



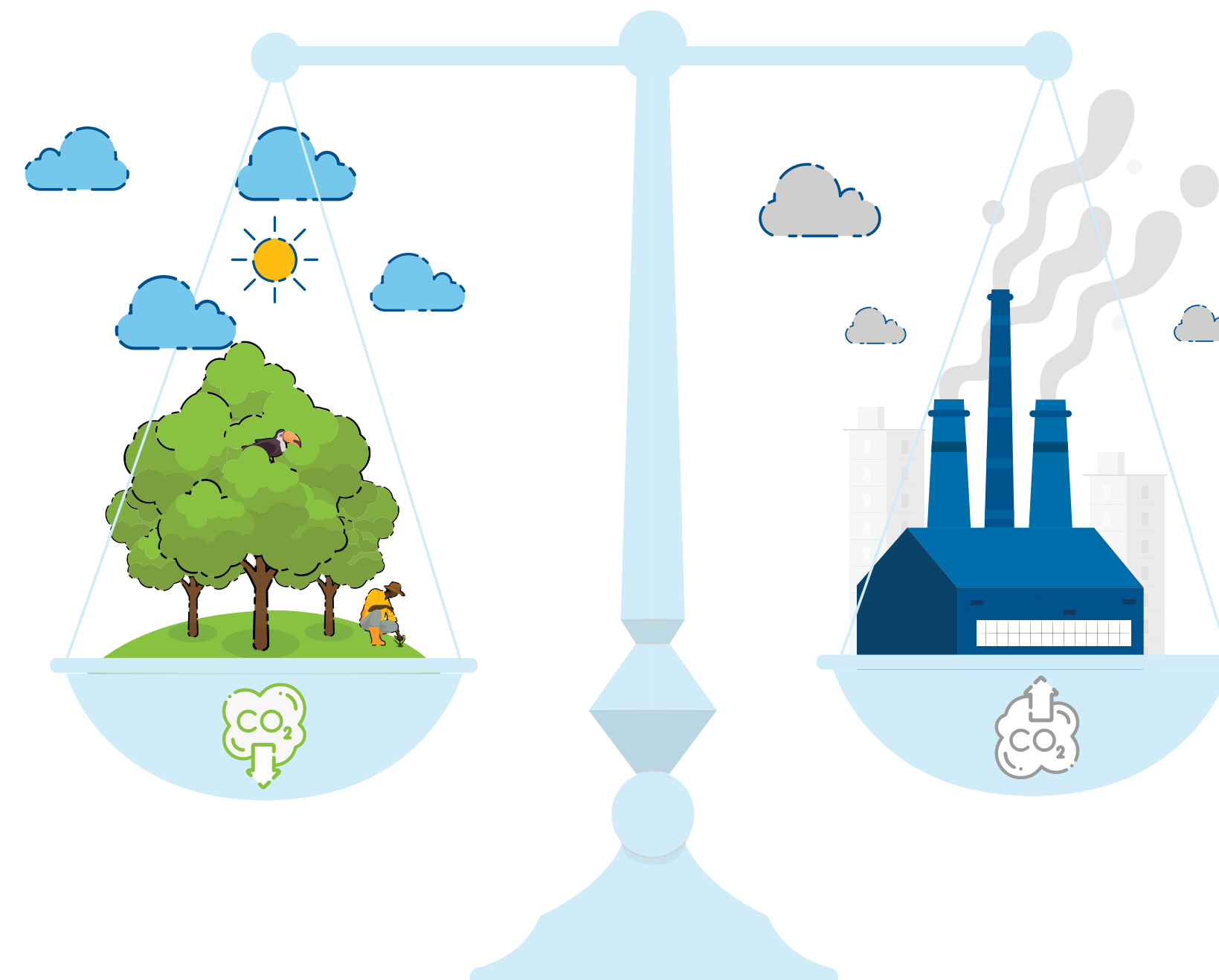
# Introduction to carbon credits and offsetting

# What are carbon credits?

Carbon credits are measurable, verifiable emission reductions from certified climate action projects. These projects **reduce, remove or avoid greenhouse gas (GHG) emissions**. But they also bring a whole host of other positive benefits, for example, they empower communities, protect ecosystems, restore forests or reduce reliance on fossil fuels.

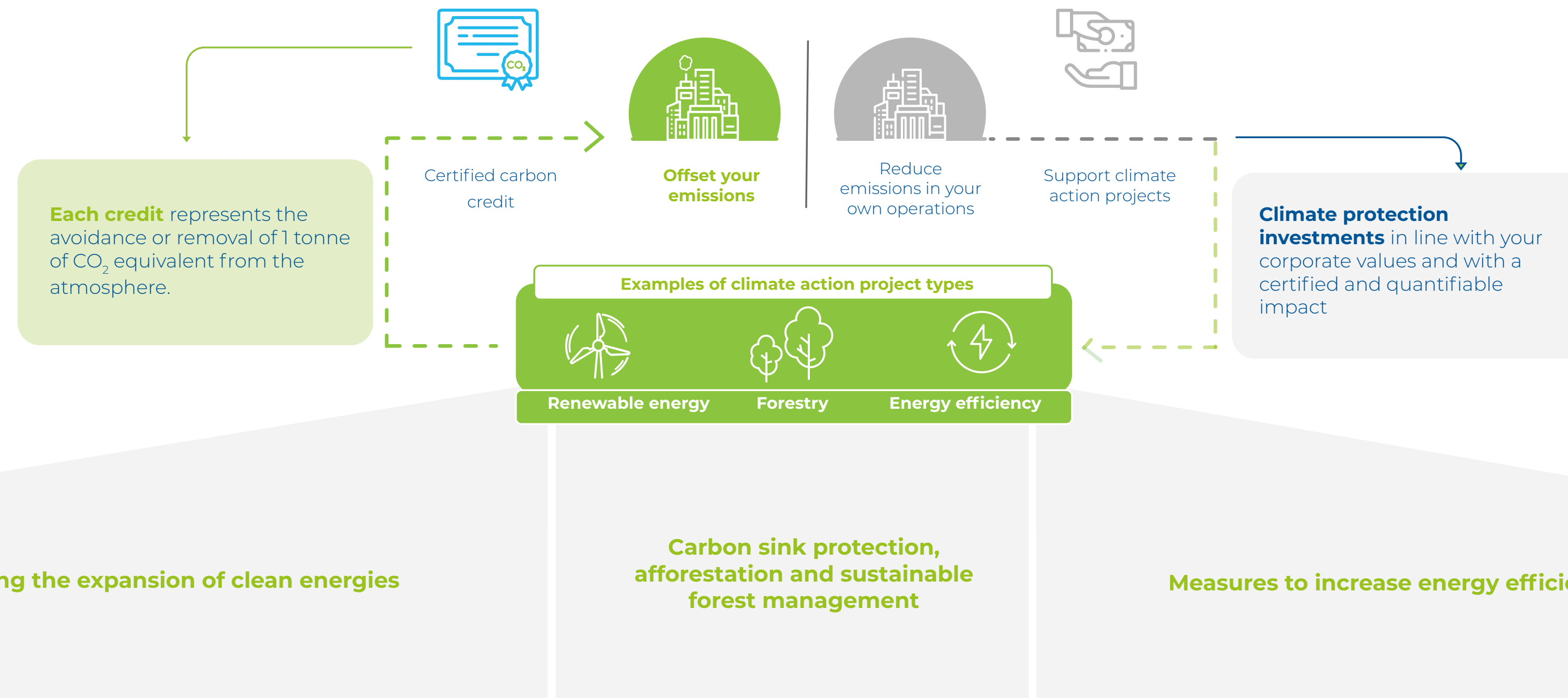


A carbon credit corresponds to 1 ton of CO<sub>2</sub>\* avoided or removed from the atmosphere, no matter where around the world



\* CO<sub>2</sub> = CO<sub>2</sub>e includes carbon dioxide (CO<sub>2</sub>) and other greenhouse gases (GHGs), such as methane (CH<sub>4</sub>) or dinitrogen oxide (N<sub>2</sub>O).

# How do carbon credits work?

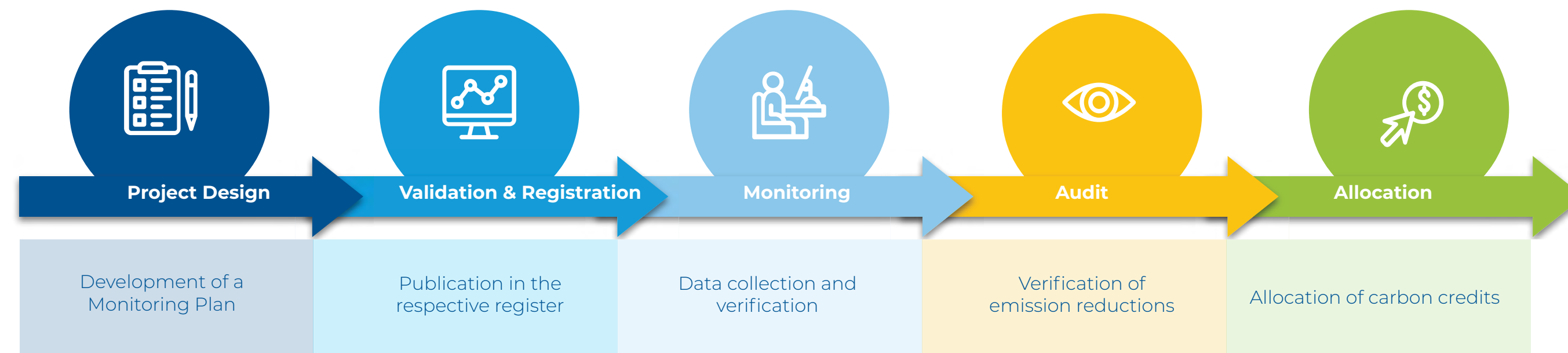


Carbon credits are a transparent, measurable and results-based way for companies to support activities, such as protecting and restoring irrecoverable natural carbon sinks, like forests or marine ecosystems and scaling nascent carbon removal technology, that keep global climate goals within reach.

Compensating remaining emissions through carbon projects:

- catalyzes faster climate action on the way to net zero,
- ensures companies are measuring their footprint and putting a price on the damage they are creating,
- attracts funding to eligible and deserving projects that dramatically reduce emissions and facilitate sustainable development.

# How do climate action projects generate carbon credits?



## What are the different types of climate action projects?

Projects reduce or remove the amount of greenhouse gas (GHG)

- 1 The first **avoids greenhouse gas emissions**, for example, by replacing fossil fuel-derived energy with energy from renewable sources.
- 2 The second **removes emissions from the atmosphere**, for example, by planting more trees, which sequester -or capture carbon- from the atmosphere and store it in liquid or solid form.
- 3 The third **captures and destroys emissions**, for example, by capturing methane—a GHG many times more potent than carbon dioxide—from wastewater.

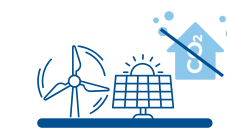
# Project types

## Carbon avoidance



### Nature-based solutions Forestry/agriculture

**Forest protection:** avoided deforestation leads to maintained land management, resulting in avoided CO<sub>2</sub> emissions.



### Technological Energy/industry

**Renewable energy:** displaces power plants based on fossil fuels, with new renewable energy projects.



**Efficient cookstoves and clean water:** cooking or boiling water on high-efficient cook stoves replaces open fire pits, reducing energy use by up to 80%.

## Both avoidance and removal



**Soil carbon:** land management changes maintain or increase the soil carbon content.



**Wetlands (inc. blue carbon):** restoration or construction of high carbon density, anaerobic ecosystems.

## Carbon removal



**Afforestation/reforestation:** tree growth takes up CO<sub>2</sub> from the atmosphere.



**Biochar:** waste biomass is heated at high temperatures to take a stable, high-carbon form, it then reaches the soil for permanence.



**Direct air capture:** CO<sub>2</sub> is removed from the atmosphere and stored underground.



**CO<sub>2</sub> to durable carbon:** CO<sub>2</sub> is removed from the atmosphere and bound in long-lived materials.

There are hundreds of different types of climate action projects, which cover the following areas:

#### Nature-based-solutions

including: reforestation, land restoration, forest protection, sustainable land management and agriculture.

#### Renewable energy

including: hydropower projects, wind projects, solar power and geothermal.

#### Community projects

including: improved cookstove technology, access to safe water.

#### Waste-to-energy

including: biogas from landfill and industry and biomass.

### How do I know that the emission reductions are actually happening?

ICROA-approved carbon standards ensure that the project is real, verified, permanent and additional by setting stringent requirements that must be followed for a project to issue carbon credits. Project impacts are then audited by approved-third parties and the documents demonstrating this are available on public registries.

For extra transparency and to prevent any double counting, carbon credits are assigned serial numbers and are issued, transferred and permanently retired in publicly accessible emission registries.

### How do projects qualify for Climate Action Credits?



Real



Additional



Measurable



Verifiable



Permanent



Unique

### What does additionality mean?

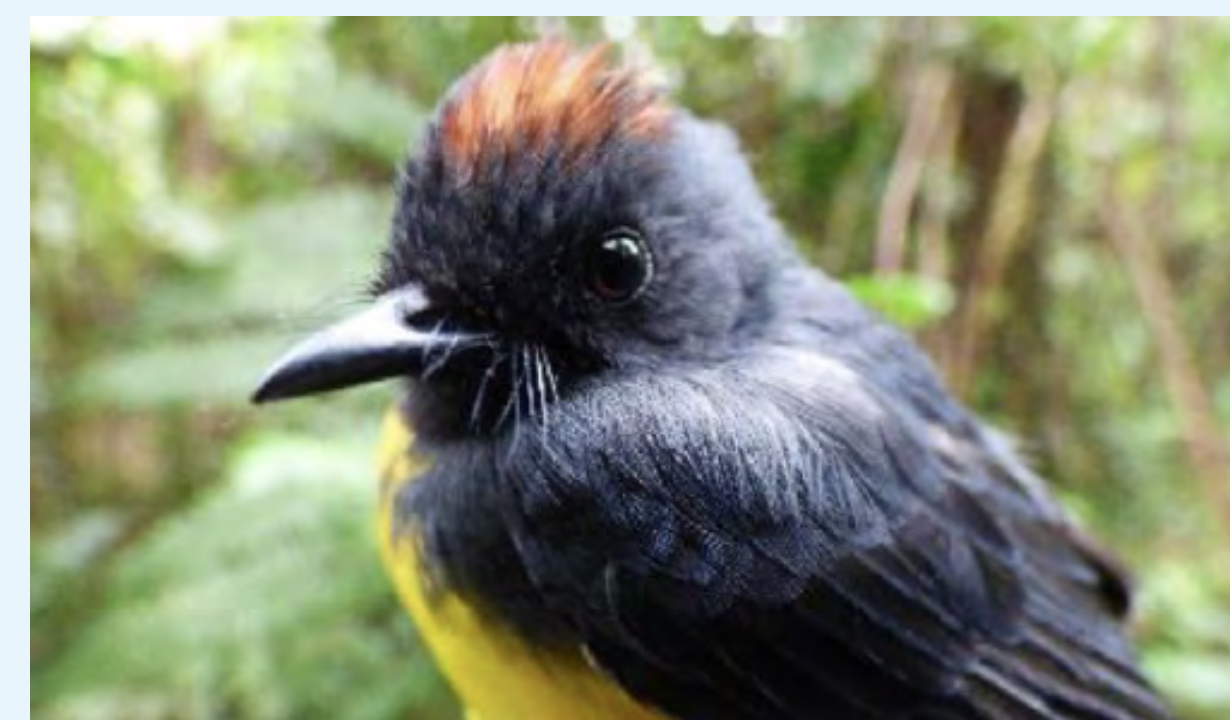
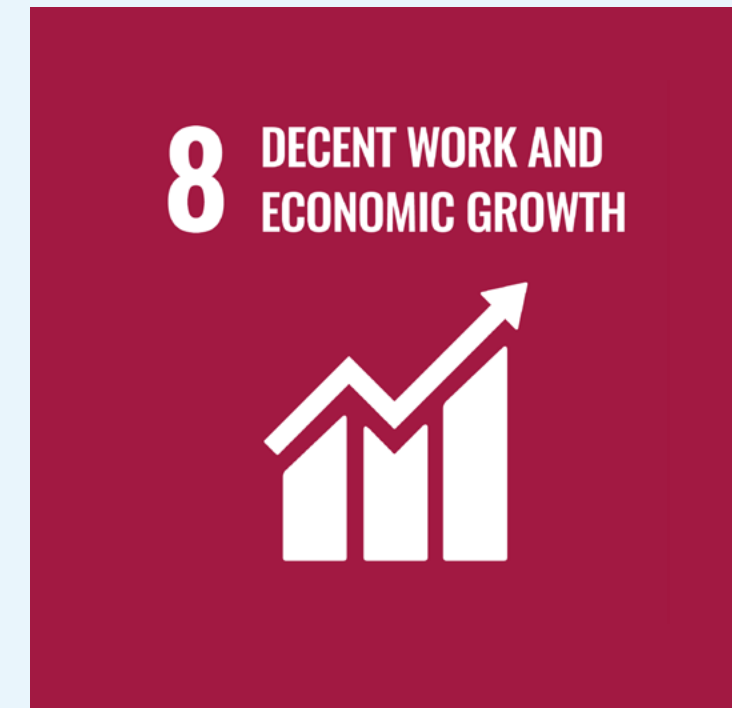
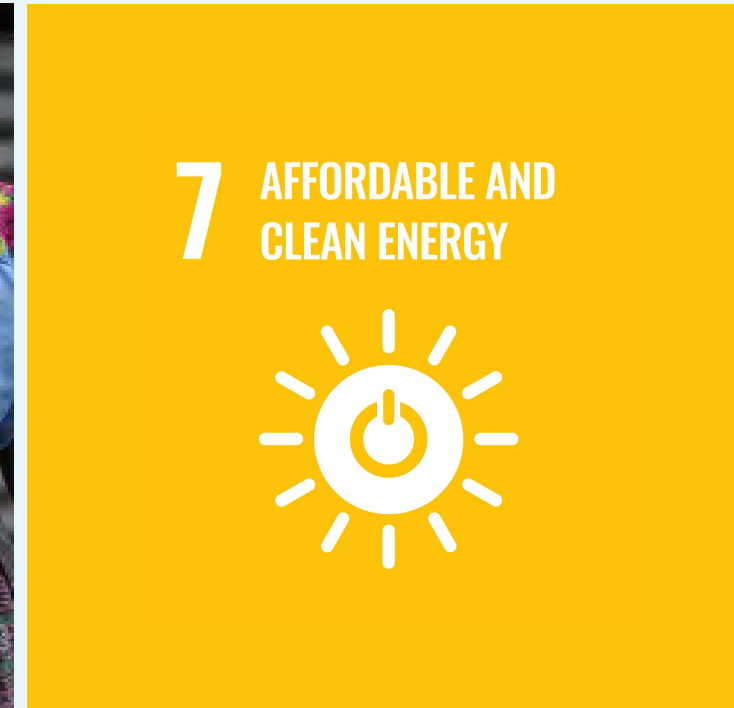
This can often be the trickiest part of carbon offsetting to understand, but theoretically it's simple. Additionality means that the reductions in emissions achieved by the project must be "above business as usual." That means they would **not** have happened unless the project was implemented.

# What makes a good climate action project?

High-quality carbon credits adhere to a strict set of standards. You can check this by ensuring the projects you invest in are registered with a third-party internationally-recognised verification standard, such as the [Gold Standard](#), [Verra's Verified Carbon Standard \(VCS\)](#), [Social Carbon](#) and [Climate, Community and Biodiversity Standards \(CCBS\)](#), or standards verified by the [UNFCCC](#).

The ICROA verification standards ensure that the project is permanent and additional to what could happen without the project being in place.

These standards also highlight additional benefits beyond carbon and make sure projects also contribute to the UN's Sustainable Development Goals. This could be improving health, creating better education opportunities, improving wildlife conservation or even building sustainable communities.



# What project type should a company support?

In the short-term, emitting and then removing carbon from the atmosphere creates greater uncertainty and risk than simply avoiding its release in the first place.

Financing **carbon avoidance today** is crucial in the transition phase to net zero emissions because simply put, they stop more emissions from entering the atmosphere. They also serve climate justice and protect our existing carbon sinks such as forests and with them, biodiversity.

In the coming decades, carbon removals will grow in importance as we get closer to both public and private net zero targets. Once we reach net zero, all new residual emissions must be neutralised with carbon removals. Companies can start to invest in carbon removal technologies so they can be scaled in the future. However, this must not delay or impact urgent efforts to decarbonize and prevent emissions from being released in the first place.

## In a nutshell, supporting climate action projects...



Reduces global emissions



Enables technology transfer



Paves the way for government action



Builds local knowhow



Builds local knowhow

# How does offsetting fit into a company's overall reduction strategy?

## Carbon contribution ≠ pay and forget

Reduction and offset are critical to catalysing climate action.

The private sector plays a critical role in accelerating global decarbonization through setting corporate strategies that:

### Measure & set science-based reduction targets

...to reduce emissions across scopes 1-3 in line with a 1.5°C scenario

### Disclose reduction plans

... to transparently report on progress and safeguard reputation

### Compensate for all residual emissions on the way to net zero

...thereby achieving the **milestone of contribution.**

*Note that this does not count towards a science-based reduction target*

### Once you've hit net zero

...neutralise residual emissions with removals



### Why do the levels of carbon and GHG in the atmosphere need to be reduced?

Scientists at the IPCC have shown that increased levels of GHG in the atmosphere are warming the planet. This creates extreme weather changes around the world. Currently, burning fossil fuels -coal, oil and gas- is the main driver of increased GHG levels.

Under the banner of the UN and Paris Agreement, the world's countries have come together to declare that urgent action must be taken to lower emissions if we are to maintain a habitable planet that can support the world's population.

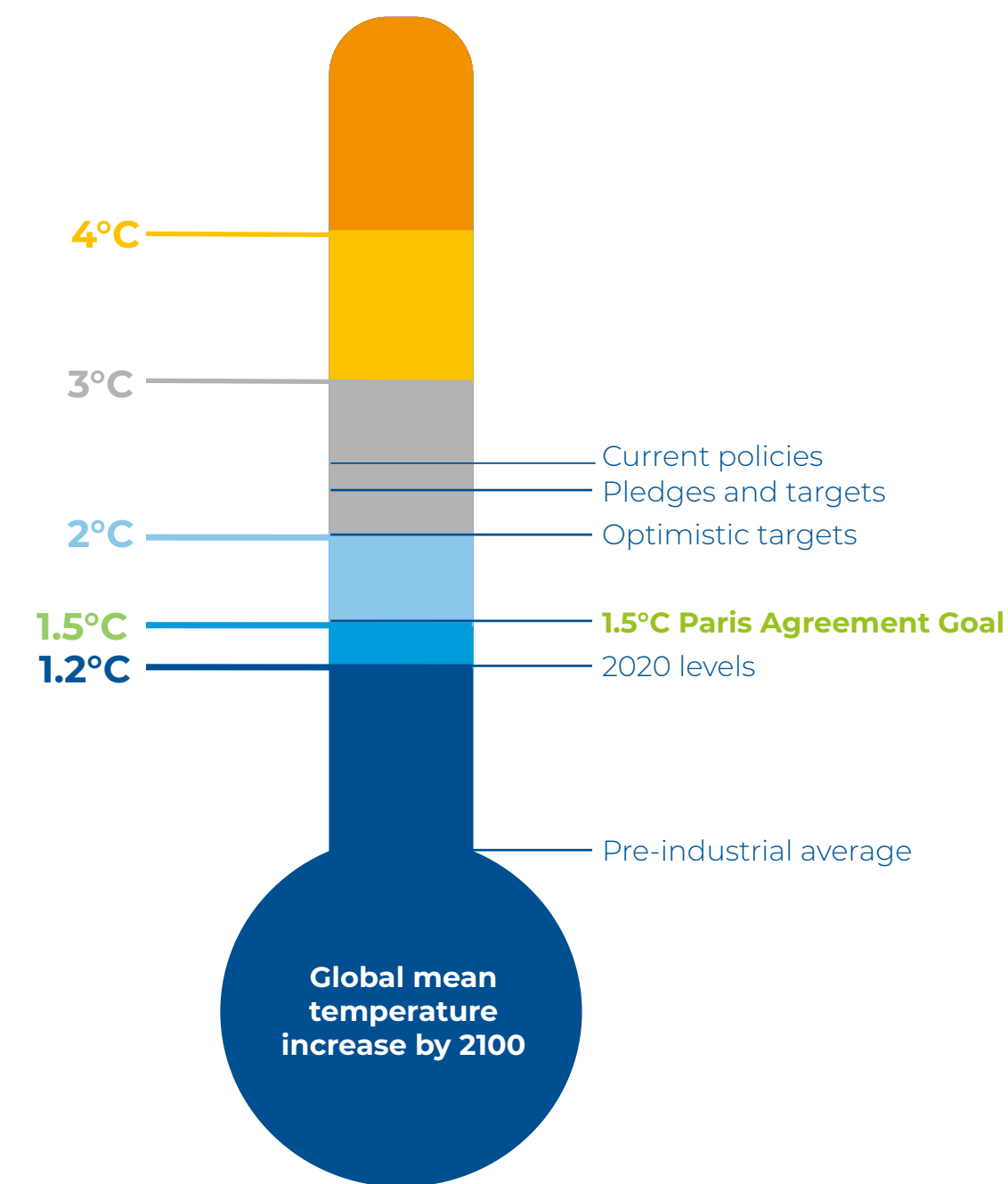
The latest research emphasises that urgent action must be taken by everyone in order to safeguard some of the most vulnerable ecosystems and communities on the planet.

### Why invest in protecting the climate?

The window to keep climate change in check is shrinking. We need to increase ambition and mobilize climate finance to lower greenhouse gas emissions drastically to reach internationally ratified targets such as the Paris Agreement and the Sustainable Development Goals (SDGs).

Beyond the moral drivers, **it is becoming imperative for businesses to take action** in order to continue their operations, for example building resilient supply chains and mitigating financial risks, or maintaining consumer trust. Moving capital towards climate-smart solutions opens doors to many opportunities and can be a long-term growth driver.

## Why invest in protecting the climate?



Source: Climate Action Tracker, November 2021

Government pledges are currently not enough to keep us within +1.5 degrees of annual warming

**We need the private sector to act.**



CO2logic joined the South Pole Group in 2021, forming the world's largest climate solutions provider and carbon project developer.

Together, they advise and support companies and institutions worldwide in defining and implementing ambitious and integrated sustainability strategies, to meet the climate challenge.

**From ambition to action, accelerate your climate transition with us!  
#ourclimatejourney**

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