

Strengthening Regional Cooperation to Manage Agricultural Open Burning and Wildfires in Southeast Asia and Beyond “Cambodia”

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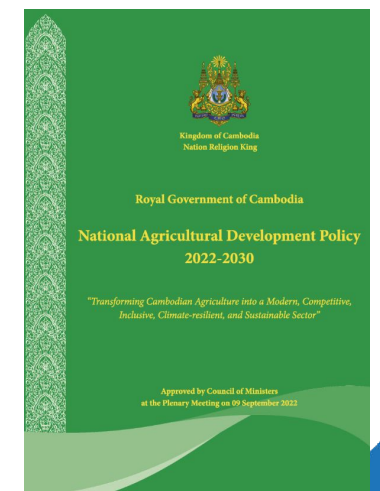
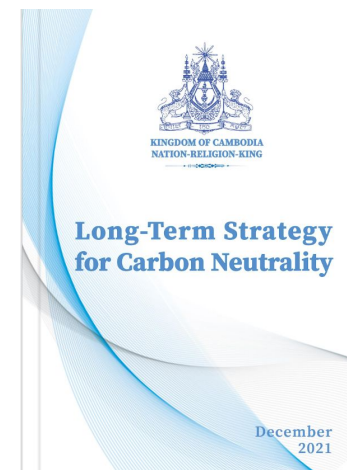
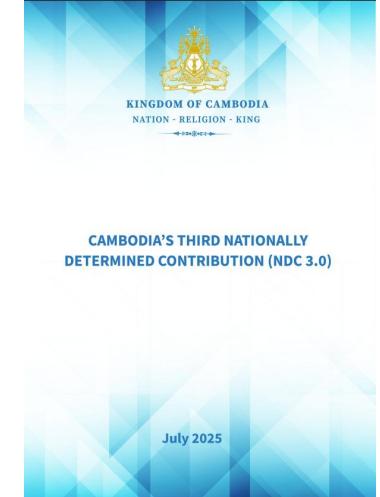
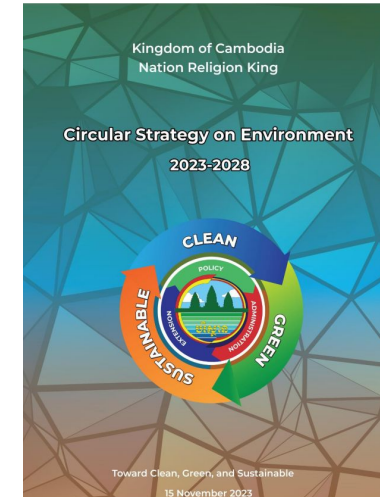
Ministry of Environment

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Policies and Regulation Related to Open Burning, Air Pollution, Early Warning in Cambodia

- Pentagonal Strategy-Phase 1
- Circular Strategy on Environment (Clean Angle)
- Cambodia's NDC 3.0
- Long-Term Strategy for Carbon Neutrality
- Clean Air Plan of Cambodia
- National Agricultural Development Policy (2022-2030)
- Code on Environment and Natural Resources
- Sub-Decree on Air Pollution Control and Noise Disturbance
- Circular No. 01 on Measures to Prevent and Reduce Public Air Pollution
- National Roadmap for Early Warnings for All (EW4ALL) for 2025–2028



What existing national projects or programs?

Alternatives to crop residue burning?

- ❑ **Cambodia Climate-Smart Village Initiative (2015–2021):**
Tested climate-smart agriculture practices, including adjusting cropping calendars and using rice residues for biochar, renewable energy, fertilizer, mulch, fodder, and bioenergy. Farmers gained practical knowledge through learning sessions and field visits.
- ❑ **IRRI-BMZ Project (2016–2018):**
Introduced scalable technologies such as rice straw balers, Trichoderma decomposition, mechanized mulching, and Life Cycle Assessment (LCA) training. Demonstrations engaged extension agents, government, and private sector stakeholders to improve farmer incomes and reduce environmental impacts.
- ❑ **Crop Residue Utilization Study (2022):**
Found that only 55% of rice straw is collected, with 45% burned or left in fields. Highlighted industrial potential of residues (biodegradable packaging, fiberboards) alongside traditional uses (feed, mushrooms, mulching).
- ❑ **CSAM Pilot Project (2021–2023):**
Conducted in Takeo Province, showcasing straw balers and seed drills. Farmers observed machinery performance under local conditions, supporting mechanization-based straw management.
- ❑ **RiceEco Project (2023–2026):**
Promotes a circular economy by integrating rice straw into products such as mushrooms, feed, bio-fertilizers, bioplastics, and urban agriculture. Compost turners were introduced to improve composting efficiency.
- ❑ **CABIN Project (2024–2026):**
Strengthens capacity in five Southeast Asian countries, including Cambodia, through training of trainers, mechanized composting business models, and demonstrations of circular economy applications (mushrooms, livestock feed).
- ❑ **CSAM Phase II Project (2024–2028):**
Expands mechanization-based solutions for climate-smart residue management. Inception workshops reviewed baseline surveys, discussed technologies to curb burning, and established training hubs for continued demonstrations.

Strengthen Capacities for Tackling Air Pollution and Improving Air Quality and Health in Cambodia

Supported by European Commission, Implementing UNEP, AIT and MoE (Jan 2025-Apr 2026)

Objectives:

- Develop a resource package on addressing open burning of agricultural crop residues and roll it out in Cambodia to support implementation key air quality measures aimed at supporting the transition to gradually achieving the WHO AQGs Interim Target 3.
- Updating Cambodia's Clean Air Plan focusing on reducing air pollution from open burning agriculture residues and wildfires

Outputs:

- Assessment of Drivers of "Rice Straw Open Burning in Cambodia"
- Implementing Pilot project with aiming to assess the effectiveness and feasibility of rice straw management
- Updating Cambodia's Clean Air Plan (in particular open burning agriculture residues and wildfire)

Progress:

- Assessment report on driver of "Rice Straw Open Burning in Cambodia" and draft policy on opening burning
- Implementing pilot project with aiming to assess the effectiveness and feasibility of rice straw management through contracted equipment services and to provide policy recommendations to promote sustainable alternatives to open burning.
 - Compare the costs and benefits of two rice straw collection methods: (1) contracted straw collection service provision and (2) manual labor.
 - Gather farmers' perceptions, experiences, and needs regarding machinery-based collection services.
 - Identify policy and institutional support required to expand contracted equipment services as an alternative to rice straw burning.

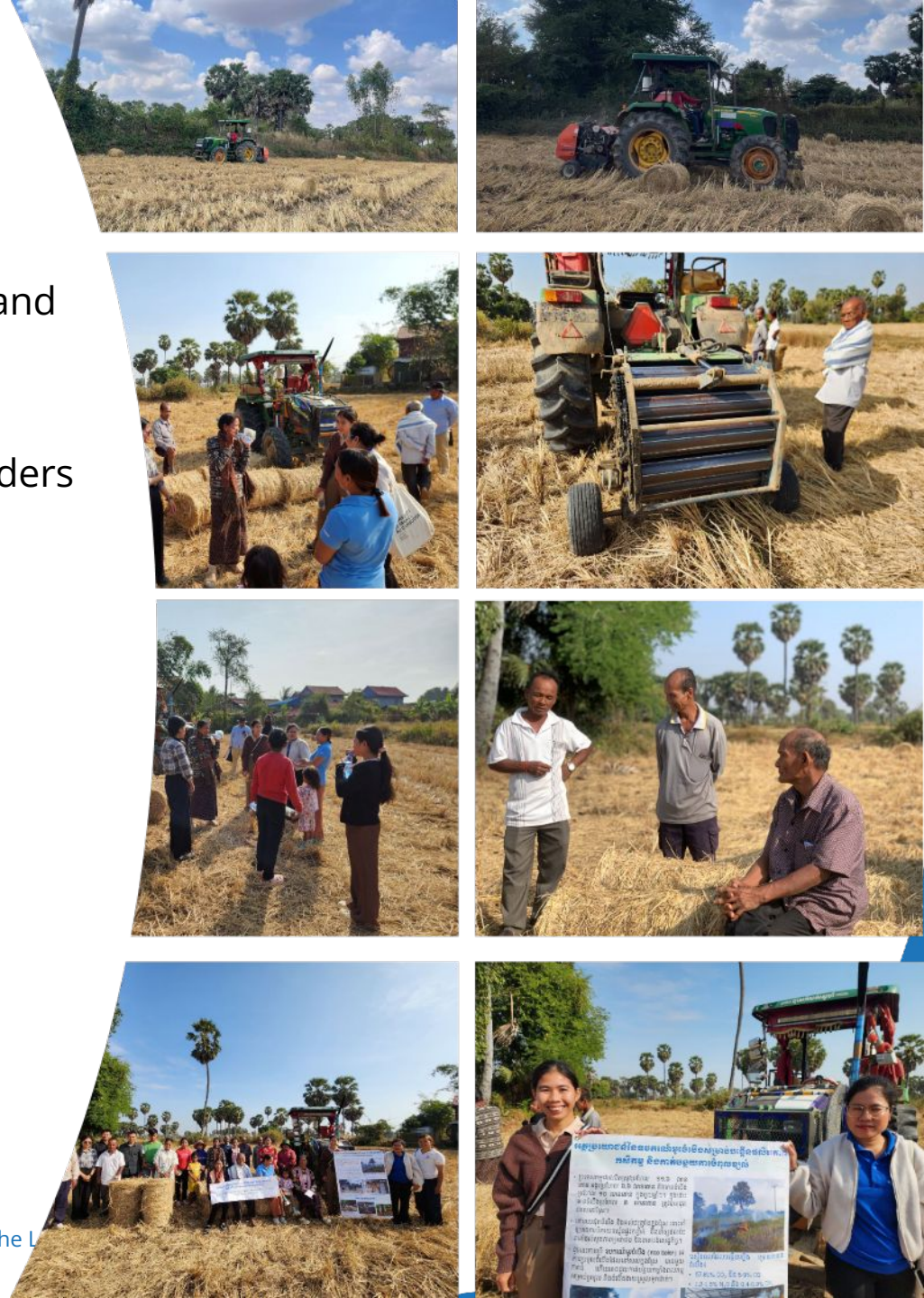
Findings

- In Prey Veng Province, rice farming is intensive with two cropping seasons and larger farms, leading to more established and affordable rice straw baling services. In contrast, Kampong Speu Province relies on rainfed, single-season rice production with smaller farms and limited, costly baling services.
- While baling is widely adopted in Prey Veng, it is still emerging in Kampong Speu, primarily for animal feed.
- Both provinces continue to practice open-field burning for quick land preparation.
- The potential for rice straw baling as a sustainable alternative to burning exists in both areas, contingent upon improved service availability, cost reduction, and increased awareness of alternative uses for rice straw.



Recommendations

- ✓ Provide practical training on composting, mushroom production, and vegetable growing using rice straw.
- ✓ Increase local baler services by encouraging local machinery providers to invest, possibly with partial financial support.
- ✓ Promote farmer groups to collectively request baler services and reduce costs when a larger land area is covered at a time.
- ✓ Strengthen market linkages so farmers can sell excess rice straw easily.
- ✓ Support local authorities and universities with small budgets to organize training and outreach activities.



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Thank you for listening!

