#### 24 APRIL 2025





## Session n°17:

# Innovation and technology adoption by entrepreneurs in the Caribbean









# FOR RESILIENT AGRIBUSINESS

- Presented by Mahalia Joseph
- Founder 3BAELS
   Energy ALLternative

   Services Ltd
- IICA Caribbean
   Agrifood Business
   Series | April 24, 2025



# THE PROBLEM – WHY CHANGE IS URGENT



- Energy costs = 30–40% of agri-processing expenses



- Power outages disrupt cold storage, drying, and processing



- Lithium-ion solutions are too costly, especially in rural areas



Why it matters: Energy insecurity = post-harvest losses, reduced income, and food waste



- Solar-powered thermal battery using superheated sand



- Stores up to 100 MWh – lasts 15–25 years

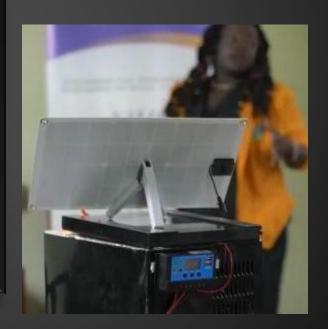


- Off-grid or hybrid system



Applications: Cold storage, crop drying, food processing, water pumping

# THE SOLUTION – WHAT IS ECOBATT?



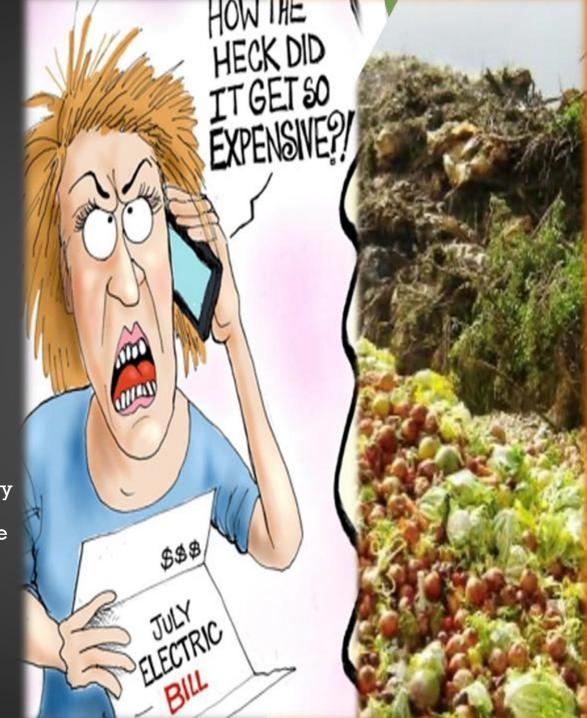
CAPEX per kWh (USD)

## COMPETITIVE ADVANTAGE

- Cost Comparison (CAPEX per kWh):
- ECOBATT: US\$35-\$55
- - Lithium-Ion: US\$140-\$250
- Other Benefits:
- - 70% lower lifecycle cost
- Built from local sand and steel
- Eco-safe, minimal maintenance, scalable for rural clusters

## IMPACT – ENVIRONMENTAL & SOCIAL

- Saves > 120,000 tons of CO<sub>2</sub> over
   20 years
- No toxic chemicals, 100% recyclable
- SDG Alignment:
- - SDG 2: Zero Hunger
- SDG 7: Affordable & Clean Energy
- - SDG 9: Innovation & Infrastructure
- SDG 13: Climate Action



# SCALING UP – THE CALL TO ACTION

- Where: Launching in Trinidad & Tobago,
   scaling to the Caribbean, Latin America, Africa
- When: Pilots in 2025–2026, regional rollout by 2027
- Call to Action:
- Partner for pilot projects
- Co-develop financing for farmers & SMEs
- Support policy for decentralized, renewable energy



## **THANK YOU**

Presenter: Mahalia Joseph

Contact: 1868-620-7595

Email:

3bael.ecobatt.tt@gmail.co

m



#### 24 APRIL 2025





## Session n°17:

# Innovation and technology adoption by entrepreneurs in the Caribbean







