



Strengthening the Seed Value Chain and Institutionalising Contract Farming through a Private Sector Partnership in Oddar Meanchey

Authors:

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Purpose:

This case study was developed as part of the Nurture Project's interim evaluation to document key achievements and lessons learned from the implementation phase.

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1. Introduction

Nurture Project Overview

Nurturing Climate Resilience in Cambodia (Nurture) is a four-year collaborative initiative among HEKS/EPER, Caritas Switzerland, the Ministry of Water Resources and Meteorology (MOWRAM), and the General Directorate of Agriculture (GDA). Co-financed by the Swiss Agency for Development and Cooperation (SDC), the project strengthens the climate resilience of smallholder farmers (SHFs)

through three interventions: local water governance; policy and planning on climate adaptation; and climate-resilient agriculture and market development. By enabling private-sector actors and farmer organizations to adopt and scale commercially viable, climate-resilient practices, Nurture facilitates improved decision-making, productivity, and market access for vulnerable rural households.

Intervention Scope

Nurture focuses on transitioning farmers from subsistence agriculture to market-oriented vegetable and seed production. The intervention was designed to provide high-quality, locally adapted seeds and technical training in climate-resilient practices, and to

establish formal contract-farming mechanisms that ensure income stability for SHFs in the Krong Samraong, Banteay Ampil, and Anlong Veng districts of Oddar Meanchey province. KS Seed, in collaboration with Nurture and HALO Trust, implemented this multifaceted intervention.



KS Seed exposure visit: Yard-long bean farmers sharing experiences and learning new techniques in Kampong Thom Province.
©KS Seed

2. The Context: Navigating Challenges in Oddar Meanchey

Oddar Meanchey is a province marked by its proximity to the Thai border and a history of conflict. Farmers in this province face unique challenges, including climate volatility and a lingering fear of border instability, which deter long-term agricultural investment. Additionally, limited access to high-quality, climate-resilient seeds (such as Mung Bean and Yard Long Bean) often results in low yields and vulnerability to market fluctuations.

Box 1: Key Challenges

- **Geographic Vulnerability:** Operations centred in the Krong Samraong, Banteay Ampil, and Anlong Veng districts along the Thai-Cambodian border, with a history of sensitive land issues.
- **Security Concerns & Investment Risks:** Farmers operate under a lingering fear of border instability. The threat of conflict creates a psychological barrier, making farmers hesitant to invest in long-term crop maintenance due to potential evacuation risks.
- **Seed Quality Gap:** SHFs traditionally rely on low-quality, non-purified seeds, leading to inconsistent yields and greater susceptibility to climate shocks and pests.
- **Subsistence vs. Commercial Mindset:** A prevailing "subsistence" approach to farming has historically constrained income growth. The transition to market-oriented production required technical know-how.
- **Climate Sensitivity:** Oddar Meanchey faces unpredictable weather patterns, necessitating a shift toward climate-resilient varieties to ensure food and income security.
- **Post-Conflict Reintegration:** Working alongside demining agency HALO Trust, Nurture targets project participants in areas transitioning demined land back into productive agricultural use, focusing on vulnerable female-headed households.

3. The Intervention: A Systemic Approach to Market-Led Agriculture



A yard-long bean seed producer monitoring and tending to her seed farm in Tuol Prasat Village, Trapeang Tav Commune.
© Nurture Project



Official signing of a contract farming agreement between the Agricultural Cooperative Union (ACU) and KS SEED in Kuok Mon Commune, Banteay Ampil District, 2025 © KS Seed

The intervention, implemented by KS Seed in partnership with Nurture and HALO Trust, transitioned SHFs from subsistence to market-oriented agriculture. This was achieved through a dual-track strategy focusing on high-value seed production and sustainable vegetable cultivation, supported by formal contract farming arrangements.

To revitalise the local seed value chain, KS Seed spearheaded the production of climate-resilient *Ek Phnom* Mung Bean and Yard Long Bean varieties. The process began with the identification and selection of specialised seed producers in three target districts. A cornerstone of this intervention was establishing rigorous technical standards for seed production and purification. Through "Field Opening Days" and on-site technical orientations, KS Seed provided farmers with foundation seeds and intensive training to ensure seed purity. To institutionalise these efforts, Nurture formalised the market linkage

through a signing ceremony, establishing binding farming contracts among seed producers, Oddar Meanchey Development of Agricultural Cooperative Union (CACU), and KS Seed Co., Ltd. This buy-back mechanism effectively mitigated market risks, providing farmers with the financial security needed to invest in high-quality production.

Additionally, to address technical gaps in vegetable farming, 25 demonstration farms were established. Through these farms, lead farmers showcased advanced cultivation techniques. The capacity-building component focused on soil health and land preparation, with a particular emphasis on climate-resilient agriculture (CRA), shifting the community's mindset toward "farming as a business." Furthermore, comprehensive agricultural material packages were distributed to the most vulnerable participants, including female-headed households in HALO Trust target areas.

Box 2: Intervention's Integrated Pillars

- **Pillar 1: Seed Value Chain Development:** Established a localised production system for Mung Bean and Yard Long Bean seeds by transitioning 22 selected "Seed Producers" (12 for Mung Bean, 10 for Yard Long Bean) covering over 13 hectares into specialised contractors who produced foundation seeds under technical supervision to ensure purity and germination quality.
- **Pillar 2: Technical Capacity Building & Demonstration:** Moved beyond traditional farming through 25 vegetable demonstration farms, including intensive training for more than 100 farmers in Cost-Return Analysis (CRA), climate-resilient seedling techniques, and soil preparation, to ensure farmers view their plots as profitable businesses.
- **Pillar 3: Market Institutionalisation:** Formalised contract farming agreements among seed producers, CACU, and KS Seed to ensure a guaranteed buyback market.

A defining feature of the intervention was its collaborative operational model. KS Seed worked closely with Nuture, HALO Trust, and Commune Agriculture Officers to ensure that field activities aligned with local development priorities. This multi-stakeholder coordination enabled effective resource sharing and expanded the project's reach. Furthermore, by

Partners and Roles

The intervention's success depends on a multi-sectoral partnership that leverages each stakeholder's unique strengths to build a robust and sustainable agricultural ecosystem. Nuture serves as the strategic facilitator, providing co-investment, oversight, and coordination to align project activities with broader development goals. As the primary private-sector partner, KS Seed Co., Ltd, serves as the project's technical and commercial engine, responsible for delivering high-quality foundation seeds, providing specialised expertise in seed purification, and ensuring long-term commercial viability through a guaranteed buy-back market. The market structure is reinforced by CACU and the Provincial Department of Agriculture, Forestry, and Fisheries (PDAFF), which provide

deliberately prioritising gender inclusion, the intervention ensured that female farmers were active contributors to household livelihood improvements. By combining high-quality seed varieties, technical expertise, and guaranteed market access, the intervention laid a sustainable foundation for long-term economic resilience in the province.

the institutional framework, regulatory guidance, and organisational support required for transparent contract farming. Additionally, HALO Trust plays a vital role in community engagement and social inclusion, particularly in demined zones and border areas, by identifying vulnerable community members, specifically female-headed households, and facilitating the ground-level logistics for training and environmental mainstreaming. Additionally, through project coordination and co-financing mechanisms, KS Seed has been working with the GDA to formalize seed registration under nationally recognised legitimacy. Together, these partners form a cohesive network that bridges technical capacity building, community development, and sustainable private-sector market access.



KS Seed consultation meeting with local farmers to select seed producers for project participation in Anlong Veng District.
© Nuture Project



Monitoring mung bean production: The Nuture team engaging with a local farmer during a field visit in Kuok Mon Commune, Banteay Ampil District. ©Nuture Project

4. Results and Systemic Impact



*Farmers harvesting yard-long bean seeds in Tuol Svay Village, Trapeang Tav Commune, Anlong Veng District, 2026
©Nurture Project*



*Farmers harvesting yard-long bean seeds in Tuol Svay Village, Trapeang Tav Commune, Anlong Veng District, 2026
©Nurture Project*

Economic Gains

The intervention delivered significant economic returns by formalising the seed value chain and transitioning smallholder farmers toward profitable commercialisation. Over 120 farmers had integrated KS Seed's high-quality inputs into their production cycles, indicating strong market adoption of improved genetics. The economic impact was most evident in the success of lead seed producers such as Chhoun Lak, who, despite a 40% yield loss from external border tensions, achieved a net profit of 2,700,000 Riels from a 900,000

Riel investment. This result highlights the inherent resilience of the Ek Phnom Mung Bean variety and the efficacy of the contract farming model in protecting farmer margins. By providing a guaranteed buy-back channel through KS Seed, the project has mitigated market price volatility that typically traps SHFs in cycles of poverty, effectively stabilising household incomes and demonstrating that specialised seed production is a viable economic pathway.

Social and Governance Gains

Nurture achieved significant social and governance impacts by fostering a more inclusive and transparent agricultural environment. With women comprising 85% of participants in vegetable cultivation training and several female-headed households managing demonstration farms, progress toward gender equity was evident. This intentional focus on empowering women was designed to enable them to assume central roles in household economic decision-making and in community-level technical leadership.

From a governance perspective, institutionalising contract farming through formal signing ceremonies replaced informal, high-risk trade with structured, transparent agreements. By bridging the private sector, the CACU, and local authorities, the project cultivated a high degree of institutional trust. This collaborative framework ensures a community-led, commercially grounded system that prioritises accountability and sustainability.

Systemic Change: (Market Systems Development Framework)

The KS Seed intervention addressed systemic market failures. Using the Adopt-Adapt-Expand-Respond (AAER) framework, Nurture's systemic impact is:

- **Adopt:** KS Seed and 22 seed producers successfully piloted a market-led contract farming model using climate-resilient Ek Phnom seeds, demonstrating that SHFs can meet rigorous commercial purification standards in exchange for guaranteed market access.
- **Adapt:** KS Seed and the core seed producers internalised these changes by shifting to independent commercial management. Lead farmers used Cost-Return Analysis (CRA) to manage profitability, and KS Seed's technical staff oversaw foundation seed quality despite external challenges.
- **Expand:** There are early indications of "crowding in," with approximately 120 nonpilot farmers independently choosing to purchase and use KS Seed's products in their production cycles. While still preliminary, this early uptake suggests a growing interest in quality certified seeds and hints at the potential for broader value chain expansion if the trend continues.
- **Respond:** Initial signs of system responsiveness are emerging. PDAFF and local authorities have begun exploring more formalised processes, such as supporting contract signing ceremonies. Although still at an early stage, this type of institutional engagement can help create clearer regulatory guidance, contributing to improved transparency and trust between farmers and private-sector actors.

Box 3: Voices from the Field

"... the border conflict always paralysed our ability to invest and kept us in a cycle of fear. However, the guaranteed buy-back contract and fair pricing ensured us with economic security." – FGD participants, Oddar Meanchey Province.

"... "Living in a high-risk area with unpredictable weather is our reality. However, market stability can boost us to scale up our production." – FGD participants, Oddar Meanchey Province.

5. Lessons Learnt

This intervention demonstrates a multi-stakeholder partnership that integrates private-sector engagement with community-based advocacy as the primary driver of implementation success.

Through a coordinated partnership model, the intervention aligned the specific expertise of Nurture, HALO Trust, PDAFF, and KS Seed, thereby building trust among project participants from the outset. This collaborative

approach ensured that farmers received a consistent, professional message across technical, social, and market-oriented domains, demonstrating that systemic change is most effective when private-sector rigor in standards and accountability is backed by institutional and community-based support.

A critical lesson was the importance of adaptive management and flexibility. Aligning technical training schedules with the local agricultural calendar ensured high attendance and genuine skill acquisition. Additionally, recruiting women for orientation and lead-farmer roles has already begun

reshaping household livelihood strategies and community perceptions of gender roles in commercial seed production.

Furthermore, the contract farming model proved to be an essential stabiliser of psychological and economic factors. In a high-risk border environment, the assurance of a guaranteed buy-back market shifted farmers from a "subsistence mindset" to a "business mindset." Reinforced by the use of CRA, it has created a resilient framework in which farmers operate as empowered market actors capable of maintaining productivity despite external shocks.



Official signing of a contract farming agreement between the Agricultural Cooperative Union (ACU) and KS SEED in Kuok Mon Commune, Banteay Ampil District, 2025 © KS Seed



Official signing of a contract farming agreement between the Agricultural Cooperative Union (ACU) and KS SEED in Kuok Mon Commune, Banteay Ampil District, 2025 © KS Seed

Box 4: Key Lessons Learnt

- **The Power of Collaboration:** The synergy between Nurture (facilitation), HALO Trust (community access & demining), and KS Seed (access to market & inputs) allowed for a more comprehensive support system than any single agency could provide.
- **Adaptability to Conflict:** The "border conflict" context remains a psychological barrier for farmers. Future interventions could explore crop insurance to maintain farmer confidence.
- **Flexibility in Training:** Aligning training schedules with the farmers' agricultural calendar and local availability was crucial for the high attendance rates observed (up to 100% in some sessions).

6. Sustainability and Ways Forward

Economic Gains

The sustainability of this intervention lies in the continued strengthening of commercially viable relationships and incentives already established among market actors. By institutionalising the contract farming model, Nurture has ensured that the relationship between smallholder farmers and KS Seed is driven by mutual economic benefit. This commercial logic, combined with Cost-Return Analysis for farmers, ensures that the production of high-quality, climate-resilient seeds will remain a permanent livelihood strategy long after the project ends.

The way forward into 2026 focuses on scaling these gains and strengthening agricultural infrastructure. Key priorities include expanding the network of specialised seed producers and finalising the seed certification and registration process with the GDA to elevate the market value of local produce. By intensifying data collection from more than 120 farmers currently using KS Seed products and integrating comprehensive environmental training sessions, the project will ensure that the growth of the seed value chain in Oddar Meanchey remains both ecologically sound and economically resilient.

Box 5: The Way Forward

- **Scaling Up:** Increase the number of seed producers to reach the target of 30 suppliers.
- **Certification:** Finalise seed registration and certification with the GDA to elevate the market value of the produced seeds.
- **Expansion:** Continue collecting data from the farmers currently using the seeds to build a "proof of concept" that can be used to attract further investment in the target areas.



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