-I originally targeted 22 countries but by completion had supported 29 countries, all of which were eligible for the African Development Fund.

At approval, TAAT-I’s total resource envelope was UA 40 million (USD 55.2 million). This comprised UA 29.0 million (USD 40 million) from an African Development Fund grant, UA 7.25 million (USD 10 million) from the Alliance for a Green Revolution in Africa (AGRA), UA 0.85 million (USD 1.17 million) from the Bill & Melinda Gates Foundation (BMGF), and UA 2.9 million (USD 4.0 million) of counterpart funding from regional member countries (RMCs). Over the course of implementation, the AfDB disbursed UA 27.53 million (USD 38.4 million) and the BMGF increased its contribution to UA 4.79 million (USD 6.6 million). USD 8.2 million was leveraged from TAAT-related programs funded by other development partners and the private sector in RMCs. Except for USD 127,000 provided by the Government of Togo, data was not available on governments’ counterpart contributions, whether in cash or in kind.
Purpose and Scope of the Evaluation

The evaluation examined TAAT-I’s strategic orientation and the program’s relevance, coherence, effectiveness, efficiency, and sustainability over its entire duration, that is, from February 2018 to September 2022. The evaluation also drew lessons and good practices related to the program’s compacts and contexts. The evaluation covered the program’s nine commodity compacts in seven purposively sampled countries; for each commodity compact, it also examined all applicable enabler compacts. The sample ensured adequate representation of all agroecological zones, all regions, and all country development contexts, including fragility. The evaluation focused on both the program and compact levels and presents its findings accordingly.

Evaluation Questions and Methodology

The evaluation followed the AfDB’s Independent Evaluation Policy and conformed to IDEV’s guidance for project cluster evaluations. The evaluators formulated the evaluation questions after consulting with the Evaluation Reference Group, the Bank’s Agriculture & Agro-Industry Department (AHAI), and several Board members. The evaluation questions can be summarized as follows:

Q1. To what extent was TAAT-I relevant to the needs of the targeted beneficiaries, RMCs, and other stakeholders?

Q2. To what extent were TAAT-I interventions in selected commodity compacts and intervention sites coherent with other Bank interventions to develop agriculture and increase productivity, and with the interventions of RMCs and other development partners?

Q3. To what extent did TAAT-I achieve or was likely to achieve its expected results and contribute to improved productivity, incomes, and food security among targeted communities and individuals for selected commodity compacts in the intervention sites?

Q4. To what extent was TAAT-I effective at leveraging resources and promoting innovation through partnerships for selected commodity compacts in the intervention sites?

Q5. How efficient was TAAT-I in using its resources and implementation arrangements, including the program’s ecosystem—the program management unit (PMU), the clearing house, the Steering Committee, and the commodity technology delivery compacts—to achieve its objectives?

Q6. To what extent were TAAT-I activities and results sustainable or were likely to be sustained for selected commodity compacts in the intervention sites?

Q7. What key lessons can be drawn about what works and does not work, where and under what circumstances, for selected commodity compacts in different country contexts? How effectively were good practices shared during the program’s implementation?

To answer these questions, the evaluation used a theory-based approach and three lines of evidence: a desk review of program-related documents, key informant interviews, and country case studies. For the country case studies, the evaluation reviewed country-level documents, conducted country- and community-level interviews, held community- and beneficiary-level focus group discussions, and undertook observation visits. Except for Nigeria and Niger, in each country covered by a case study, the evaluation examined two commodity compacts. In Nigeria and Niger, the evaluation examined one commodity compact each. The resulting case studies covered the following compacts and countries: wheat and livestock in Ethiopia, cassava in Nigeria, maize and aquaculture in Zambia, high-iron beans and orange-fleshed sweet potato in Kenya, millet/sorghum in Niger, rice and maize in Benin, and cassava and orange-fleshed sweet potato in Democratic Republic of Congo (DRC).
The evaluation experienced several challenges, the most significant of which were (i) the limited availability of data and the complexity of attributing results to the program; (ii) conflicts and insecurity that prevented the evaluators from assessing the orange-fleshed sweet potato and cassava interventions in DRC and visiting certain sites in other countries; and (iii) high turnover among staff of the Bank, the project’s implementing partners, and RMCs. The evaluation mitigated these challenges by using multiple lines of evidence to triangulate and validate the findings. The sources of evidence included the documentation systems of the program’s implementing partners and the program’s monitoring and evaluation (M&E) unit.

**Main Findings**

**Relevance**

The evaluation assessed the extent to which TAAT-I’s strategic orientation and design aligned with the Bank’s policies, strategies, and operations in the agriculture sector and with RMCs’ needs. The evaluation also assessed the program’s design and how the program integrated cross-cutting issues.

**Alignment:** The evaluation found that TAAT-I aligned with the Bank’s Ten-Year Strategy 2013–2022, which identified agriculture and food security as one of its three areas of special emphasis, and with the “Feed Africa” High 5. The Bank’s Feed Africa Strategy seeks to use a value chain approach to transform Africa’s agriculture and increase the productivity of major crops on the continent: TAAT-I’s commodity compacts did likewise. In addition, TAAT-I’s support aligned with RMCs’ priorities for the agriculture sector.

**Design:** The evaluation found that TAAT-I’s design was complex and overambitious. With nine commodity compacts and six enabler compacts, the program’s scope was broad; with 29 countries, its geographic coverage was vast; and with more than 300 partners, its implementation model was complex. Nonetheless, the evaluation found TAAT-I’s design to be tailored to the needs of RMCs, institutions, and beneficiaries at different levels. In Ethiopia, for instance, the program supported the government in its aim to achieve wheat self-sufficiency by expanding production in lowlands that traditionally had been agropastoral zones. Similarly, in Nigeria, the program supported the private sector and farmer groups to increase their cassava processing capacity in response to the increase in the supply of cassava that resulted from farmers’ use of improved varieties and good agricultural practices. However, the evaluation observed shortcomings in TAAT-I’s mainstreaming of the cross-cutting themes of gender and the environment, despite some progress on the theme of youth empowerment.

Notwithstanding the importance of TAAT-I’s shortcomings, on balance, the evaluation rated the program’s relevance as satisfactory.

**Coherence**

The evaluation assessed coherence in terms of the extent to which TAAT-I was integrated, harmonized, and coordinated with other Bank-supported interventions in agriculture and with similar interventions implemented by RMCs, development partners, and the private sector.

**Internal coherence:** TAAT-I mirrored the agricultural priorities identified in the Bank’s country strategy papers (CSPs) and its Feed Africa Strategy. Because the CSPs for 90 percent of the evaluation’s case study countries had been developed before TAAT-I had been approved, the CSPs did not reference TAAT-I; nonetheless, the CSPs prioritized agriculture and TAAT-I focus areas. At the same time, the evaluation found weak linkages between TAAT-I implementing partners and AfDB country offices in the case study countries, although it noted that towards the end of the program period, TAAT-I attempted to strengthen its ties to programs implemented by AfDB country offices.

**External coherence:** The evaluation made four principal findings on external coherence. First, it found that TAAT-I was well harmonized with global,
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continental, and regional frameworks for agricultural development. Among other things, the program collaborated with regional economic communities through the African Agricultural Technology Foundation to domesticate regional policy and legal frameworks for the seed subsector. For instance, remarkable transfers of technologies occurred from pioneer countries such as Nigeria (cassava) and Ethiopia (wheat) to other RMCs. Second, TAAT-I and other development partners’ programs were found to be highly integrated in countries with strong national coordination mechanisms, clear policy direction, and government-supported input provision schemes (e.g. Ethiopia, Kenya, and Zambia). However, TAAT-I’s success at leveraging resources from other development partners was inferior to that of similar, AfDB country office-led programs, which attracted up to 45 percent of their resources in this way. This was due to the limited degree to which the program coordinated its activities with development partners and government stakeholders in RMCs. Third, the strength of the linkages between TAAT-I and the private sector depended on RMCs’ policy environment. For example, RMCs with weak national input support programs experienced more private sector participation but needed a good regulatory framework. As for universities and nongovernmental organizations, they played a critical role in implementation. Fourth, TAAT-I was able to adapt to the initial institutional coordination challenges experienced by the program’s ecosystem (the PMU, the clearing house, the Steering Committee, and the compacts), but challenges persist.

Overall, TAAT-I demonstrated a satisfactory level of coherence.

Effectiveness

The evaluation assessed TAAT-I’s effectiveness by assessing the extent to which the program and its compacts achieved or were likely to achieve planned results and contribute to improved productivity, incomes, and food security among targeted communities and beneficiaries. The evaluation presents its findings in this regard in terms of the TAAT-I program’s objectives. The evaluation also assessed the achievement of outcomes. The assessment took place at the program level and was supported by an in-depth examination of results at the compact level in the case study countries.

Creating an enabling environment for farmers’ adoption of technology: The evaluation found that the program’s support for policy reforms-reforms that promoted the mobility of agricultural technologies, inputs, and products across borders, especially among countries in similar agroecological zones-produced tangible results. The three indicators on policy reform achieved 145 to 193 percent of their targets.

Resource mobilization: TAAT-I’s financial resources consisted of the Bank’s contribution, the BMGF’s funds for the project’s clearing house, and resources leveraged by RMCs from similar projects supported by the private sector and other development partners. A total of USD 8.2 million was leveraged against a target of USD 4.8 million, representing an achievement rate of 170 percent. As for counterpart funding, apart from USD 127,000 provided by the Government of Togo, data was not available on the resources provided by RMC governments, whether in cash or in kind. TAAT-I was less successful at mobilizing resources from AfDB-supported country programs: it only leveraged 74 percent of its target (USD 9.5 million of the USD 12.9 million targeted). Several stakeholders and program staff expressed concern about the shortage of external resources for scaling up TAAT technologies in RMCs.

Cross-cutting issues: The evaluation found the program’s performance on inclusivity and the mainstreaming of cross-cutting themes to be mixed. The program succeeded considerably on youth empowerment but less well on gender and the environment. The work on gender concentrated mainly on quotas for the participation of women, pegged at 40 percent; little gender analysis took place, and only one of 27 outcome indicators was disaggregated. The Enable TAAT Compact made progress on building youths’ capacity and
involving youths in Agripreneurship (awareness-raising activities, trainings, agribusiness parks, and group business ventures), but youths’ involvement was constrained by their poor access to land and finance. As for the implementation of environmental safeguards, in general, few risks materialized, but in some areas, the program failed to put appropriate mitigation measures in place.

**Facilitating delivery to farmers:** Although TAAT-I was found effective in developing partner organizations' capacity to deliver technology to farmers, these efforts did not increase farmers’ access to trainings on the technologies in question. The evaluation found demonstration sites to be vital for building capacity and promoting TAAT-I technologies. The program established 202 multi-stakeholder innovation platforms for learning, knowledge generation, and dissemination against a target of 234. Through these platforms, 1,250 partners (the target was 1,122) were involved in the program and received capacity-building support. This resulted in 351,456 staff members of TAAT-I partner organizations being trained under 13 of TAAT-I’s 15 commodity and enabler compacts. The training developed the capacity of national agricultural research and extension systems (NARES) centers, which were critical for training farmers. That said, only 497,275 people were trained in the development of agricultural enterprises: this fell far short of the target of 9.6 million and produced an achievement rate of only 5.2 percent. Although TAAT-I’s program-level data validated and consolidated the data tracked in compact-level reports, a review of compact-level closure reports suggests that the number of farmers trained may have been under-reported. For example, in three case study countries (Kenya, Nigeria, and Zambia) and three other beneficiary countries (Cameroon, Uganda and Zimbabwe), Syngenta, a private seed company, implemented fall armyworm-related activities that trained 1,237 staff members of partner organizations (NARES centers, agrochemical and seed companies, and academia). The NARES centers cascaded this training to 833,374 district-level extension agents. In Zambia alone, the cumulative number of beneficiaries of Fortenza Duo-treated maize seed reached 2 million farmers.

Interviews with stakeholders and focus group discussions with farmers revealed that the main challenges in training more farmers resulted from inconsistencies in the level and intensity of training activities. More training took place in the first season than in following seasons, on account of limited resources and COVID-19 restrictions. Nonetheless, the program helped establish 2,789 new small and medium agribusinesses against a target of 2,421. It also strengthened 102 national seed systems against a target of 106, accredited 5,000 input suppliers, and established digital seed trackers. This was critical in Benin and Nigeria, where small-scale farmers raised concerns about counterfeit seeds and seeds whose quality had been compromised.

The development of regional value chains was an important aspect of TAAT-I. The program had not established indicators for this activity, but the evaluation observed two notable achievements: the widespread adoption of semi-autotrophic hydroponics (SAH) technology, resulting in the establishment of improved cassava seed systems in Benin, DRC, and Nigeria; and value addition realized with improved cassava processing technologies. In Nigeria, Niji Agro Solutions spearheaded the research, fabrication, and export of food-processing and agro-equipment technologies across cassava-growing countries in Central and West Africa. In Kenya, the evaluation found evidence of a regional value chain for orange-fleshed sweet potato, with farmers sourcing cheaper planting materials from Tanzania. However, among TAAT-I’s main shortcomings were delays in the adoption of regional policies and regulations to harmonize seed systems and ease the movement of technologies among RMCs in similar agroecological zones.

**Deployment of appropriate technologies:** In total, the program deployed 208 individual technologies (133 bundled technologies): the target for individual technologies was 202. The program involved 63,472 intermediate beneficiaries against a target of 62,427.
Most intermediate beneficiaries were farmers and people involved in establishing community demonstration sites, multiplying seeds and planting materials, and fabricating equipment. Some 18.9 million people against a target of 20.2 million were reached by awareness-raising campaigns. However, of the 40 million people targeted, only 10.9 million ultimate beneficiaries (27 percent) actually used the technologies and accessed the program’s services. At the same, it should be noted that the 40 million target had been set at the design stage for all three phases of TAAT ending in 2025, not just for TAAT-I, which ended in 2022. By the end of TAAT-I, 21 percent of the program’s ultimate beneficiaries had accessed market facilities and services, 5.4 percent had used post-harvest technologies, 22 percent had engaged in commercial agribusiness supply chains, and 53 percent had accessed inputs.

Overall, despite the program’s progress in creating an enabling environment and helping partners establish an effective technology delivery infrastructure, persistent barriers prevented beneficiaries from taking full advantage of the technologies and the market linkages promoted by the program. First, small-scale farmers only had access to small plots of land and found it difficult to finance the expansion of their agricultural activities. The case studies revealed that this was especially true for youths. Second, limited access to inputs and other complementary services from governments, the private sector, and other development partners prevented beneficiaries—especially youth—from starting and expanding agricultural enterprises.

**Achievement of outcomes:** The evaluation found that despite progress on TAAT-I’s outputs, the limited scale and duration of TAAT-I’s interventions made it difficult to assess progress on outcomes, among others because of the weakness of TAAT-I’s M&E system and the complexity of attributing the results: that is, the difficulty of assessing how much of the results were due to TAAT-I and how much they were due to other agriculture programs. Nevertheless, the evaluation referred to a selection of commodity compacts in its country case studies to estimate the program’s outcomes for a limited number of beneficiaries. On this basis, the evaluation found mixed results for the program’s contribution to increased agricultural production and productivity.

**Efficiency**

The evaluation examined how efficiently TAAT-I used its resources (its time and its funds) and its implementation arrangements, including the program’s ecosystem (the PMU, the clearing house, the Steering Committee, the commodity technology delivery compacts, and the commodity and enabler compacts) to achieve the program’s objectives.

**Timeliness, Resource Use, and Implementation**

**Timeliness:** The evaluation found that despite the program’s complexity, the appraisal and approval of TAAT-I only took 4 months. Nonetheless, 7 months elapsed between the Board’s approval and the program’s first disbursement. Delays in disbursements were also found to affect the implementation of compact activities, especially the procurement of key agricultural inputs necessary at the beginning of the farming season. For example, delays in obtaining statements of no objection for the fall armyworm compact reduced disbursements for field activities in Kenya, Nigeria, and Zambia by 30 percent.

**Resource Use:** Overall, the program’s performance on resource use was found mixed. The program was only able to use its funds after two no-cost extensions. At the same time, some 90 percent of interviewees—especially program staff, the management staff of implementing partners, and the representatives of RMC institutions—expressed concern about the program’s limited resources. A comparison of the resource envelope and scope of TAAT-I and those of the Support to Agricultural Research for Development of Strategic Crops in Africa project (SARD-SC) indicated that TAAT-I’s resources were limited in light of the expectation that TAAT-I would deploy
technologies, including technologies developed by SARD-SC, at scale. Indeed, at UA 39 million (USD 60.5 million), SARD-SC’s resource envelope was similar to TAAT-I’s, but SARD-SC only supported four commodities in 20 RMCs, whereas TAAT-I supported nine commodities in 29 RMCs. Under TAAT-I, a 13 percent overhead for implementing partners, a 2 percent consultative group tax for CGIAR partners, and operating and human resource costs reduced the resources available for each country. Furthermore, the evaluation estimated that countries that participated in commodity compacts that covered 11 to 16 countries (the compacts for maize, cassava, rice, and aquaculture) received a total of USD 57,007 to USD 88,018 each over the life of the program. In contrast, countries that participated in compacts that only covered 4 to 5 countries received an estimated USD 248,315 to USD 297,640. This showed that compacts’ coverage affected the level of TAAT-I’s support.

Implementation: The evaluation found that delays associated with the Bank’s procedures for procurement and disbursement undermined the timeliness and flexibility of the program’s activities. In Nigeria, for example, the cassava compact’s slowness in procuring cassava cuttings delayed the program by seven months after the start of the planting season in April. The outbreak of the COVID-19 pandemic and measures introduced by RMCs to contain the spread of the virus slowed implementation as well. These factors led to a 40 percent slippage in the program’s completion.

TAAT-I’s institutional framework: TAAT-I’s design was complex and the program’s implementation model involved over 300 partners. The institutional framework for managing these partnerships had several layers of approvals and agreements: this created a burdensome bureaucratic system for approvals and oversight. Furthermore, the program counted 141 sub-agreements with partners: establishing these agreements and managing them during implementation entailed huge responsibility and was itself a time-consuming endeavor. Despite coordination challenges, however-especially in the early stages of the program—the evaluation found TAAT-I’s management entities (the PMU and the clearing house) and the program’s compacts to have functioned reasonably well. That said, challenges persisted in terms of the clarity of roles and responsibilities, financial and program management procedures, and the coordination between commodity and enabler compacts.

Monitoring, evaluation, and learning (MEL): The evaluation found that a programmatic MEL framework had not been prioritized and integrated into the design of TAAT-I at the project appraisal report stage. A systematic focus on MEL activities was only operationalized after a mid-term review of the program in December 2019, followed by an automated system developed with additional funds provided by the International Institute of Tropical Agriculture (the executing agency) and the BMGF.

The evaluation also found that the program only employed one dedicated M&E expert to support both management entities (the PMU and the clearing house) and the 15 commodity and enabler compacts in 29 RMCs. An M&E assistant was only engaged towards the end of the program. This arrangement compromised the design of the system as well as the collection and quality assurance of data used to track the output and outcome results reported by the program’s partners. The cost of direct MEL expenses—the cost for personnel, equipment, and the development of the MEL system—was USD 580,000; this represents only 1.5 percent of the total budget, well below the 3-10 percent recommended by development organizations. These shortcomings limited the scope and depth of the program’s M&E system and affected the rigor of data collection and analysis, especially for outcome and impact indicators.

The evaluation also found that TAAT-I did not effectively leverage the capacity of implementing partners—especially the CGIAR centers, national research centers, and universities—to deploy complementary, independent systems to collect data and monitor the achievement of outcomes and impacts.
Given these shortcomings, the evaluation rated TAAT-I’s efficiency as partly unsatisfactory.

**Sustainability**

The evaluation examined sustainability by assessing the extent to which TAAT-I interventions and results were likely to be sustained at the program and compact level in the case study countries.

**Sustainability of results:** The evaluation found the sustainability of the program’s results to be promising but limited. According to the evaluation’s document review and stakeholder consultations, TAAT-I was premised on principles of sustainability and focused deliberately on building partnerships. But evidence from stakeholder interviews revealed that TAAT-I’s huge number of partnerships (more than 300) were difficult to coordinate and support. This undermined the sustainability of TAAT-I’s interventions and results.

**Ownership by stakeholders:** The sense of ownership of the program’s interventions on the part of RMCs, the private sector, and other partners was found to be satisfactory but could have been stronger. The evaluation found that in DRC (cassava and aquaculture), Ethiopia (wheat), Kenya (high-iron beans), and Zambia (the fall armyworm response, which was the enabler compact for maize), a deliberate, government-led process of coordinating and linking various actors improved results. The private sector’s participation in TAAT-I activities was mainly driven by the viability of the technologies promoted: for example, cassava processing in Nigeria and the use of Fortenza Duo against fall armyworm in Zambia.

**Sustainability of institutions:** The evaluation noted that pre-existing, higher-level institutions, such as CGIAR centers and regional economic communities, demonstrated good potential to sustain the program’s interventions because of their capacity to mobilize resources and the fact that TAAT-I’s interventions fell within their mandates and areas of specialization. In contrast, the sustainability of national institutions, country-level research institutions, and extension systems in RMCs was found to be weak on account of limited funding and other capacity gaps. Although the TAAT Program had been expected to be implemented over three phases, the limited focus on developing a sustainability plan for the clearing house early in the first phase was another major gap.

**Functioning of new partnerships:** The assessment of the functionality and sustainability of partnerships created at various levels found mixed results. TAAT-I’s partnerships with regional economic communities, implementing partners, and the private sector were found to perform well and created new opportunities for country-level institutions in Benin, Nigeria, Kenya, and Zambia. Consequently, partners participated in the program and compact activities and were keen to sustain their partnership. In contrast, the program’s partnerships with extension services and research institutions were found moderate: their continuity relied on the flow of resources from TAAT-I or the government.

**Financial and economic sustainability:** Although the project appraisal report had projected an economic rate of return of 40 percent and a financial rate of return of 20 percent, the evaluation found that the potential of beneficiaries (smallholder farmers) to realize these returns was undermined by several factors. One such factor was farmers’ limited use of key farm inputs. In Ethiopia, for example, farmers’ incomes were limited by the small size of their plots (the average was 0.5 hectares). In a discussion with farmers in the Ido area of Oyo State, Nigeria, the farmers complained of low farm-gate prices and their lack of access to credit (interest rates were as high as 30 percent). These barriers, among others, made it impossible for beneficiaries to realize the full potential of the agricultural technologies promoted by the program.

**Environmental sustainability:** The evaluation found that TAAT-I prioritized environmental sustainability from the onset. The program’s development included environmental impact assessments and the preparation of an environmental and social
management plan. Although environmental and climate change-related challenges and risks were present, in the case study countries their manifestation was low. That said, the evaluation observed some challenges in the case study countries, such as monocropping, which emerged because of the absence of alternative economically viable crops with which farmers could rotate production. The phenomenon was exacerbated by small-scale farmers' limited access to land. The evaluation found that the program did not put in place adequate measures to continuously monitor and address these and other potential environmental challenges and risks.

Overall, the evaluation rated TAAT-I's sustainability as satisfactory.

Conclusion

The evaluation found that despite concerns about the level and consistency of TAAT-I’s support, TAAT-I made significant progress in achieving planned results, especially for outputs, with results on outcomes being more mixed. The program delivered innovative technologies to farmers at both the program and the compact level. Still, barriers prevented beneficiaries from taking full advantage of the technologies.

The program’s achievements did not materialize without challenges: financial resources that were insufficient for the program's geographic coverage and scope, complexities in the coordination mechanisms of TAAT-I’s ecosystem, operational challenges, and the adverse effects of the COVID-19 pandemic. In addition, the complexity of the program’s design produced notable operational challenges that undermined the program’s efficiency, especially in the early stages. Finally, TAAT-I demonstrated shortcomings when mainstreaming the cross-cutting issues of gender and the environment but performed better on youth empowerment.

Lessons

The evaluation draws five lessons from its assessment.

Lesson 1: Bank-supported operations executed and implemented by third-party organizations need strong linkages and coordination with AfDB country offices to engage effectively with RMC institutions and other stakeholders if they are to influence policies and strategies. They also need to better coordinate with programs supported by other development partners.

Lesson 2: A simple and agile program design is vital to efficient implementation and the achievement of results.

Lesson 3: The private sector’s participation in commodity compacts is critical to scaling-up and sustainability.

Lesson 4: Beyond the adoption of technology, support services are critical for agricultural transformation and modernization, especially when programs target youths and other vulnerable populations.

Lesson 5: Strong links with research and effective feedback mechanisms are critical to continuously update technology catalogues and meet farmers’ demands for improved technologies.

Recommendations

IDEV makes three recommendations:

Recommendation 1: Strengthen the design and implementation arrangements for TAAT-II and future, related programs. Priority actions include:

- Strengthening the coordination among TAAT management entities, TAAT implementing partners, AfDB country offices, key government institutions, and other development partners at the country level.
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- Revisiting and reviewing, as necessary, the roles and responsibilities of TAAT’s management entities (the PMU and the clearing house), the compacts, the Steering Committee, and the program’s financial management systems to make the TAAT Program more efficient.

- Ensuring that the program’s cross-cutting themes (gender, youth, and the environment) are mainstreamed at all stages of the program cycle.

**Recommendation 2:** Pursue increased private sector participation in TAAT-II and related agriculture operations. Priority actions include:

- Strengthening linkages between the TAAT Program and the Bank’s non-sovereign operations department to optimize the Bank’s support to private sector entities and enable them to seize emerging opportunities, in a timely manner, within the commodity compacts.

- Enhancing collaboration with financial institutions to facilitate farmers’ and small and medium-sized enterprises’ access to inexpensive medium- or long-term financial resources to enable them to make effective, sustainable investments in agriculture, for the benefit of vulnerable populations such as youths.

**Recommendation 3:** Strengthen the monitoring, evaluation, and learning systems of TAAT-II and future related programs by integrating the design of a monitoring, evaluation, and learning system from the onset and providing adequate resources, both human and financial, to operationalize the system in a timely fashion.
About this evaluation

This summary report presents the key findings, lessons, and recommendations of a project cluster evaluation of the African Development Bank Group (AfDB or “the Bank”) Technologies for African Agricultural Transformation (TAAT) Program, Phase I (TAAT-I) over the period 2018-2021. The evaluation assessed the relevance, coherence, effectiveness, efficiency, and sustainability of the TAAT-I program with a focus on selected countries, nine commodity compacts and six enabler compacts.

Overall, the evaluation found that the program was aligned with the strategies and initiatives of the Bank, as well as the priorities and needs of RMCs regarding agricultural development and transformation. However, the program was centrally coordinated from AfDB Headquarter offices with limited involvement of AfDB Regional and Country Offices. The program, in terms of effectiveness, performed well in achieving its intended output results, in the face of modest resources and the effects of COVID-19 pandemic on implementation. Indeed, evidence indicates that the promoted technologies had positive effects on productivity, production levels, incomes, and the food security of beneficiary households. The evaluation assessment of efficiency was rated partly satisfactory due to challenges in resource allocation and disbursements, as well as procurement of commodities and the COVID-19. The design of the TAAT-I program was based on sustainability principles, focusing on partnership building at various levels of implementation which had positive results. However, the limited funding to critical partners and inadequate response to emerging and potential economic, environment and climate change-related risks threatened the sustainability of interventions. Finally, the focus on inclusivity, in terms of mainstreaming gender and youth had mixed results, and the application of environmental safeguards, overall, was limited.

The evaluation recommends the Bank to strengthen the design and implementation arrangements for TAAT-II and future related programs. It also recommends pursuing increased private sector participation in TAAT-II and related agriculture operations; and strengthening the monitoring, evaluation, and learning (MEL) systems of TAAT-II and future related programs by integrating the design of a MEL system from the onset and providing adequate resources to operationalize the system in a timely fashion.