

GENERATION — OCEAN —

JOIN THE RACE TO PROTECT OUR INCREDIBLE BLUE PLANET



THE AMAZING
OCEAN



STORIES FROM
AROUND
THE WORLD



OCEAN &
CLIMATE



NATURE'S
RIGHTS



OCEAN ADVOCACY



YOUTH CALL TO ACTION



BLUE CARBON

When I go sailboat racing - sometimes for weeks at a time as we race around the world - we have to take everything with us onboard - our water, food, creature comforts, tools, fuel - everything! We don't have the opportunity to stop to pick up more supplies. This is the same for everyone living on our planet - we don't have any more resources, so we must treat everything we do have as precious goods, use them wisely, and put more back in than we take out.

*Francesca Clapcich - Sailor, 11th Hour Racing Team
Photo: 11th Hour Racing*



James Blake / 11th Hour Racing

The Ocean Race is considered by many to be the longest and toughest professional team sporting event in the world.

The round-the-clock race pits the planet's best sailors against each other as they circumnavigate the globe in a relentless pursuit that combines the desire to win with the adventure of life on the waves. The sailors spend months at sea together; eating, sleeping, and working in tough and often dangerous conditions.

Their boat becomes their own personal planet, where they must conserve the resources they have onboard while at sea for weeks on end. These resources are not infinite; they need to last until they reach the next stopover point (which could take as long as one month!) so finding the most sustainable way to live is crucial. Now imagine our planet as one of these boats and we humans are the crew. The choices we make, determine our destination. What and how we consume is vital; there are only so many resources available onboard. Once they are gone, they are gone!

As they race, the sailors are seeing the devastating impact of pollution, climate change and industrial overfishing on the ocean. At the same time, the world is waking up to just how important the seas are for our survival, from regulating the climate to providing us with food, jobs and the air we breathe.

It is time to act, to include and listen to the ideas and opinions of young people, like you, talking about the ocean. We are in a decade of action, where there needs to be major changes to how we treat the planet. At The Ocean Race we have the platform to inspire and accelerate action for our blue planet at this critical time in history. Will you join us? Read on to discover how you can get involved in the most important race; the race for the ocean.

Check out the Race on social media!

@theoceanrace

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The Ocean Race



#theoceanrace



The Ocean Race



The Ocean Race

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THE GREAT UNKNOWN

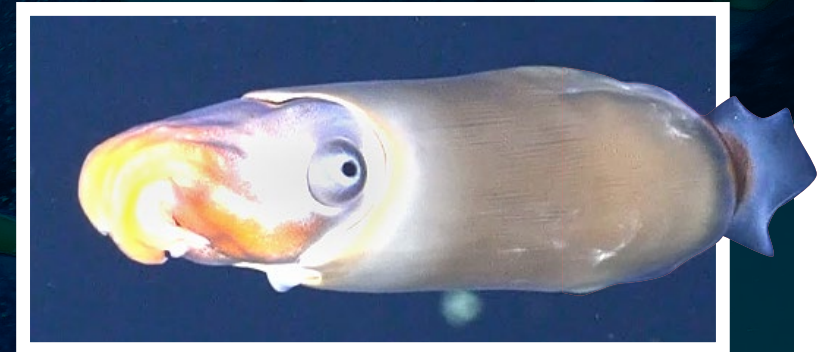
The ocean is awe-inspiring. It covers **71% of the Earth's surface and holds almost 97% of the Earth's water.** More than 80% of the ocean is unexplored, unobserved and unmapped. Scientists know more about the surface of the moon than the seafloor!

01

Schmidt Ocean Institute is a Foundation established to advance oceanographic research, discovery, and knowledge, and catalyze sharing of information about the ocean. The ROV SuBastian is a robot, operated remotely, to gather data from an underwater area.

Dr Carlie Wiener Schmidt Ocean Institute

Is that a swimming burrito?



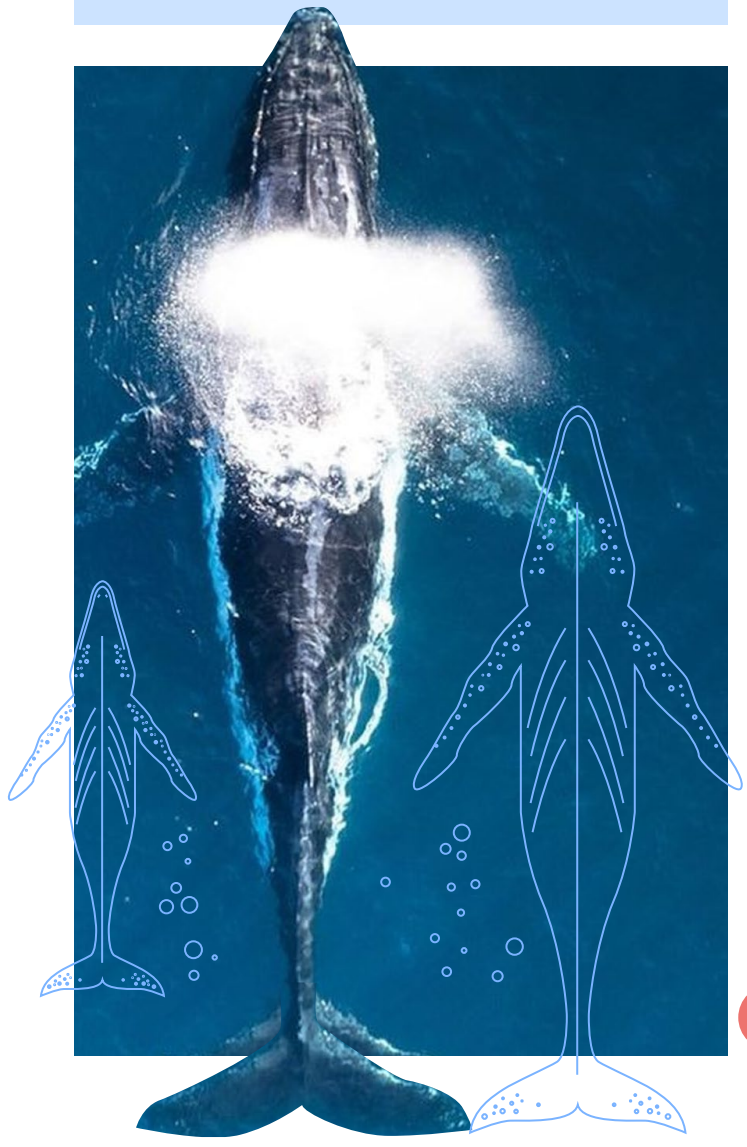
While the Ram's Horn Squid may look like a delicious tortilla, it is actually a fascinating deep-sea relative of other squid and octopus (also known as cephalopods). The video footage captured with Schmidt Ocean Institute's ROV SuBastian in 2020 was thrilling for cephalopod enthusiasts, as it marked the first time that the critter had been seen alive in its natural habitat. Their existence was only discovered because their spiral shells washed up on beaches. So, when the first ever video was recorded of a Ram's Horn Squid swimming, it made news around the world—the New York Times even published a piece about it. The species, also known as *Spirula spirula*, is the only living species in their category. As deep-sea cephalopods, they dwell as far as 1000 metres (3280 feet) below the surface. Inside the Ram's Horn Squid is a lightweight spiral shell, which they use to control buoyancy. Scientists were stumped on what position they swim in because of their odd body shape and were excited to see in the video that they swim "head down" with their tentacles pointed towards the surface. There is still much to learn about the Ram's Horn Squid, like its feeding and mating habits, but hopefully, further deep-sea expeditions will capture more intriguing footage of this incredible animal soon.

MARINE ANIMALS
& BIODIVERSITY

WEATHER
& CLIMATE

► The ocean is home to a diverse variety of living organisms, ranging from miniscule single-celled plankton to the largest animal on Earth, the blue whale.

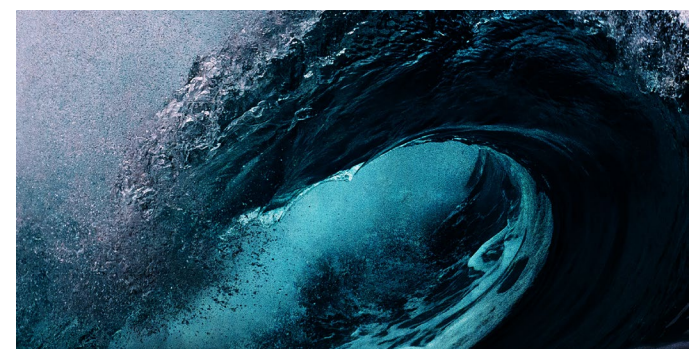
Some of the incredible species found in the ocean include cephalopods, crustaceans and other **shellfish, marine mammals, fish, sea turtles and reptiles, seabirds, sharks and rays**. Each plays a vital role in its ecosystem and helps to contribute to the health of the ocean. As the sailors race across the seas, they may be lucky enough to see some of these animals, though worryingly their encounters are becoming fewer and further between.



► Our weather and climate is significantly influenced by the ocean.

The Earth's energy, weather and carbon systems are controlled by the interaction of ocean and atmosphere processes⁽¹⁾.

When the oceanic interactions are disrupted, our weather and climate changes significantly, resulting in extreme conditions or unusual weather events.



Check out some spectacular ocean images provided by The Ocean Agency for the United Nations Decade of Ocean Science for Sustainable Development

theoceanagency.org/
ocean-image-bank



INTERCONNECTED

The ocean is what makes Earth habitable.

Imagine a massive computing network in which each part is reliant on one another for it to work effectively; all supporting the great diversity of life and ecosystems. As this is so important to the survival of every living thing on Earth, the United Nations (UN) has created some important initiatives, such as The UN Decade of Restoration, an effort to prevent, halt, and reverse the degradation of ecosystems like forests, the ocean, and grasslands ⁽²⁾.

For more information on The UN Decade of Restoration, check out youtu.be/avlehdWdfw0

THINK

> What amazes you about the ocean?

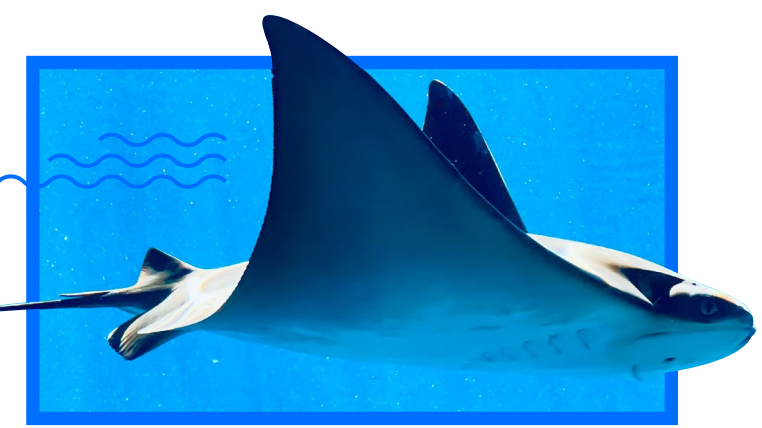
> Although we know very little about the deeper parts of the ocean, what do you think might live down there?

> How are humans and the ocean interconnected?

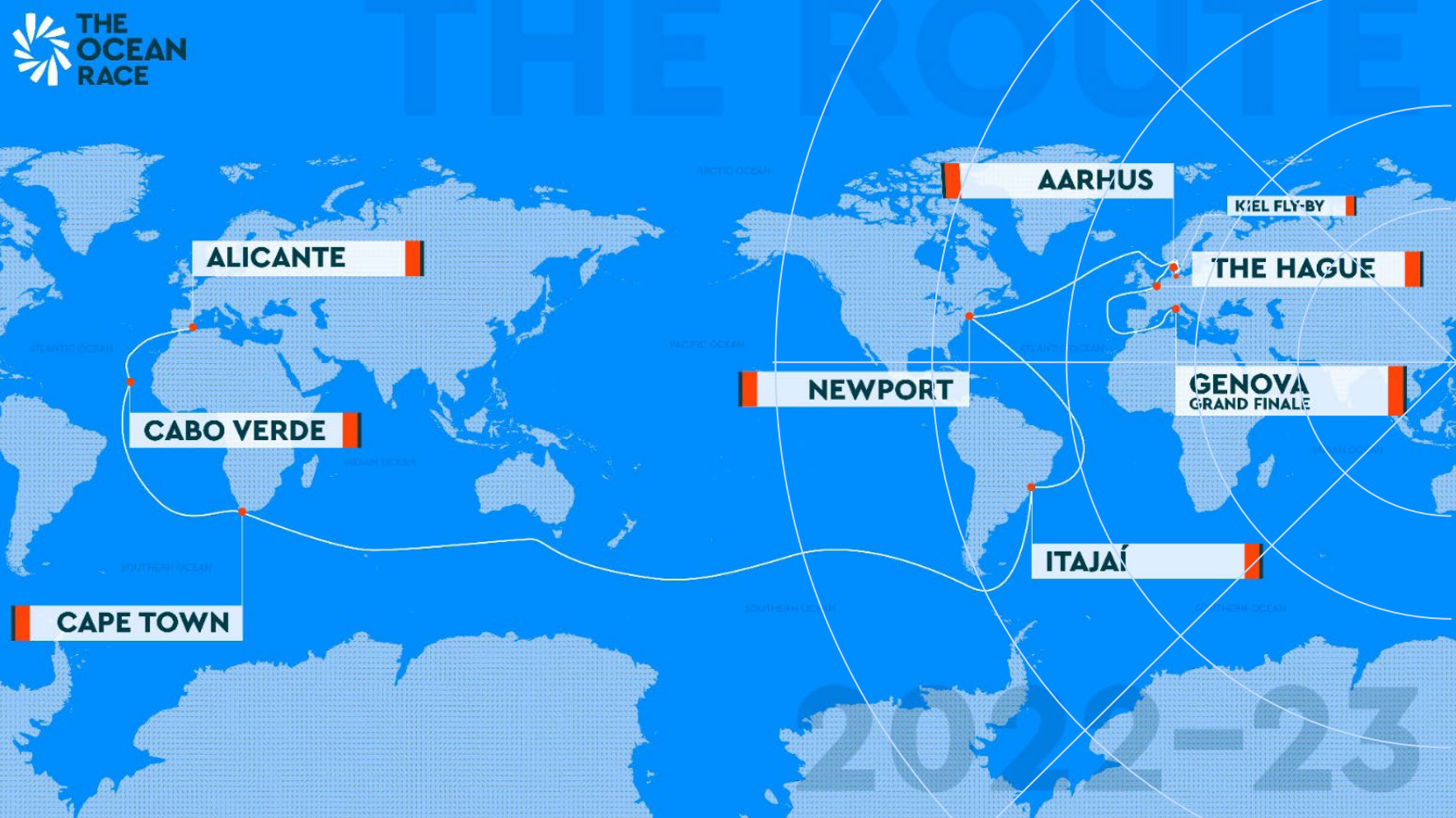
DO

Imagine an underwater world that is very dark, what type of creatures live in this harsh environment? What do you think they look like? How do you think they communicate? What do you think they feed on? What size do you think they are?

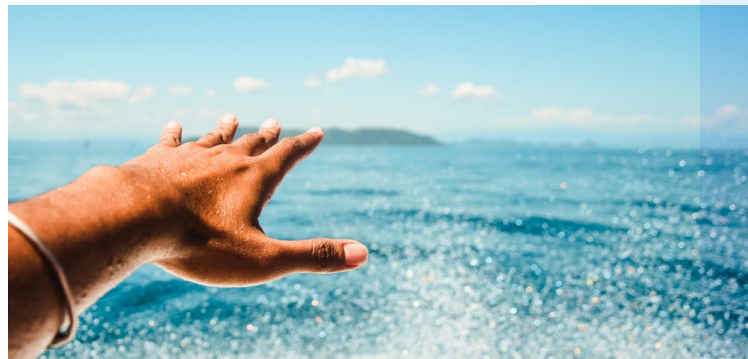
Use these ideas to storyboard three frames of a comic book depicting a day in the life one of these species you have imagined.



STORIES FROM AROUND THE WORLD



02 | FOOD, CULTURE, LIVELIHOODS AND TRADITIONAL STORIES



PERSONAL CONNECTION

How close you live to the ocean may influence whether you feel a strong connection to it.

However, while the ocean could seem remote, or even irrelevant to some people, the marine world plays a constant, vital role that impacts every being on the planet. Think about this, have you ever wondered why some places are hot and some are cold or where the oxygen you breathe comes from? This is the ocean at work. Not only does it fuel the weather, absorbing heat, which is circulated around the globe by its currents, every second breath you take is produced by the ocean. In short: the ocean is what keeps our planet habitable.

No matter where you live, a lot of the products you have in your home often come from the sea and the ocean also plays a vital role in driving the economies of coastal communities.



On the flip side, our activities greatly impact the ocean; there's all the products we use on a daily basis from toilet paper to video games that need to be transported across the world, often by sea transportation. The discussion around the shipping industry and its environmental impact comes from the need to reduce carbon dioxide (CO₂) emissions and use more sustainable fuel sources.



Pollution, as a result of containers falling from ships in transit is also having a detrimental impact on marine species and coastlines.



► The ocean is also interwoven into many cultures; in storytelling and religion, the ocean is a significant feature, providing a catalyst for mythology and tales passed between generations.



The seas give us a unique space to relax and play, provide habitats, inspiration for the arts, recreation, and an abundance of employment opportunities for the tourism industry as well as other sectors.

So with this in mind, think about your connection to the ocean, perhaps where you go on holiday, where the goods you buy are from and how they reach you, the jobs of people in your family or community, or the food you eat.

HOPE SPOTS

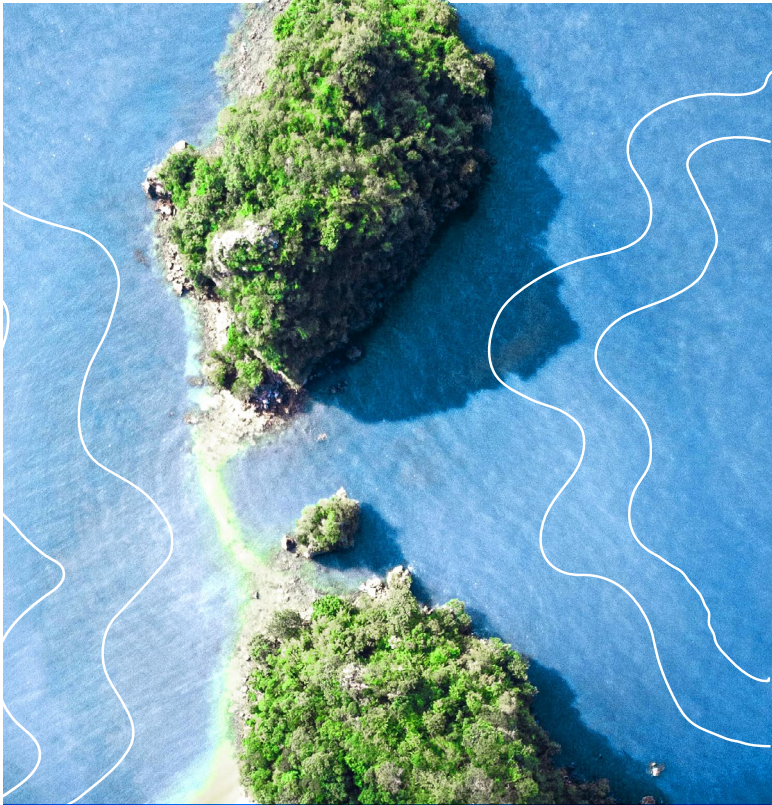
- **Hope Spots are special places that are scientifically identified as critical to the health of the ocean. They cover an estimated 57 577262 km2 of the ocean and are considered spots of hope due to ⁽⁶⁾:**
- > A special abundance or diversity of species, unusual or representative species, habitats or ecosystems
 - > Particular populations of rare, threatened or endemic species
 - > A site with potential to reverse damage from negative human impacts
 - > The presence of natural processes such as major migration corridors or spawning grounds
 - > Significant historical, cultural or spiritual values
 - > Particular economic importance to the community

MISSION BLUE

Led by Dr. Sylvia Earle, Mission Blue brings together a global coalition to inspire awareness, support and action to protect the ocean. These worldwide Hope Spots are championed by local conservationists and to date, 140 hope spots have been launched, covering an estimated **57,577,267 Km2 of ocean.**

➡ <https://mission-blue.org/hope-spots/>

Check out if there are any Marine Protected Areas near you on this interactive online map <https://mpatlas.org/>



HOPE SPOT: ABROLHOS BANK

Located in The Abrolhos Region, this Hope Spot forms part of a chain of marine and coastal ecosystems which contain the highest marine biodiversity in the southern Atlantic. The Abrolhos Bank is the main breeding area for humpback whales in the western South Atlantic Ocean and is home to endangered species such as the green, loggerhead and hawksbill turtle.

Much of our global population lives in or close to coastal areas. These concentrations of people make the need to restore and protect adjacent ecosystems even more important ⁽³⁾

The ocean provides us with the necessary resources to survive: oxygen, water, medicine and food. Even if you do not eat seafood, fishmeal is used to feed poultry and pork, as well as to organically fertilize crops for millennia. Fish and other seafood are vital for good nutrition. The ocean is also a source of minerals, energy resources, and medicines. ⁽⁴⁾

The ocean provides us with jobs and stimulates the economy. Fishing, travel and tourism, and research are all industries that provide jobs for thousands of people all around the world. Trade is possible through transportation over the ocean. ⁽⁵⁾

Seaweed; the sustainable marine food source

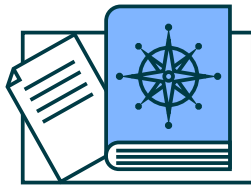
Seaweed has been cultivated for many years, not only as a direct food source for humans, but also as feed for animals that are bred for human consumption. Did you know that seaweed is also an ingredient in many everyday products like ice cream, shampoo and ketchup? To cultivate seaweed, we only need sunlight and it does the extra job of purifying water while it grows and produces oxygen. As more food is needed to feed an increasing global population, seaweed is one of the sustainable crops we could turn towards to solve the food shortage crisis.

THINK



- > How would you describe your personal connection to the ocean?
- > In what ways does the ocean provide inspiration for people in their personal and professional lives?
- > How are coastal communities most affected by ocean threats like rising sea levels?

DO



Brainstorm your personal and community's connection to the ocean in relation to food, culture, tradition and livelihood. Use your ideas to contribute to a whole class mind map on ocean connection.

FEMALE FISHERS

▶ **A lot goes into getting produce from tide to table. When we look at what is involved in the process, we see that, like the links of a chain, if just one part is missing the entire thing can fail.**

Throughout history, the role of females in fishing has been largely underrepresented or under documented for a variety of reasons, including gender stereotypes and gender pay gaps⁽⁷⁾, yet the roles of women are important to note and promote as they are present in all aspects of the industry, both in pre-and post-harvest activities, and as owners of vessels and fishing equipment. Artisanal fishing is favourable to industrial fishing practices as it is more conducive to a healthier ocean.

Over 2 million women participate in nearshore coastal fisheries worldwide, contributing 11% of the global catch from small-scale fisheries (and 12% of the value of these fisheries)⁽⁸⁾

The African Confederation of Artisanal Fishing Organisations (CAOPA) was established in 2010 and has since called for the recognition, respect and promotion of the role of women in African artisanal fisheries.⁽⁹⁾

In least developed countries (LDCs), 76% of revenue added from ocean-based industries comes from marine fisheries.⁽¹⁰⁾

The Union of Cooperative Societies of Women of Fisheries and Assimilated of Côte d'Ivoire (USCOFEP-CI) has 16 cooperatives, and 12 more being set up, spread over the West African country. Its main objective is to improve the living and working conditions of its members, by fighting against poverty and promoting the empowerment of women in the artisanal fishing sector.



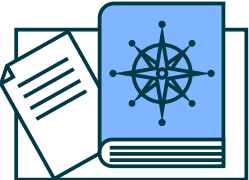
➡ <http://uscofep-ci.com/index.php/a-propos-de-nous/>

THINK



- ▶ Why is it important to empower women in the fishing sector?
- ▶ How is this type of fishing more conducive to a healthier ocean?

DO



Find out if there are any artisanal fisheries in your local area. Investigate who works there- are there any female fishers? Interview someone who works there about the development of the fishery.

THERAPEUTIC BENEFITS



The ocean has always been essential to our survival. Not only does it produce half of the world's oxygen, it also absorbs more than half of the carbon dioxide emissions. While we understand this essential role in making the planet habitable, there are also bountiful benefits to our wellbeing as more and more research is being undertaken to show the links to our wellbeing and some doctors are even prescribing surfing as medicine!

The colour of the ocean and the sky, inspire tranquillity and quietness⁽¹¹⁾

The white noise of waves breaking on the shore relaxes our brains and stimulates the production of feel-good chemicals in our body, including serotonin and dopamine and has been seen to improve sleep⁽¹²⁾

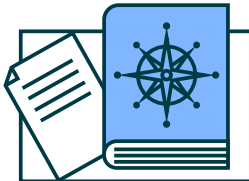
Physical benefits of the ocean include; boosts immunity, improves skin, inflammation & infection, improves sleep, assists pain management and provides one of the best sources of magnesium.⁽¹³⁾

THINK



- ▶ How do we activate our senses by the ocean? How do you feel when you are in or near the ocean and in what ways do the sights, smells and sounds of the ocean affect you?
- ▶ How could surfing help people experiencing trauma or stress?
- ▶ In what ways do you think The Ocean Race sailors manage their wellbeing while they spend so long at sea? How could the ocean help them to manage stress?

DO



- ▶ **If possible, sit by the ocean and meditate for 10 minutes, allowing your mind to clear and just tune into your senses.**
- ▶ **If you are not close to the sea, use an ocean meditation recording and find a comfortable space to be still.**

Emotional benefits of the Ocean include; offers calmness, peacefulness through mindfulness and meditation (Blue Mind), it is grounding, gives the brain and the senses a rest from overstimulation, invokes feelings of a connection to something beyond oneself, lowers stress and anxiety and sparks creativity⁽¹⁴⁾

Water sports can be powerful enough to help people recover from addictions and conditions such as post-traumatic stress disorder (PTSD).⁽¹⁵⁾

CREATIVITY AND THE OCEAN

Throughout history, the ocean has been a muse for many creatives, and is depicted in music, art, film, photography and writing. Let's think about music; from modern-day songs inspired by the ocean to classical scores, to traditional sea shanties commonly sung by workers aboard large merchant sailing vessels, the ocean provides comfort as well as inspiration.

In the written word, some of the greatest adventures took place in, on or near the seas such as Moby Dick by Herman Melville or The Old Man and the Sea by Ernest Hemingway.

In small island nations, we see striking and emotive music, historical experiences as well as folklore that have been created through the influence of the ocean.

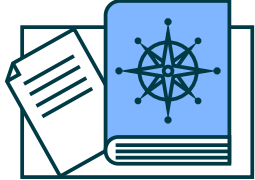


THINK



- > What is it about the ocean that you think is so inspiring for people?
- > How do you think sea shanty songs helped workers on boats and ships?
- > How might the ocean and the creativity it inspires help with wellbeing?

DO



- Sit near the sea or walk along the beach for inspiration.**
- > Try to write a song or melody that you can perform to family, friends and/or community inspired by the ocean.
 - > If you like storytelling, imagine the ocean as a human being, what would they be like, how would they behave, what would they think, feel or say?
 - > If you like creating artwork, using any media you choose (paint, sand, clay, recycled materials) to create your ocean inspired artwork.





OCEAN & CLIMATE

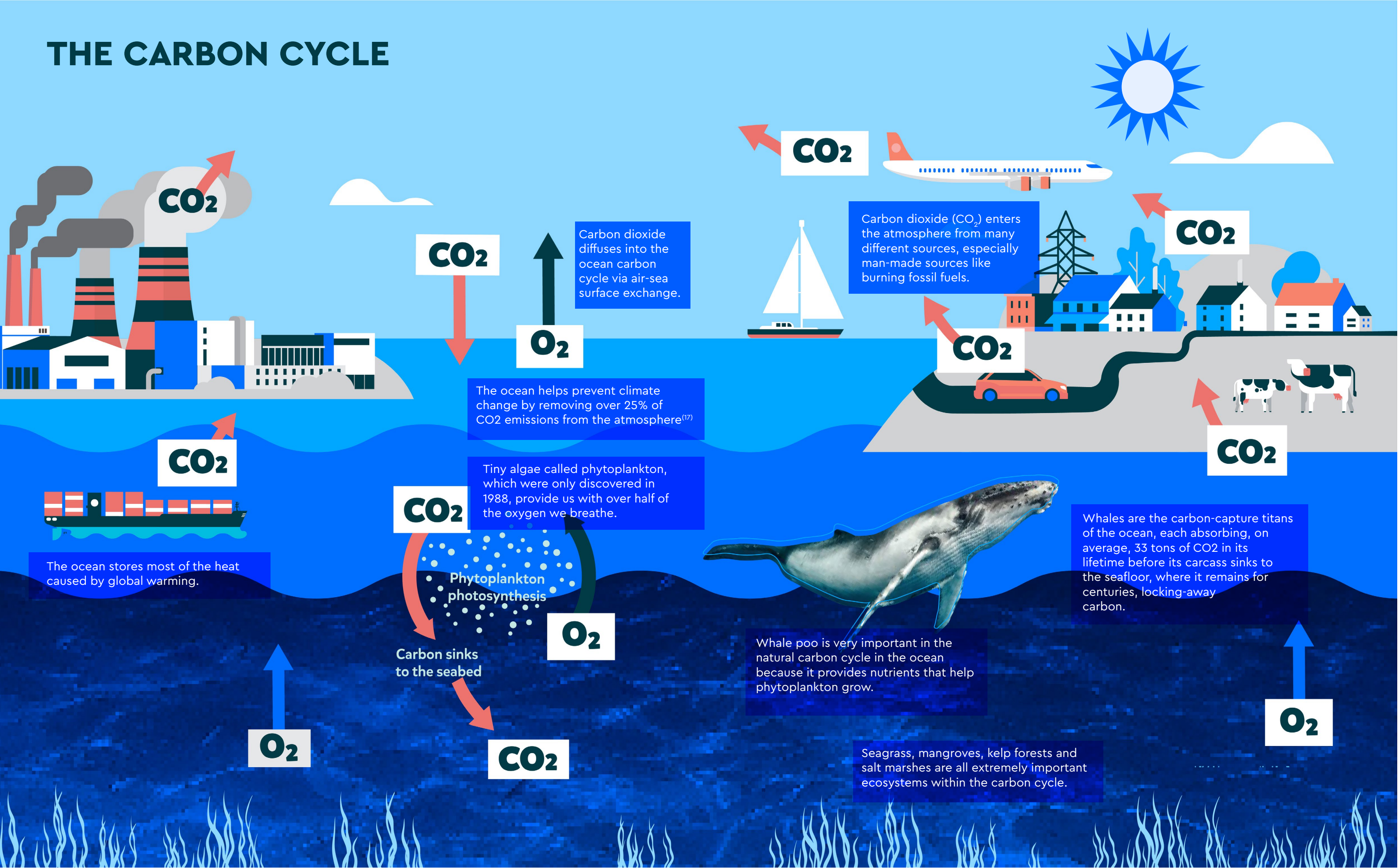
03

The ocean absorbs more carbon dioxide (CO²) than previously thought, in fact, it is one of the largest carbon sinks on the planet, making it a climate hero. The ocean regulates our climate and absorbs the sun's heat providing us with just the right conditions to live here on planet Earth. Take a few deep breaths of fresh air and thank the ocean for every second one!

The ocean is the largest reservoir for moving carbon through a cycle on Earth. Many important organisms in the ocean use carbon to form shells, skeletal parts and coral reefs and many plants and algae photosynthesise and cycle the carbon-releasing oxygen into the atmosphere. Carbon dioxide is a natural greenhouse gas in our atmosphere, which absorbs heat and keeps the Earth warm, however human activities, such as the burning of fossil fuels, have increased the levels of CO₂, trapping it in the atmosphere and making the planet warmer.

Even with the shutdowns caused by the global pandemic in 2020, the global average amount of carbon dioxide hit a new record high: 412.5 parts per million(ppm)⁽¹⁶⁾

THE CARBON CYCLE



OCEAN ACIDIFICATION

If there is too much carbon in the atmosphere, it disrupts the water's chemistry causing it to become more acidic. This makes some organisms' skeletons (oysters and coral) brittle and survival difficult.



Changes in the ocean-atmosphere system can result in changes to the climate that in turn, cause further changes to the ocean and atmosphere. These interactions have dramatic physical, chemical, biological, economic, and social consequences, for example, more frequent extreme weather events.



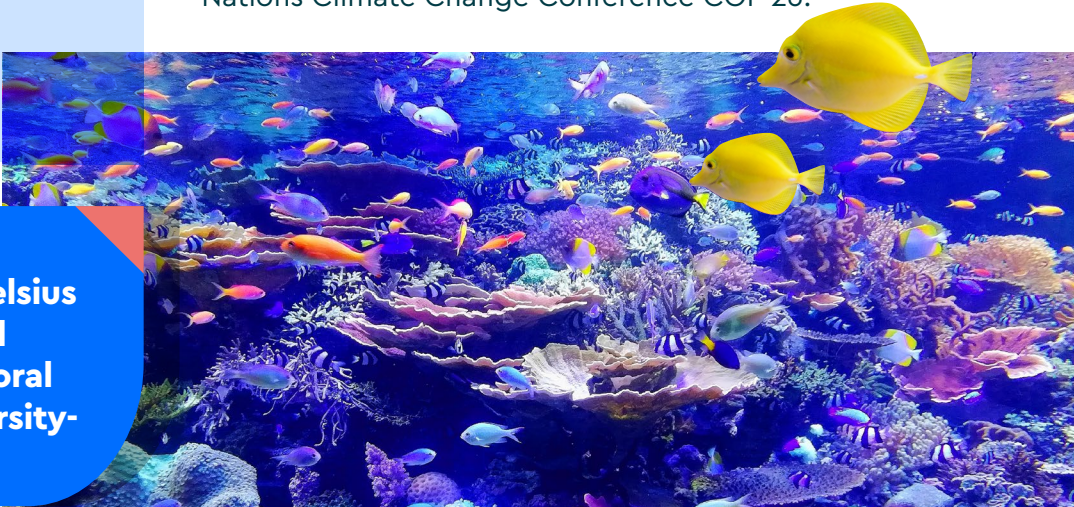
Teams in The Ocean Race are helping to grow an understanding of some of these impacts by gathering vital data as they race across the world. Teams collaborate with leading scientific organisations and programmes, like the US National Oceanic and Atmospheric Administration's (NOAA) Global Drifter Program, which helps measure atmospheric pressure, winds, wave energy, and salinity. Data is collected by sensors on special buoys deployed by the sailors, with the data sent directly to satellites. This information is extremely valuable to scientists, helping them to build a profile of ocean currents and better understand climate and ocean patterns. The sailors also have sampling equipment on board which allows them to send measurements of carbon dioxide (CO²), sea surface temperature, salinity and chlorophyll to the science community from remote locations in the ocean that very few research vessels can get to, such as the vast Southern Ocean. Some of the data received from the race boats has been used as part of globally significant studies that help to inform decisions in crucial climate meetings like the United Nations Climate Change Conference COP 26.

When the ocean absorbs huge amounts of heat from the sun, it transports warm water to the poles and cold water to the tropics.

In the ocean there is a circulation system called 'the global ocean conveyor belt', which moves water throughout all the ocean basins, transporting heat, matter, and animals around the planet. Changes in ocean circulation have a large impact on the climate and cause changes in ecosystems.

This heat exchange between the atmosphere and ocean can result in regional and global weather phenomena, impacting rain and droughts significantly. El Niño Southern Oscillation and La Niña which cause important changes in global weather patterns because they alter the sea surface temperature patterns in the Pacific – one of the biggest ocean basins on the planet.

Did you know?
An increase of just 1 degree Celsius above average can cause coral bleaching and kill masses of coral reefs, one of the most biodiversity-rich habitats on our planet.



CLIMATE JUSTICE AND THE OCEAN

Climate change affects everyone on the planet, but it is most often the small islands and poorer nations that are impacted the most, despite most of the carbon dioxide that enters the atmosphere being produced by the richer countries and large industries.

Read more about climate and ocean justice from TIME's journalist, Justin Worland, 'Climate is Everything'.

<https://time.com/5953374/climate-is-everything/>

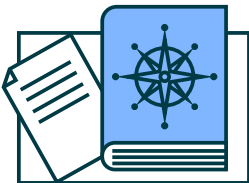


THINK



- > Do you know the definition of climate change? How do you feel about climate change?
- > Do you think you can make a difference? Why/why not?
- > Does it seem fair that there is a gap between who produces the most carbon emissions and who is most affected by it? Why/why not?

DO



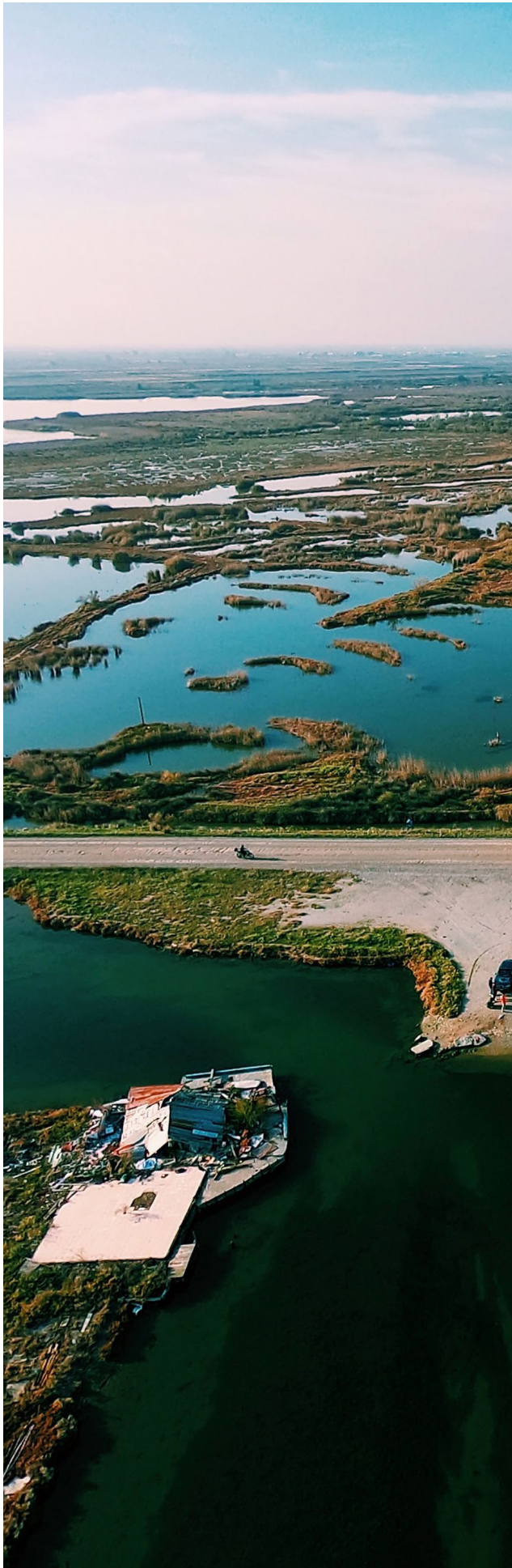
Have you ever measured your carbon footprint? Think of the activities you or your family do that could contribute to carbon in the atmosphere. Check online for a carbon footprint calculator to help you calculate your household's footprint. Are there any changes that you can make to help reduce your carbon footprint? Share these ideas with your family, friends and teachers.



BLUE CARBON A CLIMATE HERO



04



What do seagrasses, mangroves, saltmarshes and kelp forests all have in common?

These amazing marine ecosystems capture and store carbon - a process also known as carbon sequestration - from the atmosphere and ocean, locking it away in both the sediment in which they grow and the plants themselves. This 'storage' is referred to as blue carbon. Blue carbon ecosystems act like carbon sinks in much the same way as trees on land, but these marine habitats actually capture more carbon than forests. In fact, even though seagrass only covers 0.2% of the seafloor, it packs a punch by absorbing an estimated 10% of the ocean's carbon each year.⁽¹⁸⁾

However that's not all these blue carbon ecosystems do; they also offer essential ecosystem services such as providing breeding grounds and nursery areas for a variety of fish, which in turn supports healthy fisheries, benefiting communities. They also help prevent storm and flood damage to coastal communities and provide habitats for species living along the coast. Mangroves are a fantastic example, estimated to be worth at least US\$1.6 billion each year in ecosystem services that support people around the world.⁽¹⁹⁾

Across the planet these incredible blue carbon ecosystems are disappearing at an alarming rate. It is estimated that mangroves, seagrass beds, tidal marshes and kelp forests are being lost at a rate of 1-2% per year. Experts estimate that carbon emissions (the carbon that is no longer locked away and is released into the atmosphere) from mangrove deforestation account for up to 10% of emissions from deforestation globally.⁽²⁰⁾ Tidal marshes cover roughly 140 million hectares of Earth's surface but they have lost more than half of their global coverage⁽²¹⁾. Similarly, seagrasses have lost approximately 30% of global coverage and kelp forests have declined by over 33% in the past decade.⁽²²⁾

A study on protecting the global ocean for biodiversity, food and climate has highlighted the impact of bottom trawling, a method of fishing that is considered highly destructive to habitats, including blue carbon ecosystems. By destroying these ecosystems a significant amount of carbon is emitted into the atmosphere that is estimated to be similar to the emissions from global air travel and the carbon produced through agriculture.⁽²³⁾

WITH 4.5 BILLION YEARS OF EXPERIENCE, NATURE ALWAYS HAS A SOLUTION!

► Approximately 151 countries around the world contain at least one coastal blue carbon ecosystem, and nearly half of these countries contain three different types; seagrass, mangroves and tidal marshes/wetlands ⁽²⁴⁾.

The geographical spread and diversity of these habitats provides great potential for blue carbon ecosystems to contribute to many countries' commitments to reduce their greenhouse gas emissions in order to play their part in achieving the goals of the Paris Climate Agreement. Countries need to commit to researching coastal areas in order to understand their blue carbon ecosystems and create a strategy to protect and restore these important carbon sinks.



PROTECTING ONE HECTARE OF MANGROVE

UP TO 1,100 TONS OF CARBON

25X MORE CORAL REEF FISH AND THREATENED SPECIES

\$1,079 TOURISM VALUE PER YEAR

50% IN STORM IMPACTS

THE OCEAN RACE IS TAKING ACTION IN THE RACE TO RESTORE!

► The Ocean Race is committed to becoming climate positive by the end of the next Race, which means drawing down more greenhouse gas emissions (GHGs) than are produced through the event. To help reach this ambitious target, GHGs will be reduced by almost half.

The Ocean Race has also supported projects that lock away blue carbon, including mangrove restoration in Myanmar and Madagascar. These projects restore ecosystems, supporting marine life and local communities that depend on them. The Ocean Race is collaborating with its partners in a 'Race to Restore' even more blue carbon ecosystems in the 2022–23 edition of the Race.

This climate initiative supports global commitments and science-based targets to limit global warming to 1.5 degrees, aligned with the Paris Agreement.

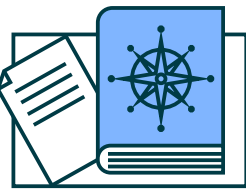
The Ocean Race has also joined the United Nations Sports for Climate Action initiative, as part of a collective response and commitment from the sports industry to take action on climate change during a decade of dedicated action to restore the seas.

THINK



- > How are these blue carbon ecosystems important?
- > Have you seen or experienced a blue carbon ecosystem? If so, how would you describe it?
- > What should be done to help protect or restore these amazing ecosystems? Share your ideas with your community, class or friends and family!

DO



Check if there are any amazing blue carbon ecosystems near you or in your country.

How are they protected?

The Ocean Race to hold one of world's first climate positive sport events

https://www.theoceanrace.com/en/news/13074_The-Ocean-Race-to-hold-one-of-worlds-first-climate-positive-sport-events.html

OCEAN RIGHTS

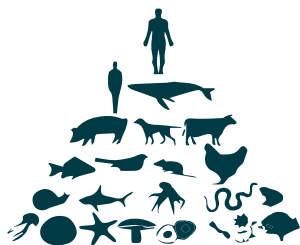
IS OUR RELATIONSHIP WITH NATURE BROKEN?

Over time and through industrialisation, the way we think about our natural world and our relationship with Nature has changed.

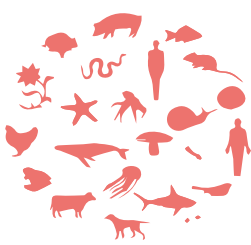
Many of us have come to think that we are separate from nature and that it is something we 'own', that we can use and exploit for benefit and profit. Yet, we are all part of Nature, not apart from Nature.

Our relationship is inextricably intertwined in many different ways; from the food it provides us, the oxygen we breathe, as a climate regulator, to our wellbeing. Without Nature in a good state, we cannot survive or thrive.

EGO



ECO

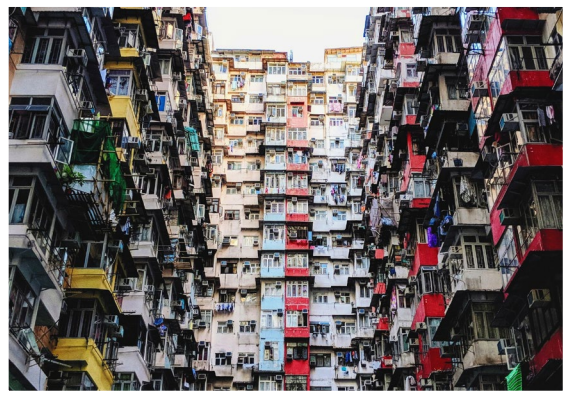


In 2009, Johan Rockström from the Stockholm Resilience Centre and Will Steffen from the Australian National University proposed the concept of planetary boundaries; which look at processes that contain environmental boundaries such as climate change, ocean acidification, biodiversity loss and the nitrogen cycle. These boundaries must be maintained in order to ensure a safe space for humanity, however the rate of biodiversity loss, climate change and human interference with the nitrogen cycle have already been exceeded.

 [nature.com/articles/461472a](https://www.nature.com/articles/461472a)

"You are not Atlas carrying the world on your shoulder. It is good to remember that the planet is carrying you."

Vandana Shiva (founder of Navdanya Research Foundation for Science, Technology and Ecology, India)



**"KO AU TE AWA,
KO TE AWA KO AU."
I am the River, and the River is me.
- a Māori proverb**

For millennia, Indigenous people have understood our intimate relationship with Nature and that we have a common responsibility to protect and conserve that which sustains us.

Feeling a part of one big web of life that makes up our home planet Earth, also referred to as Mother Nature, Indigenous communities also recognise that Nature and the environment have intrinsic value on their own, outside the direct services or benefits they provide to our lives.



If one element becomes unbalanced in Nature, it will have a cascading effect on other aspects, including us humans. We all have a right to a healthy and sustainable life on the planet, including the ocean, which sustains all life.



**A PARADIGM SHIFT IS NEEDED
FOR A HEALTHY OCEAN,
PLANET AND PEOPLE!**

**Thomas Berry,
a 20th century
cultural
historian**

who sought a broader perspective on humanity's relationship with the Earth in order

to respond to the ecological and social challenges of our times, argues that "Rights originate where existence originates. That which determines existence determines rights." Based on this theory, every part of Nature (including people) has rights just as anything else that exists.

"It is important for us to recognise and respect what Indigenous communities know. By acknowledging the inherent rights of the ocean we have a much better chance of living in harmony with our planet. If we do not, we will continue to place human needs above that of the ocean — and the health of the planet — and as a consequence human health will decline."

Michelle Bender, Ocean Campaigns Director, Earth Law Centre

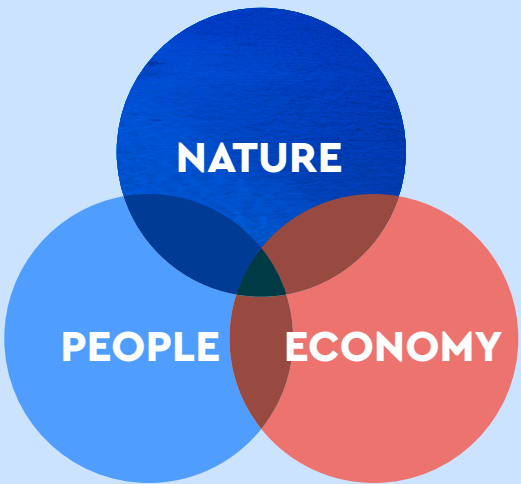
The current model for sustainability has a human-centred understanding and is flawed as it assumes that each circle of activity can operate independently of each other. The Nature's Rights model with the 3 concentric circles is more accurate because the economy can't exist without human society – and neither can exist without Nature. So it makes sense that if we are to have human and corporate rights, that we must also include the rights of Nature because otherwise these rights have no context. The Nature's Rights model allows the different rights to support each other to protect the integrity of the whole earth community. This is what is referred to as the Rights of Nature – and it encompasses both human and economic rights in the 'right relationship' recognising the dependency of economies and people on nature.

"The rights of Nature form the foundation of our human right to life – from which all our other rights and freedoms emanate, including corporate and property rights – yet we don't acknowledge it in our legal system. This is why we have the ecological crisis." Mumta Ito, Founder and President of the NGO Nature's Rights.

**OCEAN
RIGHTS**

is an emerging legal framework that shifts our view of the ocean from being a resource and property for human use, to an entity in its own right with a voice in decision making, and whose health and vitality as a major ecosystem is essential for the wellbeing of all life on earth. This shift re-establishes our relationship with the ocean, allowing us to effectively conserve and protect it by creating standards for decision making centred around mutual benefit, interconnectedness, relationships and responsibility, sustainability (with an ecocentric view) and living in harmony.

CURRENT SUSTAINABILITY MODEL



RIGHTS OF NATURE MODEL

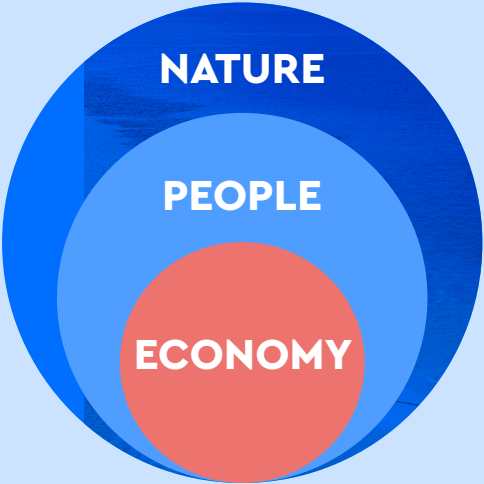


Image and description adapted from EESC Towards an EU Charter of the Fundamental Rights of Nature

AREN'T THERE ALREADY LAWS TO PROTECT THE OCEAN?

► **In short, yes, however our current legal model aims to slow down the rate of collapse, but we need to shift our approach towards aiming to maintain and create healthy, thriving ecosystems.**

This is where a holistic and ocean-rights based approach is vital to provide a better solution and a means to an end.

The United Nations Convention on the Law of the Sea (UNCLOS) was established in 1982 as the first international legal order for ocean governance. It is the primary international agreement that regulates the rights and responsibilities of nations regarding their use and treatment of the ocean. The treaty that resulted from the convention creates guidelines for State activity in international waters, including business, diplomacy, mineral rights, pollution control and fishing rights. However, the legal and policy framework created by UNCLOS is insufficient in dealing with the increasing environmental crisis, as pollution, habitat degradation, climate change and biodiversity loss are rapidly increasing and negatively impacting the ocean.

Marine biodiversity has declined by over 50% since the beginning of The Ocean Race in the 1970s and over one-third of the world's fisheries are considered overfished, or fished unsustainably.

Rather than asking ourselves what level of fishing provides the greatest benefit to us humans, we need to start asking what level of fishing provides the greatest benefit

to the whole of the Earth community; all systems, species and ecosystems. If we shift our approach to an ecocentric one with ocean rights, where we place humans as just one part of the larger Earth system, we can begin to ensure the basic needs of all species are fulfilled, now and into the future – which means that our future generations can thrive too.⁽²⁵⁾

This new approach of rights for the ocean is gaining momentum, with support growing in a number of areas, including Ecuador, New Zealand and the Salish Sea. The Ocean Race is working with legal experts from Earth Law Centre and Nature's Rights (an international non-profit organisation committed to establishing rights of nature in law and policy around the world), as well as other international experts to understand how recognising the inherent rights of the ocean can create better ocean protection and restoration.

Special thanks to Michelle Bender – Ocean Campaign Director of Earth Law Centre and Mumta Ito – Founder of Nature's Rights as much of this writing has been taken from their work.

SEE ▼



➡ earthlawcenter.org/blog-entries/2020/9/who-speaks-for-the-ocean

➡ theecologist.org/2017/jul/07/we-need-rights-nature-legislation-now-protect-our-home-planet

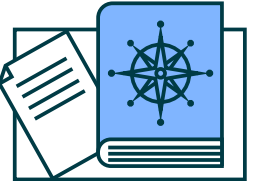


THINK



- > How do you define your relationship with Nature?
- > Do you feel like you are part of nature? What do you value about nature and in particular the ocean?
- > Why is it important for the ocean to have rights?

DO



- Go outside and sit somewhere quiet in nature, next to a tree, in your garden, near the sea, or somewhere you can see blue or green space.**
- Go barefoot on the grass or sand.**
- Take 5 deep breaths in and out and see how you feel sitting with nature. In your mind think of all that nature gives you and say thanks!**



TIMELINE

RIGHTS OF NATURE & OCEAN

For centuries indigenous communities have believed in the intrinsic value of Nature and recognised the rights of Nature.



Science and law are closely intertwined, as well as the arts and philosophy which all contribute to the theory of law. In this timeline we see how the legal system has evolved alongside science and how the rights of nature movement, including ocean rights, is accelerating in the 21st century.

1949

Aldo Leopold, American Conservationist, proposed a vision for a healthier environment and a state of harmony between men and nature. He believed by eliminating artificial boundaries between people and nature we would open doors to new understanding.

1970

On April 22nd first Earth Day celebrated beginning the start of the modern day environmental movement.

2008

Ecuador Constitutional Debate introduced and Nature was granted the same rights as individuals and corporations in Ecuador. Pachamama (AKA Mother Earth) recognised as a legal entity.

2013

Santa Monica, California – Rights of Nature Ordinance is passed enabling Nature to thrive over profits. Residents can bring forward legal rights for Nature. Uruguay establishes whale sanctuary that recognises rights of Nature.



2015

Nature's Rights and Earth Law was listed as a top 10 grassroots movement taking on the world by Shift Magazine.

2019

'Ocean Rights- A Roadmap to a Liveable Future' published by Earth Law Centre.

2021

The Ocean Race, Earth Law Centre and Nature's Rights collaborate to explore the creation of a Universal Declaration of Ocean Rights.

1969

The concept of Earth Day was established at a UNESCO Conference in San Francisco.

1972

Christopher D Stone, American law professor, published a revolutionary paper 'Should trees have standing?' proposing rights be given to forests oceans and rivers. Supreme Court Justice & outdoors man, William O Douglas issued an opinion stating that environmental objects should be able to sue for their protection!

2009

Bolivia references Pachamama in it's constitution.

2014

Aotearoa (the current Māori-language name for New Zealand) recognises rights of Nature and grants legal personhood to Te Urewera forest.

2017

Aotearoa – Both Mt Taranaki and the Whanganui are granted legal personhood the river is recognised as an indivisible & living whole in all its physical & metaphysical elements.

India grants lakes, forests and glaciers of the Himalayas legal rights.

The first UN Ocean Conference is held in New York and participants called for the change that an ocean-based approach would provide.

2020

Mar Menor saltwater lagoon (Spain)- a popular legislative initiative was submitted for rights of Nature for the lagoon.

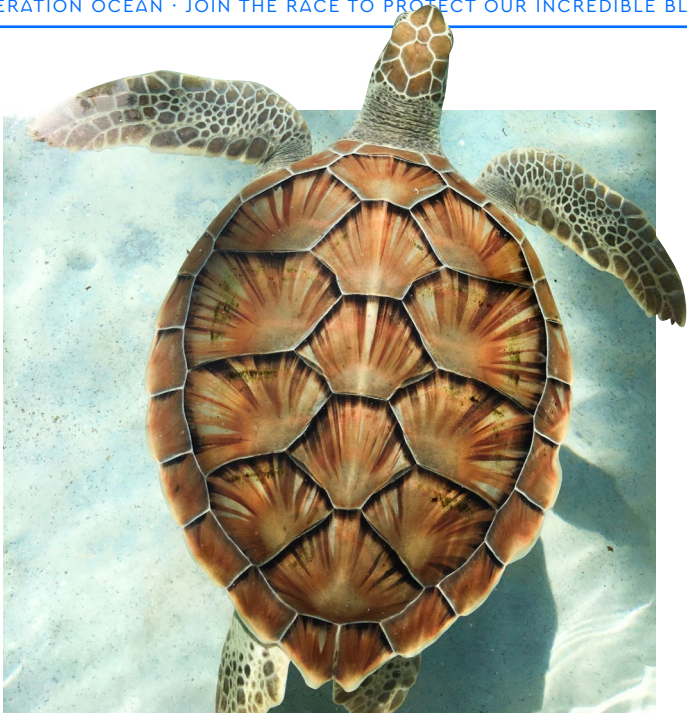
2022

Ecuador's Highest Court Enforces Constitutional 'Rights of Nature' to Safeguard Los Cedros Protected Forest.

President Laurentino Cortizo of Panama signed off on new ruling that Nature has rights. Granting Nature the "right to exist, persist and regenerate its life cycles" meaning Panama's parliament will now have to consider the impact of its laws and policies on the natural world < sMar Menor gains legal rights in Spain.

OCEAN ADVOCACY

06



WHAT IS ADVOCACY?

We usually hear of advocacy when we talk about helping people to have their voice heard, understand their rights and express their perspectives.

However, it isn't just people that need to be advocated for. Decisions are made for the ocean everyday, but most of the time they don't have the ocean's best interest at heart. We need to make sure that the ocean's voice is heard as well; that rights of the ocean are protected and advanced.

Around the world, there are individuals and groups tirelessly campaigning for people, places, species and issues. Whether advocacy begins on a small scale, like in your school or local community, or on a much bigger one, like a national campaign spearheaded by an NGO (non-governmental organisation), it can make a difference.

If you're interested in advocating, think about what is important to you and the place you live. Start there! ▼ ▼ ▼

IT STARTED WITH A STRAW



Zoë Prinsloo is an environmental activist, based in South Africa, who founded Save a Fishie in 2019 when she was 16 years old. She started the initiative after being shocked by the number of straws she saw washed up on the shoreline as she cleaned beaches. However, the defining moment in her advocacy journey came when she saw a video of a turtle with a straw embedded in one of its nostrils. Zoe continues to clean her local beaches, and is also the youngest distributor of eco-friendly products in South Africa.

Find out more about Zoë's story [here](http://www.saveafishie.co.za/) <http://www.saveafishie.co.za/>

'THERE CANNOT BE A HEALTHY PLANET WITHOUT A HEALTHY OCEAN'

RELAY4NATURE

Despite being the largest habitat on the planet, the ocean still receives far too little attention from world leaders. Relay4Nature is an initiative developed by The Ocean Race in collaboration with UN Secretary-General's Special Envoy for the Ocean, Peter Thomson, which is helping to give the ocean a voice on the critical issues affecting our planet at the landmark events where decisions are made about the environment. Nature's Baton, the symbol of Relay4Nature, has featured on the world stage at major conferences, including the United Nations Climate Change Conference (COP26) in Glasgow, and has a leading role in The Ocean Race's events, with alternating teams taking the baton for each leg, before handing it to local dignitaries and ocean advocates in the stopover cities.

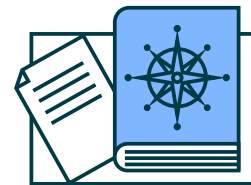
Find out more about Relay4Nature [here](http://theoceanrace.com/en/relay4nature) theoceanrace.com/en/relay4nature

THINK



- > In your life, who gets to speak about opinions and issues, and who gets heard?
- > Who/what holds the power to shape that?
- > Where and how do you talk about any issues and concerns you have? What makes it difficult? What would make it easier for you?
- > How do we embed advocacy in our everyday lives in a way that is impactful? What needs to be advocated for more in your community? Why?

DO



Choose an issue that is important to you and tell one person what it is, how it impacts you and your community and what you think needs to happen to solve it.



ADVOCACY IN ACTION YOUTHTOPIA



Founded by Indonesian climate activists, Melati and Isabel Wijsen, **Youthtopia is a community-based platform to support young people in becoming active changemakers.** From giving a platform for youth voices to be heard, to providing education programmes on becoming a changemaker and connecting individuals with experts and professionals, Youthtopia is for youth, by youth.

Check out what young people are doing around the world with Youthtopia

<https://youthtopia.world/#>

THIS IS ZERO HOUR



Centering the voices of youth is key to the discussions around climate and environmental justice. **This is the mission of Zero Hour; creating entry points, training and resources for young activists.** Founded out of frustration that the youth voice was not being listened to, their work is grounded in the belief that everyone should have access to clean air, water, and public lands.

<http://thisiszerohour.org/>

SUSTAINABLE OCEAN ALLIANCE



SOA develops leaders, cultivates ideas, and accelerates solutions to the ocean's greatest challenges. **Their leadership, accelerator, and Youth Policy Advisory Council programs focus on uplifting ocean solutions** to conserve and sustainably use marine resources.

<https://www.soalliance.org/>

EARTHECHO YOUTH LEADERSHIP COUNCIL



EarthEcho International was founded on the belief that young people have the power to change the world. **Their Youth Leadership Council is made up of a global team of young environmental leaders,** who play a key role driving EarthEcho's programs while developing and carrying out campaigns to mobilise their peers worldwide to protect and restore our ocean planet.

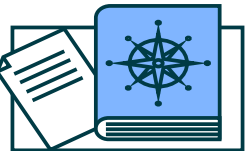
earthecho.org/youth-leadership-council

THINK



- > How can young people place themselves at the centre of decision-making processes?
- > Is the kind of advocacy you have read about accessible to all? Why is that the case? How do we ensure that it is accessible?
- > What skills are important to learn and develop to help build fair and peaceful communities? Is it easy to learn these skills? How can you start developing them in your communities?

DO



Find out what youth advocacy projects are happening in your area. Are there any that interest you? Join a meeting, or even consider starting one yourself!

The Ocean Race's **One Blue Voice** campaign is driving support for a Universal Declaration of Ocean Rights, with an online petition that will be presented to the United Nations General Assembly in September 2023. Find out more at **OneBlueVoice.net**. Encourage the adults in your life to sign up!

BECOME A CITIZEN SCIENTIST

Not all research needs to be conducted by 'experts'. Learning about green and blue spaces, like forests and the ocean, and sharing that information through citizen science projects has helped to shape policy, education initiatives, support the conservation of natural resources and promote environmental advocacy around the world.

Citizen science is also very important to ensure that scientific data and findings are universally and equally available to everyone.

By documenting species and their changes over time, citizen science helps to contribute to our understanding of the importance of our local ecosystems, which, in turn, can help protect areas from being disturbed by industry. Some examples of citizen science include wildlife identification and observation, counting and recording species, and water sample collection.



Liz Wardley (Turn the Tide on Plastic) changing a microplastic filter.



HOW SAILORS ARE CITIZEN SCIENTISTS AT SEA

During the 2017-18 edition of the Race, sailors collected important data on weather, climate change and microplastics as they travelled through some of the most remote parts of the ocean.

They were trained to deploy scientific drifter buoys to capture data that was shared with the US National Oceanic and Atmospheric Administration's (NOAA) Global Drifter Program. Two teams measured levels of microplastic pollution and found 93% of the samples taken contained microplastics, even some of those collected in the planet's most remote locations. Onboard sampling equipment allowed teams to take measurements of carbon dioxide (CO2), sea surface temperature, salinity and chlorophyll in the water, which was provided to scientists studying the effects of climate change on the ocean. This means scientists will be able to obtain more data from parts of the ocean that are rarely accessible, helping them to map the issues and progress knowledge for nature-based solutions. Check out how sailors are citizen scientists at sea [here](#).

At least one truckload of plastic is dumped into the ocean every minute! ⁽²⁷⁾

THE OCEAN RACE AND IOC-UNESCO COME TOGETHER TO INSPIRE ACTION TO PROTECT THE OCEAN

The partnership will use the Race's global platform to raise awareness of the impact that people are having on the ocean and the vital role that it plays in our lives.

The IOC (The Intergovernmental Oceanographic Commission) of UNESCO, is the United Nations body responsible for supporting global ocean science and services and will work with The Ocean Race on its Science programme, which gathers data about the state of the marine environment, including in remote parts of the ocean that are largely inaccessible to research vessels. The partners will work together to ensure the data collected by the sailing teams helps to advance ocean research. Read more about the partnership [here](#).

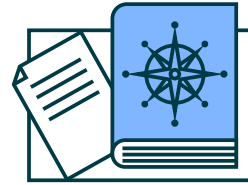


THINK



- > Do you think citizen science could be impactful in your local community? Why/why not?
- > What benefits do you see for young people participating in citizen science projects?
- > Think about the natural areas near you, that your class could observe, record, and share data with scientists. Where are they? How could this information be helpful to science and your community?

DO



- Find and take part in a citizen science project in your local community.
- Interested in a global project? Check out EarthEcho's Water Challenge at www.monitorwater.org



SAILING FOR GOOD

April 1, 2022
TFK Kid Reporter Cash Daniels

Sailor and ocean advocate Charlie Enright cares about the environment. He competes in The Ocean Race to raise awareness about the seas. Here, he speaks with TFK Kid Reporter Cash Daniels, who also cares about the environment. Cash's work fighting plastic pollution made him a Kid of the Year Top Five honoree.

You sail with the 11th Hour Racing Team. What does that name mean?

The 11th hour is supposed to signify where this planet is in its life. If we don't make some substantial changes in the 11th hour, particularly regarding ocean health, we're going to be in big trouble. So we're trying to create a sense of urgency around the global climate situation and empower people to act.

I read about your new boat. The solar panels and hydrogenerator are amazing. What other sustainable features does this boat have?

One of the big things we're proud of is the use of alternative materials. Right now, the best material for building a race boat is carbon fiber. We've been working with a couple of people who created recycled carbon fiber, which has 90% less [carbon] footprint. And we use a lot of flax and bamboo.

What are the most challenging waters to sail in?

I'd say the Southern Ocean, for sure. There are big waves, cold temperatures, and a lot of wind. That's definitely the most physically demanding. But sometimes, the doldrums, around the equator, where there's not a lot of wind, can be just as mentally taxing.

As a sailor who spends a lot of time out on the ocean, what effects of climate change have you seen?

It's tough to quantify. But I think whether you're on the ocean or living your daily life on land, the weather patterns have become a lot more erratic. Growing up here in Rhode Island, we've always had a sea breeze. As a general observation of mine, it's just different from how it used to be. When we race around the planet, we have ice gates in the Southern Ocean around Antarctica, so we don't get too close to the ice. Those gates are constantly creeping further north, which I think speaks to the ice flow and the melting.

Have you seen animal species migrating in or to places that you haven't seen them previously?

It's tough to observe that firsthand. But I do a lot of reading on this, and I work with a lot of organizations that study this. With the changing ocean temperatures, it's something that we've got to look out for.

With regard to plastic pollution, what's the most common thing you've seen?

The scary thing out there is what you can't see. Microplastics aren't visible with the human eye. We have a sampler

on board that collects water and tests for microplastics, so we know they're out there. The things that you can see are tons of water bottles and cigarettes. Those are probably the two big ones.

What's one of the most important lessons that sailing has taught you?

The size of the Earth should not be underestimated. It's funny: Sailing around it sometimes makes me feel like it's so small. But other times when you're out there, it's just so vast. The ocean is so powerful, and you learn never to take it for granted. I'm lucky to be able to do what I do and to pursue my passion as my profession.

Article source:
TIME for Kids | TFK Kid Reporter Cash Daniels



11th Hour Racing Team Skipper, Charlie Enright
Photo by Amory Ross / 11th Hour Racing



YOUTH VOICES



Today, the planet homes the largest generation of young people in history – 1.8 billion. One in five people around the world are aged between 15–24, nearly 90% of which live in developing countries ⁽²⁶⁾.

With the youth population continuing to rise, it is important that your voices are heard and you are involved in the local, national and global conversations and decisions that will affect the future of our natural world.

Your generation will experience significant consequences of a changing climate. The innovative ideas and ambitions for the planet, drawn from the diverse experiences and cultures of young people, need to be heard.

THE OCEAN RACE SUMMITS ACCELERATE ACTION FOR THE OCEAN

The Ocean Race is using its global platform to tackle the issues affecting the seas and accelerate action for the marine world. One of the ways it is doing this is by hosting a series of landmark Summits, a series of meetings, which bring together global players from the worlds of government, science, industry, NGOs, media and sport, along with passionate ocean advocates, to collaborate and focus efforts on improving ocean health. The current series, which takes place between 2019 and 2023, is helping to drive new and improved policies around the major issues affecting the ocean: lack of governance, lack of protection, and climate change. The series also examines whether giving the ocean 'rights' could be key to ensuring the future of healthy seas. Youth plays a key role in these conversations. Check out their call to action at The Ocean Race Summit Europe [here](#).



Stockholm Junior Water Prize, all finalists on stage 2019. Image by Jonas Borg.

STOCKHOLM JUNIOR WATER PRIZE: HELP TACKLE WORLD WATER CHALLENGES

Removing contaminants from freshwater ecosystems and using organic waste material for moisture retention to accelerate plant growth are just some of the research projects hoping to help solve major water challenges around the world. The ideas were submitted to the Stockholm Junior Water prize by young people aged 15–20 and judged by a panel of international water experts. Many of the ideas developed in previous years have proven to be innovative solutions to communities, with winners and participants going on to water focused careers. Do you want to enter the competition? Find out how to apply [here](#).

EARTHECHO WATER CHALLENGE

Protecting local waterways is crucial to support the health of the environment and our communities. The EarthEcho Water Challenge is a water quality monitoring program that has engaged 1.6 million participants in 146 countries. It enables anyone to protect water in their local area and build awareness to ensure sustainable and available clean water sources for all. You can become an EarthEcho Water Challenge Ambassador, collaborating with a network of peers and leading events that educate your community about the importance of water conservation. Be part of the challenge at

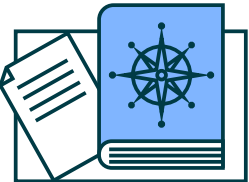
www.monitorwater.org

THINK



- > How can the voices of young people be encouraged and included in major conversations and decision-making processes?
- > What are the barriers to accessing information and opportunities in your local community?
- > How could these barriers be eliminated?

DO



Think about an issue you are really passionate about. Start sharing your opinions on this issue with your friends and family. Select one action to focus on that could help to solve this issue.

"The EarthEcho Water Challenge is a great way to dive deeper into the science that keeps our blue planet healthy. As a participant, I have learned so much about water quality and ocean conservation in just a short time, and I am thrilled to be part of a citizen science initiative that scales up for a global impact. No bigger than a reusable water bottle, the Water Challenge test kits are simple, but effective, tools to understand how water quality affects local waterways and the oceans. And with EarthEcho's water monitoring website and educational resources, youth advocates like me are now part of the process that turns the data we gather into actionable items ensuring a sustainable future for all."

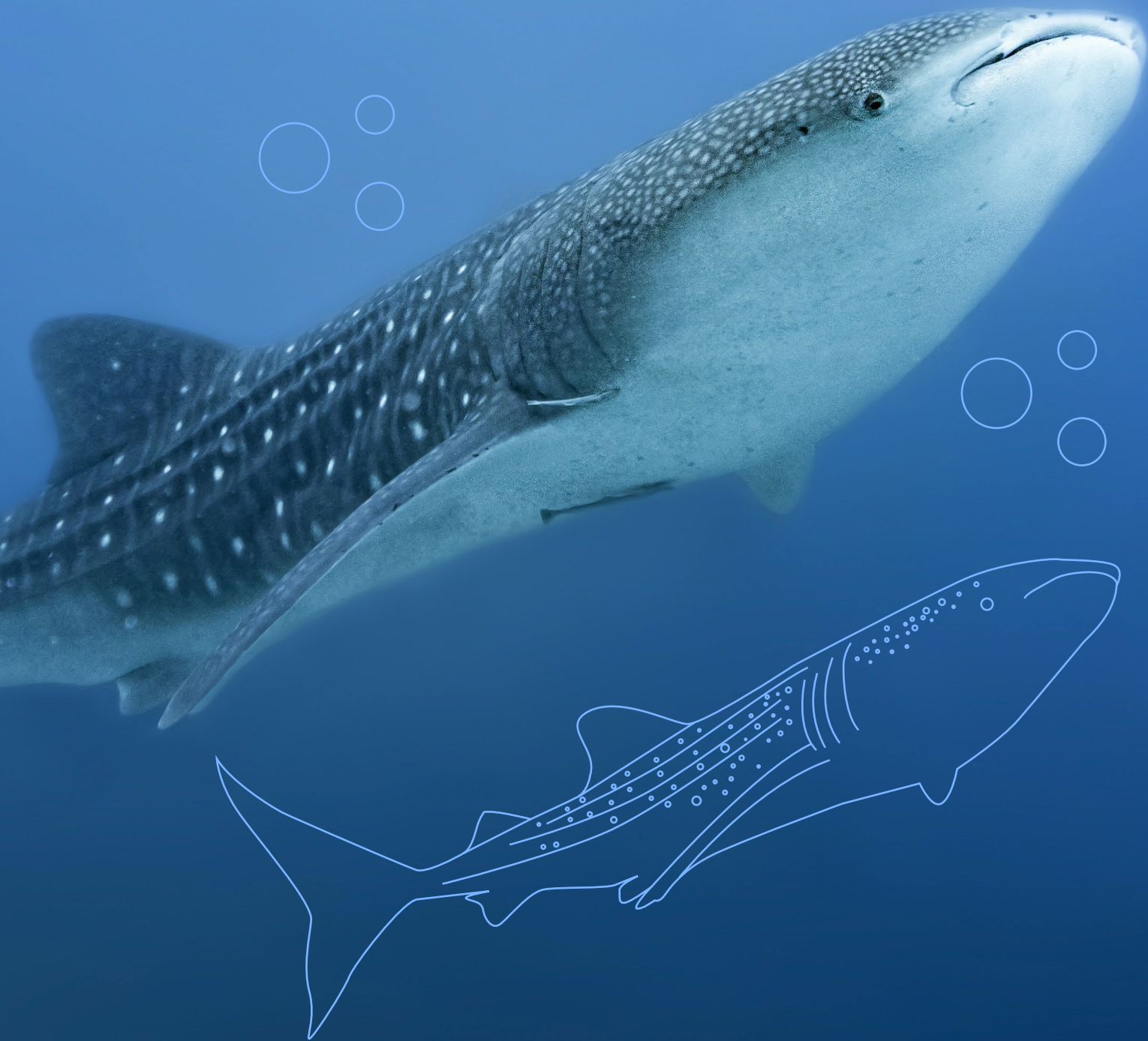
Protecting our waterways is critical to the health of our communities and our environment, and EarthEcho is making it possible to ensure clean oceans for the future!"

- Caroline Crowley, High School Student and EarthEcho Water Challenge Ambassador



Photo: Dr. Suanna Crowley

GLOSSARY



Advocacy:

describes issues highlighted and actions taken to help change 'what is' to 'what should be'.

Atmosphere:

the layer of gases that surround or envelop the Earth or another planet which is held in place due to the gravity of the planetary body.

Citizen Science:

data collected and analysed about the natural world, by members of the general public. This usually happens as part of a project in collaboration with professional scientists.

Cephalopod:

an active predatory mollusc of the large class Cephalopoda, such as an octopus or squid.

Crustaceans:

an arthropod of the large, mainly aquatic group Crustacea, such as a crab, lobster, shrimp, or barnacle.

Ego:

a person's sense of self esteem or self importance.

GHG's:

Greenhouse Gases are gases that occur in the atmosphere and have influence the Earth's energy balance e.g. methane, carbon dioxide, nitrous oxide, ozone as well as others.

Industrialisation:

is a period of social and economic change which involves an extensive reorganisation of society for the purpose of manufacturing.

Indigenous:

someone or something (e.g. plants) that are native or natural to an area or who naturally belongs there.

Interconnectedness:

the state of being connected with each other. "the interconnectedness of all things in the universe".

Phytoplankton:

microscopic marine algae that are at the base of the marine food chain.

Reservoir:

a large area of water, like a lake, pool or ocean that holds water.

Paradigm Shift:

an important change that happens when the usual way of thinking about or doing something is replaced by a new and different way.

The Paris Agreement:

often referred to as the Paris Accords or the Paris Climate Accords, is an international treaty on climate change, adopted in 2015. It covers climate change mitigation, adaptation, and finance. United Member States have signed up to the Paris Agreement in order to try to keep global warming below 1.5 degrees Celsius.

Sequestration:

the action of taking in or hiding a substance. Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide.

Therapeutic:

describes the positive effect something has on the body and the mind which contributes to our sense of well-being.

El Niño Southern Oscillation (ENSO):

is a very important and powerful climatic phenomena on the planet as it influences precipitation and global temperatures. El Niño and La Niña are opposite extremes of the ENSO, which are changes due to natural interactions between the ocean and atmosphere such as air pressure, sea surface temperature, rainfall, air pressure, atmospheric and ocean circulation that contribute to cyclical environmental conditions that occur across the Equatorial Pacific Ocean. El Niño conditions occur when surface water in the equatorial Pacific is warmer than average and east winds blow weaker than normal. La Niña refers to the opposite occurring, when the water is cooler than normal and the east winds are stronger. These ENSO events can typically occur every 3 to 5 years.



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