



Organization: Livestock Development for Community Livelihood Organization (LDC)

Location: Takeo, Kampot, and Kandal provinces, Cambodia

Solution: Introducing cricket and chaya farming for enhancing local food production and sustainability in Cambodia

Factsheet Period: First round of UNDP AFCIA funding (18 months);
Second round of UNDP AFCIA funding (10 months)



Cricket and chaya farming for enhancing local food production and sustainability in Cambodia @Ros Sokhom/LDC

Cambodia is greatly affected by seasonal droughts and flooding, with exceptional vulnerability to climate change due to the fact that 80% of its population resides in rural areas with many relying on agriculture as their primary source of food and income ([World Bank, 2021](#)). The Livestock Development for Community Livelihood Organization's solution focuses on cricket and chaya farming as a strategy to protect smallholder farmers' vulnerabilities to climate change impacts. Cricket and chaya farming are resilient to poor weather conditions and require less labour, water and land than traditional crops. The two harvests are also complementary: crickets provide frass that can be used to fertilize chaya, while the chaya plants can be used as cricket feed. This solution seeks to increase food security with nutrient rich alternatives, build capacity in local communities for climate-adaptive agriculture, and generate new sources of income.



Key achievements

- Reached 3,000 farmers with more than 1,000 households adopting cover-crop practices, resulting in 84% of adopters reporting higher net farm income and an average 23% yield increase.
- Produced 21.9 tonnes of crickets and 25 tonnes of Chaya across 100 farms, strengthening food security and resilience.
- Established 190 floating cricket pens and planted 1,800 Chaya plants, expanding climate-resilient production systems.
- Supported 100 new cricket farms and Chaya gardens and scaled up 40 existing farms, enabling rural households to generate regular income through climate-resilient farming.
- Constructed over 250 floating cricket pens and planted 1,800 Chaya plants, and established a breeding lodge for edible insects, ensuring the supply of quality cricket eggs.
- Produced more than 14 tonnes of fresh crickets and related products, generating over US\$37,000 in revenue during the reporting period.
- Trained 200 farmers, supported 60 farmers through study tours and engaged 300 community members (73% women) in awareness events on climate change, nutrition and sustainable farming.
- Formed 6 farmer groups and established partnerships with a local agri-food enterprise, while piloting women-managed community storage facilities to improve market access.
- Increased women's leadership, with 12 women serving as group leaders and managing storage facilities for farmers.
- Generated US\$71/pen in cricket farming every 45 days.



Adaptation benefits

- Greater community awareness of climate-adaptive agriculture.
- More climate-resilient farming practices, adapted to current and future climate trends.



Social impact

- Improved household diets through high-protein crickets and nutrient-rich chaya.
- Promoted productive use of small backyard land, while households reported increased consumption of nutritious crickets and Chaya leaves.
- Generated regular income streams from cricket farming, providing beneficiaries with consistent earnings and short production cycles that support ongoing livelihoods.



Innovation

- Introduced year-round, drought-resilient cricket farming as a new protein source in the region.
- Developed floating cricket pens adaptable to seasonal flooding.



Replication potential

- Strong market demand and partnerships drive sustainable cricket and chaya production, with the potential for wider expansion.
- Farmers share inputs like cricket eggs and participate in training, promoting knowledge transfer and community support.



Funding snapshot

- UNDP-AFCIA grant: US\$170,000 (initial grant: \$60,000; scaling grant: \$110,000)





Investability

<p>Revenue per year</p>	<p>LDC is developing a revenue generating business model in partnership with agri-food enterprises (AFEs). It is generating more than US\$37,000 in gross revenue from the sale of cricket and Chaya products. Income potential is up to \$118,000 annually, from 100 cricket farmers (average of 5 pens/farm). Farmers achieve 30-40% profit margins within 6 months of continuous production; margins can rise to 50%+ with efficiency and scale.</p>
<p>Sustaining criteria</p>	<p>The grant funded trainings, farming operations and a women-led producer cooperative for sustainable management of shared resources. Household incomes increased from US\$179 to \$276/month, with cricket farming representing 22% of annual household income. By 2030, it aims to achieve a net income of US\$200,000 through a self-sustaining, cost-recovery model driven by pen repayments and farmer-led expansion. Breeding Lodge and frass innovation adds 15-20% extra farm income, with cricket-based products valued up to 300% higher. LDC launched a global crowdfunding strategy (utilizing platforms like GlobalGiving and GoFundMe) to address financial barriers and mobilize support for scaling regenerative agriculture.</p>
<p>Financial innovation</p>	<p>Crickets produced by trained farmers adhere to EU food safety standards, ensuring high demand from customers and AFEs AFEs handle the post-harvest processing of crickets and chaya, addressing marketing issues and ensuring sustainable production Women-led storage facility purchases crickets from farmers, stores them, and sells them to AFEs for safe consumption</p>



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