EASA
European Union Aviation Safety Agency

EU-CORSIA
Africa & Caribbean

This project is funded by the European Union
and implemented by EASA.

EU CORSIA Africa and Caribbean

REGIONAL WORKSHOP

CORSIA IMPLEMENTATION AFTER ICAO 41st GENERAL ASSEMBLY

Update on CORSIA Eligible Emission Units and presentation of current regional CORSIA eligible projects in the African region

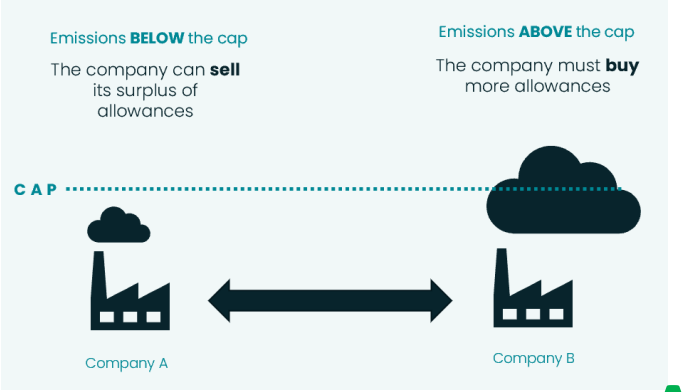
Working for quieter and cleaner aviation.

Johannesburg, 10-12 May 2023

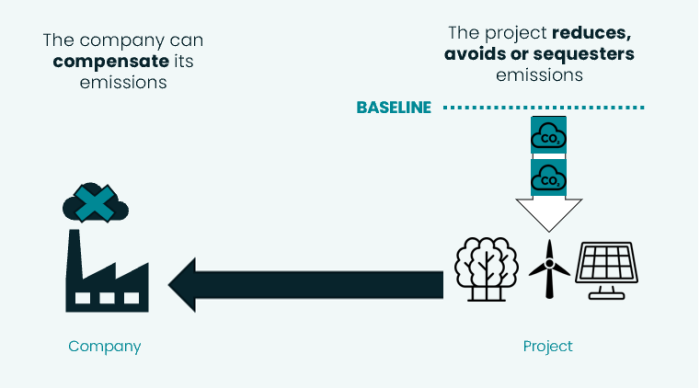
Your safety is our mission.

The Carbon Market - Mechanisms

Cap and Trade: Carbon Allowances



Offsetting: Carbon offsets

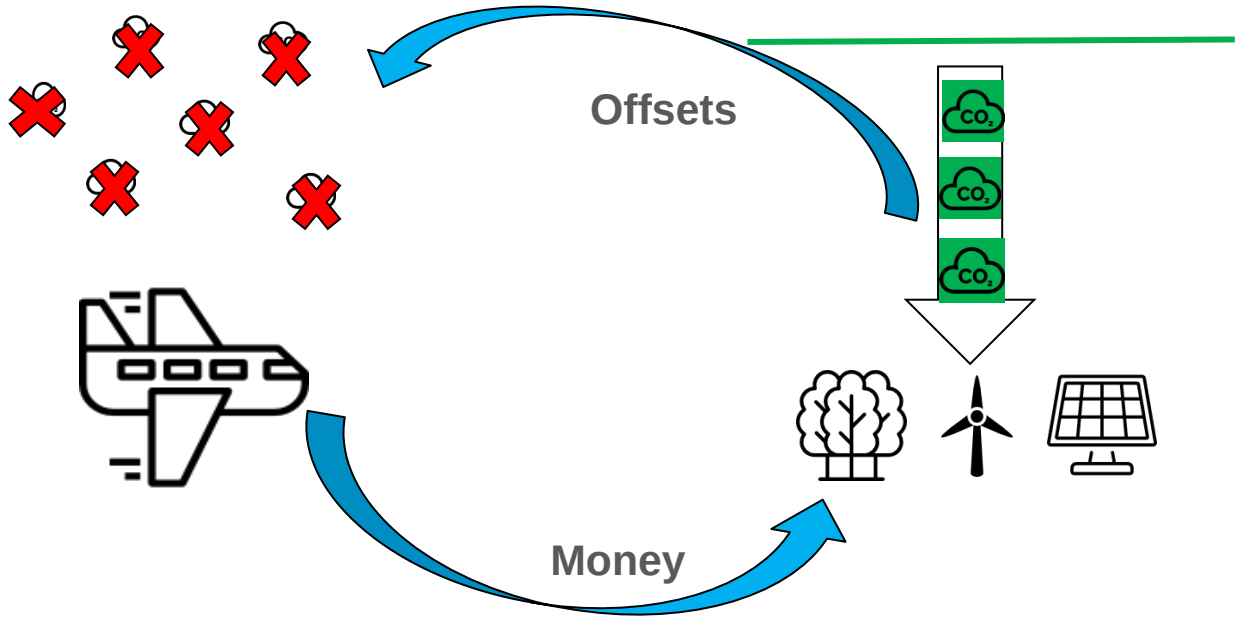


Aviation?

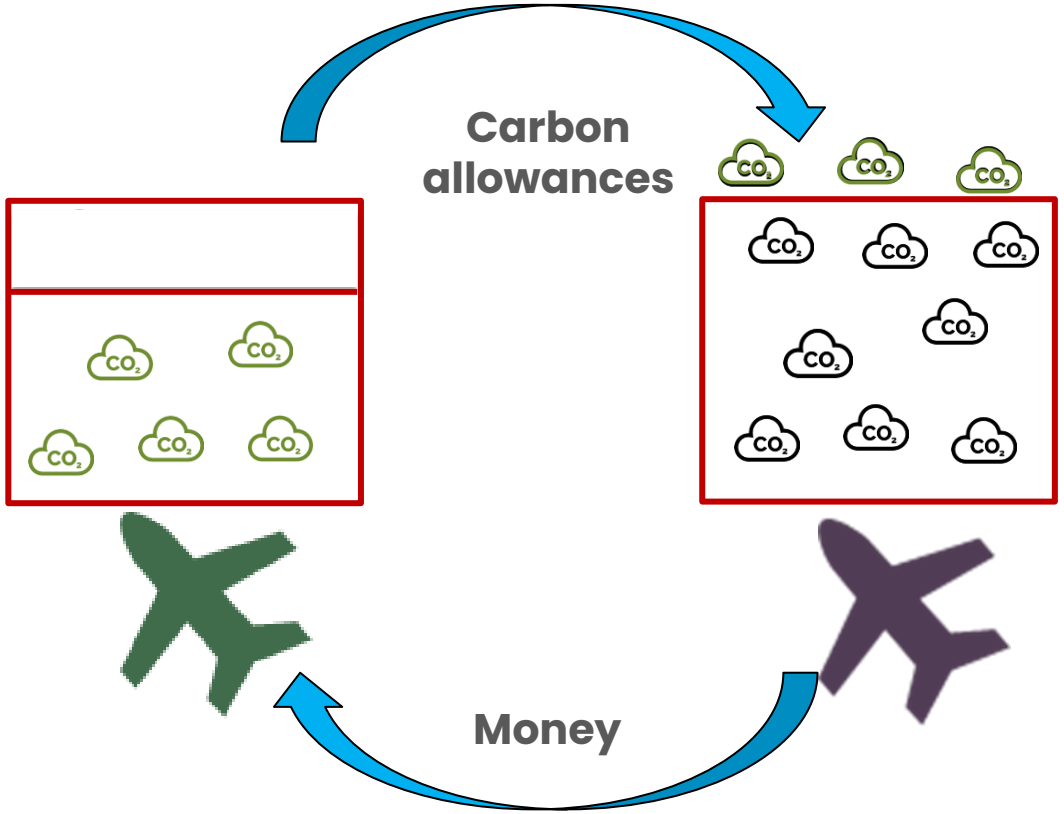
Examples: EU ETS, Swiss ETS, UK ETS, R. Korea ETS, China ETS….

Example: CORSIA (offsetting requirements) France compulsory offsetting domestic, Industry Voluntary offsetting…

CORSIA - Offsetting Mechanism



Cap and Trade

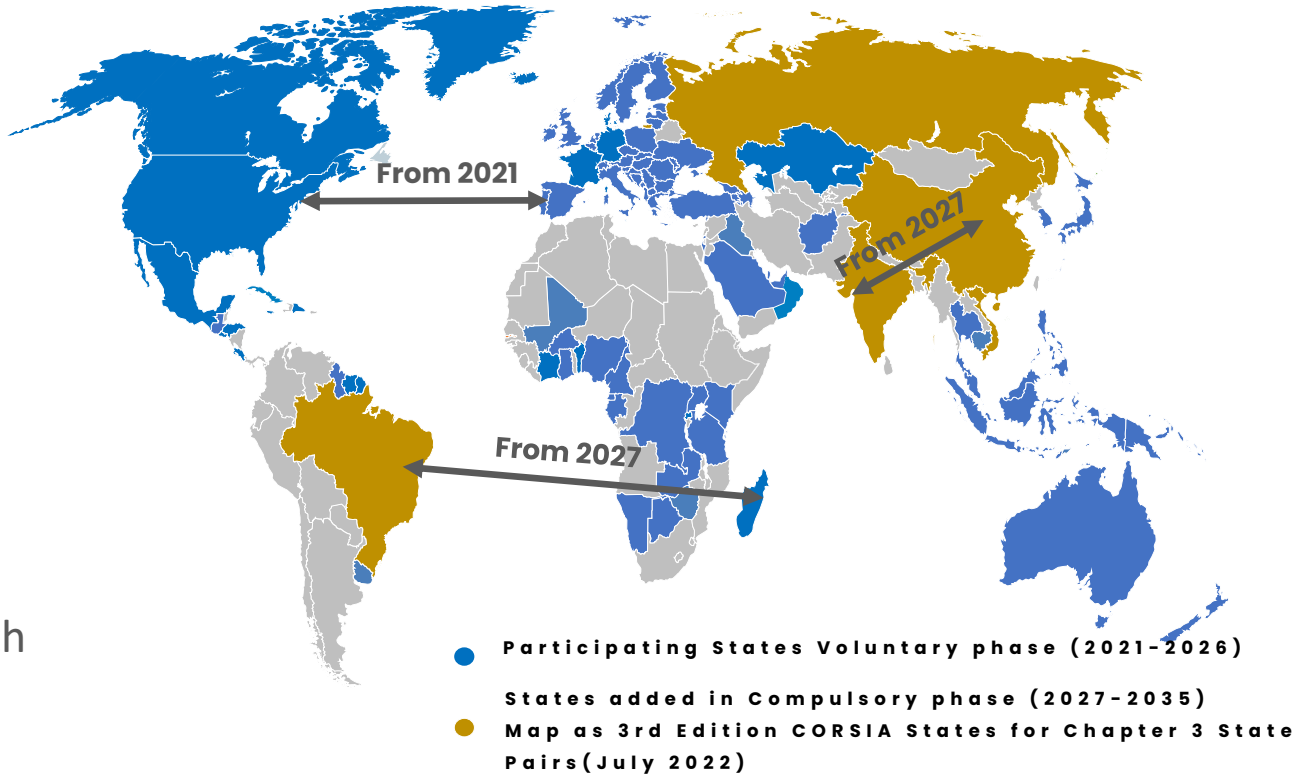


CORSIA emissions subject to offsetting requirements

- **From 2021 Offsetting requirements:**

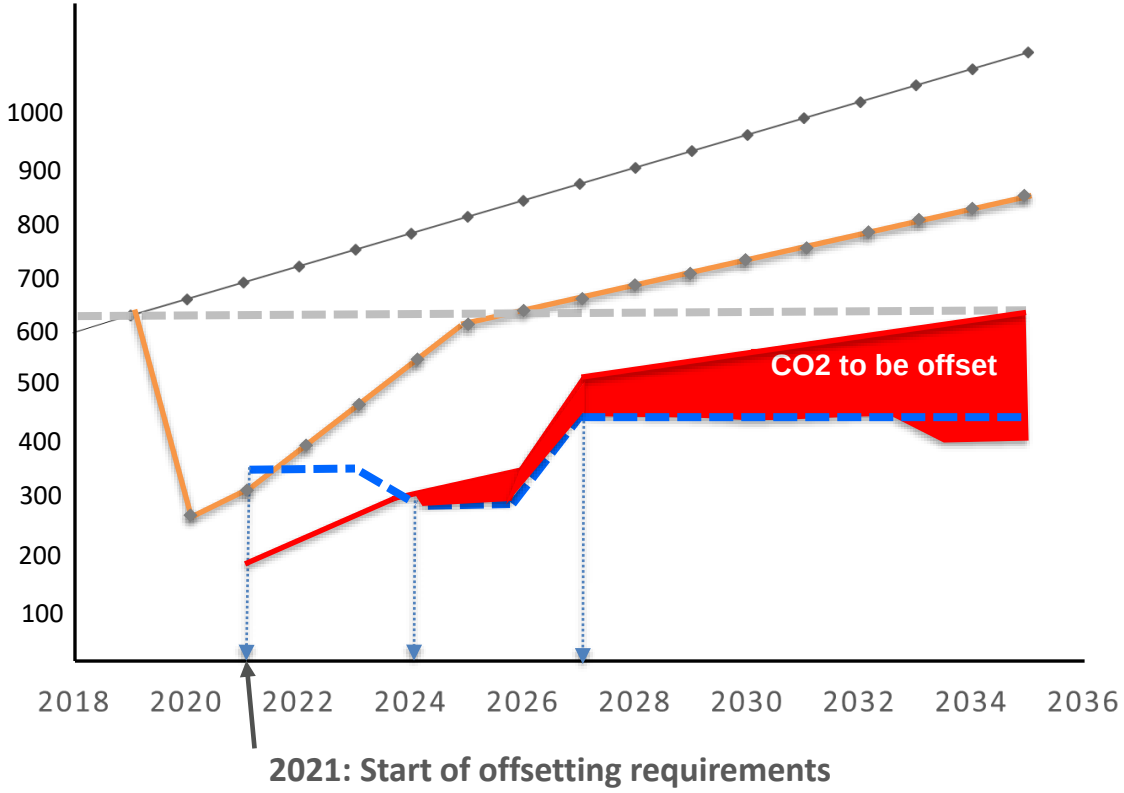
→ Flights between participating countries* Sector Growth Factor (2021-2032)

→ 15% Individual Growth Factor 2033-2035



CORSIA Offsetting

* Illustrative purpose



Emissions estimated pre covid

2019 emissions all int. flights

Sector emissions all international flights

Sector emissions covered by CORSIA

CORSIA Baseline

CORSIA Offsetting

Published in ICAO document CORSIA Annual Sector's Growth Factor (SGF) October 2022

Sector Growth Factor in 2021

$$\frac{167{,}142{,}002 - 341{,}380{,}188\ MT\ CO2}{167{,}142{,}002\ MT\ CO2} = 0$$

Sector Growth Factor in 2024

$$\frac{310\ MT\ CO2 - 300\ MT\ CO2}{310\ MT\ CO2} = 0.0322580$$

* Ilustrative purpose

Example off. requirements for 2024

Aeroplane Operator	State	2024 CO_2 emissions aggregated for all State pairs (in tonnes)		
		Total per Aeroplane Operator	Total subject to offsetting requirements	Total not subject to offsetting requirements
OPERATOR Y	Spain	827,445	379,826	447,620

379,826 * 0.0322580 = 12,252 CORSIA emission units

Example calculation in 2022 (for 2021 emissions without COVID 19 impact and original baseline)

- ✓ **CORSIA Baseline** (2019-2020): 700 MT CO2
- ✓ **Sector's CO2 emissions in 2021:** 780 MT CO2
- ✓ **2021-2032:** 100% sectoral 0% individual
- ✓ **Aeroplane Operator "Y"** emissions in 2021: 100,000 tn CO2
- ✓ **Sector's growth factor**$= \frac{780-700}{780} = 0.1025$

Calculation for Aeroplane Operator "Y" = 100,000 x 0.1025 = **10,250 offsets for 2021**

Example calculation in 2022 (for 2021 emissions with COVID 19 impact and change of Baseline)

- ✓ **CORSIA Baseline** (2019): 341 MT CO2
- ✓ **Sector's CO2 emissions in 2021:** 167 MT CO2
- ✓ **2021-2032:** 100% sectoral 0% individual
- ✓ **Aeroplane Operator "Y"** emissions in 2021: 70,000 tn CO2
- ✓ **Sector's growth factor**$= \frac{167-341}{167}$= - 1.041= **0**

Calculation for Aeroplane Operator "Y" = 70,000 x 0 = 0 offsets

CORSIA Eligible Emission Units

→ CORSIA Eligible Emissions Units are determined by the ICAO Council,

upon recommendation of the Technical Advisory Body (TAB), and meet the CORSIA Emissions Unit Eligibility Criteria

ICAO Document CORSIA Eligible Emission Units

→ CORSIA Implementation element referenced in CORSIA SARPs

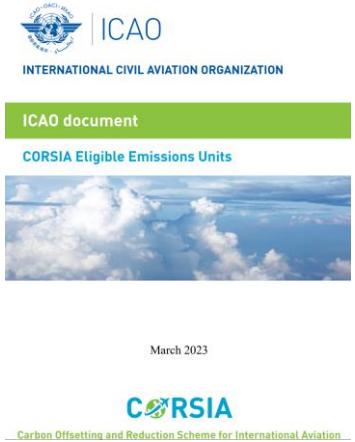
→ Current document contains eligible Emisison Units Programmes for the Pilot phase (2021-2023) and recently two programmes accepted for First Phase (2024-2026)

→ Since its establishment, TAB completed the first (Jan 2020), second (Nov 2020), third (Sep 2021), fourth (Sep 2022) and fifth (January 2023) assessments of applicants. **Current 2023 TAB assessment cycle, ongoing process**

- The ICAO Council will consider the recommendations of the 2023 TAB assessment in October / November 2023

Eligible Emission Programmes. Pilot Phase

1. American Carbon Registry
2. Architecture for REDD+ Transactions
3. China GHG Voluntary Emission Reduction Program
4. Clean Development Mechanism
5. Climate Action Reserve
6. Global Carbon Council
7. The Gold Standard
8. Verified Carbon Standard
9. Forest Carbon Partnership Facility Program



Eligible Emission Units. Pilot Phase

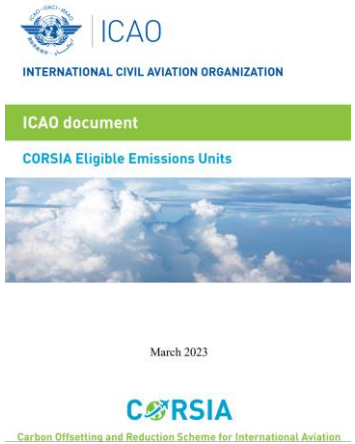
- → Projects generating units must have started their first crediting period from 1 January 2016
- → Reductions must occur no later than 31 December 2020, inclusive *

Vintage and timeframe conditions for Pilot Phase offsetting requirements

***Note:** American Carbon Registry and Architecture for REDD+ Transactions allows for emission reductions through 31 December 2023

Eligible Emission Programmes. First Phase (Not definitive)

1. American Carbon Registry
2. Architecture for REDD+ Transactions



Emission Units. First Phase

- → Projects generating units must have started their first crediting period from 1 January 2016
- → Reductions must occur from 1 January 2021 through 31 December 2026

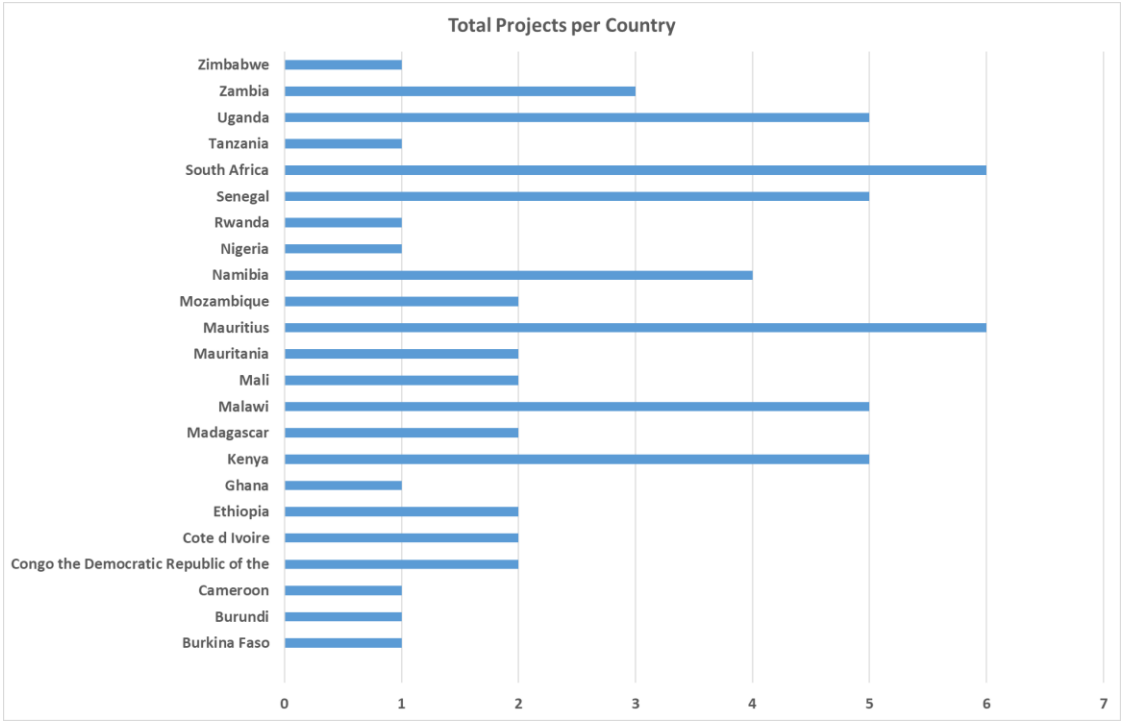
Vintage and timeframe conditions for First Phase offsetting requirements

CORSIA Emission Units in Africa

- Asssement of projects in countries covered by EU-CORSIA Africa and Caribbean Project (this reflects the coutries in Africa only)
- Assesment limited to CDM, Gold Standard and VCS for Pilot Phase
- 23 Countries have projects that comply with CORSIA eligibility criteria

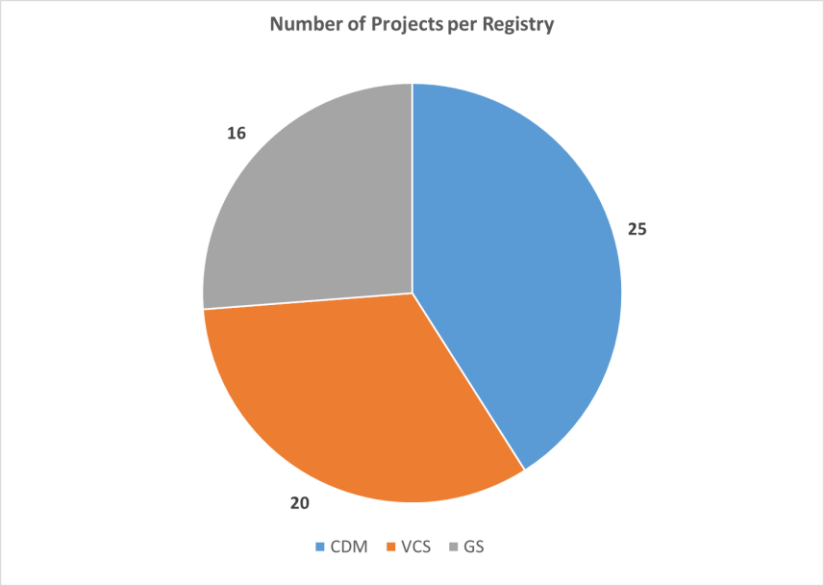
Projects by Country

Country	Total
Burkina Faso	1
Burundi	1
Cameroon	1
Congo the Democratic Republic of the	2
Cote d Ivoire	2
Ethiopia	2
Ghana	1
Kenya	5
Madagascar	2
Malawi	5
Mali	2
Mauritania	2
Mauritius	6
Mozambique	2
Namibia	4
Nigeria	1
Rwanda	1
Senegal	5
South Africa	6
Tanzania	1
Uganda	5
Zambia	3
Zimbabwe	1
TOTAL PROJECTS	**61**

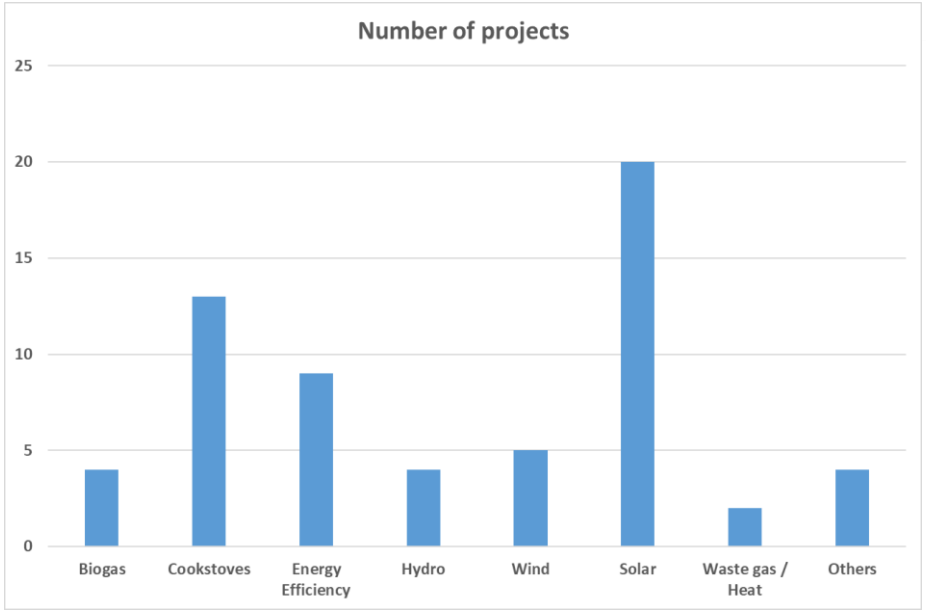


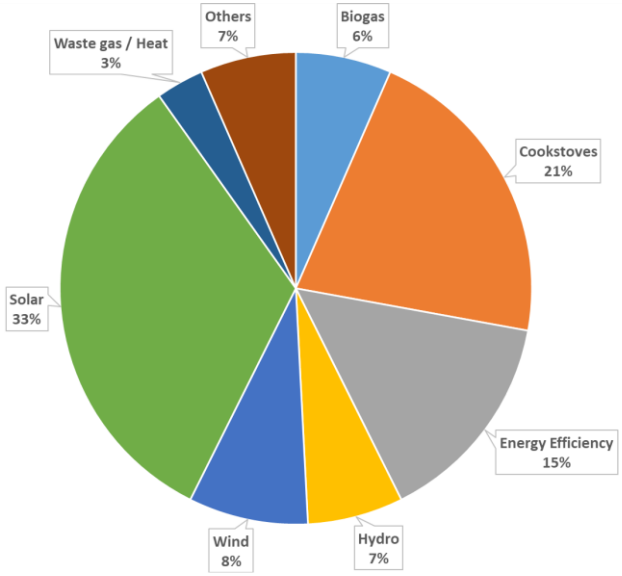
Projects by Programme

Country	Registry			Total
	CDM	VCS	GS	
Burkina Faso	1	-	-	1
Burundi	-	1	-	1
Cameroon	1	-	-	1
Congo the Democratic Republic of the	-	1	1	2
Cote d Ivoire	2	-	-	2
Ethiopia	1	-	1	2
Ghana	1	-	-	1
Kenya	-	1	4	5
Madagascar	2	-	-	2
Malawi	-	2	3	5
Mali	1	-	1	2
Mauritania	-	2	-	2
Mauritius	6	-	-	6
Mozambique	1	-	1	2
Namibia	-	4	-	4
Nigeria	-	-	1	1
Rwanda	-	-	1	1
Senegal	3	2	-	5
South Africa	3	3	-	6
Tanzania	-	1	-	1
Uganda	3	-	2	5
Zambia	-	2	1	3
Zimbabwe	-	1	-	1
Total	**25**	**20**	**16**	**61**



Projects by Methodology





OROMIA COOKSTOVE DISTRIBUTION PROJECT

Type & Standard: Gold Standard

CORSIA: Yes

Project duration: 2016-2022

Annual reduction: 47,839

Country: Ethiopia

Type of project: Energy Efficiency - Domestic

PROJECT DESCRIPTION

The Oromia cook stove project is a small scale project activity that will introduce energy efficient cook stoves into rural area of Oromia Region and thereof to reduce fuel wood uses and associated greenhouse gas emissions in targets 11,000 households with 22,000 stove in 2019

This project is a voluntary coordinated activity implemented through Oromia Coffee Farmers Cooperative Union(OCFCU), located in the Oromia region. In the rural areas of West Wollega, Ghimbi, many residents use firewood from the nearby coffee shade endemic forest, vegetation and biomass for the cooking. This leads to deforestation and accounts to grave health hazards caused from indoor air pollution. To alleviate this problem, the project distributes 11,321 units of fuel efficient cook stoves that will serve coffee producers

Oromia Coffee Farmers Cooperative Union (OCFCU) works exclusively in Oromia Regional State, which accounts for more than 65 % of the country's total coffee growing land. OCFCU exports traceable Fairtrade and organic certified coffees. The Fairtrade premium and support from roasters are invested in social projects like schools, health posts, clean water, and infrastructure.

MULTI-LAYER HOUSEHOLD WATER FILTRATION

Type & Standard: Gold Standard

CORSIA: Yes

Project duration: 2020-2025

Annual reduction: 471,924

Country: Kenya

Type of project: Energy Efficiency - Domestic

PROJECT DESCRIPTION

The project distributes water purifiers to residents and families across Kenya. The water purifiers of the project offer an affordable, long-term and zero emission solution for households that generally consume unsafe drinking water.

It not only dramatically increases access to safe drinking water but also reduces consumption for woody fuels previously required to treat drinking water, which will decrease environmental degradation and greenhouse gas emissions

LONGYUAN DE AAR 2 NORTH WIND ENERGY FACILITY

Type & Standard: VCS

CORSIA: Yes

Project duration: 2017-2027

Annual reduction: 433,929

Country: South Africa

Type of project: Renewable Energy -Wind

PROJECT DESCRIPTION

The purpose of this project activity is to supply the wind-generated electricity to the grid of the Republic of South Africa (RSA).The project envisages the installation of a new grid connected wind farm at a site where no wind farm was operated prior to the implementation of the activity.The installed capacity of the wind farm is 144MW.

The wind farm consists of 96 wind turbines and the associated infrastructure.

The wind farm is located in the Pixley Ka Seme District close to the town of De Aar in the Northern Cape Province of the RSA, approximately 30 km northeast of the Longyuan Mulilo De Aar Maanhaarberg Wind Energy Facility.

SOUBRE HYDROPOWER PLANT

Type & Standard: CDM

CORSIA: Yes

Project duration: 2017-2026

Annual reduction: 607,720

Country: Cote d'Ivoire

Type of project: Renewable Energy -Hydro

PROJECT DESCRIPTION

The Soubré Hydro Power Plant is a project located on the Sassandra river about 5 km from Soubré village, Côte d'Ivoire. The Soubré HPP is composed of a run-of-river hydropower plant with a capacity of 270 MW and a micro-hydro power plant of 5.5 MW with a total estimated average gross electricity generation of 1,170 GWh per year, fed by a 17.3 km² reservoir.

To date, electricity in Côte d'Ivoire is mainly generated from fossil fuels (natural gas and fuel oil) which leads to considerable greenhouse gas emissions. The project activity will therefore substitute fossil-fuel intensive grid-electricity and cut down GHG emissions by an estimated annual reduction of 607,720 tCO.

Emission Units Programme Registries

- Registries are electronic databases to record and track emissions units. Offsets are assigned an identification number that can be tracked from when the unit is issued through to its transfer or use (cancellation or retirement) via the registry system.
- Registries are essential to assure credibility and transparency within the market and avoid double counting, as they record the ownership of each credit.

- **CORSIA SARPs:** the AO shall:

a) cancel CORSIA Eligible Emissions Units **within a registry** designated by a CORSIA Eligible Emissions Unit Programme

b) request registry to make visible on the public website information on each AO's cancelled units for a given compliance period.

Registries

- When a buyer retires/cancels a unit to offset against their emissions, the registry retires the serial number of the unit so it cannot be resold later on.
- ICAO requirement: “ must be able to identify CORSIA eligible emissions units, and to enable the public identification of cancelled units that are used toward CORSIA offsetting requirements; and any further requirements decided by the ICAO Council”
- In some registries you need an account to see the projects, in others projects are accessible to anyone to view

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