



2022/23 Report on the Climate Cent Foundation's Allocation of Resources

for the attention of

the Federal Department of the Environment, Transport, Energy and Communications
(DETEC)

in compliance with the agreement dated 29 April 2022

30 June 2023

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1 Purpose of this report

In compliance with the Climate Cent Foundation (CCF)'s obligation under clause 2 of its agreement with the Swiss Confederation dated 29 April 2022, the present report details the Foundation's use of its financial resources in conformity with its goal and purpose. The report takes stock of the CCF's activities since 1 July 2022 and explains that and how the CCF has met its obligations as set out in clause 2 of the aforementioned agreement.

2 Conditions to be met by the Climate Cent Foundation

The Climate Cent Foundation is to use its financial resources mainly to support projects carried out chiefly in the private sector in Switzerland and abroad that make use of technologies which durably remove CO₂ from the atmosphere (Negative Emissions Technologies [NET]) or which directly capture fossil resp. geogenic CO₂ at source to be durably stored underground or in materials (Carbon Capture and Storage [CCS] resp. Carbon Capture and Utilisation [CCU]).

The Foundation is further to keep supporting projects abroad expected to yield attestations that can be credited toward the Swiss Confederation's commitments under international law.

As far as possible, the projects are to yield attestations that meet the quality requirements set out in the Swiss CO₂ Ordinance. All attestations are to be handed over to the Swiss Confederation.

3 Available resources and commitments

The Climate Cent Foundation reported no revenues in the period under review. A total of CHF 8'982'186 was paid out to meet incurred commitments (see table below) and to cover the CCF's operating expenses.

Taking into account investment profits, as per 21 June 2023 the CCF's resources stood at CHF 87'634'093.

4 Collaboration with the Swiss federal authorities

In the period under review, a delegate of the Compensation Directorate attended a meeting of the CCF's Foundation Council as agreed. The CCF's Secretariat and the members of the Swiss Interdepartmental Committee on Climate's Field of Activity 4 conferred several times in connection with the call for NET / CCS project proposals (see section 5.4).

Table: Commitments incurred by the CCF and payments made.

	Commitments (in CHF)	Paid out 1.1.2014 to 30.6.2023 (in CHF)	Of which paid out in the period under review (in CHF)	Attestations delivered from 1.7.2022 to 30.6.2023 (units)
Ci-Dev	23'000'000 (23'000'000 USD)	8'033'007	3'419'912	134'129 (CER2)
TCAF	12'500'000 (12'500'000 USD)	952'333	202'250	–
Microsol, Tuki Wasi	16'124'000 (15'356'000 EUR)	6'665'718	5'031'467	–
Total	51'624'000	15'651'058	8'653'629	134'129

5 Ongoing activities

5.1. Participation in the Carbon Initiative for Development (Ci-Dev)

Since early 2014, the CCF has held a share of USD 23 million in the World Bank's Carbon Initiative for Development (Ci-Dev), in operation until the end of 2025 (www.ci-dev.org/). The fund also numbers among its investors the governments of Great Britain and Sweden, which hold shares of respectively GBP 50 million and USD 23 million. GBP 35 million and USD 40 million are available for the purchase of certificates; the remaining funds go toward activities granting governments, financial institutions, the private sector and civil society improved access to the carbon market.

The portfolio currently numbers 9 programmes. In the period under review, the CCF received delivery of 134'129 CER2 in total from two programmes in the portfolio. Over the fund's operation to date, it has received 226'956 CER2. In the period under review, a purchase agreement was signed with the following project:

- Solar home systems, improved cook stoves, Rwanda:** The Rwandan government provides off-grid solar home systems and clean cooking stoves. Almost all Rwandan households cook using biomass, mainly non sustainably used firewood. The spread of efficient and clean cooking stoves lowers the consumption of firewood, reducing carbon emissions and protecting valuable forests. Off-grid solar home systems can supply electricity to millions of people living in remote rural areas at a remove from the power grid. They also reduce reliance on fossil fuels such as kerosene, often used in Rwanda to operate generators for local electricity production. The funds provided by the Ci-Dev are used to subsidise the distribution and the sale of an additional 10'000 off-grid power systems and 300'000 efficient and clean cooking stoves, which will benefit low-income households. The project is

thus scheduled to avoid 450'000 tonnes of CO₂, which will be purchased by the Ci-Dev as certificates. The project's emission reductions are generated within the Standardised Crediting Framework (SCF), which has been in development in Rwanda since 2019 with funding by the Ci-Dev. This new standard, tailored toward the provisions of the Paris Agreement, takes over from the CDM and ensures the environmental integrity of certified greenhouse gas emission reductions.

The Ci-Dev had signed purchase agreements with another five programmes, which in the meantime have been terminated because for various reasons the programmes did not make headway or reach implementation. Due to the loss of these programmes, but also to cutbacks in the delivery volumes of existing programmes in the portfolio, the Ci-Dev is currently not fully invested. Negotiations are underway for the admission of one further programme to the portfolio.

It remains to be seen in what way programmes registered under the Kyoto Protocol can also be certified under Article 6 of the Paris Agreement. According to the current Swiss CO₂ Ordinance, the issuance of ITMOs (Internationally Transferred Mitigation Outcomes) under Article 6.2 presupposes the existence of an implementation agreement between Switzerland and a programme's host country, which is currently the case in none of the eight countries in which the Ci-Dev operates.

5.2. Participation in the Transformative Carbon Asset Facility (TCAF)

The CCF and the Swiss State Secretariat for Economic Affairs (SECO) are jointly participating in the World Bank's Transformative Carbon Asset Facility (TCAF), in operation since 2017 and until the end of 2028. They hold shares of USD 12.5 million each, thereby in total meeting minimal share requirements for having a say in the selection of funded activities. The other major investors are the governments of Great Britain (GBP 60 million), Norway (USD 80 million) and Sweden (USD 25 million). Germany, Canada and Spain also hold shares on a smaller scale.

The countries involved in the TCAF aim to make use of the possibility set out in Article 6 of the Paris Agreement for signatory states to cooperate on a voluntary basis. Like Norway and Sweden, the CCF plans to use the certified emission reductions toward fulfilling national emission targets. Great Britain and the SECO, on the other hand, plan to use their resources toward climate finance, which explicitly precludes counting certificates toward national emission targets.

In June 2023, in a historic first, an agreement was signed for the purchase of certificates issued for the greenhouse gas reducing impact of a political measure. Concretely, the project "Innovative Carbon Resource Application for Energy Transition" (iCRAFT) creates incentives for the Central Asian country of Uzbekistan to reform its energy subsidy system with the aim of reducing fossil energy use and thus carbon emissions.

Owing to subsidised energy prices, Uzbekistan is one of the world's most energy and emission intensive economies. It ranks among the countries with the highest subsidies

for energy producers; in 2020, these subsidies amounted to 6.6% of GDP. Consumer prices for electricity and natural gas in Uzbekistan accordingly rank among the lowest worldwide, covering only 70% resp. 50% of the effective costs of power and gas.

These low prices hamper energy savings and efficiency improvements in households and businesses. By 2026, the government therefore aims to reform energy subsidies in such a way that prices in the power and gas sectors cover costs. The funds provided by the TCAF will be used to cushion the impact of rising energy prices for lowest-income households and to fund campaigns to raise awareness of the necessity and the benefits of cost-covering energy prices.

With these reforms, over the years 2022–2027 Uzbekistan will reduce its greenhouse gas emissions by an estimated total of 60 million tonnes of CO₂. Of these, around 2 million tonnes of CO₂ are ascribed to the TCAF's involvement, which will be funded with USD 46.25 million.

Funding possibilities are currently being assessed for a handful of other activities. Despite this long-awaited success in Uzbekistan, the World Bank's ambition to implement the crediting of transformative climate mitigation activities via the TCAF scheme has for now not materialised as expected. Methodological challenges, combined with protracted regulatory uncertainty concerning the implementation of Article 6 of the Paris Agreement, have weighed heavily. However, in a series of technical papers the TCAF has laid important foundations to establish a market for transformative programmes under the Paris Agreement.

5.3. Pilot activity Tuki Wasi

In development since 2017 and in operation since February 2019, the pilot activity "Tuki Wasi, Peru" is aimed at the country's poorest households and strengthens the Peruvian market for improved cook stoves by means of competitive calls for tenders and standardisation (www.tukiwasi.org). In November 2021, the CCF signed a purchase agreement for ITMOs with the programme owner Microsol S.A.S. after a legal framework had been established for the issuance and transfer of such certificates with an implementation agreement signed between Switzerland and Peru in October 2020.

More specifically, the CCF – and in a downstream transaction the KliK Foundation – will purchase up to 960'000 ITMOs from Microsol until 2030. Up to 60'000 improved cook stoves are to be installed over the period 2022–2025. The CCF prefinances the scaling of the programme and more specifically the construction of the stoves with over half of the contract value.

Following completion of the pilot phase launched in 2018, in which 1'000 cook stoves were installed according to defined specifications, the actual project started in summer 2022. Since then, two public calls for tenders have secured a further two stove builders in addition to the two builders already identified in the pilot phase. A total of 33'000 stoves have been commissioned in the calls for tenders, of which around 7'500 have been built to date.

In order to gain a direct picture of the programme's progress, in February 2023 a consultant was tasked with an on-site inspection at Microsol, at one of the stove

builders' as well as with several families who had recently had a cook stove installed. Online interviews were conducted with the other stove builders. The results were documented in a due diligence report.

The programme's validation was recently finalised, the next step being its authorisation by the two partner states. However, to date Peru has not established the national processes needed for the programme's authorisation.

5.4. Call for NET / CCS project proposals

In order to identify projects worthy of funding in the fields of NET / CCS, from June to September 2022 the CCF carried out a call for proposals. Of the projects submitted, 21 met the conditions set out for participation. Among these, 14 were invited to provide more detailed proposals. In February 2023, five projects were granted funding approval; in total, the CCF is providing funding of CHF 50 million. Funding agreements are currently still being negotiated and should be finalised soon.

All five projects involve carbon capture in Switzerland, mainly in biogas facilities. Three of the projects store the CO₂ in construction materials in Switzerland, while the other two plan to transport the CO₂ to other countries to be durably stored underground. Project details are as follows:

- **Sika, ReCO₂ver:** Sika Services Ltd, which operates worldwide in construction aggregates, has developed a process named ReCO₂ver in which demolition concrete is mechanically separated and broken down into its main components gravel, sand and cement powder using additives. In a tank, the cement powder is then injected with CO₂ captured from specific emission sources. A mineralisation process transforms it into carbonated powder, which can in turn be used for the production of cement / concrete / mortar. Next to the sequestration of CO₂ in the carbonated powder, the technology reduces resource consumption by making it possible to reuse the original components of demolition concrete. Several such facilities are to go into operation by 2026. The carbon sink performance under contract amounts to 16'500 t CO₂ until 2030.
- **Zirkulit, sequestration of biogenic CO₂ in concrete granulate:** Zirkulit Ltd, a subsidiary of construction enterprises Eberhard Unternehmungen, has developed the zirkulit brand for recycled concrete whose special formulation ensures a lower proportion of cement and thus a reduced carbon footprint compared to conventional concrete. Under the project, this concrete granulate is further injected with biogenic CO₂ captured in biogas plants, storing the CO₂ in concrete via mineralisation. Zirkulit Ltd plans to operate several such facilities by 2025, making it possible to store a yearly amount of around 3'000 t CO₂. The contracted quantity amounts to 16'500 t CO₂ until 2030.
- **Neustark, BEST:** Founded in 2019 as an ETH spin-off, Neustark Ltd has developed and brought to market maturity a process for storing CO₂ in recycled concrete. The project involves setting up liquefaction facilities for captured CO₂ next to biogas plants as well as carbon sequestration facilities next to recycled

concrete factories in which concrete granulate is injected with CO₂ in special containers, durably storing the CO₂ in concrete through mineralisation. The project focusses on the gassing of concrete granulate, which is then used not to produce recycled concrete but rather as loose crushed material, for example for roadbuilding. The contracted quantity amounts to 16'500 t CO₂ until 2030.

- **CO2 Energie, Nesselbach Extension:** The biogas plant in Nesselbach processes food waste to produce methane, which is fed into the natural gas grid. To this end, CO₂ is captured from the biogas. Since November 2022, a liquefaction facility has been in operation to bring the CO₂ to food grade quality. Following an extension of the biogas plant, an additional processing facility is under construction to scale up the feed-in of natural gas. Under the project, the CO₂ captured in this process is to be liquefied in another facility to be durably stored underground. As such storage sites are not yet available in Switzerland, the CO₂ will be exported by truck, train and boat – storage sites are already under development in Norway, Iceland, the Netherlands and Denmark. The contracted quantity amounts to 21'800 t CO₂ until 2030.
- **Neustark, TOGETHER:** Under this project, Neustark Ltd plans to build liquefaction facilities next to several biogas plants in Switzerland that already capture CO₂ for natural gas processing, and to transport the liquefied CO₂ to storage sites abroad by truck, train and boat. Possible countries of destination are Norway, Iceland, the Netherlands and Denmark. The contracted quantity amounts to 13'000 t CO₂ until 2030.

6 Outlook

In the 12 months ahead, the Climate Cent Foundation will focus firstly on getting the programme "Tuki Wasi" authorised and on supporting the programme's implementation. Secondly, it will support the implementation of selected programmes and projects in the fields of NET / CCS and work toward their registration by the Swiss Federal Office for the Environment (FOEN) as activities qualified for the issuance of attestations.
