



CIRCULAR INNOVATION MODEL

Practical Innovation Model: Turning Waste into Climate-Smart Wealth

A visual and practical explanation of ECAE's integrated circular agriculture system.

Registered in Kitale

Operational Farm

Circular Model

Ready Products

ECAE Circular Innovation Model

The ECAE Circular Innovation Model connects aquaculture, organic composting, BSF farming, poultry, livestock, crops, water reuse and market access into one integrated system. It shows how agricultural waste becomes a production resource rather than an environmental burden.



Closed-Loop Production Flow

1. Organic Waste

farm, crop, kitchen and market residues

2. BSF Conversion

larvae process waste into feed protein

3. Animal Feed

BSF protein supports poultry and fish

4. Poultry and Fish

food products plus manure and effluent

5. Nutrient Recovery

compost, frass, manure and fish water

6. Crop Production

vegetables, tomatoes, coffee and seedlings

7. Market and Residues

products sold; residues recycled back into system



What Makes It Innovative

- Waste is treated as a resource, not a disposal problem.
- Feed and fertilizer are generated within the farm system.
- Water and nutrients are reused to strengthen productivity.
- Different enterprises reduce risk through diversified income streams.
- The model can be taught to farmers and replicated in phases.

Value Created by the Model

For Farmers

Lower feed and fertilizer costs, more income streams and practical skills for sustainable production.

For Communities

Cleaner waste management, improved food availability and green livelihood opportunities.

For Donors

A visible, scalable and measurable climate-smart agriculture intervention.

For Investors

Diversified revenue across food, feed, fertilizer, training and value-added services.

For Environment

Reduced waste, better nutrient cycling, improved soil health and efficient water use.

For Markets

Reliable supply of fish, poultry, vegetables, coffee and organic inputs.