



CARBON FOOTPRINT CENTER (CFC)

Carbon footprint assessment

T H O R A Y A S E A D A



What we know is that humanity is changing the earth climate by:

Emitting greenhouse gases, especially carbon dioxide, but also, nitrous oxide, methane, and a number of industrial chemicals into atmosphere. Those chemicals act like a kind of thermal blanket so when the solar radiation hits earth and is reflected again, or emitted again, that blanket of greenhouse gases in the atmosphere captures the infrared radiation and warms the planet. We are on a path of global warming.



THREATS TO GLOBAL WARMING

- Rising sea level is one of them
- Intense storms is another
- Increasing frequency of droughts and floods
- Emerging diseases that are temperature dependent, such as many of the newly emerging diseases carried by mosquitoes, such as the Zika virus
- Crop failures because of rising temperatures
- Human discomfort and loss of productivity because of rising temperatures
- Heat waves that cause the deaths

CFC Services



- Carbon Footprint assessment
- Water Footprint assessment
- Ecology Footprint assessment
- Sustainability assessment
- True costing account assessment.
- Carbon sequestration assessment
- Technical consulting for afforestation and carbon neutrality project.
- Training and workshop to raising the awareness of the threat of climate change and global warming
- Providing technical studies and reports for installing renewable energy stations
- PDD service provider



ISO Certification

CERTIFICATE



Compliance Certificate

This is to certify that



Carbon Footprint Center
Heliopolis University for Sustainable Development

Carried out at following site:

3 Cairo Belbies Desert Road. P.O. Box 2834 El-Horreya, Cairo, Egypt

Has been found to conform to the Greenhouse gases — Part 1: Specification with Guidance at The Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals Standard:

ISO 14064-1:2018

This certificate is valid for the following Product or Service ranges:

Specification With Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals

Certificate no.	: EASC/GSER/1001-2022
Issued on	: 10/09/2022
Validity Until	: 09/09/2023
1 st Surveillance Due On	: 10/08/2023
2 nd Surveillance Due On	: 10/08/2024
Re-Certification Due On	: 10/09/2025

THE VALIDITY OF THIS CERTIFICATE WILL BE EXTENDED AFTER SUCCESSFUL SURVEILLANCE AUDIT OR OR BEFORE ABOVE MENTIONED SURVEILLANCE DATES. AFTER SURVEILLANCE REVISED CERTIFICATE WILL BE ISSUED WITH EXTENDED DATE.

TO VERIFY THIS CERTIFICATE STATUS PLEASE VISIT ACCREDITATION BOARD WEBSITE www.eurasaccreditation.com

AUTHORISED BY
CHAIRMAN/DIRECTOR







PCMS WORLDWIDE LTD
Address : Kemp House, 160 City Road,
London, EC1V2NX, United Kingdom
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CERTIFIED COMPANY

The Certificate Remains The Property Of PCMS As Per Certificate Audit Contract




Carbon Footprint Center
Heliopolis University
for Sustainable Development

Carbon Footprint Center

Heliopolis University for Sustainable Development

Certified on

Specification with Guidance at The Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals Standard
ISO 14064-1:2018

Specification With Guidance at The Project Level for Quantification, Monitoring and Reporting of Greenhouse Gas Emission Reductions or Removal Enhancements Standard **ISO 14064-2:2019**

CERTIFICATE



Compliance Certificate

This is to certify that



Carbon Footprint Center
Heliopolis University for Sustainable Development

Carried out at following site:

3 Cairo Belbies Desert Road. P.O. Box 2834 El-Horreya, Cairo, Egypt

Has been found to conform to the Greenhouse gases — Part 2: Specification With Guidance at The Project Level for Quantification, Monitoring and Reporting of Greenhouse Gas Emission Reductions or Removal Enhancements Standard:

ISO 14064-2:2019

This certificate is valid for the following Product or Service ranges:

Specification With Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals

Certificate no.	: EASC/GSER/1001-2022
Issued on	: 10/09/2022
Validity Until	: 09/09/2023
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The First Step Measuring

Corporate carbon footprint assessment
Sustainable Development & Environmental Consultant

Carbon Footprint - definition

The total amount of greenhouse gases produced directly and indirectly from human activities, usually expressed in equivalent tons of carbon dioxide (CO₂e).

Product Carbon Footprints (PCF) is carried out in order to identify and quantify the CO₂e emissions occurring due to a products production, processing and distribution



Carbon Footprint – Methodology

The underlying standards for CF methodology are:

- The Greenhouse Gas Protocol ,
- The Publicly Available Specification 2050 (PAS2050) as recently released by the British Defra and Carbon Trust
- Iso 14064



Carbon Footprint - Procedures

Identify and calculate different emission sources as follows:

- Scope 1: Emission directly related to the Organization
(Electricity and Diesel/petrol)
- Scope 2: Emission indirectly related to the Organization
(Indirect emissions, such as business travel,
waste)
- Scope 3: Emission indirectly related to the Organization
(commuting, administrative corporate operations,
etc.)

Carbon Footprint – Calculation

- Administration and Company facilities
- Energy Audit(The amount of energy consumed of any energy source electricity, oil, gas, Diesel, etc.)
- Employee/staff commuting
- business travel
- Paper consumption
- Waste and waste treatment

EoL agriculture
carbon credit

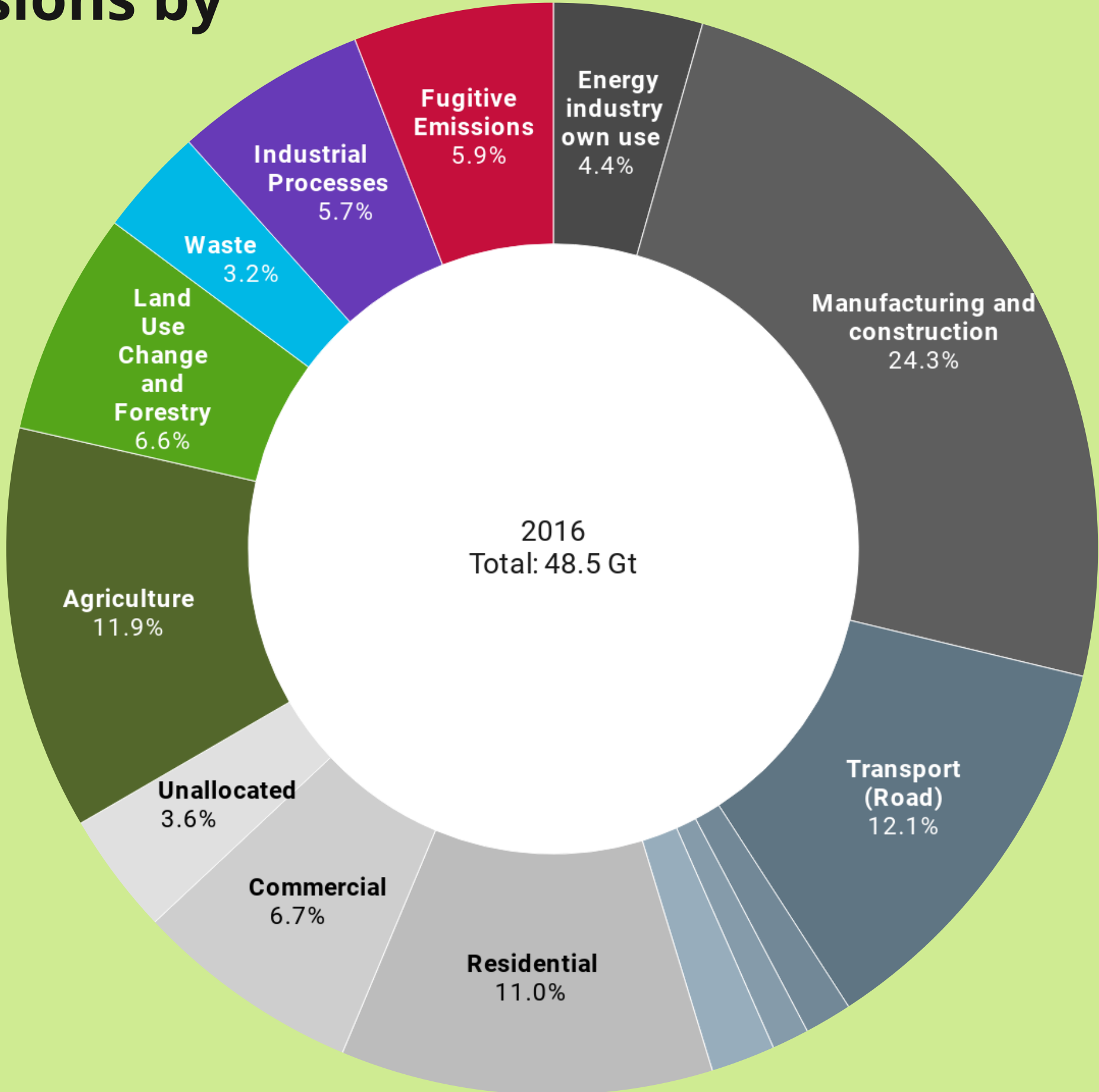
SEKEM & HU

2022



Global Greenhouse Gas Emissions by Sector

- Energy industry own use (4.4%)
- Manufacturing and construction (24.3%)
- Transport (Road) (12.1%)
- Transport (Int. Shipping) (1.4%)
- Transport (Int. Aviation) (1.1%)
- Transport (Other) (1.9%)
- Residential (11.0%)
- Commercial (6.7%)
- Unallocated Combustion (3.6%)
- Agriculture (11.9%)
- Land Use Change and Forestry (6.6%)
- Waste (3.2%)
- Industrial Processes (5.7%)
- Fugitive Emissions (5.9%)



- The second biggest category of emissions is the sector that we rely on daily for the food we eat.
- Methane from cows and other livestock contribute the most to emissions, at 5.8% total. These foods also have some of the highest carbon footprints, from farm to table.

Agriculture, Forestry & Land Use

Sub-sector	GHG Emissions Share
Livestock & Manure	5.8%
Agricultural Soils	4.1%
Crop Burning	3.5%
Forest Land	2.2%
Cropland	1.4%
Rice Cultivation	1.3%
Grassland	0.1%
Total	18.4%

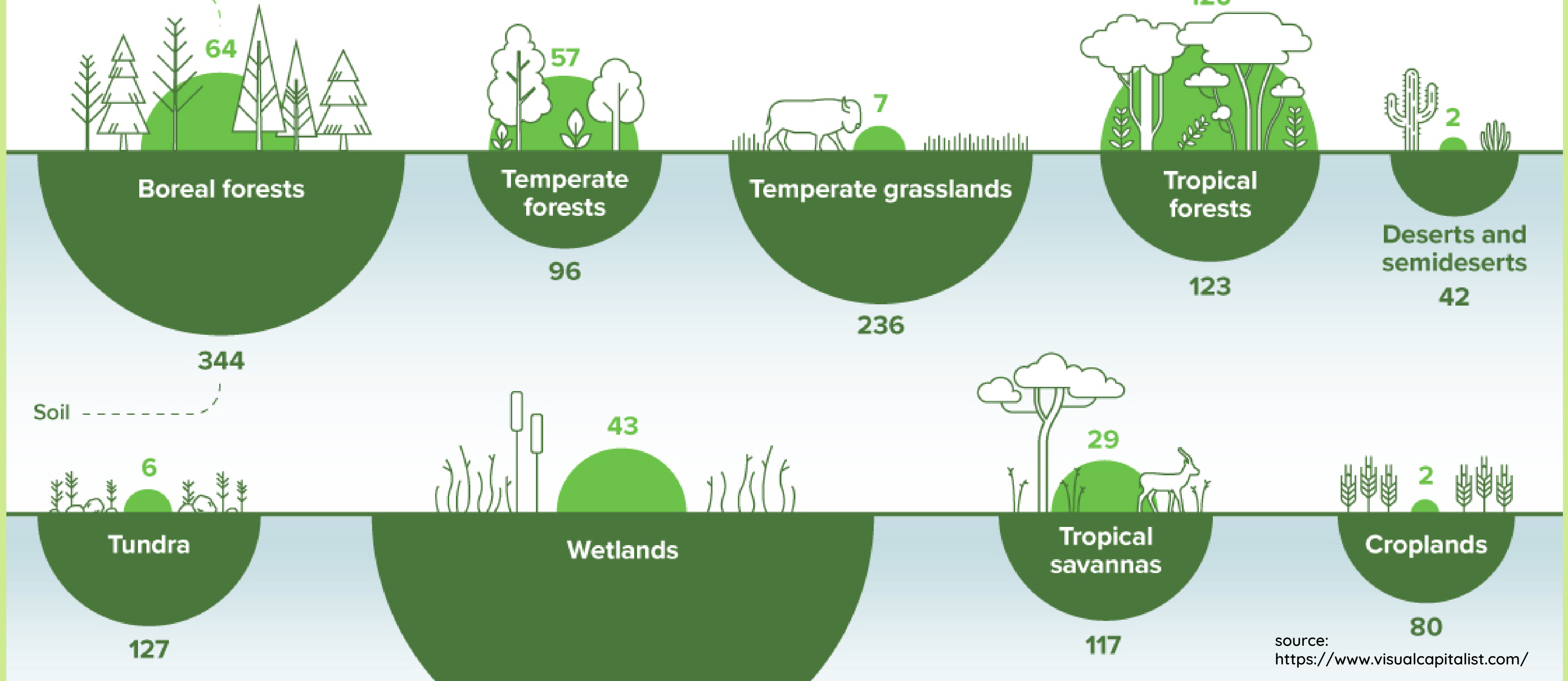
Carbon Storage

Tonnes of Carbon per Hectare*

The world's forests absorb around **15.6 gigatonnes** of CO₂ each year. That's around 3X the annual CO₂ emissions of the United States.

However, around **8.1 gigatonnes of CO₂** leaks back into the atmosphere due to deforestation, fires and other disturbances.

Vegetation



Soil



Our objectives

Showing possibilities to sequester carbon and to mitigate climate change through farming.

Finding the right methodology to incentivize and remunerate farmers for their sustainable farming methods.



Farm model

**The sources of the carbon reduction on farms:
(acc. to IPCC methodology
and CDM);**

- Trees
- Soil carbon sequestration
- Renewable energy
- Composting



Soil carbon

Soil organic carbon (SOC) stocks through the adoption of improved agricultural practices. Activities can achieve avoidance of emissions as well as sequestration of carbon in the soil

Afforestation



The amount of carbon sequestration depends on the estimated growth rate during the project crediting period.

Composting

The project activity comprises measures to avoid the production of methane from biomass and other organic matter that would have otherwise been left to decay anaerobically partly in a solid waste disposal site without methane recovery, partly in uncontrolled dumping sites and partly burnt.



Renewable Energy

The baseline emissions are calculated based on the fuel consumption of the technology in use or that would have been used to generate the equivalent quantity of energy in the absence of the project activity



Carbon Saving Tons CO₂e

6.3/ha

SOIL

1.35/KW

RENEWABLE
ENERGY

0.6/t

Composting

0.03/tree

TREE

*numbers according to the
Climate and Energy research
Center assessment, validated by
COAE

SEKEM wahat farm 2021



Soil

1200 ha, 336 ha has been reclaimed



trees

190k trees have been planted




Renewable energy

1.3 MW has been installed



composting

5.8k tons compost have been used

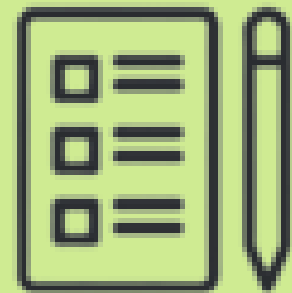


Wahat Farm Saved carbon 2021		
	Amount	carbon saving (tco2e)
Soils	336 ha	2.14k CC
Trees	190k tree	6.3k CC
Composting	5.8k tons	3.5k CC
RE	1.3 MW	1.7 k CC (Included in Soil)
Total		11.93 k CC

* CC: Carbon Credit: offsetting one tons co2e

Project Phase

Phase 1 2018-2021



Prototype SEKEM Wahat Farm

- 830 Acres
- 12,000 Carbon Credits (CC)/yr
 - 190,000 Trees
 - 1075 t Soil Carbon (CDR*)
 - 5,800 t Compost/yr
- 300k € Value of CC/yr
- 0.5 mio. € Investment for Conversion

Phase 2 2021-2023



Upscaling to 2100 Farmers

- 14,000 Acre
- 84,000 CC/yr
 - 636,363 Trees
 - 21,000 t Soil Carbon (CDR)
 - 70,000 t Compost Production
- Value of 2.1 mio €
- 9.7 mio. € Investment for Conversion

Agenda 2023

Project Phase

Agenda 2028

Phase 3

2023-2025



Upscaling to 40,000 Farmers

- 250,000 Acre
- 1.5 mio CC
 - 11.3 mio Trees
 - 375,000 t Soil Carbon (CDRI)
 - 1.2 mio t Compost Production
- Value of 37.5 mio €
- 174 mio. € Investment for Conversion

Phase 4

2025-2028



Upscaling to 250,000 Farmers

- 1.6 mio Acre
- 9.6 mio CC
 - 72.7 mio Trees
 - 2.4 mio t Soil Carbon (CDRI)
 - 8 mio t Compost Production
- Value of 240 mio €
- 1.1 mrd. € Investment for Conversion

Additionality

More than just carbon



Decrease price of organic & biodynamic products



well-being of farmers



increase amount of carbon sequestration



Avoid carbon emissions

HOW Farmers Can Issue CC?



▼ Verification & Validation Body

The EoL Standard is certified by the Center of Organic Agriculture in Egypt (COAE) which is an Egyptian certification body, which is accredited by the Egyptian Accreditation Council (EGAC) according to ISO 17065. The COAE is validating and verifying the EoL licensees based on the EoL project design document provided by the Carbon Footprint Center.



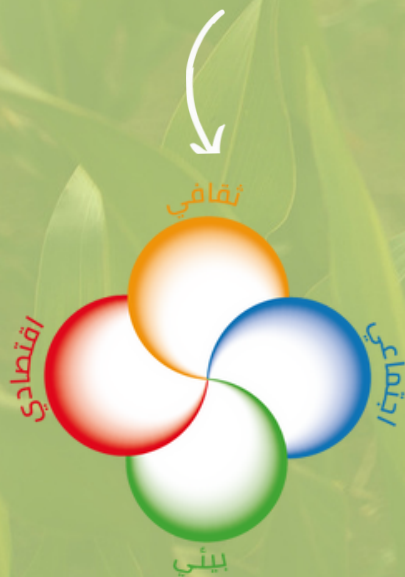
▼ Standard owner

The Economy of Love (EL) voluntary carbon credits are verified and validated according to the EL standard by the Center of Organic Agriculture in Egypt (COAE), which is competent under the terms of O 14065:2020 for verification and validation of greenhouse gas emissions.



▼ Registry Management

The certification works as follows, COAE is contracted by Demeter Egypt to certify the EoL standard and verify our Carbon credit. Then, the Carbon FootPrint Center (CFC) is responsible for the issuing of the carbon credits and its management in the EoL Carbon Registry. In order to avoid double accounting, each project certificate has a serial number connected to invoices, issues date and amounts.



▼ Standard

EoL Governance



EoL Certificate



€25.00 per 1 credit

Offset your emissions with EoL Carbon Credits
With 1 EoL Carbon credit, you offset 1 ton of CO₂e through



13 trees planted



545 m of soil carbon sequestered



410 kg compost produced

Offset your emissions with EoL Carbon Credits
With 1 EoL Carbon Credit, you offset 1 ton of CO₂e through:

2000 Farmers Applying for EoL CC

Economy of Love was initiated by an organic farmer's association called The Egyptian Biodynamic Association (EBDA), to support sustainable farmers, companies and consumers. <https://www.economyoflove.net/>



Economy of Love

Home

Certification

impacTrace

Credits ▼

Education

Contact Us



Farms & companies have the responsibility to create safe and fair working spaces & protect the environment.



ANY QUESTIONS!

A person's hands are shown holding a small plant seedling in soil. The background is a soft-focus green, with a large, stylized green leafy shape overlaid. The text 'Thank You' is written in a black, elegant cursive font, and 'THORAYA SEADA' is written in a smaller, black, sans-serif font below it.

Thank You

THORAYA SEADA