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Federal Department of the Environment, Transport, Energy and Communications

Federal Office for the Environment FOEN
Swiss Federal Office of Energie SFOE

Process description for authorization and specific requirements for Monitoring, Reporting and Verification of mitigation activities under Art. 6 of the Paris Agreement

Version 3.0, March 2025

1. Introduction

The Federal office for the environment (FOEN) is the Swiss regulator for emission reduction projects in the Swiss compliance market. It is running the compensation office (CO) together with the federal office of energy (SFOE). Mitigation Activities (MA) under Art. 6.2 of the Paris Agreement (PA) have to be authorized by FOEN and the host country of the emission reduction activity.

This document describes the processes of the compensation office CO from authorization application to issuance of international attestations, as they are called in the domestic regulation, or International Transferred Mitigation Outcomes (ITMOs), in PA terminology.

It also contains additional and (project) specific requirements to those in the CO_2 Ordinance for the definition of parameters or monitoring concepts.

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2. Process description for authorization

General remarks

Mitigation Activity Design Documents (MADD), including the methodologies, volume of ITMOs and other restrictions are defined by the partner country. FOEN will not issue any international attestation without the consent of the partner country.

On the other hand, the CO does always specifically evaluate the MA to assure the compliance with PA, with the corresponding bilateral Agreements and with the Swiss legislation (see CO_2-ordinance under Section 6). The CO might formulate additional restrictions, require adapted methodologies or even refuse the authorization of MA or issuance of international attestations. This has various implications that differ from processes during the CDM: 1) Methodologies are not accepted/registered per se, but should be used as a starting point for project-specific adaptations. 2) The version of the MADD that has been sent to validation can differ from the MADD that is finally authorized. A feedback process to the VVBs is implemented to continuously adapt to the requirements.

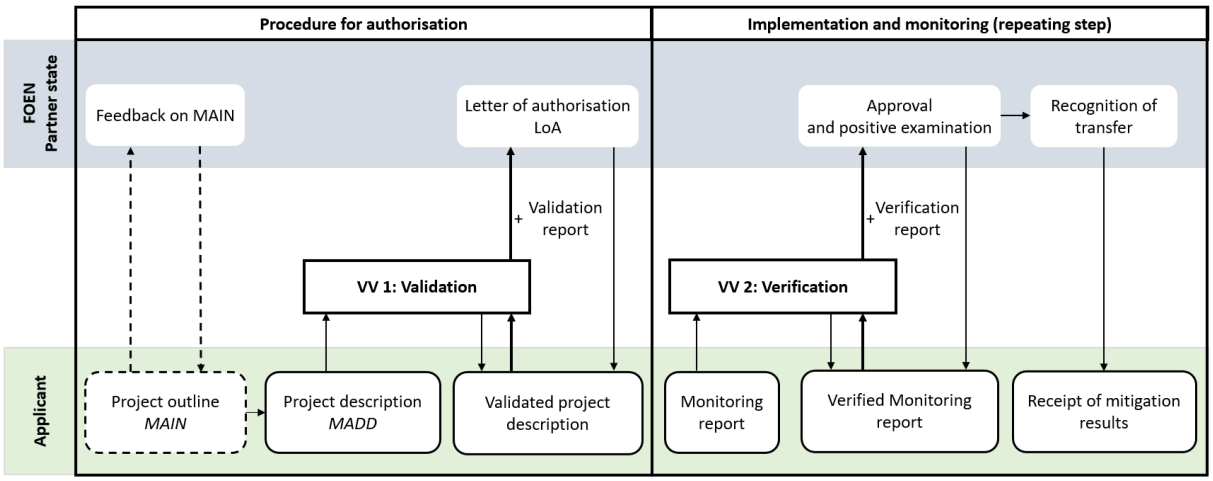

Figure 1 Diagram of the procedure for authorization applications and issuance of attestations abroad. While they do not appear in Swiss legislation, the following terms are used for activities abroad: LoI (Letter of Intent), MAIN (mitigation Activity Idea Note) = Project description, MADD (mitigation activity Description Document)= Project description, LoA (Letter of authorization).

Mitigation Activity Idea Note, MAIN (see 3.2 in Communication of FOEN)

An optional step before authorization application can be to ask the CO for an assessment of a Mitigation Activity Idea Note (MAIN) or draft MADD. As a reaction a Feedback on the MAIN (formerly called “Letter of Intent (LoI)”) can be issued. This includes a preliminary assessment. The better the MAIN (or draft MADD) is, the better the responses of the CO can be. CO will already contact other concerned offices from the Swiss administration to incorporate their feedback in the response.

Confirmatory feedback will only be issued for projects implemented in partner countries with existing bilateral agreement or where negotiations about a bilateral agreement are in an advanced phase.

The feedback (formerly LoI) does not influence the subsequent evaluation of the MA. **Authorization (see 3.4 in Communication of FOEN)**

The MADD has to be validated by an approved validation body (approved in the partner country and in Switzerland). It has to contain the Mitigation Activity Summary MAS (template can be downloaded on the website of FOEN, link see in Section 0). Both MADD and validation report have to be sent to

the CO by mail. The MADD also has to be signed and sent by post to the CO. The post stamp marks the date of submission. This date is important, since the implementation of the MA cannot start more than 3 months before this date. Note: for Switzerland the time when the applicant makes a significant financial commitment to a third party or itself takes organizational measures relevant to the project or programme is already deemed the start of implementation.

The CO will start examination, once the validated MADD and the corresponding validation report is received. After a formal examination, a comprehensive examination starts on the technical level. During this examination clarification requests (CR) and/or corrective action requests (CAR) can be formulated, and the project proponent might have to adapt the MADD to assure the compliance with the Swiss legislation. The final authorized MADD might therefore vary from the validated version. This process took between 4 and 6 months for the first authorized projects. An acceleration of the process in the long-term is expected. After the CO has finished its examination, it will consult with the other concerned offices of the Swiss administration at the operational level for their agreement and inputs (so called HF6 consultation), which on average takes one week. Once all offices agreed, the strategic level (so called POL) of the offices is asked for the final decision, which on average takes another week. After this decision, Switzerland is ready to issue the authorization statement, including an updated initial report. But Switzerland will only issue the authorization once the authorization statement of the partner country has been received by the CO. Informal exchanges between Switzerland and the partner country should take place before the formal authorizations such that findings and possible issues can be clarified in advance and the issuance of the authorizations coordinated.

Note:
- CO can confirm the decision of the POL to help the partner country take their decision about the authorization statement.
- The examination of the MADD is more than a formal step of authorization. It might even result in a rejection of the MA. The use of established methodologies (CDM, GoldStandard, etc.) are no guarantee for an authorization. The CO might ask for additional requirements, if these are necessary to comply with Swiss regulation.

Submission of authorization application has to be provided with the following documents:

Document	Electronically	By post
Project or programme description, duly validated and signed (including annexes)	X	X
Redacted project or programme description, if redaction is desired	X	–
Signed validation report (including annexes)	X	–
Redacted validation report, if redaction is desired	X	–
Abroad: Project or programme authorisation granted by the partner country, duly signed[18]	X	–

Monitoring, reporting and verification (see 3.7 in Communication of FOEN)

The Monitoring Report (MR) has to be verified by a verification body (approved in the partner country and in Switzerland). Both MR and verification report have to be sent to the CO by mail. The MR also has to be signed and sent by post to the CO. The post stamp marks the date of submission. This date is important, as it determines whether the deadline for MR is respected. MRs can contain max. 3 years (monitoring period) and have to be sent to the CO within one year after the end of the monitoring period. The verification body needs to be different from the initial validation body.

After the submission of the verification and monitoring reports by the verifier, a non-objection period of 90 calendar days applies for both Switzerland and the partner country until the approval of the reports takes automatic effect. The approval may take earlier effect if Switzerland and the partner country confirm the reports ahead of the non-objection period of 90 calendar days through a written non-objection. Within the same 90 calendar day period, the partner country shall also examine the mitigation outcomes covered by the submitted MR against the requirements in Article 7.5 of the bilateral agreement (no double claiming, no discrepancy with authorization statement, no violation of human rights or national legislation) and shall publicly issue a statement of positive examination. The issuance of a statement of positive examination by the partner country automatically entails the approval of the underlying monitoring report.

The CO will start examination of the verified MR upon receipt by the verifier. After a formal examination, a comprehensive examination starts on the technical level. During this examination clarification requests (CR) and/or corrective action requests (CAR) can be formulated and the project proponent might have to adapt the MR to assure the compliance with the Swiss legislation. The final accepted MR might therefore vary from the verified version. This process might take 3 months or longer, depending on the MA. After the CO has finished its examination, it will consult with the other concerned offices of the Swiss administration at the operational level for their agreement and inputs, which takes typically one week. Once all offices agreed and the publicly available examination statement of the partner country is available, the strategic level of the offices is asked for the final decision, which takes typically another week.

The CO can send a confirmation of the examination status (notification of positive examination) of the MR before the final decision of the strategic level is taken, in case the final decision of the partner country needs such a confirmation. If the examination statement of the partner country has already been received, the CO has to confirm the fulfilment of the requirements for transfer within 30 calendar days, and make it publicly available.

Once positive examination statements have been issued by both Switzerland and the partner country, the mitigation outcomes may be issued within the registry of the partner country.

The Entity authorized to Transfer may request the transfer of mitigation outcomes. The transfer can occur upon issuance of recognition of transfer by the partner country, which includes the identification of the mitigation outcomes, proof of cancellation of transferred units inside the partner country registry and the commitment to undertake corresponding adjustments in line with the method chosen by the partner country pursuant to Article 10 of the bilateral agreement. Upon receipt of the recognition of transfer of the partner country, Switzerland will publish its own recognition of transfer and subsequently issue the attestations in the Swiss registry within 4 weeks.

Switzerland and the partner country shall undertake relevant reporting in accordance with the guidance adopted under Article 6 paragraph 2 of the Paris Agreement, including relevant corresponding adjustment.

Submission of MR has to be provided with the following documents:

Document	Electronically	By post
Monitoring report, duly verified and signed (including annexes)	X	X
Redacted monitoring report, if redaction is desired	X	–
Signed verification report (including annexes)	X	–
Redacted verification report, if redaction is desired	X	–
Abroad: Project or programme authorisation granted by partner state and duly signed[24]	X	–

Plus (should be part of the MR document):

- Identification of the project proponent
- Amount of ITMOs and vintage year
- Reference to the underlying authorization

The CO then accepts the MR as a request for transfer, if it contains all the beforementioned information.

3. Fraction of non-renewable biomass fNRB

MA reducing the use of non-renewable biomass (i.e., cookstoves or biogas) need to establish robust methodologies for determining the Fraction of Non-Renewable Biomass (fNRB). fNRB describes the part of biomass that will not regrow within reasonable time scales. Therefore, emissions coming from burning non-renewable biomass are considered to stay in the atmosphere for a long time, while carbon emissions from renewable biomass are removed from the atmosphere by the regrowing biomass. The parameter fNRB plays a crucial role in quantifying the effects of such activities and ensuring the integrity of emission reduction claims.

To achieve this goal, Switzerland proposes a conservative approach that draws on international studies and tries to incorporate the lessons learned from projects registered under other standards. By utilizing existing research and methodologies we want to enhance transparency, accuracy, and comparability across projects and regions.

Switzerland will authorize MA using an fNRB value of max. 30% as a default. MA can either use this value as a fixed parameter for the crediting period, or define it as a dynamic parameter. Switzerland and the partner country may however define country-specific alternative fNRB values with a regional resolution. In such case, the MA may use the new values. The new values at a regional level shall however be reflected in the MA methodology.

New values have to be based on a study that Switzerland and the partner country agree on.

There are three main aspects, deeming Switzerland to be key for establishing such a study:

fNRB-values shall have a regional resolution.
It is known that fNRB can vary greatly within a country. Adopting a regional resolution approach enables us to account for variations in biomass composition, availability and demand across different geographical areas. By tailoring the fNRB to specific regions, we can capture local nuances and ensure that the methodology reflect regional realities as good as possible.

Participation of a multilateral party or bilateral parties.
Clear criteria for the sources and quality of data and methodologies used in determining fNRB shall be established. To maintain credibility and avoid potential conflicts of interest, studies conducted by project developers will not be considered. Instead, Switzerland prioritizes independent, peer-reviewed research and studies. International review may be conducted by UNFCCC, or by involving both the partner country and Switzerland in the development of the study.

MoFuSS[1] model has to be taken into account in the study.

[1] MoFuSS is an open-source freeware. It is primarily modelling degradation rather than deforestation. Degradation occurs under the forest canopy or in open non-forest areas with low tree density. Monitoring these changes is more difficult than monitoring deforestation, which can be assessed by looking at changes in the canopy cover.

Expert knowledge and extending experience, including historical data to determine fNRB values are only within partner countries. Therefore, Switzerland will consider fNRB values established by a partner country, as long as they are compared with values from MoFuSS. As there is no way to objectively measure fNRB, and even though no model is perfect, modelling remains the best way to go ahead. Switzerland makes a strong connection to UNFCCC-funded studies, based on MoFuSS, as this model has been published after scientific peer-review and is being further developed under UNFCCC . Further, Switzerland considers the approach within MoFuSS related to i) its logistic growth function, ii) the aggregation of many years instead of a snapshot and ii) future projections to represent the state-of-the-art. If a study bases fNRB values on a different model than MoFuSS, deviations from MoFuSS shall be explained, input data has to be traceable and the study has to be reviewed by a third, independent party.

The following table gives an overview of the different ways to determine fNRB values and the consequences for authorization by Switzerland.

Table 1: ways to determine fNRB and requirements for authorization.

fNRB value derivation	Authorization by Switzerland possible?	Regional resolution necessary?	comment
30% or lower	yes	no	Default value in-line with previous decision of the Compensation Office and CDM Tool 33
Higher value derived from MoFuSS-model including international review.	yes	yes	International review may be conducted by UNFCCC, or by incorporating Switzerland and the partner country in the development of the study. Project proponents may be allowed to challenge the model's input parameters and host countries may request updates to the input data of the MoFuSS model. If updated reliable and demonstrable conservative data are available, this can be considered in an updated calculation with MoFuSS and will be assessed on a case-by-case basis.
Higher value derived from different models, but differences to MoFuSS can be explained and input data is traceable and third, independent party reviewed.	yes	yes	A cross check of data has to be part of the study.
Higher value derived from MoFuSS based on input data from the project developer only, i.e. without third, independent party review.	no	n.a.	
Higher value derived from other models, only.	no	n.a.	
Higher value derived from CDM Tool 30, only.	no	n.a.	

In the model, each year's wood harvest is simulated by considering the fuelwood and/or charcoal consumption from every populated pixel on a map and the accessibility of woody biomass to those pixels. Accessibility for both rural fuelwood (transported on foot) and urban fuelwood and charcoal (transported in vehicles) is determined by distance and terrain including factors like elevation, land cover, and road networks, while also accounting for borders and protected areas. Urban fNRB appears to be low because the model assesses fNRB based on the harvest location. Demand in urban areas is met by other regions.

In particular, the logistic growth function (which in our view is more representative than the assumption of constant growth in CDM Tool 30) also makes MoFuSS dependent on the assumptions about the current biomass stock in relation to the maximum stock.

4. Plausibility check for cookstove-related activities

This section sets out the CO's minimum requirements for monitoring plans for cookstove-related activities. The main goal is to accurately quantify emission reductions and to avoid the risk of over-crediting, pursuant to Art. 5 al. 1 let. c No. 4 of the Swiss CO_2-ordinance. The quantification of emission reductions achieved by mitigation activities that reduce fuel consumption is directly linked to household fuel consumption, usage rate, and the number of stoves installed. It is therefore essential that the monitoring plan, sample design and sample size are set out in a way that reliably and accurately reflects these factors. It is important to note that the following conditions apply in addition to the general requirements for offset projects and programs of the CO_2 Ordinance[2].

Monitoring design overview

Description of the target population: In order to account for project-specific circumstances in the monitoring plan, a description of the target household and their livelihoods must be provided. This should include insights into their activities and practices, as well as social and environmental factors that influence them. The objective is to evaluate the diverse behaviours of the target households in relation to fuel consumption, cooking practices and the primary influencing factors. These may include geographical location, seasonality, income, as well as the different occupations and household structures of the households in question. The results of this evaluation should be incorporated into the sampling design, for example through the use of stratification. Some influencing factors may no longer be relevant due to their inclusion in the definition of the target population (inclusion criteria; CO2 Art. 5a.1.c.).

Real time data collection from the field

Emission reductions are only recognized if they “are verifiable and quantifiable". Realtime data from the field are the basis for a recognizable quantification of the emission reduction (According to Art. 5 al, 1 let. c No. 1). Data shall be collected using:

1. **KPT:** The Kitchen Performance Test (KPT) is the principal field–based procedure to measure household fuel consumption (Specific fuel savings - SFS).

2. **Stove use monitors (SUMs)** (usage rate): = Sensors These sensors track cooking events by recording the temperature of a cookstove. Once the cookstove’s temperature has exceeded a certain threshold, a cooking event is recorded on the device’s usage log.

3. **Surveys** (qualitative): represents a qualitative data acquisition to gauge how people feel about the cook stoves, to identify problems quickly, to check plausibility of the inclusion criteria of the projects in the program, usage rate (SUM) and fuel consumption (KPT) and finally to check the Sustainable development goals defined in the program are met.

4. **Appropriate sample design**

Requirements to minimize the risk of over-crediting are set out below for each of the data collection approaches 1-4.

[2] The requirements can be updated whenever relevant changes occur in international stove monitoring requirements (e.g. Clean Cooking Alliance, CCA guidance).

4.1. The Kitchen Performance Test (KPT)

4.1.1 General requirements:

- The selection of households to participate in KPT's has to be randomly selected. The MADD shall describe in detail how this will be assured.

- KPTs shall be performed in at least two groups of households, one using the old stove (reference households) and one using the new stove (participants in the program). The reference household should be representative of the participants targeted by the project activity. The MADD shall explain how this is assured. KPTs in these groups have to be performed at the same time (including seasons).

- It shall be described how people will be motivated to participate, especially for the reference households which are not using an improved stove.

4.1.2 Duration of measurement:

Appropriate KPT test periods shall be chosen. It shall be explained how the period captures the representative cooking pattern. Please explain how many days (min 3 days), how the test days are determined and why the test period is appropriate.

4.1.3 Frequency of data collection:

To account for variation in climate (in space and time) and other external factors (e.g. traditions or other occupations which could influence cooking habits) influencing the consumption of fuel during the year a frequent monitoring is required. It must be clearly explained how the chosen frequency and duration of the measurement covers the possible seasonal variations in consumption. Any external factor that could influence consumption fluctuations must be discussed (See description of target household). An ongoing coverage during the monitoring period is considered best practice and any deviation from this has to be explained

4.1.4 Sample size:

If all the program participants cannot be measured a sampling approach can be applied. The number of KPTs conducted shall be determined in the sampling design (See sampling design section 4).

4.2. SUM (Stove use monitors = Sensors), usage rate:

To avoid stove stacking the usage rate has to be checked for plausibility with continuous measurements with stove use monitors. These sensors track cooking events by recording the temperature of a cookstove. Once the cookstove's temperature has exceeded a certain threshold, a cooking event is recorded on the device's usage log.

4.2.1 General requirements:

Ideally, sensor installation shall be done on the cookstoves of all the active projects otherwise deviation of this target shall be justified.

4.2.2 Duration of measurement:

Duration of Measurements should be as far as possible ongoing (continuous).

4.2.3 Frequency of data collection:

If digital data reception is not possible, data should be collected frequently to ensure no data loss.

4.2.4 Sample size:

A sampling approach may be used if it is not possible to obtain digital data following the requirements in section 4.

4.3. Surveys:

Surveys should be conducted at different stages of the project and are project specific. The complete survey/questionnaire is part of the MADD. Suitability of questions in the surveys shall be assessed during the monitoring/verification and if needed adapted.

It shall be explained how data is collected and where it is stored as well as who will be responsible for data collection. Finally sample design as well as sample size shall be explained.

- **First survey before start of project:** This survey provides important information and it should occur before stoves are sold or distributed. The survey may also include households that do not adopt the stove. The goal is to gauge how people feel about the stove, to identify differences among the households such basic social, economic and cooking information of the community families and to identify eligibility of household participation and to check plausibility of inclusion criteria. First survey will also influence sample design.

- **A follow-up survey (first check after installation):** could be conducted sometime after the stove has been in use to identify both strengths and weaknesses in the stove's performance and to quickly correct problems.

- **Monitoring survey:** The goal is to acquire qualitative data about performance and use of the stove. The data collected should be in line with the parameters used for the calculation of the ER— Plausibilisation of inclusion criteria and KPT/SUM data. Finally, parameters to monitor and verify SDG alignment shall be collected.

4.4. Sampling design:

If the entire target population cannot be measured a sampling approach can be applied. The sampling must be unbiased and ensure reliable estimates of the parameters used in the calculations of greenhouse gas emission reductions. In the following minimum requirements for the sampling design are set.

Sampling design has to be explained and justified for suitability and representativeness of the target population. A random sampling is compulsory. Representativeness of target population (e.g. different technologies, household compositions, climate etc.) shall be considered in the sampling design. Consequences if a random selected household cannot be properly accessed shall be described in the monitoring plan.

The following must be taken into account:

- The latest version of the sample size calculator from CDM (sampling and surveys for CDM projects activities shall be used)
  um
- In case of a stratified sampling approach: Sample size shall be defined for each stratum independently.

- Dropout should be taken into account in the determination of the sample size with a realistic dropout rate so that the minimal calculated sample size can actually be reached.
- Sample design is adapted regularly according to real data (mean and standard deviation). The sample size shall be recalculated after each monitoring period using to the CDM tool. As a result, the sample size may increase or decrease based on the actual variation seen in the monitoring data.

- Expected mean / SD must be comprehensible and credibly justified (data)

- A high level of confidence/precision shall be applied 95/5. The imprecision of 5% must be factored in to avoid overstating of the calculated emission reductions (Art. 5 para. 1 let. c No 4 CO2 Ordinance).

- It must be stated what % of the ER is covered by the sample (transparency measure)

- The performance of the random sampling shall be explained in the MADD. After first verification random selection of projects shall be performed by the FOEN. The applicant submits the full list of active projects including planned new projects to the CO_2 Compensation office for random sampling before the start of monitoring.

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5. Links

Communication of FOEN for projects and programmes

Communication of FOEN for validation and verification bodies

Mitigation Activity Summary template

Bilateral agreements under Art. 6.2 PA with Switzerland

CO2-Ordinance (requirements for offset projects Art. 5 – 12)

Emissions Trading Registry of Switzerland

6. Changes

In comparison to version 1.1 July 2023 the following changes have been made to the document:

- Titel was adapted to include additional requirements for specific project types

- Introduction was adapted to include additional requirements for specific project types

- Table of content was added for better overview

- Figure 5 has been updated. LoI was replaced with Feedback to MAIN

- New Section 4 was added