

YOUTH EXCHANGE

Save the Oceans



LOVE EARTH
16th - 23rd March 2023
Azores, Portugal

 Agência Nacional
Erasmus+ Juventude/Desporto
Corpo Europeu de Solidariedade

 Erasmus+



**PRO ACTIVE
AZORES**



Save the Oceans



The result - “Save the Oceans ” was created by the participants of the project “Love Earth” and it is composed of 4 elements:

1. A manual of pollution prevention behaviors and how to help environmental recovery

2. A digital campaign of the project to raise awareness of pollution and how to help environmental recovery

3. A dissemination plan of the project campaign to reach young people and the general population.

4. Audiovisual recording containing testimonials and messages from participants to promote and raise awareness of the importance of our forests and thus show that young people are involved.



Manual



About the creators of the manual:

The Youth Exchange "Love Earth", is a project organized by Associação Pro Active Azores PAA with a focus on the environment. The Youth Exchange was implemented from 16th to 23rd March 2023 in Rabo da Peixe.

The idea of the project Love Earth arised because, despite the existence of a policy of environmental sustainability in all locations that are part of the project, we still face a great lack of common sense and maritime pollution in these locations as well as throughout the coastline, thus intending to combat this scourge.

The project was implemented by participants from six different countries with the purpose to raise the awareness of the importance that maritime pollution has on the impact of environmental sustainability.



Manual



What is maritime pollution and what causes it?

Maritime pollution is a significant environmental issue that can have far-reaching effects on the health of our oceans and marine life. It refers to the **release of harmful substances into the ocean, seas, or other bodies of water** that can harm marine life and ecosystems, as well as human health.

There are several types of maritime pollution, including oil spills, chemical pollution, plastic pollution, sewage and wastewater, atmospheric deposition, marine debris, and noise pollution. Each of these types of pollution can have serious consequences for marine life, including habitat destruction, water contamination, and harm to wildlife.

Maritime pollution is caused by a range of factors, including shipping, offshore platforms, agricultural and industrial runoff, and atmospheric deposition. These sources of pollution are often the result of human activities, and addressing them will require a coordinated effort from governments, industries, and individuals to reduce pollution and protect the health of our oceans and marine life.



Manual



Interesting statistics related to maritime pollution

- According to the International Maritime Organization (IMO), shipping is responsible for around 2.5% of global greenhouse gas emissions.
- A study published in the journal Science in 2015 estimated that between 4.8 million and 12.7 million metric tons of plastic waste entered the ocean in 2010 from land-based sources.
- The National Oceanic and Atmospheric Administration (NOAA) estimates that 706 million gallons of oil were released into the Gulf of Mexico during the Deepwater Horizon oil spill in 2010, making it the largest marine oil spill in U.S. history.
- In a report published in 2020, the European Environment Agency (EEA) estimated that shipping was responsible for around 10% of total nitrogen oxide (NOx) emissions in the EU.
- The United Nations Environment Programme (UNEP) estimates that over 80% of marine pollution comes from land-based sources, such as agricultural runoff and wastewater discharge.



Manual



Case Study 1: Black Sea

The Black Sea is one of the world's most polluted bodies of water, and maritime pollution plays a significant role in this issue. The pollution of the Black Sea is caused by a variety of factors, including shipping, offshore platforms, coastal tourism, and industrial and agricultural runoff.

In addition, the Danube River also carries large quantities of plastic waste into the Black Sea. This is due to the high volume of plastic waste that is generated in the Danube River basin, as well as the lack of proper waste management and recycling facilities in the region. Once plastic waste enters the Black Sea, it can cause significant harm to marine life and ecosystems.

Some interesting facts related to the pollution of the Black Sea

- According to a report by the Black Sea Commission, the Black Sea is one of the most polluted seas in the world, with pollution levels 30 times higher than the Mediterranean Sea.
- According to a report by the European Environment Agency, industrial and agricultural activities are the primary sources of pollution in the Black Sea, accounting for 80% of all pollution.
- A study conducted by the United Nations Environment Programme (UNEP) found that the Black Sea receives approximately 355,000 tons of oil pollution each year.



Manual



- **Plastic pollution is also a significant problem in the Black Sea. A study published in Marine Pollution Bulletin found that the Black Sea has one of the highest concentrations of microplastics in the world, with an average of 140 particles per cubic meter of water.**
- **The discharge of untreated wastewater from coastal cities and towns is another significant contributor to Black Sea pollution. According to the Black Sea Commission, approximately 40% of the population living around the Black Sea coast lacks access to proper sanitation facilities.**
- **The loss of biodiversity in the Black Sea is also a significant concern. According to a report by the World Wildlife Fund (WWF), overfishing, pollution, and habitat destruction have led to a decline in the population of several marine species in the Black Sea, including sturgeon, dolphins, and seals.**



Manual



Types of maritime pollution:

Oil Pollution: Oil pollution is the release of oil or petroleum products into the marine environment. This can occur through oil spills from ships, oil rigs, or pipelines, as well as from illegal dumping of oil and other hazardous materials.

Some interesting facts related to oil pollution

- According to the International Tanker Owners Pollution Federation (ITOPF), there were 105 recorded incidents of oil spills in 2020, resulting in a total of 3,809 tonnes of oil being spilled into the marine environment.
- The oil industry is a major source of oil pollution in the maritime environment, with accidents and leaks from drilling rigs, pipelines, and tankers contributing to oil pollution.



Manual



Types of maritime pollution:

Chemical Pollution: Chemical pollution is the release of toxic chemicals and substances into the marine environment. This can occur from industrial activities, accidental spills, and improper disposal of chemicals.

Some interesting facts related to chemical pollution

- The use of synthetic chemicals, such as pesticides and fertilizers, has increased significantly in recent decades, contributing to the levels of chemical pollution in the marine environment.
- Chemical pollution can have a range of negative impacts on marine wildlife and ecosystems, including affecting growth and development, disrupting hormonal and reproductive systems, and causing genetic mutations.
- In addition to impacting wildlife, chemical pollution can also affect human health, particularly for those who rely on seafood as a primary source of protein.



Manual



Plastic Pollution: Plastic pollution is the presence of plastic waste in the marine environment. This can include plastic bags, bottles, and other single-use plastics, as well as microplastics that result from the breakdown of larger plastic items.

Some interesting facts related to plastic pollution

- It is estimated that 8 million metric tons of plastic enter the ocean each year, which is equivalent to dumping a garbage truck of plastic into the ocean every minute.
- Over 700 species of marine wildlife, including turtles, seabirds, and marine mammals, have been documented as being impacted by plastic pollution.
- The economic cost of plastic pollution in the ocean is estimated to be at least \$8 billion per year, due to impacts on industries such as fishing, tourism, and public health.
- The impact of plastic pollution on the ocean is projected to increase significantly in the coming decades, with some estimates suggesting that there could be more plastic than fish in the ocean by weight by 2050.

Microplastics:

Research has shown that microplastics can have negative impacts on fish, including changes in behavior, reduced growth and survival rates, and impaired reproductive success. Some studies have also shown that microplastics can accumulate in the tissues of fish, potentially leading to toxic effects.

Apart from that,, microplastics can also impact the food chain, as small organisms that ingest microplastics can be consumed by larger fish, which in turn may be consumed by humans.



Manual



Agricultural Pollution: Agricultural pollution is the release of agricultural chemicals and nutrients into the marine environment. This can occur from runoff of fertilizers and pesticides from farmland and livestock operations, which can contribute to harmful algal blooms and other environmental problems.

Some interesting facts related to agricultural pollution

- A study published in the journal Science estimated that up to 80% of the nitrogen and phosphorus pollution in coastal waters is from agricultural sources, including runoff from fertilizers and animal waste.
- Eutrophication caused by agricultural pollution can lead to harmful algal blooms, which can produce toxins that can be harmful to marine wildlife and humans.
- Oxygen depletion caused by agricultural pollution can create "dead zones" in the ocean where oxygen levels are too low to support most forms of marine life.
- A report by the United Nations Environment Programme estimated that the economic cost of eutrophication from agricultural sources in the European Union alone was between 7 and 16 billion euros per year.



Manual



Sewage Pollution: Sewage pollution is the discharge of untreated or partially treated sewage into the marine environment. This can occur from inadequate wastewater treatment facilities or from boats and ships discharging sewage directly into the water.

Some interesting facts related to sewage pollution

- An estimated 80% of the world's wastewater is discharged into the environment without adequate treatment, according to a report by the United Nations.
- In the United States, an estimated 23,000 to 75,000 sewage spills occur each year, releasing millions of gallons of untreated sewage into waterways and coastal areas.
- Sewage pollution can lead to the proliferation of harmful bacteria and viruses in the marine environment, which can make humans and marine wildlife sick.
- Sewage pollution can also contribute to eutrophication and the formation of harmful algal blooms.

Thermal Pollution: Thermal pollution is the release of heated water or other materials into the marine environment. This can occur from power plants and other industrial facilities that use water for cooling purposes, as well as from ships discharging heated water

Some interesting facts related to thermal pollution

- Oil spills can have a devastating impact on marine life, with oil covering the feathers and fur of animals and impacting their ability to regulate their body temperature, leading to hypothermia and death
- The oil industry is a major source of oil pollution in the maritime environment, with accidents and leaks from drilling rigs, pipelines, and tankers contributing to oil pollution.



Manual



TIPS TO PREVENT MARITIME POLLUTION

- **Conserve water**

- **Use less water so excess runoff and wastewater will not flow into the ocean.**
- **Never use your toilet as a waste basket.**
- **Repair all leaks. (A leaky toilet can waste 200 gallons per day.)**
- **Do not install or use ornamental water features unless they recycle the water.**

- **Reduce pollutants**

- **Choose nontoxic chemicals and dispose of all of them properly.**
- **Use eco-friendly products. Using them can help reduce the number of harmful pollutants released into the sea. This includes using biodegradable cleaning agents, paint, and so on.**

- **Practice safe boating and regular maintenance of boats**

- **Tighten bolts on your engine to prevent oil leaks.**
- **Replace cracked or worn hydraulic lines and fittings before they fail.**
- **Outfit your engine with an oil tray or drip pan.**



Manual



- **Proper disposal of waste**
 - **Ships should follow the International Maritime Organization (IMO) guidelines on the disposal of waste at sea. Waste should be segregated, stored properly, and disposed of in the designated areas.**
- **Reporting incidents**
 - **Any incidents of pollution should be reported immediately to the appropriate authorities. This can help contain the damage and prevent further harm to the marine environment.**
- **Increase public awareness**
 - **Educating the public about the dangers of maritime pollution and encouraging them to take actions to prevent it, such as reducing plastic waste, can also be effective in preventing pollution.**
- **Support ocean organizations**
 - **Volunteer, join and support ocean organizations and show support on social media.**
- **Response planning and procedures**
 - **Contingency planning**
 - **This involves developing a plan to respond quickly and effectively in the event of a spill or other incident that could cause pollution. This includes identifying potential hazards and risks, establishing emergency response teams, and developing communication protocols.**



Manual



TIPS FOR POLLUTION REMEDIATION

- **Using chemical absorbents with high absorption capacity to remove oil and heavy metal spills**
 - **Rice straws have high porosity, therefore a high capacity to absorb in a small surface area**
 - **Important because oil spills prevent the dissolution of oxygen into the water resulting in killing marine creatures and aquatic ecosystems**
- **Treating oil spills with chemical dispersants that work**
 - **BP used Corexit 9500A to treat an oil spill in the Gulf of Mexico and it only made the spill expand and the newly created molecules to be more harmful and therefore kill more marine species**
- **Solid waste that is already submerged can hardly be taken out because the large-scale dragging method (trawling) across the ocean floor could wipe out species living there (like corals)**
- **Creating artificial coastlines**
 - **an NGO called “The Ocean Cleanup” creates coastlines in the Great Garbage Patch (located between Hawaii and California) to accumulate plastic waste from the ocean**
 - **The plastic is not dealt with, but at least it doesn’t disrupt marine wildlife**
- **Individual snorkeling/diving experts cleaning up the floor**
- **Beach cleanups**
 - **Participate or organize beach cleaning events and set an example for others.**



Manual



- Using Proteobacteria "*Ideonella sakaiensis*" capable of digesting plastic particles and transforming them into organic matter
- Alfa Laval's membrane bioreactor is capable of creating a plastic concentrate from a large volume of wastewater by collecting 95% of microplastics
- put plastic filters under all vessels sailing at sea





Plan



Detailed Dissemination Plan for Love Earth Azores Project within a 4-day timeframe

Aim of the project: To share knowledge and prevent pollution through engaging content with the ultimate goal of promoting sustainability, improving life quality, and ensuring a cleaner Earth.

Goals:

- Create 6 visually appealing posts with photos for Instagram and Facebook.
- Create 4 engaging posts with videos for Instagram and TikTok.
- Gain 50 followers on Instagram within one week.
- Achieve 1000 views on TikTok within one week.
- Gain 50 likes on the Facebook page within one week.
- Develop a comprehensive manual on pollution prevention for the target audience.

Evaluation Indicators:

- Number of followers on Instagram.
- Number of views on TikTok.x
- Engagement rates on Instagram and TikTok (likes, comments, shares).
- Reach (number of people who saw the posts).
- Number of likes on the Facebook page



Plan



Schedule:

Day 1:

- **Digital Marketing Team:**
 - **Morning:** Research branding strategies, brainstorm ideas for logo and slogan.
 - **Afternoon:** Refine ideas and develop a cohesive branding strategy.
- **Content Creation Team:**
 - **Morning:** Research and brainstorm content topics and ideas that align with the project's aim.
 - **Afternoon:** Develop a content plan, discuss possible locations and equipment needed.
- **Manual Team:**
 - **Morning:** Research pollution prevention methods and best practices.
 - **Afternoon:** Brainstorm structure and topics for the manual.



Plan



Day 2:

- **Digital Marketing Team:**
 - **Morning:** Finalize branding strategy, and create logo and slogan.
 - **Afternoon:** Set up Instagram and Facebook accounts.
- **Content Creation Team:**
 - **Morning:** Polish content plan, and finalize shooting schedule and locations.
 - **Afternoon:** Collaborate with the Digital Marketing Team to align branding strategy with content.
- **Manual Team:**
 - **Morning:** Outline the manual, and define sections and topics.
 - **Afternoon:** Begin writing the manual content.

Day 3:

- **Digital Marketing Team:**
 - **Morning:** Collaborate with the Content Creation Team on content scheduling and posting.
 - **Afternoon:** Schedule and post initial content on Instagram, TikTok, and Facebook.
- **Content Creation Team:**
 - **Morning:** Capture photos and film videos according to the content plan.
 - **Afternoon:** Edit photos and videos, add captions and educational messages, and finalize content.
- **Manual Team:**
 - **Morning:** Continue writing the manual content.
 - **Afternoon:** Review and refine the manual, to ensure it aligns with the project's aim.



Plan



Day 4:

- **Digital Marketing Team:**
 - **All day:** Engage with followers on Instagram, TikTok, and Facebook, respond to comments and share posts to maximize visibility.
- **Content Creation Team:**
 - **Morning:** Create additional content if needed and collaborate with the Digital Marketing Team for branding consistency.
 - **Afternoon:** Assist the Digital Marketing Team in promoting the content and engaging with the audience.
- **Manual Team:**
 - **Morning:** Finalize the manual, proofread, and edit the content.
 - **Afternoon:** Share the manual with the Digital Marketing Team for dissemination and incorporation into social media posts.



Plan



Post schedule

Facebook

- **6 posts - each one posted every 5 days starting with 20 March;**

Instagram

- **9 photo posts and 4 video posts - to be posted over 30 days, starting with 20 March**

Tiktok

- **4 posts - one post every week for the first 4 weeks**



Plan



Explanation of sections:

Goals: Designed to create initial traction and awareness among our target audience while emphasizing the importance of education through engaging content.

Evaluation Indicators: Help measure the success of our dissemination plan, provide valuable insights into how well our content resonates with the target audience, and allow data-driven decisions for future campaigns.

Schedule: Ensures that each team has a well-defined set of tasks for each day, allowing for efficient use of time and resources, while maintaining a balance between research, content creation, and audience engagement.

Post schedule: Helps with scheduling the posting process of the content over the duration of the dissemination plan.

Connections between teams: Outlines how each team collaborates with the others to create a cohesive and impactful campaign that aligns with the project's aim. This enables the teams to support each other, share knowledge, and maintain consistency throughout the project.

Aim of the project: Defines the overarching purpose of the campaign, which guides the creation of engaging content that educates our target audience on pollution prevention, encourages sustainable living, and ultimately contributes to a cleaner Earth.



Plan



Connections between teams:

Digital Marketing and Content Creation Teams collaborate closely to ensure branding consistency, content alignment, and effective content dissemination.

Content Creation and Manual Teams work together to incorporate educational messages into photos and videos, making content informative and engaging.

Digital Marketing and Manual Teams collaborate on promoting the manual through social media platforms and engaging with the audience.



Plan



Conclusion:

The Love Earth Azores project's 4-day dissemination plan focuses on educating the target audience about pollution prevention and promoting sustainable living through engaging content.

By setting specific goals, defining evaluation indicators, and outlining a detailed schedule for each team, this plan enables effective collaboration and ensures that all aspects of the project align with its aim.

With the support of the Digital Marketing, Content Creation, and Manual Teams working together, the Love Earth Azores project is poised to create a positive impact on the target audience and contribute to a cleaner, more sustainable future.



Digital campaign



The process

In the brainstorming stage we decided the campaign should be fun and catchy taking into consideration our target audience. The logo is the Earth being presented as a **person**, making people take the planet more seriously and respect it, like they would respect a human being.



We decided that our slogan should follow the logo's playful manner.

Be cute, don't pollute

Target audience:

- youngsters 16-35
- children

Channel:

- social media: Instagram, Facebook, TikTok, Twitter
- going to the school; doing activities and games; non-formal education

Love Earth

- raise awareness - billboard
- stickers; QR codes; competitions
- social media

target - youngsters: schools; kindergarten

- how? - follow trends - "dumb ways to die"
- marine biologist
- influencers
- share on story - when they find logo in the town
- educate how to recycle
- podcasts
Awards - Scholarship - science

Logo:

- earth with a heart in the middle -

- song campaign
Healthy Oceans Today

- fireman

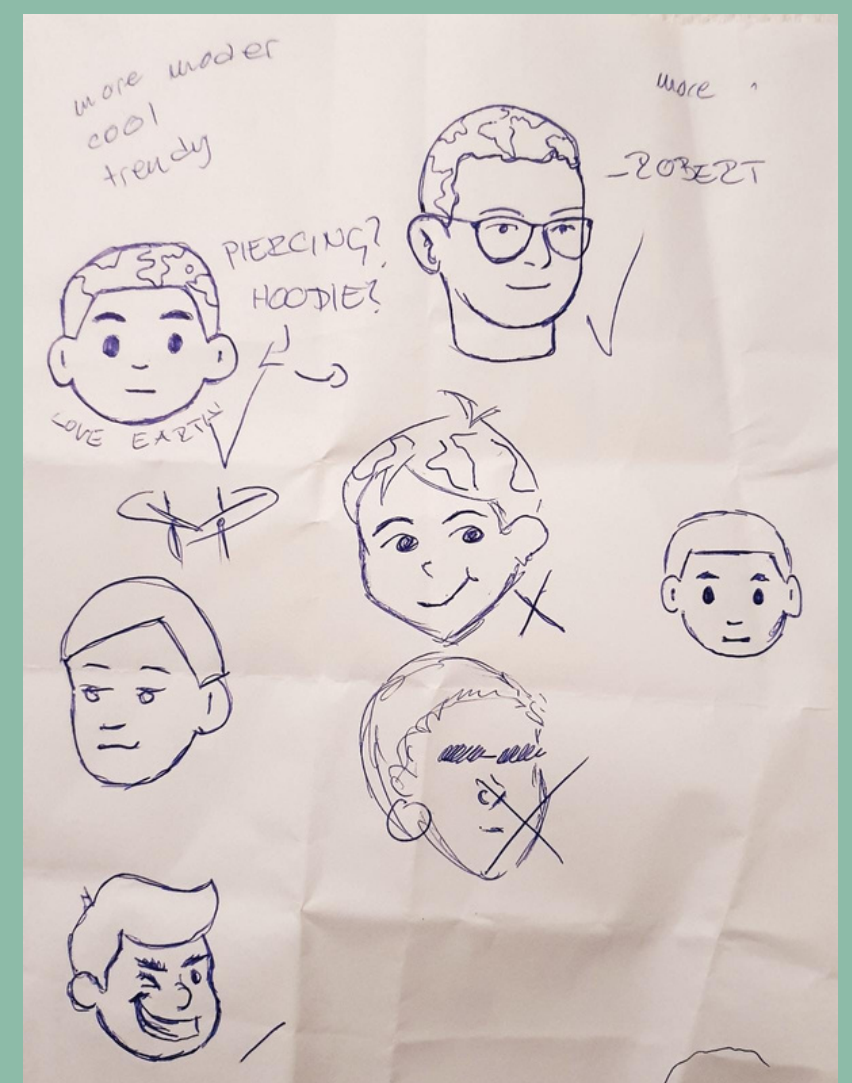
Slogans:

Help earth, so earth can help u
Be cute, don't pollute!

"keep the earth cool,
so we can be hot.
Recycle"

"don't go with the flow"
"only dead fishes
go with the flow"

"change yourself, not
the ocean"





1st Facebook post

Did you know that? -A study published in the journal Science in 2015 estimated that between 4.8 million and 12.7 million metric tons of plastic waste entered the ocean in 2010 from land-based sources.



2nd Facebook post

Did you know that? - There are several types of maritime pollution, including oil spills, chemical pollution, plastic pollution, sewage and wastewater, atmospheric deposition, marine debris, and noise pollution. Each of these types of pollution can have serious consequences for marine life, including habitat destruction, water contamination, and harm to wildlife.



3rd Facebook post

Did you know that? - Plastic pollution is the presence of plastic waste in the marine environment. This can include plastic bags, bottles, and other single-use plastics, as well as microplastics that result from the breakdown of larger plastic items.



4th Facebook post

Did you know that? - Over 700 species of marine wildlife, including turtles, seabirds, and marine mammals, have been documented as being impacted by plastic pollution.



5th Facebook Post

Did you know that? - Research has shown that microplastics can have negative impacts on fish, including changes in behavior, reduced growth and survival rates, and impaired reproductive success. Some studies have also shown that microplastics can accumulate in the tissues of fish, potentially leading to toxic effects.



6th Facebook Post

Did you know that? - Participating or organizing beach cleaning events set a good example for others.



Carousel post for Instagram



**Caption: Cleaning the environment connects
people**





Instagram post



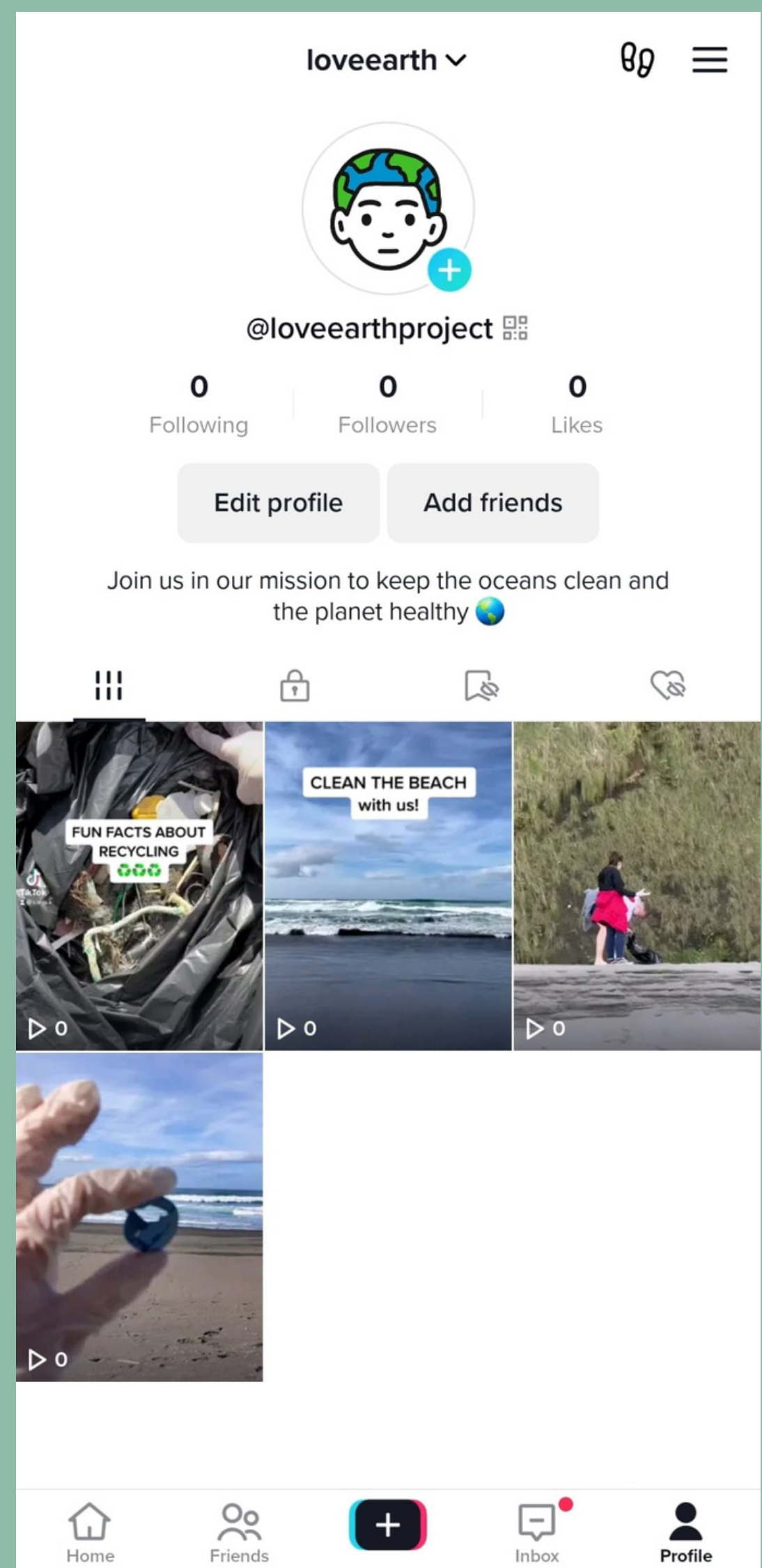
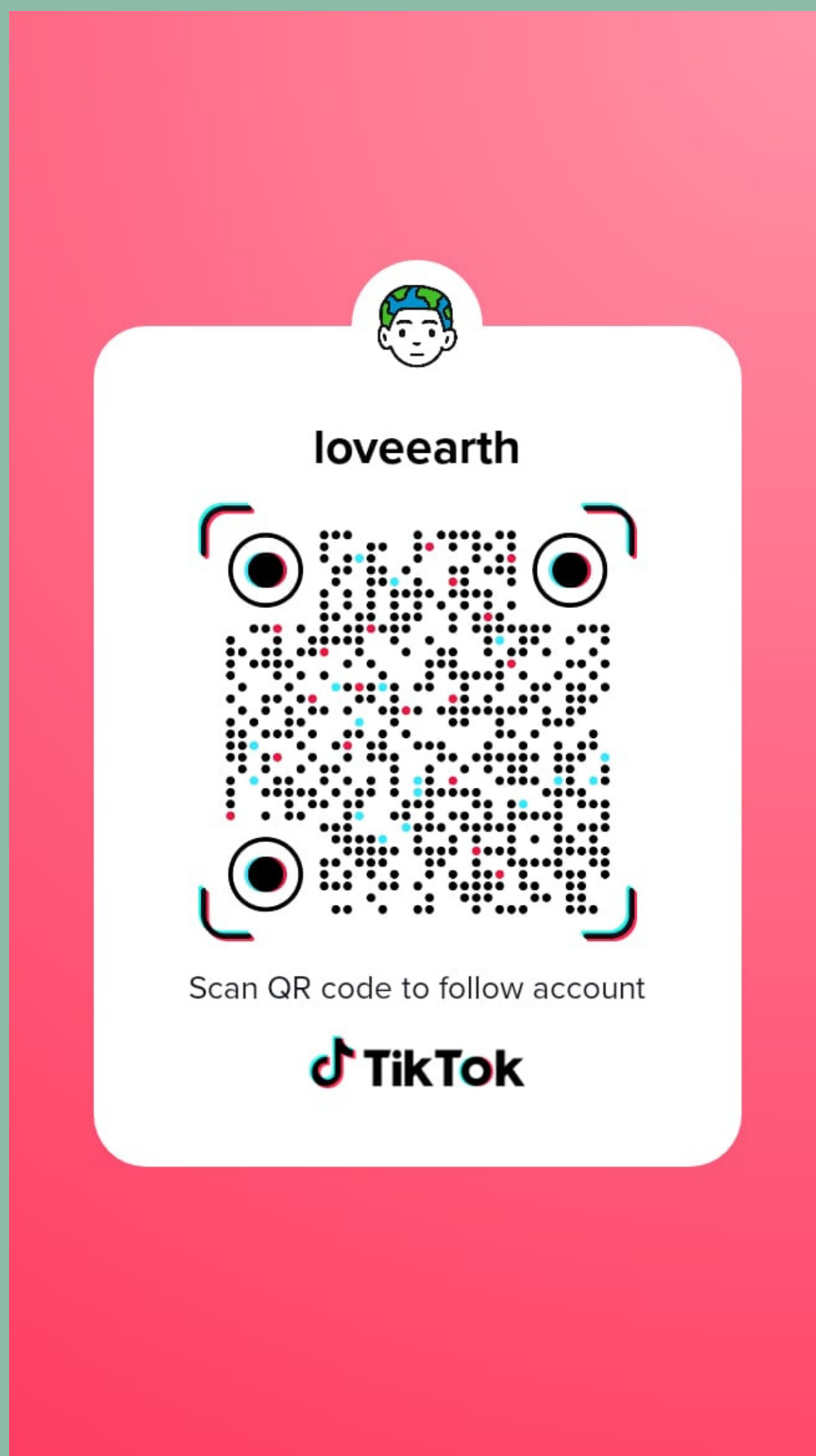
**The only traces we should
leave behind are our
footprints**



Tik Tok



- reach a broad and diverse audiences
- have fun
- make a trend out of our actions





Instagram



- most popular social network
- higher audience
- professional

