

Article 6, Paragraph 2 Initial Report (AIR) Referred to in Decision 2/CMA.3, Annex, Chapter IV.A (Initial Report) in Respect of Authorisation of ITMOs

General Information

Party	Kingdom of Cambodia
NDC Period	2021 – 2030
Report number for the NDC period	1
Report type	Initial report
Version	1.0
Date	14/02/2025
Names of cooperative approaches included in this report	• Grouped Projects for Cambodia Improved Cookstove • Grouped Projects for Cambodia Water Purifier

I. Participation responsibilities (para. 18(a))

- A.** Information on how the Party ensures that it is a Party to the Paris Agreement (para. 18(a), para. 4(a), to be updated by para. 21(a))

Cambodia signed the Paris Agreement on April 22, 2016¹ and ratified it on February 06, 2017 and therefore, is a Party to the Paris Agreement.

- B.** Information on how the Party ensures that it has prepared, communicated and is maintaining an NDC in accordance with Article 4, paragraph 2 (para. 18(a), para. 4(b), to be updated by para. 21(a))

Cambodia submitted the latest version of her updated NDC on December 31, 2020². Cambodia published a Long-Term Strategy for Carbon Neutrality in December 2021³ and a Circular Strategy on Environment for the 2023 – 2028 period⁴. As of the date of this report, there are 66 programs and actions conducted by the Cambodian government, listed on a dedicated webpage for tracking Climate Action⁵ of the Cambodian Ministry of Environment. Cambodia declares that it is continuing to implement its NDC in alignment with Article 4, paragraph 2 of the Paris Agreement.

- C.** Information on how the Party ensures it has arrangements in place for authorizing the use of ITMOs towards achievement of NDCs pursuant to Article 6, paragraph 3 (para. 18(a), para. 4(c), to be updated by para. 21(a))

Cambodia's competent authority for authorizing the use of ITMOs is the Ministry of Environment (MOE), designated by the Royal Government of Cambodia (RGC) as the permanent National Authority for GHG ER Mechanisms. The competence is delegated to the MOE through the Operations Manual for the Implementation of Article 6 of the Paris Agreement on Climate Change in Cambodia⁶, including eligibility requirements for the authorizations.

Main functions of the National Authority:

¹ <https://www.un.org/sustainabledevelopment/blog/2016/04/parisagreementsignatures/>

² [20201231_NDC_Update_Cambodia.pdf \(unfccc.int\)](#)

³ [Cambodia's Long-Term Strategy for Carbon Neutrality \(unfccc.int\)](#)

⁴ [Circular Strategy on Environment 2023 2028 \(moe.gov.kh\)](#)

⁵ [Climate Action Tracking \(ncsd.moe.gov.kh\)](#)

⁶ [Cambodia Article 6 Operations Manual \(moe.gov.kh\)](#)

- Authorizing international transfers of GHG ERs;
- Reviewing and making recommendations to the Coordinator and approving GHG ER projects;
- Monitoring compliance with the Paris Agreement and taking necessary actions;
- Ensuring the GHG ER projects meet the requirements outlined in the Paris Agreement;
- Ensuring that Cambodia complies with her international obligations under the Paris Agreement;
- Managing the National Registry of GHG ERs;
- Submitting relevant reports and information to the UNFCCC with respect to Cambodia's participation in cooperative approaches under Article 6 of the Paris Agreement;
- Making decisions on Corresponding Adjustments.

D. Information on how the Party ensures it has arrangements in place that are consistent with the Article 6, paragraph 2, guidance and relevant decisions of the CMA for tracking ITMOs (para. 18(a), para. 4(d), to be updated by para. 21(a))

Cambodia has arrangements in place for tracking ITMOs, which are detailed in the Article 6 Operations Manual, with the National Authority responsible for tracking and reporting related to ITMOs. The RGC will develop a National GHG ER Registry for tracking ITMOs and supporting the submission of relevant information to the UNFCCC.

Prior to such operationalization, the RGC will:

- Utilize the international registry provided by the UNFCCC; or
- Utilize the registry infrastructure provided by the issuing carbon crediting mechanism, provided that such mechanisms have established procedures to facilitate the provision of all information required by the RGC to fulfill Article 6 reporting requirements.

E. Information on whether the most recent national inventory report required in accordance with decision 18/CMA.1 has been provided (para. 18(a), para. 4(e), to be updated by para. 21(a))

Cambodia provided her most recent national inventory report to the UNFCCC in September 2022 in the Third National Communication⁷.

F. Information on how the Party ensures participation contributes to the implementation of its NDC and long-term low-emission development strategy, if it has submitted one, and the long-term goals of the Paris Agreement (para. 18(a), para. 4(f), to be updated by para. 21(a))

Cambodia's first NDC (2021 – 2030) will mainly be achieved domestically, thereby further strengthening Cambodia's transition to a low-carbon economy. In the interest of timely climate action and as an addition to domestic actions, Cambodia intends to use Article 6 activities, contributing to the overall emission reduction target of approximately 41.7%⁸ by 2030 compared with the BAU level.

The engagement under Article 6 of the Paris Agreement is in line with Cambodia's Long-Term Strategy for Carbon Neutrality⁹, which sets out Cambodia's transition towards reaching carbon

⁷ [20220921_Third National Communication_Cambodia.pdf \(unfccc.int\)](#)

⁸ Page 23 of Cambodia's Updated Nationally Determined Contribution.

⁹ [Cambodia's Long-Term Strategy for Carbon Neutrality \(unfccc.int\)](#)

neutrality by 2050. Cambodia has also actively publicized a Summary Report for the year 2023¹⁰ in September 2024 to present the 2023 progress in the implementation of the Updated NDC.

To ensure that participation in Article 6 cooperative approaches contributes to the implementation of Cambodia's NDC, the RGC will only authorize activities included on the country's 'positive list', i.e., those activities in the updated NDC that have been designated as conditional upon international support. The cooperative approaches for the Grouped Projects for Cambodia Improved Cookstoves and the Grouped Projects for Cambodia Water Purifier are expected to annually generate 40,161,920 tCO₂eq and 16,588,095 tCO₂eq¹¹ of ITMO, respectively, contributing 10% of their share of proceeds to Cambodia's NDC implementation. Cambodia shall authorize the transfer of ITMOs to the purchasing Party while retaining corresponding adjustments for NDC compliance.

II. Description of the Party's NDC, as referred to in decision 18/CMA.1, annex, paragraph 64, where a participating Party has not yet submitted a biennial transparency report (para. 18(b), to be updated by para. 21(b))

A. Target(s) and description, including target type(s) (decision 18/CMA.1, annex, para. 64(a))

Updated information on Cambodia's NDC is available on the UNFCCC NDC Registry¹². Information in this section of the initial report reflects that Cambodia's NDC is an emission reduction target below the BAU level, with half of that reduction concentrated in the forestry and land use sectors and the rest primarily in the energy, agriculture, industry, and waste sectors.

B. Target year(s) or period(s), and whether they are single-year or multi-year target(s) (decision 18/CMA.1, annex, para. 64(b))

Cambodia expresses her NDC as a single-year target, with 2030 being the target year. The reduction target is approximately 41.7% by 2030 compared with the BAU level.

C. Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s) (decision 18/CMA.1, annex, para. 64(c))

BAU emission scenarios (with and without the FOLU):

In the BAU scenario, overall GHG emissions in 2030 without the FOLU are expected to rise to 79 MtCO₂eq/year, while overall GHG emissions with the FOLU are expected to increase to 155 MtCO₂eq/year.

Historical data (excluding the FOLU):

The reported estimates of emissions of GHGs and removal of CO₂ are based on data reported in the 2019 GHG Inventory Report¹³ and the First Biennial Updated Report (FBRU, 2020)¹⁴ developed by

¹⁰ [Nationally Determined Contribution Summary Report 2023 \(ncsd.moe.gov.kh\)](https://ncsd.moe.gov.kh)

¹¹ LoA number 3162/0624 MoE; LoA number 3161/0624 MoE, issued by the Ministry of Environment of Cambodia

¹² [20201231_NDC_Update_Cambodia.pdf \(unfccc.int\)](https://unfccc.int)

¹³ [Cambodia 2019 National GHG Inventory \(unfccc.int\)](https://unfccc.int)

¹⁴ [FBRU Cambodia \(unfccc.int\)](https://unfccc.int)

the Government of Cambodia, which consists of GHG emissions from 2010 to 2016 for most of the sectors.

D. Time frame(s) and/or periods for implementation (decision 18/CMA.1, annex, para. 64(d))

Timeframe for implementation: 2020 - 2030
For the period 2026 – 2035, Cambodia's NDC shall be updated.

E. Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases (decision 18/CMA.1, annex, para. 64(e))

Scope of gases included in the contribution: Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O).

Geographies covered by the contribution: All national territories.

The base year for estimation: 2010

Sectors covered: Energy (Electricity, Transport, and Buildings), Industrial Processes and Product Use (IPPU) (Cement and Other Industry), Agriculture, Forestry and Other Land Use (AFOLU), and Waste. All categories in Cambodia's inventory are covered.

F. Intention to use cooperative approaches that involve the use of internationally transferred mitigation outcomes under Article 6 towards NDCs under Article 4 of the Paris Agreement (decision 18/CMA.1, annex, para. 64(f))

Cambodia's mitigation target by 2030 will be achieved through significant domestic efforts. Many sectors are included, which can be considered a disadvantage and challenge. However, this is also an opportunity to develop and strengthen Cambodia's capacity.

The emissions reduction of 64.6 MtCO_{2eq}/year is expected by 2030. This is a 41.7% reduction compared with the BAU case. The FOLU is expected to provide the major share of 59.1% emission reduction by 2030. Other sectors, like energy (21.3%), agriculture (9.6%), IPPU (9.1%), and waste (0.9%) are also expected to contribute significantly¹⁵.

G. Any updates or clarifications of previously reported information (e.g. recalculation of previously reported inventory data, or greater detail on methodologies or use of cooperative approaches) (decision 18/CMA.1, annex, para. 64(g))

N/A

III. Description of the Party's NDC, as referred to in decision 18/CMA.1, annex, paragraph 64, where a participating Party has not yet submitted a biennial transparency report (para. 18(b), to be updated by para. 21(b))

¹⁵ Table 6, page 22 of Cambodia's Updated Nationally Determined Contribution

A. ITMO metrics (para. 18(c))

ITMOs recognized from cooperative approaches are in CO₂ equivalents (tCO_{2eq}) whereby one ITMO equals one ton of CO₂. All ITMOs generated under Cambodia's cooperative approaches are quantified in CO₂ equivalents (tCO_{2eq}). No non-GHG metrics are used. Methodologies and metrics are applied in accordance with Article 4.13 of the Paris Agreement.

B. Method for applying corresponding adjustments as per chapter III.B (Application of corresponding adjustments) (para. 18(c))

1. Description of the method for applying corresponding adjustment for multi- or single-year NDCs that will be applied consistently throughout the period of NDC implementation, if applicable (para. 18(c))

Cambodia expresses her NDC as a single-year target. The reduction target of approximately 41.7% by 2030 compared with the BAU level.

Cambodia will consistently apply corresponding adjustments by using the averaging method specified in decision 2/CMA.3, annex, paragraph 7 (a) throughout the period of NDC implementation. Indicative corresponding adjustments equal to the average amount are applied annually, and corresponding adjustments equal to the average amount are applied in the NDC target year. The application of corresponding adjustments to calculate Cambodia's emissions balance will be included in the 'regular information' reporting (annex to the biennial transparency report) to the UNFCCC.

2. Description of the method for applying corresponding adjustments where the method is a multi-year emissions trajectory, trajectories or budget, if applicable (para. 18(c))

N/A

C. Quantification of the Party's mitigation information in its NDC in t CO₂ eq, including the sectors, sources, GHGs and time periods covered by the NDC, the reference level of emissions and removals for the relevant year or period, and the target level for its NDC or, where this is not possible, the methodology for the quantification of the NDC in t CO₂ eq (para. 18(d))

Sectors and sources covered by the NDC: Economy-wide

GHGs covered by the NDC: Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O)

Time periods covered by the NDC: 2020 – 2030

Reference level of emissions and removals for the relevant year or period: BAU 2030 emissions: 155.0 MtCO_{2eq}

The target level for the NDC:

The reduction target of approximately 41.7% (which is 64.6 MtCO_{2eq}/year) by 2030 compared with the BAU level. The majority of this is conditional upon international support. Further information is provided in Appendix 4 of Cambodia's Updated NDC.

- D. Quantification of the Party's NDC, or the portion in the relevant non-GHG indicator, in a non-GHG metric determined by each participating Party, if applicable (para. 18(e))

N/A

- E. For a first or first updated NDC consisting of policies and measures that is not quantified, information on quantification of the Party's emission level resulting from the policies and measures that are relevant to the implementation of the cooperative approach and its mitigation activities for the categories of anthropogenic emissions by sources and removals by sinks, as identified by the first transferring Party pursuant to paragraph 10, and the time periods covered by the NDC (para. 18(f))

N/A

IV. Information on each cooperative approach (para. 18(g-i), para. 19)

Grouped Projects for Cambodia Improved Cookstove, VCS 2925

- A. Copy of the authorization by the participating Party (para. 18(g))

The copy of the LoA and the addendum to the original letter for **Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)** shall be attached to this Initial Report and submitted to the UNFCCC. The LoA authorizes the implementation of a project targeting the distribution of 800,000 energy-efficient cookstoves. The purpose is to reduce deforestation, improve public health by minimizing indoor air pollution, and achieve annual GHG emission reductions of approximately 4,016,192 tCO₂eq¹⁶.

- B. Description of the cooperative approach (para. 18(g))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925) Project Introduction

The project activity targets households lacking access to improved cookstoves (ICS), often relying on traditional three-stone cookstoves. The geographical scope of the project is limited to Cambodia. ICSs are distributed to beneficiaries at no cost. The project uses a baseline-and-crediting mechanism and the methodology VMR0006 (Methodology for installation of high-efficiency firewood cookstoves version 1.1). The legislation of the Kingdom of Cambodia governs the project.

Project Objectives

The project aims to:

- Reduce wood fuel consumption;
- Improve public health by reducing indoor air pollution;
- Promote the adoption of energy-efficient ICSs;
- Reduce deforestation and forest degradation;
- Enhance the quality of life for Cambodian households;
- Contribute to global climate change mitigation by reducing GHG emissions;

¹⁶ Page 12, Grouped Projects for Cambodia Improved Cookstove, VCS 2925 approved by VERRA

- Contribute to Cambodia's sustainable development goals.

Project Implementation and Scale

The project will distribute 800,000 free ICSs to targeted households within Cambodia.

Estimated GHG Emissions Reductions

The estimated annual average GHG ERs for the project are 4,016,192 tCO_{2eq}/annum.

C. Duration of the cooperative approach (para. 18(g))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925):
10 years from 02/05/2022 to 01/05/2032

D. Expected mitigation for each year of the duration of the cooperative approach (para. 18(g))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

Year	GHG emission reductions (tCO _{2e})
2022	2,857,957
2023	4,216,111
2024	4,157,591
2025	4,099,656
2026	4,042,300
2027	3,985,518
2028	3,929,304
2029	3,873,652
2030	3,818,556
2031 (not included in this NDC period)	3,764,011
2032 (not included in this NDC period)	1,417,265
Total	40,161,920¹⁷

E. Participating Parties involved in the cooperative approach (para. 18(g))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925):
The Kingdom of Cambodia as the transferring Party shall update the transfer/cancellation information in the National Registry, include this in the Annual Report, and apply corresponding adjustments in the next BTR after the first transfer.

F. Authorized entities (para. 18(g))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

Entity name	Country of registration	Enterprise code	Date of authorization	LOA No.	Scope of authorization
Sustainability Investment Promotion and Development Joint Stock	Vietnam	0108747069	June 04, 2024	3162/0624 MoE, issued by the Ministry of Environment	Authorized to participate; authorized to generate and request

¹⁷ Page 12, Grouped Projects for Cambodia Improved Cookstove, VCS 2925 approved by VERRA; LoA approved by Ministry of Environment of Cambodia

Company (SIPCO)				of Cambodia	international transfer
--------------------	--	--	--	----------------	---------------------------

G. Description of how the cooperative approach ensures environmental integrity (para. 18(h), to be updated by para. 22(b))

1. Description of how the cooperative approach ensures that there is no net increase in global emissions within and between NDC implementation periods (para. 18(h)(i), to be updated by para. 22(b)(i))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

A robust monitoring system is implemented to track the transition from fossil fuels and non-renewable biomass to clean, efficient energy sources, as outlined in the Project Description Document (PDD)¹⁸. As a summary, the project's monitoring follows procedures provided in CDM Methodology AMS-II.G. version 11 - Energy efficiency measures in thermal applications of non-renewable biomass¹⁹ and the revisions set out in VMR0006 version 1.1 - Methodology for Installation of High Efficiency Firewood Cookstoves²⁰.

The number of commissioned project cookstoves is monitored twice annually. A stratified random sampling technique is employed for sampling, with detailed calculations provided in the monitoring plan, as outlined in the CDM guidelines - Sampling and surveys for CDM project activities and programmes of activities²¹. While the methodology does not specify a project size, the project proponent has referenced the CDM small-scale methodology AMS-II.G., categorizing instances within the project group as small-scale and implementing instance-based sampling to maximize the coverage of monitored samples.

In addition, the project proponent, in collaboration with the Cambodian Women For Peace and Development (CWPD), conducts ongoing internal monitoring and record-keeping, with quarterly updates. As part of the monitoring process, CWPD engages in advocacy for cookstove usage and promotes the benefits of cookstove use to end-users and the environment, which is expected to encourage the continued use of project stoves and facilitate permanent emissions reductions. Consequently, ITMOs generated from this cooperative approach will be eligible for international transfer and utilization to meet NDC commitments, provided they are realized within Cambodia's initial NDC implementation period, encompassing the 2030 vintage.

These ITMOs can only be used towards the use of an NDC of the same implementation period (until 2030). Given that the project's current crediting period extends beyond 2030, the following applies to ensure that there cannot be a net increase in global emissions between NDC periods:

- The modification will allow for an upward scale of the Mitigation Activity while considering lessons learned from Phase 1.
- Cambodia shall count and adjust the ITMOs beyond 2030 within the current project and its modification against the first NDC target and shall not carry over to the second NDC commitment period.

2. Description of how the cooperative approach ensures environmental integrity through robust, transparent governance and the quality of mitigation outcomes, including through conservative

¹⁸ [VCS PD Cambodia Cookstove 22052023 \(registry.verra.org\)](https://registry.verra.org/projects/22052023)

¹⁹ [AMS-II.G.: Energy efficiency measures in thermal applications of non-renewable biomass \(cdm.unfccc.int\)](https://cdm.unfccc.int/AMS-II.G/energy-efficiency-measures-in-thermal-applications-of-non-renewable-biomass/)

²⁰ [VMR0006 Methodology for Installation of High Efficiency Firewood Cookstoves, v1.1 \(registry.verra.org\)](https://registry.verra.org/projects/VMR0006)

²¹ [Guidelines for sampling and surveys for CDM project activities and programmes of activities \(cdm.unfccc.int\)](https://cdm.unfccc.int/Guidelines-for-sampling-and-surveys-for-CDM-project-activities-and-programmes-of-activities/)

reference levels and baselines set in a conservative way and below 'business as usual' emission projections (including by taking into account all existing policies and addressing uncertainties in quantification and potential leakage) (para. 18 (h)(ii), to be updated by para. 22(b)(ii))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

The cooperative approach shall be implemented in accordance with Cambodia's Article 6 Operations Manual and the relevant regulations of the National Authority. Information on the cooperative approach, including the project design document, ER calculation sheet, and verified monitoring reports, is publicly accessible.

The project follows the monitoring approach of the CDM methodology and applies the IPCC default values for the baseline. To ensure the most conservative figure, the project proponent voluntarily applied an uncertainty deduction for f_{NRB} of 26 percent²², meaning that only 74 percent of emission reduction according to the applied methodology will be calculated.

The project proponent intending to generate authorized GHG Ers must demonstrate as part of their request for authorization that they ensure environmental integrity by:

- Setting baselines conservatively and below 'business-as-usual' emission projections.
- Minimizing the risk of non-permanence of mitigation.

The RGC will not provide a Letter of Authorization if the project proponent fails to demonstrate that the project ensures environmental integrity. A review of the Law on Environmental Protection and Natural Resource Management indicates no potential barriers to the implementation of improved cookstove projects.

3. Description of how the cooperative approach is minimizing the risk of non-permanence of mitigation across several NDC periods and how, when reversals of emission reductions or removals occur, the cooperative approach will ensure that these are addressed in full (para. 18(h)(iii), to be updated by para. 22(b)(iii))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

Mitigation activities associated with forestry, agriculture, and other removal projects that are susceptible to non-permanence risks must adhere to specific rules and procedures related to buffer credits. These buffer credits will be withheld from the total carbon credits issued for the project and may be released at a later date.

The risk of non-permanence is not applicable to the **Grouped Projects for Cambodia Improved Cookstove**. The project will implement a robust monitoring system to track and verify its emission reductions. These reductions are expected to be permanent and carry no risk of reversal.

- H. Additional description of the cooperative approach (para. 18(i))

1. Description of how the cooperative approach minimizes and, where possible, avoids negative environmental, economic and social impacts (para. 18(i)(i), to be updated by para. 22(f))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

²² (Round 2) MR ICS CAM 1st version05 20.12.23 Clean (registry.terra.org)

The cooperative approach was carefully designed to avoid negative environmental, economic, and social impacts. Instead, its positive environmental, economic, and social impacts are detailed below.

No net harm:

Greenhouse gas reductions: Project implementation will reduce GHG emissions by decreasing the consumption of non-renewable biomass.

Air quality: Users, particularly women and children, will benefit from improved air quality due to reduced emissions of CO₂, carbon monoxide, and particulate matter. Air pollution from solid-fuel cooking is a major risk factor for childhood pneumonia and other respiratory, cardiovascular, and ocular diseases.

Biodiversity: The project will reduce pressure on Cambodia's remaining forests, leading to improved biodiversity.

No negative impacts are anticipated.

Local Stakeholder Comment:

All stakeholders supported the project activities ***without negative comments.***

Environmental Impact:

The project activities distributed under this grouped project do not require an environmental impact assessment. ***The project activities will not have any negative environmental or ecological impacts.*** They will not involve the use of land or soil for crop or other product production. ***The installation of ICS will not have any significant environmental impacts.*** The grouped activity contributes to reducing firewood consumption, thereby alleviating pressure on forests and reducing indoor air pollution from wood smoke. This, in turn, helps prevent smoking-related health issues, resulting in positive environmental impacts.

2. Description of how the cooperative approach reflects the eleventh preambular paragraph of the Paris Agreement, acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity (para. 18(i)(ii), to be updated by para. 22(g))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

General: The project is consistent with and contributes to the sustainable development objectives of Cambodia and, therefore, can obtain approval from the National Authority. In the criteria, the assessments related to the eleventh preambular paragraph of the Paris Agreement include consulting local stakeholders, supporting the most disadvantaged groups of the target communities, improving public health, and promoting gender equity and women empowerment. The project has been assessed by the SD VSta standard to meet UN SDGs numbers 3, 4, 5, 7, 8, 13, and 15.

Specific: The project engages with local communities through various methods, including interviews, surveys, and group discussions. By reducing reliance on traditional biomass fuels, the project improves indoor air quality, leading to a decrease in respiratory illnesses and other health issues, hence improving community health. Additionally, the project frees up time for women and children, allowing them to focus on education, healthcare, and other productive activities. Also, the project proponent collaborates firmly with the CWPD to ensure and intensify gender equality and the

empowerment of women. Furthermore, the project creates employment opportunities and provides training to enhance the skills of indigenous people.

3. Description of how the cooperative approach is consistent with the sustainable development objectives of the Party, noting national prerogatives (para. 18(i)(iii), to be updated by para. 22(h))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925)

Sustainable development objectives of Cambodia:

- Social enhancement of income and quality of life
- Technology transfer
- Economic benefits

How the cooperative approach is consistent with the criteria:

- The project aims to improve the health and well-being of households by providing energy-efficient cookstoves as a replacement for traditional stoves. By reducing indoor air pollution, the project will mitigate respiratory illnesses and other health issues, particularly among women and children. Furthermore, the project will contribute to reducing waterborne diseases. These benefits ensure healthy lives and promote well-being for all ages.
- The initiative contributes to ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all by significantly reducing the time required for gathering firewood. The initiative enables individuals, particularly women and children, to allocate more time to education, healthcare, and other productive activities. Additionally, the project creates employment opportunities and provides training to enhance skills.
- The initiative mitigates gender inequality by reducing the time spent by women and children on time-consuming and physically demanding tasks such as collecting firewood. This reduction in workload allows women and girls to engage in more productive activities, leading to improved livelihoods and empowerment.
- The project will distribute energy-efficient cookstoves to households, replacing traditional, inefficient cooking methods. This will reduce reliance on polluting fuels, improve indoor air quality, and contribute to ensuring access to affordable, reliable, sustainable, and modern energy for all.
- The project will create employment opportunities at various stages, from the distribution of improved cookstoves to the production of components. This will contribute to promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

4. Description of how the cooperative approach applies any safeguards and limits set out in further guidance from the CMA pursuant to chapter III.D (para. 18(i)(iv), to be updated by para. 22(i))

N/A

5. Description of how the cooperative approach contributes resources for adaptation pursuant to chapter VII (Ambition in mitigation and adaptation actions), if applicable (para. 18(i)(v), to be updated by para. 22(j))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925):

Cambodia does not currently mandate mitigation activities under this cooperative approach to contribute to adaptation. Instead, the project proponent is encouraged to contribute voluntarily to the Adaptation Fund.

6. Description of how the cooperative approach delivers overall mitigation in global emissions pursuant to chapter VII (Ambition in mitigation and adaptation actions), if applicable (para. 18(i)(vi), to be updated by para. 22(k))

Cooperative Approach #1 (Grouped Projects for Cambodia Improved Cookstove, VCS 2925):

Cambodia does not currently mandate this cooperative approach to deliver overall mitigation in global emissions. However, in an effort to enhance global climate mitigation, the project proponent will voluntarily cancel 2 percent of the verified ITMOs generated under this cooperative approach.

Grouped Projects for Cambodia Water Purifier, VCS 3052

- A. Copy of the authorization by the participating Party (para. 18(g))

The copy of the LoA and the addendum to the original letter for **Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)** shall be attached to this Initial Report and submitted to the UNFCCC. The LoA authorizes the distribution of 1,000,000 water purifiers to replace wood-fueled boiling methods. This aims to reduce deforestation and achieve annual GHG emission reductions of approximately 1,658,810 tCO₂eq²³.

- B. Description of the cooperative approach (para. 18(g))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

Project Activity

The project aims to improve the quality of drinking water by distributing low-greenhouse gas-emitting safe drinking water purifiers (SDWPs) to households in Cambodia. To minimize energy consumption and associated emissions, the project will avoid the use of thermal energy or low-energy technologies. The project uses a baseline-and-crediting mechanism and the methodology AMS-III.AV (Low greenhouse gas-emitting safe drinking water production systems version 08.0). The legislation of the Kingdom of Cambodia governs the project.

Project Objectives

The project aims to:

- Reduce wood fuel consumption;
- Improve public health by reducing indoor air pollution;
- Promote the adoption of clean and efficient water purification methods;
- Reduce deforestation and forest degradation;
- Enhance the quality of life for Cambodian households;
- Contribute to Cambodia's sustainable development goals;
- Contribute to Cambodia's climate change response and global mitigation by reducing GHG emissions from deforestation and wood fuel combustion.

Project Implementation

The project will distribute 1,000,000 water purifiers to households that traditionally use wood-fueled stoves for boiling water. All project activities will be confined to Cambodia.

Estimated GHG Emissions Reductions

The estimated annual average GHG ERs for the project are 1,658,810 tCO₂eq/annum.

- C. Duration of the cooperative approach (para. 18(g))

²³ Page 11, Grouped Projects for Cambodia Water Purifier, VCS 3052 approved by VERRA

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052): 10 years from 02/05/2022 to 01/05/2032

D. Expected mitigation for each year of the duration of the cooperative approach (para. 18(g))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)			
Year	Baseline GHG emissions (tCO₂e)	Leakage GHG emissions (tCO₂e)	Net GHG emission reductions (tCO₂e)
2022	1,162,482	58,124	1,104,358
2023	1,746,115	87,306	1,658,810
2024	1,746,115	87,306	1,658,810
2025	1,746,115	87,306	1,658,810
2026	1,746,115	87,306	1,658,810
2027	1,746,115	87,306	1,658,810
2028	1,746,115	87,306	1,658,810
2029	1,746,115	87,306	1,658,810
2030	1,746,115	87,306	1,658,810
2031 (not included in this NDC period)	1,746,115	87,306	1,658,810
2032 (not included in this NDC period)	583,634	29,182	554,452
Total	17,461,153	873,058	16,588,095²⁴

E. Participating Parties involved in the cooperative approach (para. 18(g))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052): The Kingdom of Cambodia as the transferring Party shall update the transfer/cancellation information in the National Registry, include this in the Annual Report, and apply corresponding adjustments in the next BTR after the first transfer.

F. Authorized entities (para. 18(g))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)					
Entity name	Country of registration	Enterprise code	Date of authorization	LOA No.	Scope of authorization
Sustainability Investment Promotion and Development Joint Stock Company (SIPCO)	Vietnam	0108747069	June 04, 2024	3161/0624 MoE, issued by the Ministry of Environment of Cambodia	Authorized to participate; authorized to generate and request international transfer

G. Description of how the cooperative approach ensures environmental integrity (para. 18(h), to be updated by para. 22(b))

²⁴ Page 11, Grouped Projects for Cambodia Water Purifier, VCS 3052 approved by VERRA; LoA approved by Ministry of Environment of Cambodia

1. Description of how the cooperative approach ensures that there is no net increase in global emissions within and between NDC implementation periods (para. 18(h)(i), to be updated by para. 22(b)(i))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

A robust monitoring system is implemented to track the transition from fossil fuels and non-renewable biomass to clean, efficient energy sources, as outlined in the Project Description Document (PDD)²⁵. In summary, the project's monitoring follows procedures provided in CDM Methodology AMS-III.AV. version 8.0 - Low greenhouse gas emitting safe drinking water production systems²⁶. The project proponent has applied the CDM small-scale methodology AMS-III.AV., categorizing instances within the project group as small-scale and implementing instance-based sampling to maximize the coverage of monitored samples.

In addition, the project proponent, in collaboration with the Cambodian Women For Peace and Development (CWPD), conducts ongoing internal monitoring and record-keeping, with quarterly updates. As part of the monitoring process, CWPD engages in advocacy for water purifier usage and promotes the benefits of water purifier use to end-users and the environment, which is expected to encourage the continued use of project water purifiers and facilitate permanent emissions reductions. Consequently, ITMOs generated from this cooperative approach will be eligible for international transfer and utilization to meet NDC commitments, provided they are realized within Cambodia's initial NDC implementation period, encompassing the 2030 vintage.

These ITMOs can only be used towards the use of an NDC of the same implementation period (until 2030). Given that the project's current crediting period extends beyond 2030, the following applies to ensure that there cannot be a net increase in global emissions between NDC periods:

- The modification will allow for an upward scale of the Mitigation Activity while considering lessons learned from Phase 1.
- Cambodia shall count and adjust the ITMOs beyond 2030 within the current project and its modification against the first NDC target and shall not carry over to the second NDC commitment period.

2. Description of how the cooperative approach ensures environmental integrity through robust, transparent governance and the quality of mitigation outcomes, including through conservative reference levels and baselines set in a conservative way and below 'business as usual' emission projections (including by taking into account all existing policies and addressing uncertainties in quantification and potential leakage) (para. 18 (h)(ii), to be updated by para. 22(b)(ii))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

The cooperative approach shall be implemented in accordance with Cambodia's Article 6 Operations Manual and the relevant regulations of the National Authority. Information on the cooperative approach, including the project design document, ER calculation sheet, and verified monitoring reports, is publicly accessible.

The project follows the monitoring approach of the CDM methodology and applies the IPCC default values for the baseline. The Verified Carbon Standard sets out requirements for the quantification, monitoring, and reporting of GHG emissions and removals; and verification, registration, and issuance of verified carbon units (VCUs). VCUs under the project have been calculated according

²⁵ [VCS PD Cambodia Water Purifier 13052024 \(registry.terra.org\)](https://registry.terra.org/VCS_PD_Cambodia_Water_Purifier_13052024)

²⁶ [AMS-III.AV.: Low greenhouse gas emitting safe drinking water production systems \(cdm.unfccc.int\)](https://cdm.unfccc.int/AMS-III.AV/Low_greenhouse_gas_emitting_safe_drinking_water_production_systems)

to the small-scale methodology of CDM AMS-III.AV. - Low greenhouse gas-emitting safe drinking water production systems version 08.0 to ensure that all VCUs issued are real, measured, permanent, additional, net of leakage, verified by an accredited independent third party, and are not double-counted.

The project proponent intending to generate authorized GHG Ers must demonstrate as part of their request for authorization that they ensure environmental integrity by:

- Setting baselines conservatively and below 'business-as-usual' emission projections.
- Minimizing the risk of non-permanence of mitigation.

The RGC will not provide a Letter of Authorization if the project proponent fails to demonstrate that the project ensures environmental integrity. There are no national laws or regulations in Cambodia that would restrict the implementation of any of the alternative project activities. The project complies with all government regulations, specifically concerning the supply of clean water in rural areas and urban areas whilst providing "opportunities for poor people" who can access the technology, both physically and financially. The Cambodian Ministry of Health has been involved and consulted since the very start of SDWP in Cambodia.

3. Description of how the cooperative approach is minimizing the risk of non-permanence of mitigation across several NDC periods and how, when reversals of emission reductions or removals occur, the cooperative approach will ensure that these are addressed in full (para. 18(h)(iii), to be updated by para. 22(b)(iii))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

Mitigation activities associated with forestry, agriculture, and other removal projects that are susceptible to non-permanence risks must adhere to specific rules and procedures related to buffer credits. These buffer credits will be withheld from the total carbon credits issued for the project and may be released at a later date.

The risk of non-permanence is not applicable to the **Grouped Projects for Cambodia Water Purifier**. The project will implement a robust monitoring system to track and verify its emission reductions. These reductions are expected to be permanent and carry no risk of reversal.

H. Additional description of the cooperative approach (para. 18(i))

1. Description of how the cooperative approach minimizes and, where possible, avoids negative environmental, economic and social impacts (para. 18(i)(i), to be updated by para. 22(f))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

The cooperative approach was carefully designed to avoid negative environmental, economic, and social impacts. Instead, its positive environmental, economic, and social impacts are detailed below.

No net harm:

Greenhouse gas reductions: Project implementation will reduce GHG emissions by decreasing the consumption of non-renewable biomass.

Air quality: Users, particularly women and children, will benefit from improved air quality due to reduced emissions of CO₂, carbon monoxide, and particulate matter. Air pollution from solid-fuel cooking is a major risk factor for childhood pneumonia and other respiratory, cardiovascular, and ocular diseases.

Biodiversity: The project will reduce pressure on Cambodia's remaining forests, leading to improved biodiversity.

No negative impacts are anticipated.

Local Stakeholder Comment:

All stakeholders supported the project activities ***without negative comments.***

Environmental Impact:

The project activities distributed under this grouped project do not require an environmental impact assessment. ***The project activities will not have any negative environmental or ecological impacts.*** They will not involve the use of land or soil for crop or other product production. ***The use of water purifier technology will mitigate adverse environmental and social impacts associated with the use of non-renewable biomass.*** The grouped activity contributes to reducing firewood consumption, thereby alleviating pressure on forests and reducing indoor air pollution from wood smoke. This, in turn, helps prevent smoking-related health issues, resulting in positive environmental impacts. Therefore, ***no significant negative environmental impacts have been identified.***

2. Description of how the cooperative approach reflects the eleventh preambular paragraph of the Paris Agreement, acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity (para. 18(i)(ii), to be updated by para. 22(g))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

General: The project is consistent with and contributes to the sustainable development objectives of Cambodia and, therefore, can obtain approval from the National Authority. In the criteria, the assessments related to the eleventh preambular paragraph of the Paris Agreement include consulting local stakeholders, supporting the most disadvantaged groups of the target communities, improving public health, and promoting gender equity and women empowerment. The project has been assessed by the SD VISTA standard to meet UN SDGs numbers 1, 3, 4, 5, 6, 8, 13, and 15.

Specific: The project engages with local communities through various methods, including interviews, surveys, and group discussions. The project aims to improve the lives of Cambodian households by addressing various challenges related to water access and fuel consumption. By providing water purifiers and reducing reliance on wood fuel, the project contributes to improved health, gender equality, and sustainable development for the local people. Specifically, it helps reduce indoor air pollution, frees up time for education and other activities, and promotes gender equality by reducing the burden on women and children. Additionally, the project supports sustainable development by creating employment opportunities for the indigenous people.

3. Description of how the cooperative approach is consistent with the sustainable development objectives of the Party, noting national prerogatives (para. 18(i)(iii), to be updated by para. 22(h))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052)

Sustainable development objectives of Cambodia:

- Social enhancement of income and quality of life
- Technology transfer
- Economic benefits

How the cooperative approach is consistent with the criteria:

- The project will provide energy-efficient water purifiers to households that currently rely on wood-fueled stoves for water purification. By eliminating the need for boiling water, the project will reduce fuel consumption, improve indoor air quality, and save time. This will contribute to ending poverty in all its forms everywhere by improving the health and well-being of vulnerable populations.
- The project will provide safe drinking water to households in Cambodia that currently rely on unsafe water sources. By eliminating the need to boil water, the project will reduce exposure to harmful pathogens and improve overall health, particularly for vulnerable populations such as women, children, and the elderly. This ensures healthy lives and promotes well-being for all ages.
- The project creates employment opportunities at various stages of implementation, from conception to execution. Additionally, the project proponent provides training to enhance the skills of local individuals, enabling them to contribute to sustainable development, ensuring inclusive and equitable quality education, and promoting lifelong learning opportunities for all.
- The initiative mitigates gender inequality by reducing the time spent by women and children on time-consuming and physically demanding tasks such as collecting firewood and water. This reduction in workload allows women and girls to engage in more productive activities, leading to improved livelihoods and empowerment.
- The project aims to improve public health by providing access to safe drinking water through the distribution of water purifiers. This will reduce exposure to waterborne diseases and contribute to ensuring the availability and sustainable management of water and sanitation.
- The project will create employment opportunities at various stages, from the initial distribution of products to ongoing maintenance and monitoring activities. This will contribute to local economic development and help promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

4. Description of how the cooperative approach applies any safeguards and limits set out in further guidance from the CMA pursuant to chapter III.D (para. 18(i)(iv), to be updated by para. 22(i))

N/A

5. Description of how the cooperative approach contributes resources for adaptation pursuant to chapter VII (Ambition in mitigation and adaptation actions), if applicable (para. 18(i)(v), to be updated by para. 22(j))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052): Cambodia does not currently mandate mitigation activities under this cooperative approach to contribute to adaptation. Instead, the project proponent is encouraged to contribute voluntarily to the Adaptation Fund.

6. Description of how the cooperative approach delivers overall mitigation in global emissions pursuant to chapter VII (Ambition in mitigation and adaptation actions), if applicable (para. 18(i)(vi), to be updated by para. 22(k))

Cooperative Approach #2 (Grouped Projects for Cambodia Water Purifier, VCS 3052): Cambodia does not currently mandate this cooperative approach to deliver overall mitigation in global emissions. However, in an effort to enhance global climate mitigation, the project proponent will voluntarily cancel 2 percent of the verified ITMOs generated under this cooperative approach.

Submitted on behalf of the National Authority of the Kingdom of Cambodia by

CHOUP Paris, PhD

Secretary of State, Chair, Climate Change Technical Working Group.

Morodok Techo Building (Lot3) Tonle Bassac, Chamkarmorn, Phnom Penh, CAMBODIA.

Choup.paris@moe.gov.kh