Mangrove Restoration Project

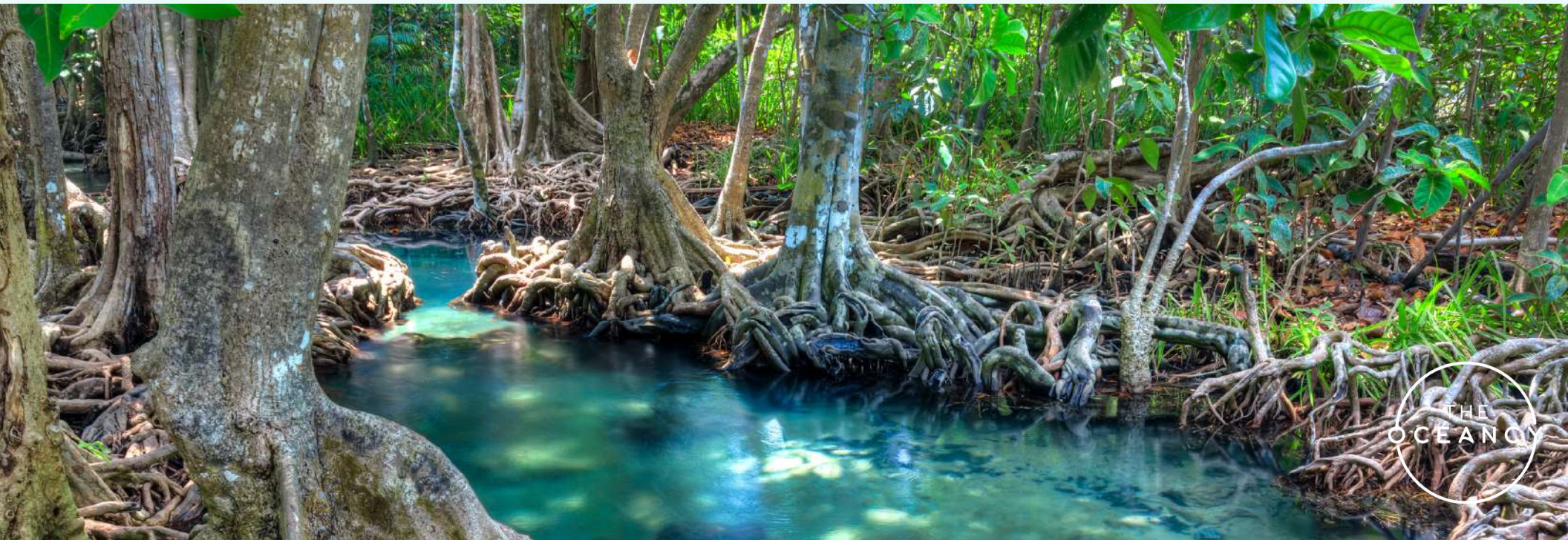
Philippines

2021-22

THE OCEANCY

What are mangroves ?

Mangroves are trees that can be found along shores, rivers and coastlines in over 118 different countries.
Mangroves are periodically submerged by sea water and despite this they manage to survive!
They can live in water up to **100 times saltier** than most other plants are able to tolerate.



Why are mangrove forests so important and why do they need protection ?

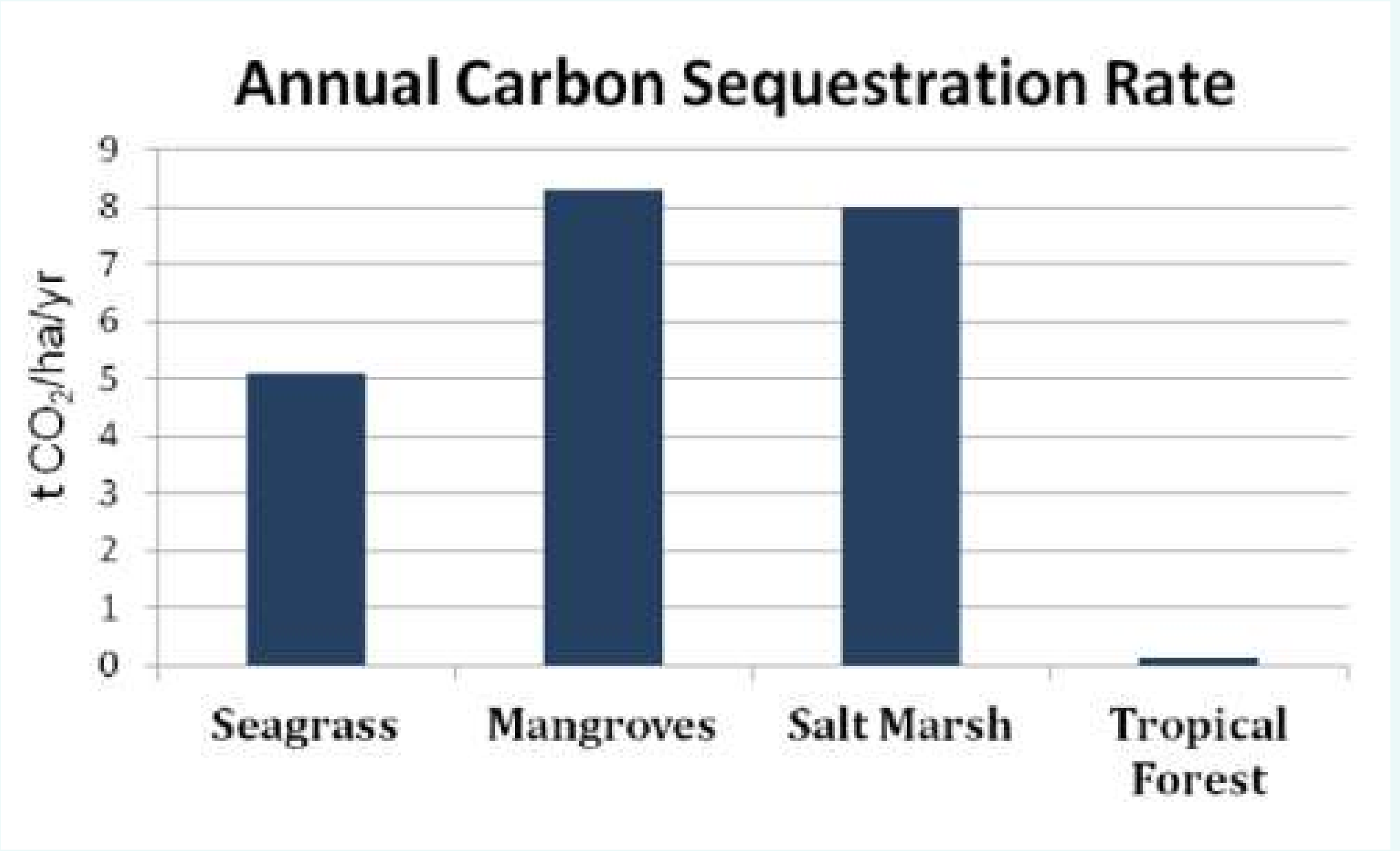
Mangrove forests are...

- CARBON SINKS
- SOURCES OF NEW MEDICINES
- HABITAT FOR BIODIVERSITY
- OCEAN FILTRATION SYSTEMS
- COASTAL DEFENDERS DURING STORMS
- THE LIVELIHOOD OF MANY LOCAL COMMUNITIES

Mangroves as Carbon Sinks

Mangrove forests **mitigate the effects of climate change** and have the capacity to absorb and store more carbon dioxide than any other ecosystem on Earth.

Mangrove forests absorb **almost 10 times** as much carbon dioxide (CO_2) from the atmosphere than other types of forests, including tropical forests (i.e. the Amazon).



Blue Carbon Rising. The Climate Trust | Invest with Purpose. (2019, November 6). Retrieved October 3, 2021, from https://climatetrust.org/blue-carbon-rising/.

The problem

Over 35% of the world's mangrove population has been **destroyed in just the last 20 years** due to development, aquaculture, tourism, and over-exploitation.

What is mangrove restoration?

It's **growing and planting mangroves** in places where they were already present, and which for various reasons (often linked to erroneous human activity) have completely or almost disappeared.

The goal is to recover abandoned areas and **involve local communities** to let them manage and protect these forests and their inhabitants.

Our Project

We are partnered with **Oceanus Conservation**, a local NGO in the Philippines. With them, our target is to reforest **15,000 mangrove** seedlings by the end of 2021, with an **additional 20,000** by the end of 2022.

OCEANUS
CONSERVATION

How the Project Works

The first step is to train the local community about the project. Then, it's necessary to sprout the seeds and **grow the mangrove seedlings** up to a certain height, in an area other than where they will be planted. Once the ideal height is reached, the **mangroves will be planted** in the designated area.
This increases the survival rate of these mangroves compared to normal seeds.

Planting the Seedlings

The mangrove species we are planting are the **Avicennia marina** and **Avicennia alba**, also known as grey or white mangrove, which are largely common in the Salay area, where the project is underway.

Planting Rate

About **3,000 mangrove seedlings** can be planted each month. The number may vary due to funding and number of persons from the local community available.
Mangroves can only be planted when the tide level allows it (i.e. when there is low tide).

Growth Rate

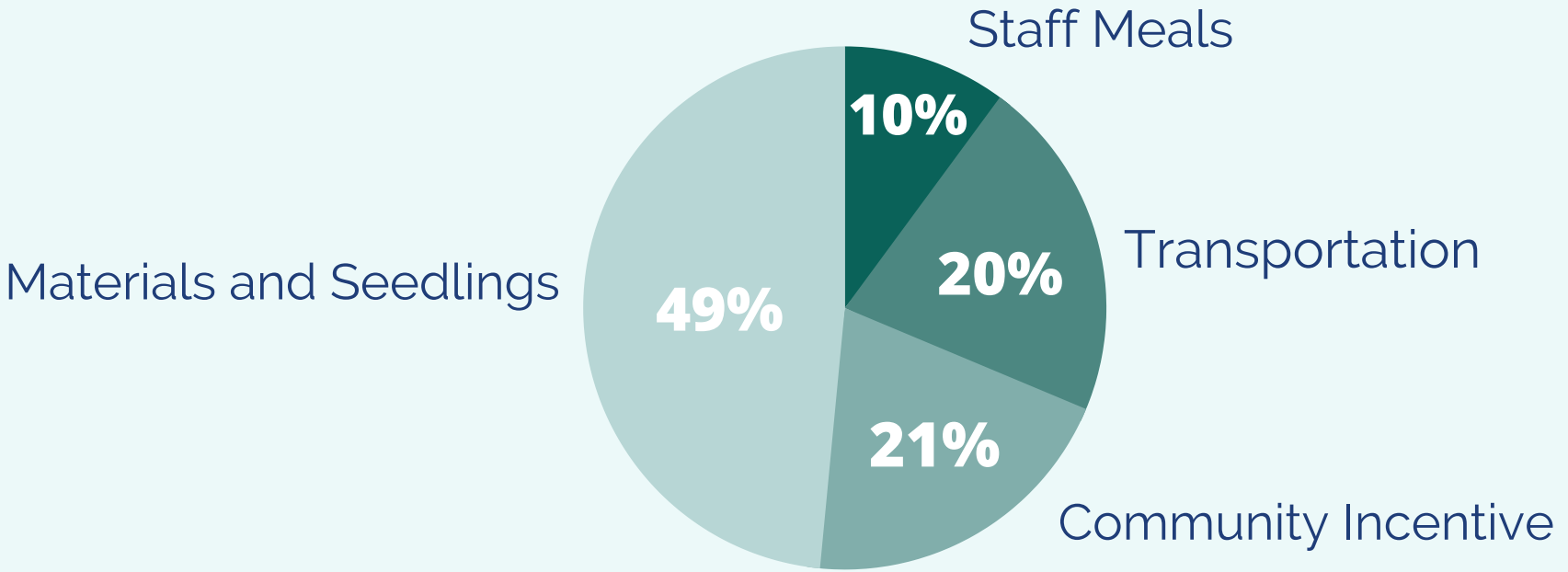
Mangrove seedlings will consistently grow, **giving life to a mangrove forest**!
On average, farmed mangroves grow about **10 to 15 cm per year**, depending on the species.

Local Community Involvement

Local communities are at the forefront of the fight against climate change as they are the first to suffer from its consequences. Without the involvement of the local communities nothing would be possible.

That's why **The Oceancy strongly supports** and involves **these communities** in our projects and reimburses the local workers for their energy and time.

Where do Donations go?



Mangrove CO_2 Offset

Mangroves absorb around **12.3 kg of CO_2 every year**.

If we consider that the mangrove species we plant can live more or less 32 years, we can estimate that each single mangrove can absorb around **400 kg of CO_2** in its life.

Project Targets

- **Duration**: at least 5 years
- **Target 2022**: 20,000 mangroves (6.800.000 kg of CO_2)
- **Target 2026**: **1 MILLION mangroves (340.000.000 kg of CO_2)**

Note: data calculated based on a average survival rate of the 85% of mangrove seedlings planted.

Examples of CO_2 Emissions

- **Fly from New York to London**: 83,068.58 kg of CO_2, equivalent to 207 mangroves;
- **Using your cellphone for 1 hour a day per 1 year**: 1,250 kg of CO_2, equivalent to 3 mangroves;
- **1 Cigarette**: 1,39 g of CO_2, if we consider an average of 20 cigarettes smoked daily, in one year are produced more than 10 kg of CO_2, so planting 1 mangrove compensate the emission of 40 smokers!
- **Sending 1 e-mail:** (1 megabyte): 19 grams of CO_2, with 1 mangrove you can compensate an equivalent amount of around 21000 mails.
- **A company with 100 employees** who all send an average of 33 e-mails a day for about 220 days a year, produces approximately 13.6 tons of CO_2, equivalent to 34 mangroves.

THE OCEANCY

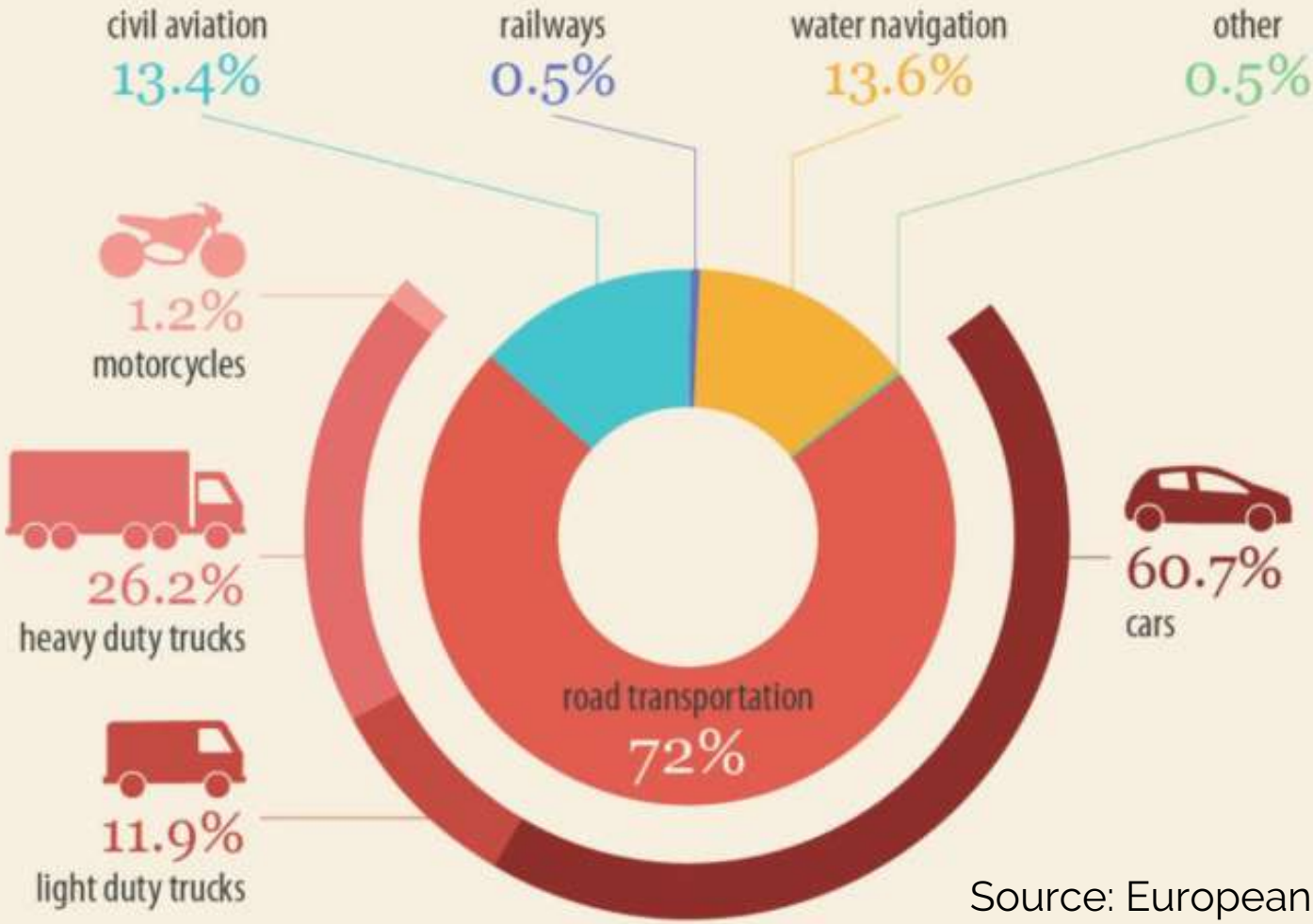
Car and CO_2 Emissions

A typical passenger vehicle emits about **4.6 metric tons** of carbon dioxide per year. This number can vary based on a vehicle's fuel, fuel economy, and the number of miles driven per year.

This assumes the average gasoline vehicle on the road has a fuel economy of about 22.0 miles per gallon and drives around 11,500 miles per year. **Every gallon of gasoline burned creates about 9 kg of CO_2.**

TRANSPORT CO2 EMISSIONS IN THE EU

Emissions breakdown by transport mode (2016)



Source: European Environmental Agency

Future Expansion

Together with Oceanus Conservation, we are planning to **expand this project** as soon as possible by creating additional nurseries, starting but not limited to Cagwait and Aringay.


"The greatest threat to our planet is the belief that someone else will save it"
-Robert Swan
JOIN OUR MISSION
THE OCEANCY
joinourcause@theoceancy.org