TAAT Phase II: Deploying agricultural technologies and innovations at scale

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Presentation Outline

01 The Context & rationale

02 TAAT Program & Clearinghouse

03 TAAT technology vetting and profiling

04 TAAT country engagement, scaling approach & partnership,

05 Examples of transformative success stories
Today, the technologies exist to feed Africa, if widely deployed. They include: i) high yielding crop varieties & livestock breeds; and ii) bio-fortified crops such as pro-vitamin A rich cassava, high iron & zinc rice, high zinc sorghum. If scaled up, these can help to address the problems of malnutrition & stunting of African bodies and minds. In fact, Africa has more food production technologies available today than Asia had at the time of its Green Revolution.
TAAT (Technologies for African Agricultural Transformation) is a flagship program of the Feed Africa Strategy of the African Development Bank.

TAAT seeks to increase agricultural productivity across Africa by deploying proven agricultural technologies integrating social inclusion dimensions to farmers.

Technologies exist today to feed Africa; we need to get them into the hands of millions of farmers to raise productivity.

TAAT is a partnership that brings together all the key players in a unique delivery system.

Overall goal - Double crop, livestock, and fish productivity by expanding access to productivity-increasing technologies to more than 40 million smallholder farmers across Africa.
The key organizing principles of TAAT for Africa Feeding Africa

The key organizing principles for achieving a transformative impact at scale in RMCs:

- Technology Matters
- Scale Matters
- Policy Matters
- Partnership Matters
TAAT Program Components Driving Delivery of Innovative Solutions

TAAT works with 11 commodity compacts and 3 enabler compacts in SSA countries.

11 commodity compacts:
- Rice
- Maize
- Sorghum/Millet
- Wheat
- High-iron beans
- Cassava
- OFSP
- Vegetables
- Soybean
- Small ruminants
- Aquaculture

3 enabler compacts:
- Youth
- Policy
- Capacity Development

1. Creating an Enabling Environment
2. Deploying a Regional Technology Delivery Infrastructure (RTDI)
3. Deployment of technologies
4. Program management
THE REGIONAL TECHNOLOGY DELIVERY INFRASTRUCTURE (RTDI)
With IITA as the Executing Agency

Structure of TAAT’s Regional Technology Delivery Infrastructure

- Clearinghouse (CH)
  - IFPRI, FARA, NARES, IWMII, ILRI,
  - WorldFish, SROs, Private sector

- Commodity Technology Delivery Compact (CTDC)
  - Implementing CGs + others + DPs
    - AAFT, AfricaRice, ICRISAT, ICARDA, IITA, CIMMYT, CABI, ICIPE

- Program Management Unit (PMU)
  - IITA- Executing Agent

The Program Management Unit promotes a sustainable TAAT implementation structure adhering to compliance of the donor.

The Clearinghouse promotes work of the Compacts at scale and through country investments for sustainable transformation.

Scaling of TAAT Technologies – The Critical & Unique Linkages
The TAAT-Clearinghouse is the lynchpin of TAAT, vetting & selecting agricultural technology and marketing them to the public & private sectors and development partners.
TAAT brokers proven & evidence-based technologies

Flow of Technologies, Innovations, Best Practices...

Feedback to inform and direct R&D

Governments

Private Sector

Technology brokering

TAAT Clearinghouse

Technology scouting, vetting & characterising

TAAT Compacts

NARS

CG Centers & ARIs

Private sector

Technology repositories
Technology providers:
- TAAT Compacts (CGIAR, ARI)
- Other providers
  - NARS, SROs
  - Private sector
  - Other repositories (USAID..)

Transparent vetting process
- Pre-vetting using scaling readiness
- Vetting committee of wise people
- Ensures technologies are fit for purpose and ready to scale
TAAT technology e-catalogs available online

2-TAAT technology e-catalogs, customized to specific audiences, available on-line

- Currently technologies profiled for
  1) Government 2) the Private Sector
    - 130+ technologies profiled in the database
    - e-catalogs offer powerful search, filtering and browsing
    - Online help system available

To make it easy to select the right technology for your needs
Technology Profiles with content customized for 2 e-catalogs (Private sector and Governments)
TAAT e-catalogs
Detailed profiles of validated agricultural technologies for projects and businesses

https://e-catalogs.taat-africa.org/
Government Engagement Strategy for Agricultural Transformation in Africa

**Approach:**
- **TAAT CH Team with Compacts**
  - actively participate in Country missions and engage governments and national partners by strongly coordinating and working closely with Bank’s TAAT Coordination Team, Task Managers, Regional Sector Managers and Country Coordinators for inclusion of TAAT vetted technologies in Country’s large scale agricultural investments and catalyse their scaling for driving agricultural transformation in RMCs
Strategic approaches and tools for country engagement

1. Gather country information
   - Value chains, AEZS, Policies,
   - Strategies, laws and regulations
   - Institutions, partners...Priorities...

2. Match-making and selecting appropriate toolkits
   - Country Info matched with TAAT techs database

3. Develop a compelling value proposition
   - Country-specific compelling value proposition:
     - Selected climate smart TAAT technologies...
     - Intervention agro-ecologies
     - Key technical assistance

4. TAAT Teams engage
   - CE Officers;
   - Compacts

5. Integrate TAAT technologies through Country Engagement to catalyze scaling

6. Integrate technologies in large-scale agricultural investments

7. Mobilize Compacts to provide Technical assistance and catalyze scaling

8. Establish a Country info database

TAAT Clearinghouse

Pursue impact through Monitoring, Evaluation and Learning (MEL)
Country Engagement Processes:
new, supervision, restructuring of underperforming projects

Country engagement for the design of new projects, mainly of AfDB

Country engagement for ongoing supervision/mid-term projects

Country engagement for restructuring of underperforming projects,
I. African Emergency Food Production Facility (AEFPF)

- With the global disruption caused by the war in Ukraine, there is an estimated supply gap of 30 million metric tons of wheat, maize, and oilseeds on the continent.

- The African Emergency Food Production Facility (AEFPF) is designed to boost the local production of cereals and oil grains as the most effective and efficient way to build the resilience of Africa’s food systems to respond to these circumstances and mitigate risks to supply in the short to medium term.
II. Dakar-2 Initiative: Commitments of African Presidents to agricultural transformation

WE, the Heads of State and Government of 34 African countries...AGREE that it is time for Africa to feed itself and fully unlock its agriculture potential...
The action-driven Dakar 2 Summit set a planned investment of mobilizing

- **$20 billion** by several other partners (WB, IFAD, IsDB..) in support of Africa’s agricultural transformation
- **$10 billion** by the African Development Bank
- 44 African countries developed Country Food and Agriculture Delivery Compacts.

Clearinghouse focus in Daka2 initiative

- Intensify government engagement operations for linking TAAT vetted technologies to large scale agricultural investments target RMCs
- Support Policy and regulatory reforms for enhancing delivery of seeds and fertilizers and developing market infrastructure and value addition
- Develop a robust national seed system with roadmap and provide technical to NRS and private sector to accelerate the production and delivery of EGS and certified seeds
- Piloting the demonstration of TAAT vetted climate smart technologies with their integrated GAP and past harvest technologies and provide ToTs for extension agents to first-track their large scale and estread adoption by wheat farmers
- Strengthening innovation platform approach by engaging all concerned stakeholders along the value chain for joining planning, implementation and linking farmers to input and output markers
Mapping AfDB, IsDB financed large scale investments in Africa

**AEFPF – On-going projects 2023/24**
- 35 countries

**Non-AEFPF sovereign loan – On-going 2023/24**
- 17 countries
Mapping AfDB, IsDB financed DAKAR 2 and Pipeline Projects

Pipeline 2023

**DAKAR 2 initiatives**
- 44 countries

**Sovereign loan pipeline projects**
- 18 countries
TAAT country engagement: Areas of key Technical Assistance to AEFPF/Dakar2/IsDB target countries

- Identifying seed supply gaps and informing the country for sourcing additional quantity of certified seeds from other countries of similar eco-ecological zones
- Providing technical specifications for the supply and quality assurance of certified seeds;
- Supporting policy and regulatory reforms facilitating access to improved seeds and fertilizers to farmers
- Developing the seed roadmap and seed system aligned with the country’s strategy and AEFPF targets
- Upgrading the skills of NARS seed technicians on EGS and private enterprises engaged in certified seed production on quality seed production and management programmes;
- Demonstrating TAAT vetted climate-resilient varieties with integrated packages in representative large scale intervention sites to fast-track a widespread technology adoption
- Providing ToTs on GAP, harvest and post harvest management for extension agents, SMSs
TAAT approach for developing seed system & road map

1. Projections based on AEPFP, DAKAR2
   Targets

   - Breeder Seed
   - Foundation Seed
   - Certified Seed

2. Stakeholder and capacity mapping

   - Seed Certification and Regulatory functions
   - SEED PRODUCTION
   - SEED DISTRIBUTION

3. Development of Investment Priorities

   - KEY GAPS
   - PRIORITIZATION
   - INVESTMENT PLAN

- What are the targets of certified seeds of Maize, Soybean, Wheat and Rice to be deployed under AEPFP in the target countries?
- What are the quantities of Foundation seed are needed to produce the certified seeds?
- What are the quantities of Breeder seeds are needed to produce the Foundation seeds?

✓ Who is involved in the production of breeder, foundation and certified seeds for target crops and varieties?
✓ What is the role of private and public players in each category of seeds?
✓ What is the capacity of each actor?
✓ What is the projected supply based on the capacity?
✓ Does the supply match with the projected demand?
✓ What are the seed distribution pathways and which actors are involved?
✓ Are there any infrastructure and capacity gaps in production and distribution of seeds?

➢ What are the short-term measures to address the gaps (e.g., import of seed)
➢ What are the long term measures to address the gaps?
➢ What are the priority actions and their investment needs?
➢ Which actors will be involved in the investment?
➢ What are the timelines for the actions?
Mapping seed sector assessment and seed road map in RMCs

25 countries
Delivering a Successful TAAT Program

TAAT Footprint across SSA countries

TAAT currently offers over 120 Technologies which can transform African agriculture

TAAT Technology providers are:
11 commodity and 3 cross-cutting or enabler Compacts
TAAT Country engagement for the integration of proven technologies into large scale agricultural investments in RMCs (Oct 2022-Dec 2023)

**Countries covered:**
- **25 AEFPF**
- **19 non-AEFPF**

**USD 1.7 billion**
Investment influenced by TAAT climate-smart technologies (including USD 866.87 million for AEFPF and USD 837.1 million for non-AEFPF projects)

**USD 44.78 million**
Mobilized to provide Implementation Support by TAAT Compacts with national partners

The TAAT Team has mapped all relevant AfDB financed large scale agricultural investments, including DAKAR 2 initiative and pipeline projects for Central, West, East, and Southern Africa

62 cases of TAAT-vetted technologies incorporated into national and regional agricultural investment projects financed through the AEFPF

**Government Engagement with Ministers**
Private sector engagement achievements

1. 29 climate-smart crop varieties (cassava, rice and wheat) adopted by 17 private seed companies

2. Engagement with over 20 private seed companies to disseminate TAAT proven technologies with compacts (e.g. Mitsui/ETG conglomerate, PICS Global LLC, Fertile Ground, SeedCo., Ecobasic Seeds, Premier Seeds, CANDEL, Africa-Agriculture, the Farmer House etc.)

3. Creation of the African Cereal and Legume Breeding Consortium (ACLBC) hosted under the AFSTA umbrella to attract over 200 seed companies operating in Africa to adopt and scale
TAAT Partnership is the largest in Africa

Examples of transformative TAAT success stories
Some examples of transformative TAAT success stories: Maize

Maize varieties for Africa

TAAT Maize Compact with partners catalyzed the scaling of climate-smart maize technologies such as the elite Water Efficient Maize for Africa (WEMA) varieties.

TAAT facilitated the production and dissemination of 21,983 tons of climate-smart maize by seed companies for nearly 879,320 ha of cultivated area.

Through its extensive partnership network, the TAAT has reached 2,302,585 farmers with climate-smart maize varieties with average maize yields of 2.68 t/ha. The compact has been able to catalyze the production of 2,331,111 MT of maize grain.
Some examples of transformative TAAT success stories: Rice Towards Self-sufficiency in Rice

The TAAT Rice Compact disseminated 67,739 MT of seeds of climate-adapted and high-yielding rice varieties which were planted on 1,354,780 ha and benefited 2,252,987 farmers, boosting rice production by 5,039,579 MT of paddy and 3,326,122 MT of milled rice.
Some examples of transformative TAAT success stories: Wheat

Irrigated wheat has increased dramatically over the past 4 years achieving over 400K ha in 2021/22 and over 1M ha planned for 2023/24

<table>
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<tr>
<th>Year</th>
<th>Area (K ha)</th>
<th>Production (K t)</th>
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<tbody>
<tr>
<td>18/19</td>
<td>5K</td>
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<tr>
<td>21/22</td>
<td>400K</td>
<td>1.6 M</td>
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</tbody>
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Productivity**

- 2.6 t/ha
- 3.1 t/ha
- 3.9 t/ha

Scale up:

- Femoral
- Amole Region
- Ghana Basin
- China Basin

Pilots:

- Gomali (22,200 ha)
- Ambome (22,200 ha)
- Aja (175 ha)
- Khirkhi (12 ha)
- Sani (5 ha)

Avg. Africa

- 2.3 t/ha
- 62,000 form 1.6 M

Improved adopted

- 3.1 t/ha
- 672,200 form 1.6 M

Improved potential

- 4.0 t/ha
- 1.6 M form 1.6 M
Some examples of transformative TAAT success stories: Cassava

Semi-Autotrophic Hydroponics™ (SAH) technique introduced in 2018

Large-scale adoption of HQCF processing and SAH for EGS production by BAB in the Agricultural Transformation Agenda (ATA-DRC)

President Obasanjo is investing about $0.3 million in 2022
Expand TAAT Partnership with CORAF

Possible areas of collaborations

▪ Explore mechanisms to link TAAT technology database with CORAF and jointly promote proven climate smart technologies in the in West and Central Africa region and across Africa

▪ Foster complementarity between TAAT and CORAF to jointly participate in country engagement missions for integrating proven technologies into large scale investments financed by IFSs (AfDB, IsDB, WB, IFAD)

▪ Joint resource mobilization for food system transformation in West and Central Africa region.

▪ Institutionalize West and Central Africa Technology trade fairs to commercialize proven technologies by engaging private sector.

▪ Strengthen the delivery of technologies through collaboration between TAAT Compacts and Regional and National and Centers of Specialization Excellence (NCoS/RCE)
Thank you for your attention