Initial report referred to in decision 2/CMA.3, annex, chapter IV.A (Initial report)

Party	Switzerland
NDC period	2021-2030
Report type Initial report Updated initial report	 ☒ ☐
Report number for the NDC period	1
Version	1.0
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Names of cooperative approaches included in this report	Promotion of climate smart agriculture practices for sustainable rice cultivation in Ghana
	Operation of e-buses on privately owned, scheduled public bus routes in the Bangkok Metropolitan area by Energy Absolute
	Electrification of Vanuatu's Inhabited Islands through Solar Power ITMO Programme

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))

Switzerland has ratified the Paris Agreement on October 6th 2017 and 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))

Switzerland has submitted the latest version of its updated NDC on December 17th 2021.[1] Switzerland's national CO_2 Acts (2022-24 in force; 2025-2030[2] under Parliamentary debate) anchor Switzerland's emission reduction targets and define domestic measures.

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))

Switzerland's competent authority for authorizing the use of ITMOs is the Federal Department of Environment, Transport, Energy and Communications acting through the Federal Office for the Environment (FOEN). The competence is delegated to the FOEN through the bilateral agreements as well as Switzerland's national CO_2 Act. The bilateral agreements and the national CO_2 legislation include eligibility requirements for the authorizations.

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))

Switzerland uses the Swiss Emissions Trading Registry[3] for the tracking of ITMOs which are recognized by Switzerland under Article 6.2. The ITMOs, which have been first transferred from Switzerland's partner countries will be issued in the Swiss Emissions Trading Registry as "international attestations". The Swiss Emissions Trading Registry tracks the holder of the units, transfers between accounts, use towards NDC (surrendering under the Swiss CO_2 legislation) as well as voluntary cancellations. Information on the specific mitigation purpose

[1] Swiss NDC 2021-2030 incl ICTU_December 2021.pdf (unfccc.int)
[2] Botschaft zum CO2-Gesetz 2025-2030 (admin.ch) (in German, French and Italian)
[3] https://www.emissionsregistry.admin.ch/

of a cancellation other than use towards NDC will be collected from the account holders on a voluntary basis. Furthermore, the Swiss Emission Trading Registry will serve as a central database and provide access to the authorizations of Switzerland and its partner countries underlying each international attestation that represents an ITMO and its respective cooperative approach. Switzerland may define, together with its partner countries, a jointly used registry.

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))

Switzerland submitted its most recent national inventory report for the year 2020 on the 14th of April 2022 to the UNFCCC.[4]

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))

Switzerland's first NDC (2021 – 2030) will mainly be achieved domestically, thereby further strengthening Switzerland's transition to a low carbon economy. In the interest of timely climate action and as an addition to domestic actions, Switzerland intends to use Article 6 activities, contributing to the overall emission reduction target of at least minus 50 percent by 2030 compared with 1990 levels. The engagement under Article 6 of the Paris Agreement is in line with Switzerland's long-term climate strategy, [5] which sets out Switzerland's transition towards net zero greenhouse gas emissions by 2050. The 2050 strategy details sectoral pathways and reflects the long transformation periods of Switzerland's remaining mitigation potential.

II. Description of the Party's nationally determined contribution, 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 Switzerland's NDC is available via the UNFCCC NDC Registry.[6] Information in this section of the initial report reflects Switzerland's NDC as of 2022: Switzerland's NDC is an economy-wide absolute emission reduction target compared with the base year 1990.

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))

Switzerland expresses its NDC both as a single-year and multi-year target. The reduction target of at least minus 50 percent by 2030 compared with 1990 levels corresponds to an average reduction of at least minus 35 percent over the period 2021-2030.

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))

Base year: 1990
Emissions in base year (1990) comprise emissions from all sectors, except LULUCF. Indirect CO_2 is also included. The provisional value for base year emissions, subject to change due to recalculations of the greenhouse gas inventory, is 54'158.92 kt CO_{2eq}. The value for the final accounting will be defined in the inventory submission covering data up to 2030.
For forest land: reference level
For non-forest land (cropland, grassland, wetlands, settlements, other land): reference period
Additional information on LULUCF accounting can be found via the NDC Registry.

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

[4] Switzerland's greenhouse gas inventory (admin.ch)
[5] Long-term climate strategy to 2050 (admin.ch)
[6] Swiss NDC 2021-2030 incl ICTU_December 2021.pdf (unfccc.int)

1.1.2021 – 31.12.2030
The quantified commitment for the year 2030 is translated into an average commitment over the period from beginning 2021 to end 2030. By 2025, a reduction of greenhouse gases by at least 35 percent compared with 1990 levels is anticipated. Information on the anticipated level of emissions for 2025 is given for international comparability.

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

Gases covered: CO_2 (including indirect CO_2), CH_4, N_2O, HFCs, PFCs, SF_6, NF_3

Base year for gases covered: all 1990 (not relevant where a reference level/period approach is applied).

Sectors covered: energy; industrial processes and product use; agriculture; land-use, land-use change and forestry; waste and other (consistent with 2006 IPCC guidelines). All categories and pools in Switzerland's inventory are covered.

While Switzerland supports the inclusion of international aviation and navigation on the basis of existing and future internationally agreed rules applicable to all Parties, Switzerland's NDC currently does not include emissions from international aviation and navigation. In particular, Switzerland's emission reduction targets do not include emissions from international aviation, a part of which are already covered by the Swiss emission trading scheme (ETS) as well as by the Carbon Offsetting and Reduction Scheme (CORSIA) of the International Civil Aviation Organization (ICAO). However, Switzerland's emission reduction targets do include emissions from domestic aviation (excluding military) and navigation.

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))

Switzerland's emission reductions by 2030 will mainly be achieved domestically, thereby further strengthening Switzerland's transition to a low carbon economy. In the interest of timely climate action and as an addition to domestic actions, Switzerland intends to use Article 6 activities, contributing to the overall emission reduction target of at least minus 50 percent by 2030 compared with 1990 levels.

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))

Not applicable.

III. Information on ITMO metrics, method for applying corresponding adjustments and method for quantification of the NDC (para. 18(c–f))

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

The current bilateral agreements recognize only ITMOs in CO_2 equivalents whereby one ITMO equals one tonne of CO_2 and methodologies and metrics pursuant to guidance under Article 4.13 of the Paris Agreement are applied.

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))

Updated information on Switzerland's NDC is available via the UNFCCC NDC Registry. Information in this section of the initial report reflects Switzerland's NDC as of 2022:

Switzerland expresses its NDC both as single-year and multi-year target. The reduction target of at least minus 50 percent by 2030 compared with 1990 levels corresponds to an average reduction of at least minus 35 percent over the period 2021-2030.

Switzerland communicates one consistent accounting method for its single and multi-year target for its first NDC. In line with the annex of decision 2/CMA.3, paragraph 7, Switzerland will apply the trajectory method to both its single- and multi-year target (paragraph 7 (a) (i) and (b)).

The (indicative) multi-year emissions trajectory of Switzerland corresponds to the average reduction of minus 35 percent over the period 2021-2030 communicated in Switzerland's NDC. Switzerland will update, as necessary, the information on the multi-year trajectory, consistent with relevant guidance adopted by the CMA.

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))

See above.

C. Quantification of the Party's mitigation information in its NDC in t $CO_{2\,eq}$, 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 $CO_{2\,eq}$ (para. 18(d))

Updated information on Switzerland's NDC is available via the UNFCCC NDC Registry and are provided above as per 2022.

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))

Not applicable.

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))

Not applicable.

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

(a) Promotion of climate smart agriculture practices for sustainable rice cultivation in Ghana

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

Registered compensation projects abroad (admin.ch).

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

The cooperative approach promotes the adoption of Alternate Wetting and Drying (AWD) for rice cultivation. Under common agricultural practice in Ghana rice farmers flood their rice field throughout the cropping season. This practice leads to significant methane emissions. Through the AWD application, rice farmers can reduce these methane emissions, while improving efficiency of water use. Farmers are compensated financially for adopting the AWD practice and receive targeted technical training, which provides the necessary incentive to change the current cultural practice. The cooperative approach is expected to reduce 1,125,655 tCO_2e until the end of 2030. At full implementation, the adoption AWD technology will cover 78% of rice production areas in Ghana.

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

October 1st 2022 – December 31st 2030.

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

Year	Baseline GHG emissions (tCO_2e)	Project GHG emissions (tCO_2e)	GHG emission reductions (tCO_2e)	Conservativeness Factor (until CH_4 measurements can be done)[7]	Net GHG emission reductions (tCO_2e)
2022	166,562	86,751	79,811	0.89	71,032
2023	333,124	173,502	159,622	0.89	142,063
2024	370,138	192,780	177,358	0.89	157,848
2025	370,138	192,780	177,358	0.89	157,848
2026	474,239	246,999	227,239	0.89	202,243
2027	231,336	120,488	110,849	0.89	98,655
2028	231,336	120,488	110,849	0.89	98,655
2029	231,336	120,488	110,849	0.89	98,655
2030	231,336	120,488	110,849	0.89	98,655
Total	2,639,544	1,374,762	1,264,781		1,125,655

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

Republic of Ghana: *reference to be completed.*
Switzerland: Registered compensation projects abroad (admin.ch).

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

Country Office of the United Nations Development Programme (UNDP) in Ghana.

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))

The cooperative approach ensures environmental integrity building on the established CDM methodology AMS-III.AU "Methane emission reduction by adjusted water management practice in rice cultivation". Default values are used based on IPCC 2019/refinement values from 2022 until the end of 2025 and a conservativeness factor is applied. From the first cropping season of 2026 onwards, methane measurements will be conducted using the reference field approach. Only verified emission reductions following the monitoring procedure will lead to the recognition of ITMOs. All ITMOs recognized

[7] considering the uncertainty range of 30-50% (more than 30% but less than equal to 50%) i.e., for an uncertainty band of 40% (average value). Technical guidance on methodologies for adjustments under Article 5, paragraph 2, of the Kyoto Protocol (unfccc.int)

under this program can only be used towards the NDCs implementation period ending in 2030.

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))

The programme follows the monitoring approach of the CDM methodology and applies the IPCC default values for the baseline and programme emission factor plus an uncertainty factor of 0.89, meaning that 11 percent of calculated emission reductions will be further discounted, thereby ensuring conservativeness of estimations. For the quantification of GHG emission reductions AWD compliance will be monitored through a WebApp. The WebApp will allow farmers to document the application of AWD and to verify the eligibility criteria for participation in the program.

Awareness raising and technical trainings in addition to the provision of water level measuring tubes for farmers will be the core of the programme implementation as the way of promoting the adoption of climate smart agricultural, in particular SRI techniques. As the programme aims at changing an established cultural practice, in addition to the economic incentives, continuous trainings and guidance for farmers are crucial for the success of the programme and reaching its targets.

Towards the end of the programme implementation, it is expected that the targeted farmers will have adopted SRI and AWD as their standard irrigation practice. By that time, Ghana will have an increasingly resilient rice production sector capable of withstanding many of the challenges of climate change, thus guaranteeing the stable supply of a staple food for Ghana's population. Transparent governance of the cooperative approach is ensured through close coordination of UNDP (project coordinator) with relevant government agencies of Ghana and Switzerland. The modalities for monitoring and verification are defined in relevant national legislation of both countries. The bilateral agreement between Ghana and Switzerland sets the cooperation framework for the transparent transfer of ITMOs.

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))

Methane emission reductions achieved through the AWD practice will be monitored. They constitute permanent emission reductions and bear no risk of reversals.

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))

The cooperative approach was carefully designed to avoid negative environmental, economic and social impacts. Instead, its positive environmental, economic and social impacts are detailed under the section on sustainable development (paragraph i, (iii)). Switzerland invites any direct or indirect stakeholders detecting the possibility of negative impacts to contact the Federal Office for the Environment through a grievance mechanism where stakeholders have the opportunity to confidentially submit complains to Switzerland. Complaints shall be addressed to carbonoffset@bafu.admin.ch.

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))

Switzerland fully subscribes to the view that Parties should, when taking action to address climate change, respect, promote, and consider their respective human rights obligations, including due consideration for gender equality and gender sensitive policies, intergenerational equity, and the needs of particularly vulnerable groups.

General: Per "Cooperation Agreement between the Republic of Ghana and the Swiss Confederation towards the Implementation of the Paris Agreement" (hereafter referred to as the "Cooperation Agreement Ghana Switzerland"), ITMOs will not be recognized in case of evidence for violation of human rights during the implementation of the activity.[8] Thereby, eleventh preambular paragraph of the Paris Agreement is operationalized in a robust manner in the "Cooperation Agreement Ghana Switzerland".

Activity specific: The activities involved in the cooperative approach have no risk in relation to the listed elements. Furthermore, the proposed ITMO programme will undergo a UNDP's SDG Impact Assessment through the Climate Action Impact Tool (CAIT).[9] The assessment under the CAIT Tool requires a thorough screening for potential negative impacts before assessing the programmes positive impacts. During this screening, risks are identified, and commensurate management approaches defined. The section "Social and Environmental Risk Screening" is compliant with UNDP's social and environmental screening procedures. The impact and probability of an event occurring will need to be graded from 1 to 5 with 1 being low (e.g. low level of impact or low probability of event occurring) and with the level of significance automatically calculated. Those indicators that are defined as significantly high will need to be provided with additional information on a proposed risk mitigation approach.

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))

The "Cooperation Agreement Ghana Switzerland" requires both participating countries to review a mitigation activity against its consistency with sustainable development and the country's relevant strategies, where applicable. Switzerland considers the mitigation activity to contribute to sustainable development in the following manner: The programme has significant co-benefits related to sustainable land management and will be directly covering at least 10 Sustainable Development Goals (see MADD, Chapter 4).

The ITMO programme ensures environmental sustainability through improved soil quality, and also contributes to the eradication of extreme poverty and hunger, by supporting farming communities in increasing the rice yield through better management of nutrient, pest and improved water management. The programme also widens the income source base through diversification of agricultural production enabled by higher water availability for other crops. The ITMOs programme supports technology and know-how transfer which can contribute to more sustainable growth in the agricultural sector. Finally, the programme creates new opportunities for farmers to generate income, as well as for trainers and qualified personnel involved in programme implementation.

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))

Not applicable.

[8] Bilateral climate agreements (admin.ch)
[9] https://climateimpact.undp.org/

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))

Switzerland announced voluntary contributions to the Adaptation Fund of CHF 15 million in 2019 and CHF 10 million in 2021. These contributions were made to provide resources for adaptation, because of the effectivity of the fund and its thematic focus to support developing countries in their efforts to adapt to the adverse effects of climate change and as encouraged in the Annex to the decision 2/CMA.3.

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))

On a voluntary basis, Switzerland will cancel 2 percent of the ITMOs recognized under the cooperative approach authorized "Alternative Wetting and Drying for Rice Cultivation" to deliver an overall mitigation in global emissions.

The ITMOs from this cooperative approach will be used towards the voluntary compensation of the Swiss administration's emissions and will not be counted towards the Swiss NDC. Beyond the volume necessary to compensate all of the Swiss administration's emissions, an additional 2 percent will be cancelled for the achievement of OMGE. These 2 percent of ITMOs will not be used towards any NDC, nor towards any other mitigation purposes, including voluntary compensation.

Switzerland foresees to cancel 2 percent of all future cooperative approaches used for the compensation of the Swiss administration's emissions ("Klimapaket"[10]). Furthermore, the Swiss Government has submitted a proposal to the Swiss Parliament to establish a legal basis to cancel a portion of all ITMOs recognized by Switzerland under the Article 6.2 of the Paris Agreement, extending this approach beyond the offsetting of the Swiss administration's compensation programme.

(b) Operation of e-buses on privately owned, scheduled public bus routes in the Bangkok Metropolitan area by Energy Absolute

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

Registered compensation projects abroad (admin.ch)

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

The activity will replace the use of conventional (diesel & natural gas) buses with e-buses on more than 100 (existing and new) privately operated bus routes that provide a regular, scheduled service within the Bangkok Metropolitan area (refer to Annex 1 of the MADD for further details).
In addition to reducing GHG emissions, the project will improve service quality, reduce commuting times, local air and noise pollution while maintaining bus ticket prices.
The carbon finance from the purchase of up to **500,000 mitigation outcome units that are authorised** as International Transferred Mitigation Outcomes (ITMOs) within Thailand's first NDC period (including 2030 vintage) shall be used to levelise the total cost of ownership differential between baseline buses and the project e-buses.
The mitigation outcomes from this project are generated inside sectors covered by Thailand's NDC and represent a surplus beyond the policies and measures planned by the government of Thailand.

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

[10] RUMBA: Bundesrat genehmigt Konzept für Klimakompensation der Bundesverwaltung (admin.ch) (in German, French and Italian)

1st of October 2022 – 31st of December 2030.

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

Expected mitigation:

Year	Net GHG emission reductions (tCO_2eq)
2022	10,383
2023	61,411
2024	80,712
2025	79,554
2026	78,407
2027	77,273
2028	76,149
2029	75,037
2030	73,935

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

Kingdom of Thailand: https://www.onep.go.th/letter-of-authorization/
Switzerland: Registered compensation projects abroad (admin.ch).

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

Energy Absolute Public Company Ltd.

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))

ITMOs from this cooperative approach will be eligible for international transfer and use towards NDC when achieved within the first NDC implementation period of Thailand (including 2030 vintage). These ITMOs can only be used towards an NDC of the same NDC implementation period (until 2030). This ensures that there cannot be a net increase in global emissions between NDC implementation periods.

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))

The program activity of privately operated public transport buses is not within the scope of measures planned under Thailand's NDC or accompanying domestic legislation of implementation. The mitigation outcomes will be used in the NDC implementation period until 2030.
The Calculation of mitigation outcomes is based on the following T-VER methodologies, while some modifications have been applied:

1. T-VER-METH-TM-05 Version 03 – Use of Electric Vehicles in Public Transportation System (TM-05); and
2. T-VER-METH-TM-06 Version 03 – Modal Shift from Private Vehicles to Public Passenger Transportation with Electric Vehicles (TM-06).

The monitoring is based on data of measured fuel consumption of comparable buses or electricity consumption of electric buses. For modal shift, annual surveys via a ticket sales app are the primary basis for calculating emissions reductions.
The program promotes the new technology of e-buses including the associated service improvements (air conditioning, real-time timetable, etc.) and increase social acceptance. The program contributes to advances in the manufacturing and integration of e-vehicles and batteries in Thailand and improves air quality in Bangkok.

Leakage in the fuel switch scenario is considered negligible as the replaced vehicles shall not be used within the program boundaries and other areas. Leakage emissions are considered in the case of the modal shift. This includes the reduction of other public transport vehicles on the road, taxi and road congestion as a result of the modal shift to the e-busses for transit.

The cooperative approach ensures environmental integrity by demonstrating that ITMO revenues close the existing total cost of ownership (TCO) gap for the initial batch of 154 e-buses that are to be put into operation. The carbon finance will allow to adhere to existing bus ticket prices, thus ensuring a viable, commercial operation of this initial fleet.

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))

The e-bus program reduces emission reduction with each ride. These achieved emission reductions are permanent by definition and cannot be reversed.

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))

The compliance of the activity with environmental and social requirements is established via the Environmental and Social Management Framework (ESMF) of TGO. The ESMF is a tool for assessing city greenhouse gas mitigation projects for eligibility under T-VER program and enhancing stakeholders' participation.

Switzerland invites any direct or indirect stakeholders detecting the possibility of negative impacts to contact the Federal Office for the Environment through a grievance mechanism where stakeholders have the opportunity to confidentially submit complaints to Switzerland. Complaints shall be addressed to carbonoffset@bafu.admin.ch.

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))

General: Switzerland fully subscribes to the view that Parties should, when taking action to address climate change, respect, promote, and consider their respective human rights obligations, including due consideration for gender equality and gender sensitive policies, intergenerational equity, and the needs of particularly vulnerable groups.

Per "Implementing Agreement to the Paris Agreement between the Swiss Confederation and the Kingdom of Thailand" (hereafter referred to as the "Cooperation Agreement Thailand Switzerland"), ITMOs will not be recognized in case of evidence for violation of human rights during the implementation of the activity. Thereby, eleventh preambular paragraph of the Paris Agreement is operationalized in a robust manner in the "Cooperation Agreement Thailand Switzerland".

Activity specific: The Activity adheres to the Environmental and Social Management Framework (ESMF) of TGO. The Bangkok e-bus program scores well on social benefits such as inclusion, job creation, poverty alleviation, health and safety benefits, cooperation, and people empowerment. There is no indication of negative human rights impact from the Bangkok e-bus program activities.

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))

The "Cooperation Agreement Thailand Switzerland" requires both participating countries to review a mitigation activity against its consistency with sustainable development and the country's relevant strategies, where applicable.
The mitigation effect of this activity replaces fossil-fueled buses with e-bus alternatives thereby:
– reducing levels of hazardous local air pollution levels contributing to "SDG 11: Sustainable cities and communities" and reducing emissions with contribution to "SDG 13: climate action".

The activity also contributes to "SDG 8: Decent work and economic growth" by creating new jobs in the Bangkok Metropolitan area.

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))

Not applicable.

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))

Switzerland announced voluntary contributions to the Adaptation Fund of CHF 15 million in 2019 and CHF 10 million in 2021. These contributions were made to provide resources for adaptation, because of the effectivity of the fund and its thematic focus to support developing countries in their efforts to adapt to the adverse effects of climate change and as encouraged in the Annex to the decision 2/CMA.3.

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))

On a voluntary basis, the buyer in Switzerland will cancel 2 percent of the ITMOs recognized under the cooperative approach authorized "Bangkok e-bus program" to deliver an overall mitigation in global emissions if this is not already done on the side of Thailand.

Furthermore, the Swiss Government has submitted a proposal to the Swiss Parliament to establish a legal basis to cancel a portion of all ITMOs recognized by Switzerland under the Article 6.2 of the Paris Agreement.

(c) Electrification of Vanuatu's Inhabited Islands through Solar Power ITMO Programme

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

Registered compensation projects abroad (admin.ch)

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

The activity will support Vanuatu's rollout of decentralized solar power installations to supply electricity across Vanuatu's inhabited islands. The generated energy will be monitored continuously and used to calculate emission reductions based on the replacement of fossil fuel-based generators.
In addition to reducing GHG emissions, the project will improve energy access to un- and under-electrified communities and will generate new jobs and income for local communities through productive use of the electricity.
The cooperative approach is expected to reduce 97'217 tCO_2e until the end of 2030.

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

1st of April 2022 – 31st of December 2030.

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

Expected mitigation:

Year	**Net GHG emission reductions (tCO_2eq)**
2022	658
2023	3'711
2024	5'678
2025	8'207
2026	10'735
2027	13'264
2028	15'792
2029	18'321
2030	20'850

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

Republic of Vanuatu: *reference to be completed* **Switzerland**: Registered compensation projects abroad (admin.ch).

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

United Nations Development Programme (UNDP)

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))

The cooperative approach will implement a robust monitoring scheme and promote the shift from fossil fuel-based electricity generation to solar energy production. The increased production and use of solar energy will enable permanent emission reductions. ITMOs from this cooperative approach will be eligible for international transfer and use towards NDC when achieved within the first NDC implementation period of Vanuatu (including 2030 vintage). These ITMOs can only be used towards an NDC of the same NDC implementation period (until 2030). This ensures that there cannot be a net increase in global emissions between NDC implementation periods.

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))

The methodological details of the cooperative approach, including the environmental integrity criteria can be found in the attached MADD. The cooperative approach is assessed by both parties as well as third-party, independent, accredited auditors (validation and verification bodies). This ensures that quantification is robust and risks of over-crediting are minimized.

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))

Within this cooperative approach, the risk of non-permanence is considered low. The deployment of off-grid solar installations for electricity generation will improve energy access and accelerate a shift from fossil-fuel based to renewable energy.

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))

The cooperative approach was designed to avoid negative environmental, economic or social impacts. The positive impacts of the activity are a key part of the program design and are specified with regard to the UN's sustainable development goals in the project documentation. Switzerland invites any direct or indirect stakeholders detecting the possibility of negative impacts to contact the Federal Office for the Environment through a grievance

mechanism where stakeholders have the opportunity to confidentially submit complaints to Switzerland. Complaints shall be addressed to carbonoffset@bafu.admin.ch.

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))

General: Per the "Implementing Agreement to the Paris Agreement between the Swiss Confederation and the Republic of Vanuatu" (hereafter referred to as the "Cooperation Agreement Vanuatu Switzerland"), ITMOs will not be recognized in case of evidence for violation of human rights during the implementation of the activity. Thereby, the eleventh preambular paragraph of the Paris Agreement is operationalized in a robust manner in the "Cooperation Agreement Vanuatu Switzerland". Switzerland fully subscribes to the view that Parties should, when taking action to address climate change, respect, promote, and consider their respective human rights obligations, including due consideration for gender equality and gender sensitive policies, intergenerational equity, and the needs of particularly vulnerable groups.

Activity specific: The activity considered in this cooperative approach has no risk in relation to the listed elements. The program will undergo an SDG Impact Assessment through the Climate Action Impact Tool, which is integrated in the monitoring, reporting and verification. Potential impacts and risks are assessed and graded from low to high. Significant high-risk factors will require additional assessments regarding risk mitigation within the proposed activity.

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))

The "Cooperation Agreement Vanuatu Switzerland" requires both participating countries to review a mitigation activity against its consistency with sustainable development and the country's relevant strategies, where applicable.
The project will have a positive impact on nine sustainable development goals beyond SDG13 to enable climate action. This includes access to clean energy (SD7), economic benefits from improved energy access (SDG1, 2, 8, 9 and 17) and social impacts (SDG 3 and 4).

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))

Not applicable.

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))

Switzerland announced voluntary contributions to the Adaptation Fund of CHF 15 million in 2019 and CHF 10 million in 2021. These contributions were made to provide resources for adaptation, because of the effectivity of the fund and its thematic focus to

support developing countries in their efforts to adapt to the adverse effects of climate change and as encouraged in the Annex to the decision 2/CMA.3.

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))

On a voluntary basis, the buyer in Switzerland will cancel 2 percent of the ITMOs recognized under the cooperative approach authorized "Electrification of Vanuatu's Inhabited Islands through Solar Power ITMO Programme" to deliver an overall mitigation in global emissions.

The ITMOs from this cooperative approach will be used towards the voluntary compensation of the Swiss administration's emissions and will not be counted towards the Swiss NDC. Beyond the volume necessary to compensate all of the Swiss administration's emissions, an additional 2 percent will be cancelled for the achievement of OMGE. These 2 percent of ITMOs will not be used towards any NDC, nor towards any other mitigation purposes, including voluntary compensation.

Switzerland foresees to cancel 2 percent of all future cooperative approaches used for the compensation of the Swiss administration's emissions ("Klimapaket").

Furthermore, the Swiss Government has submitted a proposal to the Swiss Parliament to establish a legal basis to cancel a portion of all ITMOs recognized by Switzerland under the Article 6.2 of the Paris Agreement, extending this approach beyond the offsetting of the Swiss administration's compensation programme.