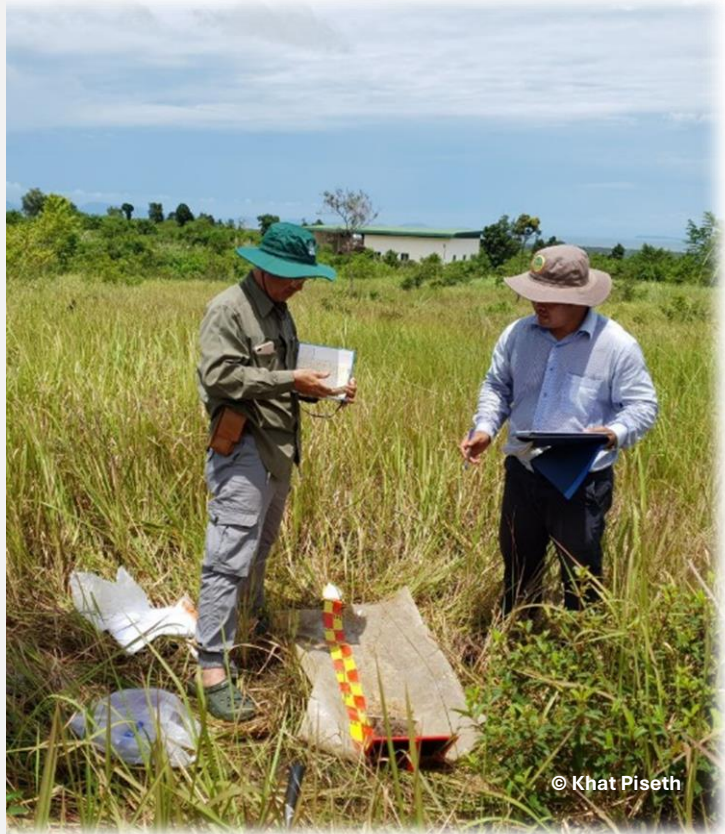




SOIL GOVERNANCE ANALYSIS: CAMBODIA

KEY MESSAGES

- Cambodia faces soil challenges like acidity, erosion and nutrient deficiencies, compounded by climate change and farming systems that place pressure on soil resources
- Soil management efforts are fragmented across ministries, requiring a unified national strategy to address soil health comprehensively.
- While existing frameworks provide a foundation, they remain fragmented. Greater alignment and clarity are needed to effectively address soil challenges and strengthen governance.
- Financial constraints and limited institutional capacity restrict the implementation of soil management strategies, highlighting the need for increased investment.
- A lack of comprehensive soil data and continuous feedback systems prevents effective monitoring and timely policy adjustments.



Introduction

Cambodia is a low-lying country consisting of a central plain surrounded by low hills. It is located in mainland Southeast Asia, covering a total area of 18 103 500 hectares (ha). Around 8.2 million ha are under forest cover, while the remaining 9.6 million ha are classified as non-forest area. Non-forest areas include 4.3 million ha of paddy fields, 3.3 million ha of cropland, around 320 000 ha of grassland, and other land use/cover, which account for 1.8 million ha of the country's total area.

Sandy soils dominate both the upland and lowland regions of Cambodia, where high acidity is a prevalent issue. Many of these soils are deficient in nutrients and organic matter, and their coarse texture results in poor water retention. The low pH, coupled with high iron and aluminum content, makes some upland soils better suited to remain under natural forest cover. Intensive monocropping further exacerbates nutrient deficiencies and deplete carbon stocks.

In lowland areas, a combination of shallow groundwater tables, low subsoil permeability, and gentle gradients has led to widespread waterlogging, which is well suited to rice cultivation. However, inappropriate soil management

practices and the effects of climate change affect soil health. While efforts in research, development and the extension of sustainable agricultural techniques continue, the adoption of innovations by farmers and local communities remains limited. High rates of deforestation and forest fires exacerbate erosion, while soil pollution from bauxite mining and the presence of landmines in some areas make the land unsafe for agricultural use.

Currently, there are no instruments specifically addressing soil management and preservation. These efforts are carried out through several legal frameworks addressing soil health issues implemented by different ministries, mainly the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the Ministry of Environment (MoE). MAFF remains primarily responsible for the formulation, implementation and monitoring of strategies and legal frameworks related to soil management. MAFF also oversees the management of agricultural land resources, providing national strategies and technology for sustainable and profitable land management. The Ministry of Land Management, Urban Planning and Construction handles land administration, ownership and development, which indirectly impact soil management.

Objective

This brief critically reviewed and analysed soil-related strategies and legislative frameworks in Cambodia, with the aim of providing targeted recommendations to policymakers for addressing eventual policy gaps and strengthening implementation and monitoring of impacts mechanisms. The analysis evaluated these strategies and legislative frameworks based on how well they address critical soil threats specific to the country, as well as the extent to which they are implemented, monitored, and improved over time. The assessment, supported by officers from relevant government agencies and institutions, focused on evaluating the following key criteria:

1. Legislative Frameworks: analysis of the number and type of existing strategies and legislative frameworks and their effectiveness in addressing the dominant soil threats in the country.
2. Institutional Arrangements: analysis of government agencies or institutions' roles in the formulation, implementation and monitoring of soil strategies and legislative frameworks, as well as their mechanism of collaboration and information exchange.
3. Implementation: evaluation of the strategies in place for promoting, monitoring, and assessing the implementation of soil-related strategies and legislative frameworks, including enforcement mechanisms.
4. Feedback system: evaluation of the processes for ongoing improvement of soil strategies and legislative frameworks based on outcomes and stakeholder feedback.

Strategies and legal frameworks

The following frameworks are especially relevant to soil management and preservation. A comprehensive list of soil strategies and legal frameworks is available on the [SoilLEX database](#).

- [Law on Forestry \(2002\)](#)

This establishes the framework for the management, use and conservation of forests. It mandates development of the National Forest Management Plan. While the Law does not focus specifically on soil management and preservation, it regulates activities affecting soil health, such as forest harvesting. Punishments for forestry offences include imprisonment, fines and revocation of permits.

- [Agricultural Extension Policy in Cambodia \(2015\)](#)

This guiding framework serves to improve agricultural extension services and aims to ensure that all farmers and farming communities have access to and adopt improved agricultural

information and technologies to enhance productivity. MAFF directly provides extension services to farmers, and supervises and regulates those provided by other stakeholders.

An accountability system incorporates incentives to promote quality service delivery and sanctions for non-compliance.

- [Land Degradation Neutrality Target \(LDN Target\) \(2018\)](#)

Cambodia developed this instrument as a party to the United Nations Convention to Combat Desertification (UNCCD) to combat desertification, restore degraded land and soil, and address issues related to desertification, drought and floods. The country aims to achieve land-degradation neutrality by 2030 through implementation of sustainable land management practices.

The document identifies three main targets to be achieved by 2030: increasing forest cover, promoting agricultural growth, and increasing soil organic carbon stock in both forest and cropland. It also aims to maintain and enhance ecosystems and identifies key measures to this end.

- [National Environment Strategy and Action Plan \(NESAP\) 2016-2023](#)

This roadmap guides Government ministries and institutions at all levels, along with the private sector and other development actors, in integrating environmental considerations into policies, programmes and investments and improving associated law enforcement and financial and institutional mechanisms.

The document's four strategic objectives involve several components relevant to soil health, including developing participative soil mapping, minimizing pollution and mobilizing investments in the green economy.

- [Code on Environment and Natural Resources \(2023\)](#)

This comprehensive legal framework governs the management, protection, conservation and restoration of natural resources to support sustainable livelihoods and development. The Code addresses a range of issues, including soil-related matters, in areas such as climate change response and environmental protection.

- [Pentagonal Strategy \(2023\)](#)

This broad national socioeconomic policy agenda outlines development priorities for the next 25 years. One of the key priorities is the sustainable management of natural resources, including soil (*Pentagon 4.2*). The Strategy also promotes national

action programmes aimed at combating soil degradation, preventing soil erosion and enhancing soil productivity. The Pentagonal Strategy serves as the foundation for the development of the [National Strategic Development Plan \(NSDP\) 2024-2028](#).

The instruments discussed above are complemented by several other national strategies and legal frameworks. The [Law on Land Management, Urban Planning and Constructions \(1994\)](#) regulates the organization and development of urban and rural areas, ultimately affecting soil health through the allocation of land use. [Cambodia's Updated Nationally Determined Contribution \(NDC\) \(2020\)](#) and [Cambodia's Third Nationally Determined Contribution \(NDC 3.0\) \(2025\)](#), developed as part of the country's commitment to the Paris Agreement, acknowledges the country's vulnerability to adverse climate phenomena and highlights several mitigation and adaptation actions that impact soil health. The country's [Long-Term Strategy for Carbon Neutrality \(2021\)](#), a policy framework to achieve a carbon-neutral society, recognizes the role of soils as a critical carbon sink and identifies actions that impact soil health. The [Law on the Management of Pesticides and Fertilizers \(2011\)](#) reduces the risks caused by the use of pesticides and fertilizers. [Government Policy Priorities Programs 5 and 6 \(2023\)](#), ensure successful implementation of the three strategic policies of promoting agricultural production, market accessibility and price stability through financing programmes; improving extension services by deploying 1600 commune agricultural officers (CAOs); and developing modern agricultural cooperatives.

Gaps analysis

While Cambodia has made strides in addressing soil management through various legal frameworks and strategies, significant gaps remain.

Legal frameworks

Cambodia has implemented several strategies and legal frameworks related to soil management. While these instruments address several soil threats, they often approach these issues in isolation, without focusing specifically on broader soil management. They primarily focus on environmental protection, making the response more reactive than proactive and leaving several critical soil health issues unaddressed.

The absence of a dedicated strategy has also led to fragmented and siloed approaches, limiting effective governance and oversight. The LDN Target holds the most potential for translating into a more robust soil governance framework. However, it has yet to be fully elaborated into specific regulations.

Institutional arrangements

As soil management is carried out through separate legal frameworks implemented by different ministries, efforts are often fragmented. There is no clear, centralized structure for MAFF and MoE to coordinate these efforts. Effective soil management and preservation require a multifaceted and coordinated approach addressing both.

Implementation

Financial constraints and inadequate institutional capacity limit the implementation of strategies and legal frameworks. Limited funding from the Government and international donors restricts the development and execution of effective soil management programmes. Additionally, there is a lack of personnel and institutional capacity to implement existing frameworks adequately.

Inadequate soil advocacy and poor data management hinder progress in promoting soil health. Advocacy efforts for soil issues remain weak, leading to limited adoption of sustainable practices. This also results in soil health being deprioritized in policy discussions. Additionally, Cambodia has limited reliable data on soil health and conditions. However, MAFF has worked on the development of the national agricultural information systems, including the Cambodian soil information system (CamSIS) to support informed decision making.

There are no penalties for non-compliance and financial incentives for sustainable practices. Although there is a promising pilot initiative to finance farmers' transition to agroecology and a safer food system, these efforts remain limited in scope. Without defined consequences, there is limited motivation for compliance.



Feedback mechanism

Cambodia's feedback mechanisms for many soil-related policies are underutilized. While the country has established five- and ten-year agricultural censuses led by the Ministry of Planning and co-implemented by MAFF, legal framework evaluation is often based on periodic reviews rather than continuous stakeholder feedback. This can delay addressing on-ground challenges.

Recommendations and conclusions

To improve soil governance in Cambodia, the following recommendations can be adopted:

- **Develop a national soil management strategy and action plan** with a centralized coordinating body to combat land degradation, mitigate climate change impacts and conserve soil biodiversity, aiming to achieve the global LDN Target by 2030. The UNCCD's Sustainable Land Use Systems approach should guide this strategy. A soil governance task force can ensure cross-sectoral integration and address soil health holistically. The Pentagonal Strategy provides a pathway to enhance soil management, aligning with the NSDP 2024-2028. There is potential to incorporate a soil-specific strategy under Pentagon 4 (agricultural resource management).
- **Develop comprehensive soil regulations as part of the national strategy, with strong enforcement and evaluation mechanisms.** Create legal frameworks addressing issues like soil acidity and biodiversity loss. New frameworks should include incentives for adopting sustainable soil management practices.
- **Enhance data collection, soil database management, and continuous feedback systems.** Implement a robust soil information system (CamSIS) that consolidates existing data and can communicate real-time changes in soil properties. This would provide a comprehensive foundation for targeted interventions and effective strategies. Utilize agricultural censuses as a continuous feedback mechanism to update legal frameworks.
- **Improve decentralization of the agricultural extension system.** Although MAFF aims for a decentralized extension system, the current framework remains somewhat centralized under MAFF itself. Yet, empowering subnational levels is crucial for effectively implementing extension methods. MAFF has recently deployed CAOs across 1 250 communes, and will recruit them for another 350 communes in 2026. This could be key to ensuring the long-term sustainability of a decentralized extension system. Evaluating the 2015 Agricultural Extension

Policy would offer insights for enhancing the system's effectiveness.

- **Strengthen capacity development and human resources.** The implementation of extension and advisory services is often hindered by insufficient capacity. Investing in training programmes for local government officials, agricultural extension workers, and farmers to improve knowledge and skills related to sustainable soil management practices are crucial for effectively decentralizing these services.
- **Increase financial investment in soil management initiatives.** Enhance financial allocations specifically for soil management initiatives within the national agricultural budget. Prioritize funding for targeted programmes that address critical soil issues and invest in innovative technologies for soil conservation and rehabilitation. Additionally, establish dedicated funding mechanisms, such as grants or subsidies, to empower farmers and local communities to adopt sustainable practices.

With the support of



Ministry of Agriculture,
Forestry and Fisheries of
Cambodia



Department of Agricultural
Land Resources Management
of General Directorate of
Agriculture

CONTACTS

FAO Representation in Cambodia

FAO-KH@fao.org
<https://www.fao.org/cambodia/en>

Required citation: Maulana, M.A., Phy, C., Caon, L., Seng, V., Ly, P., Roccheggiani, G., Pasetto, S. 2025. *Soil Governance Analysis: Cambodia*. Phnom Penh, FAO. <https://doi.org/10.4060/cd6869en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.



Some rights reserved. This work is made available under the Creative Commons Attribution - 4.0 International licence (CC BY 4.0).