



2025 RESEARCH OUTPUTS

A SYNTHESIS OF ACADEMIC AND PRACTICE OUTPUTS

Director's Foreword

The 2025 research portfolio represents a significant step forward in understanding the complex realities shaping agricultural livelihoods in Northwest Cambodia. Across the analyses presented here, a consistent picture emerges, which builds on earlier outputs and cumulative learning. Smallholder decisions are shaped by long-standing structural, social, and financial pressures. Climate vulnerability is intensified by precarity rather than by knowledge gaps. Intensification is feasible when aligned with real constraints. Extension succeeds when it builds trust, values agency, and strengthens relationships.

These insights are the product of long-term collaboration with farmers, local partners, and emerging Cambodian researchers. They reflect a program that now integrates diverse methods and perspectives to explain why change happens when it does, and why it often does not. The resulting evidence base offers not only academic contributions but practical guidance for institutions seeking to support sustainable, inclusive, and resilient agricultural systems.

The portfolio also demonstrates the value of investing in people. From the next generation of extensionists to the communities trialing new approaches, the findings show how capability, confidence, and connection underpin lasting improvement.

Taken together, these outputs reaffirm the importance of research that is attentive to context, grounded in lived experience, and designed to illuminate actionable pathways toward food security, livelihoods, and wellbeing. They position the program to continue supporting partners in Cambodia as they navigate the evolving challenges of agricultural development and climate resilience.

Looking ahead, the next phase (Activities 6&7) will rigorously evaluate the impacts of twenty interventions with this population, enabling a deeper understanding of what works, for whom, why, and how. This forward trajectory continues the program's commitment to generating evidence that is both scientifically robust and directly usable by those shaping Cambodia's agricultural future.

The 2025 research portfolio advances five linked debates central to ACIAR's mission and directly contributes to SDG1 (poverty), SDG2 (hunger and food systems), SDG10 (inequality), SDG12 (sustainable production), and SDG13 (climate action). Together, the outputs show that progress on these goals requires not only understanding the structural, social, and behavioural realities shaping agricultural practice in Northwest Cambodia, but also addressing these realities through enabling conditions, safeguards, incentives, market access, and institutional reform. This aligns with major debates animating the SDGs in terms of emphasis on behavioural drivers, institutional reform, and systems-based pathways to food security.

Reframing SDG2 begins with recognising how smallholders make decisions

A central SDG2 debate concerns why smallholders rarely adopt recommended technologies despite awareness and training. The research shows that farmers pursue low-cost and low-risk strategies because doing so manages exposure to volatile markets, limited liquidity, and climate uncertainty.^{4,2} These findings reinforce a prominent argument in the SDG literature: productivity gains cannot rest on technological diffusion alone but require alignment with local rationality, financial constraints, and differentiated risk exposures that shape adoption decisions and livelihood outcomes. Evidence on moderate investment pathways⁸ further strengthens the sustainable intensification debate by demonstrating that realistic investment profiles, not high-input packages, offer the most viable route to SDG2 and SDG12. Rice systems research⁹ confirms another key concern within the SDG debates: that environmental degradation and market volatility jointly suppress yields, meaning that sustainable food production requires both agronomic and institutional change.

Debates on inequality and wellbeing deepen contributions to SDG1 and SDG10

Debates consistently show that poverty and inequality emerge from intersecting structural, demographic, and mobility processes rather than from individual behaviour. Settlement and wellbeing research³ align with this by demonstrating how spatial inequality shapes opportunity and perceived life chances.

Labour mobility research⁷ reflects a major SDG10 debate: that migration is a strategy for stability rather than an indicator of failure, and that mobility connects rural poverty to regional labour markets. These findings collectively speak to debates over reducing inequality and understanding how livelihoods unfold across places, sectors, and stages of life rather than only within agriculture.

Extension system reform strengthens debates on institutions and SDG2

A core debate concerns institutional effectiveness and how formal systems can better support behaviour change. Research on extension institutions^{5,13} contributes directly by showing that formal rules and reporting structures limit meaningful engagement, while informal norms and trust are what enable learning. Evidence on decision-making⁴ counters the assumption that awareness drives action. Participatory research¹ connects to the debates on inclusive governance, showing that dialogic approaches create learning and adaptation that diffuse through social networks. These outputs reinforce a central SDG2 claim: transforming food systems requires institutions that support agency, not merely the provision of advice or training.

A systems view of adaptation strengthens contributions to SDG1 and SDG13

Climate risk analysis² echoes a core concern in the SDG discourse: climate vulnerability emerges from financial precarity and institutional gaps as much as from hazard exposure. Rice systems analysis⁹ supports the view that climate adaptation requires addressing interlinked constraints rather than isolated technical fixes. The project's impact stories deepen this systems argument, showing how small but well-targeted interventions, for example, laser land levelling¹⁴, solar-powered wells¹⁵, and financial literacy training¹⁶ produce gains across labour, health, production, and social resilience. These analyses contribute to the SDG13 solutions that combine behavioural feasibility, economic viability, and social acceptance; these examples demonstrate exactly that.



Building future capacity through human development contributes to debates on SDG1 and SDG2

A cross-cutting concern within the SDGs is the role of human capital in shaping development pathways. Research on agricultural graduates¹² shows that extension capacity is produced through social expectations, gender norms, and institutional legacies, not only through technical curricula. This reinforces the broader SDG debate that sustainable food systems depend on the aspirations, motivations, and capabilities of the people who will manage them.



Across all 2025 outputs, the Next-Gen Project demonstrates that achieving the SDGs requires recognising local and structural determinants of smallholder rationality, addressing inequality, strengthening relational and participatory extension, supporting systems-level adaptation, and investing in future agricultural professionals. Agricultural development is shaped by long-term processes that determine the opportunities, risks, and constraints within which farmers and institutions operate.

Academic Outputs

Thinking Theatre and SDG2

This paper provides rare, rigorous evidence of how Forum Theatre fosters learning, behaviour change, and diffusion. Following 13 performances and year-later interviews, the study shows that learning predicts behavioural shifts and that these shifts then drive spillover effects to non-attendees. The innovation is its bridging of qualitative depth with quantitative impact tracing, reframing participatory theatre as a viable pathway for SDG2 when it promotes agency rather than awareness.

1. Cook, B. R., Harrigan, N., Touch, V., Hainzer, K., Imperiale, A., Ganbaatar, T-A., & Coombe, B. (2025). From Theatre to Transformation: Learning, Action, and Diffusion for SDG2 in Cambodia. *Sustainable Development*, 1-18.

Extreme climate risks and adaptation gaps

This study integrates climate modelling, household census data, and socioeconomic analysis to show how extreme rainfall variability and financial precarity jointly constrain adaptation. Farmers recognise rising risk, yet debt, limited savings, and structural constraints block any meaningful response. Its innovation is a systems-level diagnosis that shifts responsibility away from awareness and toward the financial environments that determine what households can actually do.

2. Touch, V., Utomo, A., Liu, D. L., Harrigan, N., Bannan, L., Chay, P., Finlayson, C., Hainzer, K., McGregor, A., McKinnon, K., Mom, L., Phan, S., Song, P., Tan, D. K. Y., Tran, T. A., Yong, S., & Cook, B. R. (2025). Bridging extreme climate risks, financial precarity, and adaptation gaps. *Global Environmental Change*, 95, 103073.

Settlement, inequality, wellbeing

This study explains how settlement processes have produced long-term inequality and uneven wellbeing across Northwest Cambodia. Its innovation lies in connecting historical land and migration patterns with contemporary social and economic divides. It shows that inequality is embedded structurally and spatially, shaping aspirations and life satisfaction.

3. Zhuo, J., Harrigan, N., Utomo, A., Touch, V., Finlayson, C., McGregor, A., McKinnon, K., & Cook, B. R. (2025). Settlement, inequality and wellbeing: Settled social structures and the creation of inequality and low life satisfaction in Northwest Cambodia. *World Development*, 195, 107112.

Smallholder decision-making and SDG2

This article reframes SDG2 by centring how smallholders navigate risk rather than how global agendas imagine intensification. Extensive engagements with cassava farmers uncover a 'ngeay sruol' approach to agrarian decision-making: a low-cost, low-risk logic that shapes livelihood decisions in ways that make top-down intensification unrealistic. The innovation in this analysis is its demonstration that smallholders reject risk, not productivity, and that extension fails when it assumes awareness can override structural uncertainty. By grounding the analysis in farmer agency, the analysis exposes why global ambitions repeatedly collide with locally rational strategies.

4. Cook, B. R., Touch, V., Finlayson, C., Tran, T. A., Harrigan, N., Read, N., Bannan, L., & Hainzer, K. (2025). Smallholder decision-making and its misalignment with Sustainable Development Goal 2 (Zero Hunger). *Agriculture and Human Values*, 42, 2689-2710.

Agricultural extension institutions

This paper explains why extension continues to struggle by mapping the institutional boundaries that shape agent-farmer relationships. It identifies how formal institutions impose rules and hierarchies while informal norms create space for trust, flexibility, and co-learning. The innovation lies in conceptualising the shared relational boundary where real interaction occurs, reframing extension as a socially embedded process rather than a technical delivery mechanism.

5. Tran, T. A., Cook, B. R., & Touch, V. (2025). Agricultural extension institutions in rural Cambodia: Unpacking extension agent-farmer relations and interactions. *Journal of Rural Studies*, 117, 103671.

Team photo-diaries: making places, people, and power visible in agricultural research

This paper analyses the use of team photo-diaries as a methodological and relational tool.

Originally introduced as a reflexivity exercise for Cambodian research associates conducting a household census, the method evolved into a collaborative space for sense-making across the Next-Gen research team. It enabled the team to better understand field contexts, interpret emerging patterns, and surface issues that quantitative instruments alone could not capture. Its innovation lies in showing how team photo-diaries can enhance mixed-methods research by making field conditions, researcher experiences, and persistent North-South power relations more visible.

6. Utomo, A., McGregor, A., Som, B., Finlayson, C., Korn, C., McKinnon, K., Mom, L., Harrigan, N., Chay, P., Srean, P., Song, P., Chen, S., Yong, S., Chhun, S., Phan, S., Yous, S., Tran, T., Touch, V., & Cook, B. R. (2025). Team photo-diaries: Making places, people, and power more visible. *Geographical Research*, 1-16.

Dual employment destinations

This paper maps how rural Cambodians navigate two dominant migration pathways: within Cambodia and to neighbouring Thailand. The innovation is its integration of mobility histories with labour and wellbeing analysis, showing that migration reflects complex trade-offs that extend beyond wages. It reframes migration as a strategy to stabilise precarious rural livelihoods rather than an escape from agriculture.

7. Finlayson, C., Harrigan, N., Utomo, A., Touch, V., McGregor, A., McKinnon, K., & Cook, B. R. (2025). The dual employment destinations for rural Cambodians: Skills, distance and non-monetary returns on migration. *Population, Space and Place*, 31(2), e70016.

Reshaping agricultural production systems

This article quantifies the financial, productivity, and environmental consequences of low-, moderate-, and high-investment farming strategies. The key innovation is the identification of moderate investment as the optimal intensification pathway, providing strong yields while reducing input costs and environmental damage. By scaling these results nationally and regionally, the study demonstrates the policy relevance of efficiency-focused intensification.

8. Touch, V., Utomo, A., Harrigan, N., Finlayson, C., McGregor, A., McKinnon, K., Tran, T. A., Bannan, L., Tan, D. K. Y., Phan, S., Chay, P., Yous, S., Hainzer, K., & Cook, B. R. (2025). Reshaping agricultural production systems. *Agricultural Systems*, 230, 104484.

Smallholder challenges and opportunities

Using mixed methods, this analysis shows how climate stress, soil decline, market volatility, and financial pressure compound to reduce resilience across rice systems. The innovation is its integration of climate projections, surveys, crop monitoring, and qualitative accounts into a coherent assessment of system-level vulnerability. It demonstrates that heterogeneous farming styles still converge on similar structural limits and that productivity-focused interventions overlook deeper constraints.

9. Touch, V., Tan, D. K. Y., Cook, B. R., Liu, D. L., Cross, R., Tran, T. A., Utomo, A., & Yous, S. (2024). Smallholder farmers' challenges and opportunities: Implications for agricultural production, environment and food security. *Journal of Environmental Management*, 370, 122536.

Adaptation constraints in lowland rice

This study provides a granular account of why lowland rice farmers struggle to adopt improved agricultural practices. Its innovation is the alignment of structural constraints—soil degradation, labour shortages, input credit, climate variability—with research priorities that treat farmers as co-creators rather than passive recipients. It demonstrates that adoption is constrained by systemic pressures that shape risk and decision-making.

10. Touch, V., Cross, R., Grünbühel, C., Van Ogtrop, F., Ampt, P., Yorn, T., Martin, R. J., Cook, B. R., & Tan, D. K. Y. (2024). Adaptation constraints and prospects for future research priorities in lowland rice-based farming systems. *Environment, Development and Sustainability*, 26, 22555-22586.

Historical Agrarian Change and Contemporary Extension

This paper shows how three decades of agrarian transformation in Northwest Cambodia shape what agricultural extension can realistically achieve today.

The analysis demonstrates that these historical dynamics structure smallholder risk, opportunity, and agency in ways that limit the effectiveness of top-down, production focused extension models. The core contribution is a historically grounded explanation of why extension outcomes diverge from policy expectations. Rather than attributing limited adoption to farmer behaviour, the paper reframes extension as embedded within long standing political economic conditions that shape decision making far more than technical advice.

11. [Cook, B. R., Satizábal, P., Touch, V., McGregor, A., Diepart, J.C., Utomo, A., Harrigan, N., McKinnon, K., Srean, P., & Tran, T. A. \(2024\). Historical Agrarian Change and its Connections to Contemporary Agricultural Extension in Northwest Cambodia. *Critical Asian Studies*, 56\(1\), 25-52.](#)

Becoming agricultural extensionists

This article analyses how young Cambodian graduates come to imagine careers in agricultural extension. The innovation is its life-course approach, showing how university networks, family responsibilities, post-conflict histories, and gender norms shape aspirations. It reframes extensionists as socially produced actors whose trajectories influence the future of extension systems and agrarian change.

12. [Foong, R. H., Utomo, A., Finlayson, C., Touch, V., & Cook, B. R. \(2026\). Becoming agricultural extensionists: Evolving career aspirations of agricultural graduates in Northwest Cambodia. *Agriculture and Human Values*, 43\(36\), 1-17.](#)

Agricultural extension and agrarian transitions

This paper analyses how multiple drivers of agrarian transition in Cambodia, and neighbouring Laos and Vietnam, are reshaping agricultural extension. Drawing on expert interviews, it shows that these changes strain under-resourced extension systems while also motivating new, collaborative models. The study's innovation lies in revealing how 'champions' catalyse pluralistic, co-produced extension approaches.

It argues that business-as-usual models no longer meet farmers' needs and highlights pathways to legitimise more participatory, learning-oriented practices.

13. [Tran, T.A. & Touch, V. \(2024\). How agricultural extension responds to amplified agrarian transitions in mainland Southeast Asia: experts' reflections. *Agriculture and Human Values*, 41, 1773-1789.](#)

Policy & Practice Outputs

Laser land levelling

This story shows how subsidised laser land levelling transforms rice farmers' experiences. Levelling improves water distribution, reduces weeds, lowers labour and fuel costs, and restores pride in farming. The innovation is demonstrating that subsidies can act as a gateway to adoption, allowing farmers to test a high-cost technology and become reference points for their neighbours. Peer evidence drives diffusion more effectively than formal training.

14. Yong, S., Song, P., Yous, S., Korn, C., Mom, L., Chay, P., Phan, S., Touch, V., & Cook, B. R. (2025). *Levelling the field, lifting hopes.*



Solar-powered wells

This narrative shows how small pieces of infrastructure create wide social gains. Clean, reliable water reduces illness, improves safety, frees labour, and enables home gardens and small livestock production. The innovation lies in pairing technical installation with community governance and impact monitoring, ensuring equitable access and generating evidence for future scaling.

15. Phan, S., Chay, P., Mom, L., Korn, C., Song, P., Yong, S., Yous, S., Hainzer, K., Touch, V., & Cook, B. R. (2025). *Small infrastructure, big change.*



Financial literacy

This story explains how everyday financial practices shape household resilience. Savings, budgeting, and debt awareness reduce stress, strengthen confidence, and create the capacity for small investments in farming. The innovation is showing that financial literacy produces emotional, relational, and economic improvements even under severe structural constraints.

16. Song, P., Chay, P., Yong, S., Yous, S., Korn, C., Mom, L., Phan, S., Finlayson, C., Touch, V., & Cook, B. R. (2026). *Financial literacy as a pathway toward household resilience and agricultural development.*

