Good Practices and Projects of the Biosphere Reserves as direct Implementation of the SDGs:

Case Studies: Agüita con el Plástico in Lanzarote, Spain, and Sensitization on the Elimination of Single-use Plastics in the St. Mary's Biosphere, St. Kitts & Nevis

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PROBLEM STATEMENT

8.3 billion tonnes of plastic have been produced, using 17 million barrels oil each year

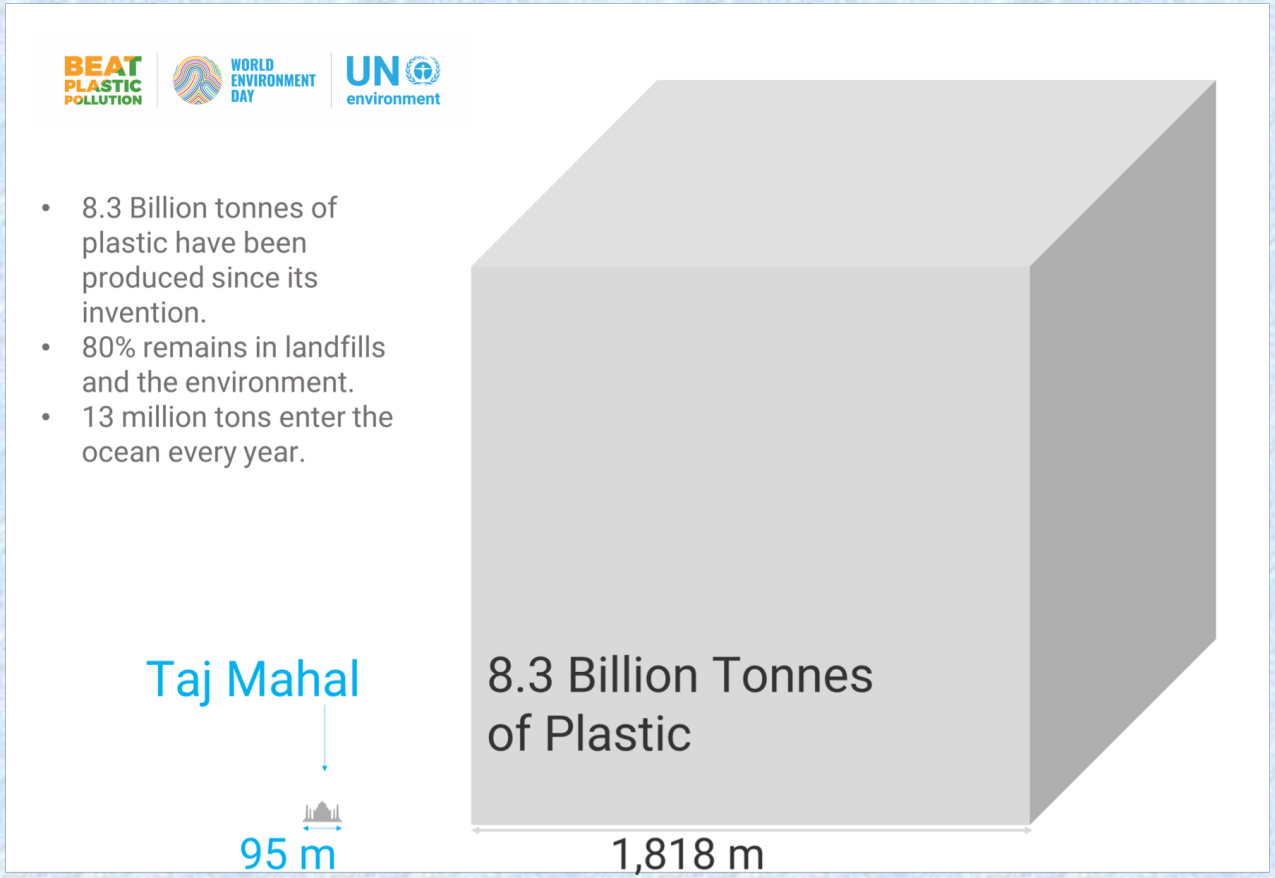
80% remains in landfills or the environment, 100 years for plastic to degrade in the environment, 13 million tonnes of plastic enter ocean each year

1 million plastic bottles, 10 million plastic bags bought every minute

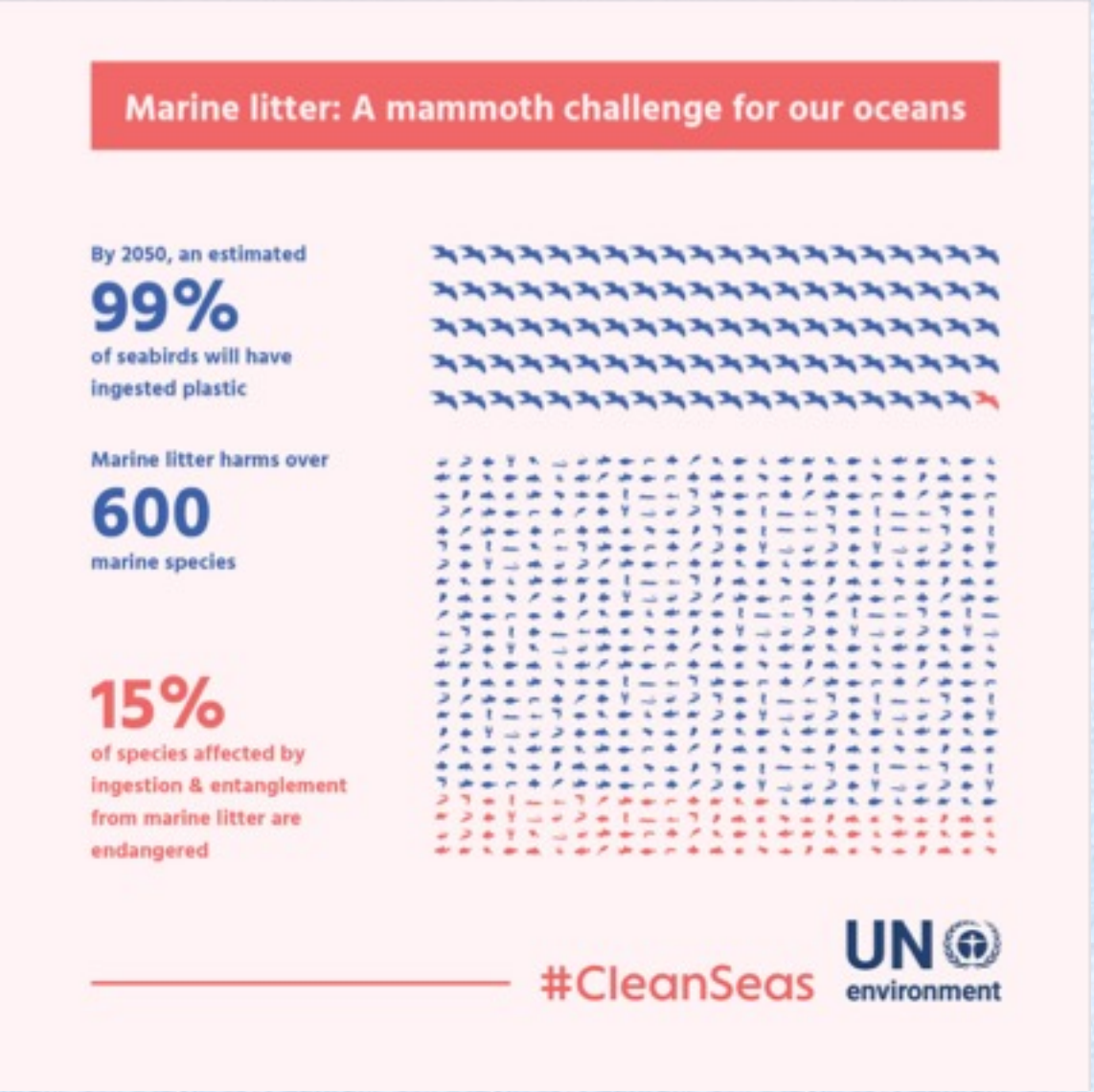
50% of consumer plastics are single use, and 10% of all human-generated waste is plastic

100,000 marine animals killed by plastics each year

90% of bottled water found to contain plastic particles, 83% of tap water



Source:http://worldenvironmentday.global/sites/default/files/toolkit_with_nature/wed_key_messages_english.pdf



UN environment

PROBLEM STATEMENT

By 2050, **99% of seabirds** will have ingested plastic

Marine litter harms over **600 marine species**

15% of species affected by ingestion & entanglement from marine litter are endangered

Source:http://worldenvironmentday.global/sites/default/files/toolkit_with_nature/wed_key_messages_english.pdf

SOLUTION STATEMENT

Generating circular economy for plastics to reduce plastics pollution and increase resource efficiency:

•goods (plastics and plastic containing)

•services (catering, waste management)

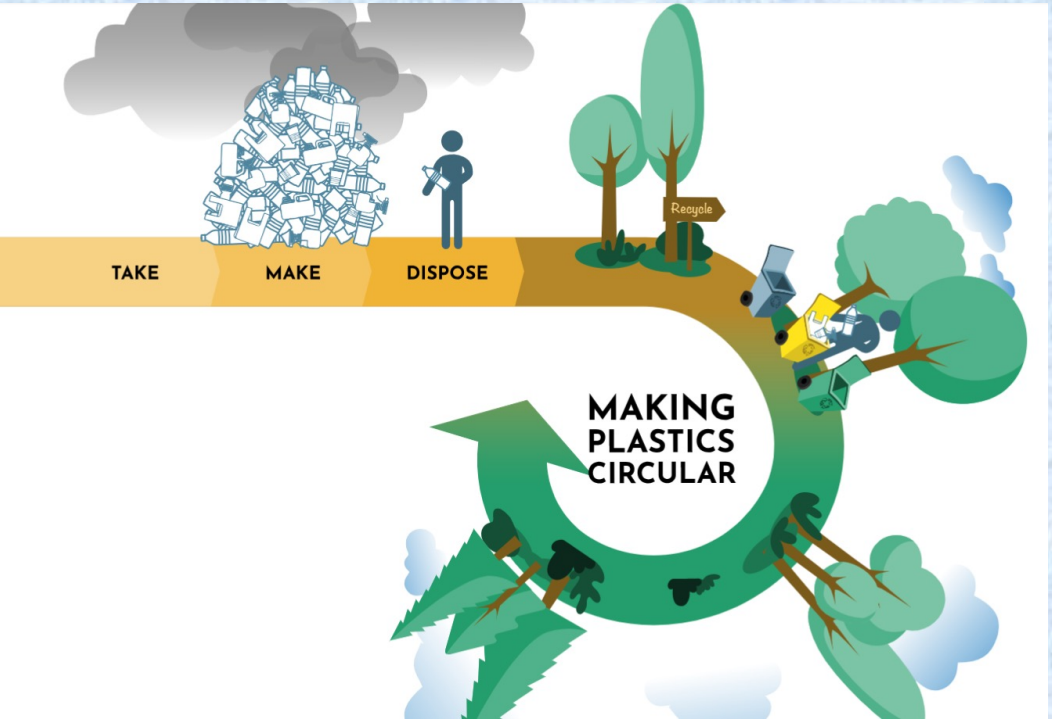
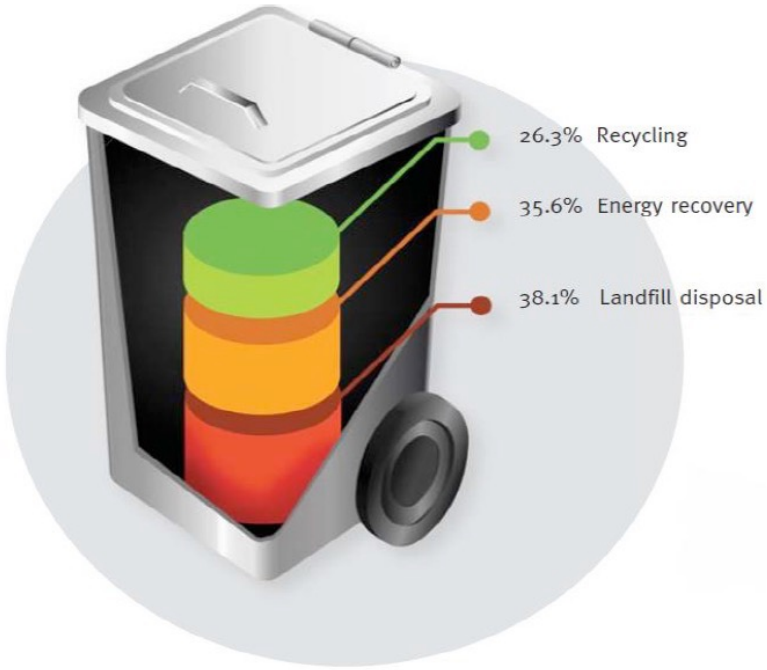


FIGURE 2. DISTRIBUTION OF RECYCLING, ENERGY RECOVERY AND LANDFILL DISPOSAL OF POST-CONSUMER PLASTICS IN 2012 FOR EUROPE (PlasticsEurope, 2013).

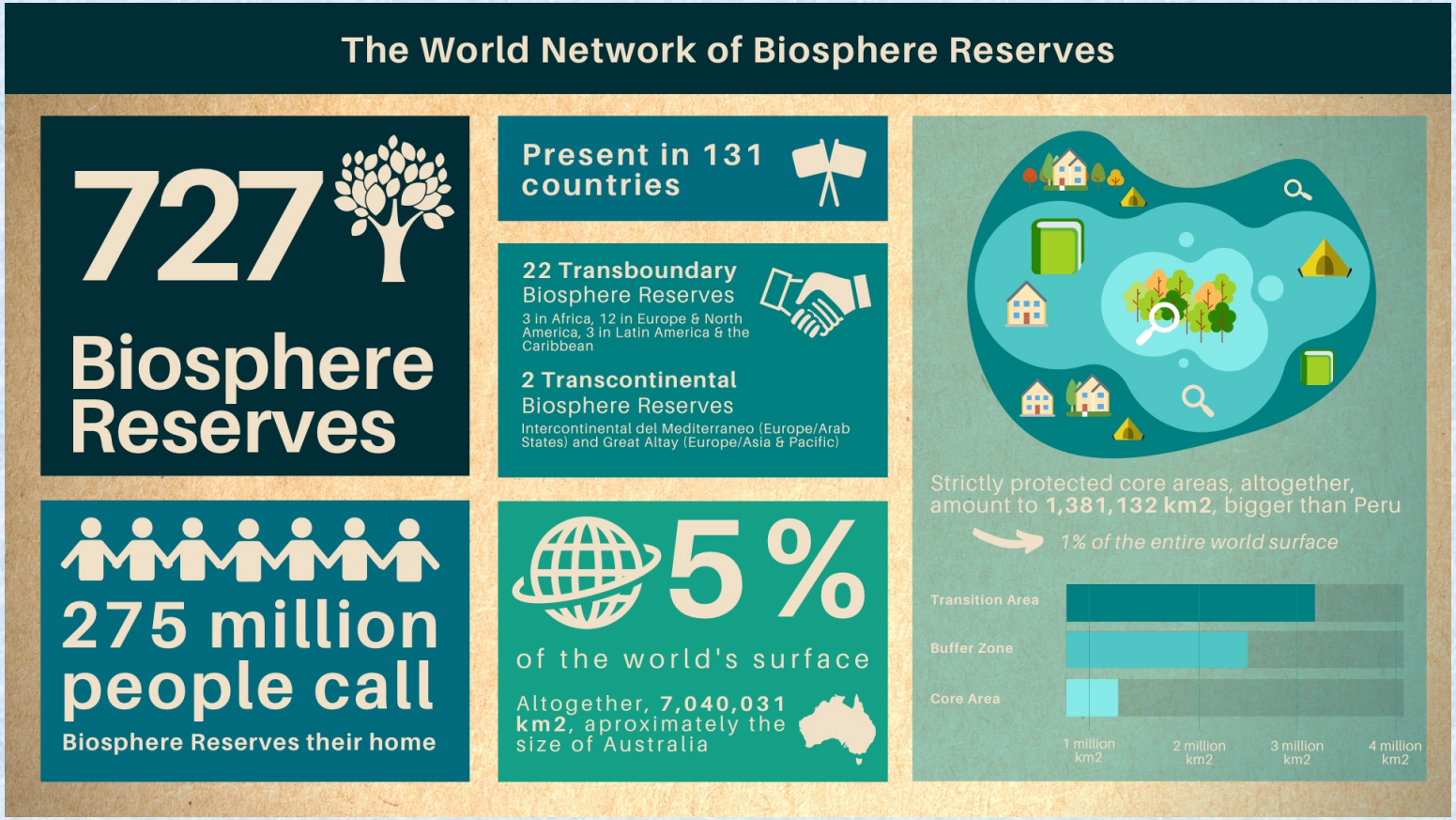


Source:http://worldenvironmentday.global/sites/default/files/toolkit_with_nature/wed_key_messages_english.pdf

World Network of Biosphere Reserves as of 15 June2022:

738 Sites in 134 countries, including 22 TBRs

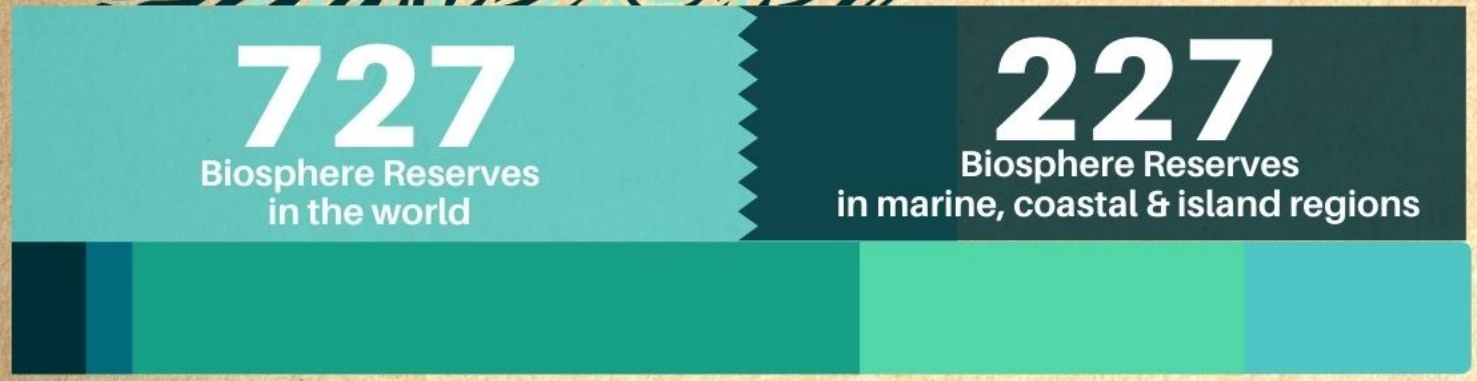
More than 7 Mio km2, 276 million people



Marine, Coastal & Islands Biosphere Reserves | 2021-2022

727
Biosphere Reserves
in the world

227
Biosphere Reserves
in marine, coastal & island regions



Facts & Figures of **COASTAL AREAS**

around **1 BILLION people** depend on corals

3.5% of the ocean **is a protected** marine area

11M **tonnes of plastic** wasted in the ocean every year

high level of BIODIVERSITY and endemism

The zonation of a Biosphere Reserve

- Core Areas are legally strictly protected zones that are designed to ensure the conservation of landscapes, ecosystems, species and genetic variation.
- Buffer Zones surround all Core Areas to buffer and reduce impacts. They also can serve conservation purposes, in particular if their valuable ecosystems depend on specific human intervention such as traditional farming or herding, landscape management etc. More generally, they are used for activities compatible with sound ecological practices that mutually reinforce with scientific research, monitoring, training and education.
- Transition Areas are those parts of a Biosphere Reserve, which should not be governed by additional regulation but through incentives and innovation, such that communities are empowered to conduct socio-culturally and ecologically sustainable activities, in particular truly Green Economies. Biosphere Reserves include coasts and islands with surrounding marine areas.

SDG 3 GOOD HEALTH & WELL-BEING

ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES.

While health indicators have improved substantially globally, benefits have not been shared fairly both between and within countries, because of widening social gaps, as well as a series of environmental health determinants. By promoting a healthy environment, with includes sustainable agriculture, preservation of the ecosystems and action to mitigate the effects of climate change, Biosphere Reserves boost better health standards among their populations.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Lanzarote Biosphere Reserve, Spain | Reserva de Biosfera de Lanzarote, España

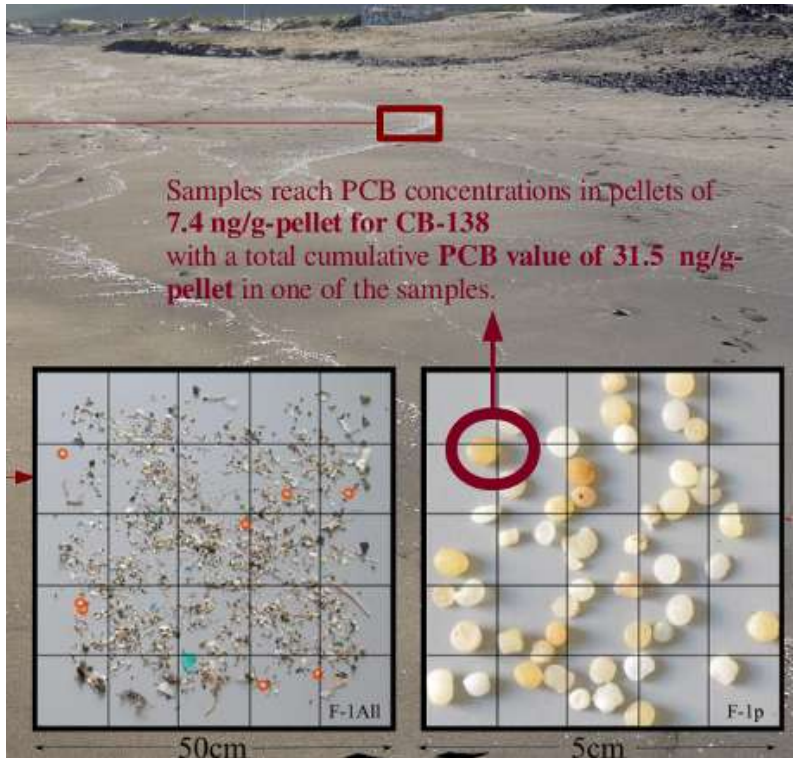
Located on the northernmost island of the Canary Archipelago (Spain), the Lanzarote Biosphere Reserve hosts a very rich biodiversity with a high degree of endemism. The arid landscape of the island contrasts with the colourful underwater ecosystem. However, increasing levels of plastic waste threatens this marine environment.

Plastics constitute more than 60% of the waste that accumulates in oceans and coastlines of the planet, and represent a growing threat to the entire biosphere. According to the World Health Organization (WHO) 'when plastics decompose they release chemicals that are hazardous to health, the environment and wildlife.

To raise awareness about this issue, in 2014 the biosphere reserve launched a campaign called 'Agüita con el plástico'. The aim of the project is to engage citizens, companies and local government in action to transform Lanzarote into a Zero Plastic Island. The initiative will also be exported to other biosphere reserves worldwide within the World Network of Island and Coastal Biosphere Reserves.

카나리아 제도(스페인)의 최북단 섬에 위치한 Lanzarote 생물권 보전지역은 고유종성이 매우 높은 매우 풍부한 생물다양성을 보유하고 있습니다. 섬의 건조한 풍경은 다채로운 수중 생태계와 대조를 이룹니다. 그러나 증가하는 수준의 플라스틱 폐기물은 이 해양 환경을 위협하고 있습니다.플라스틱은 지구의 바다와 해안선에 축적되는 폐기물의 60% 이상을 구성하며 전체 생물권에 대한 위협이 커지고 있습니다. 세계보건기구(WHO)에 따르면 '플라스틱이 분해되면 건강, 환경 및 야생 동물에 유해한 화학 물질이 방출됩니다.이 문제에 대한 인식을 높이기 위해 2014년 생물권보전지역은 'Agüita con el plastico'라는 캠페인을 시작했습니다. 이 프로젝트의 목표는 시민, 기업 및 지방 정부가 행동에 참여하여 Lanzarote를 플라스틱 제로 섬으로 바꾸는 것입니다. 이 계획은 또한 World Network of Island and Coastal Biosphere Reserve 내의 전 세계 다른 생물권 보호 구역으로 수출될 것입니다.

Zero Plastic working group



Growing from the Zero Plastic campaign in Lanzarote, the Zero Plastic working group was launched in May 2018 at the annual meeting of the WNICBR. The Zero Plastic working group unites Biosphere Reserves impacted by plastic pollution and the research community through the Marine Sciences For Society network.

Marine Sciences For Society

Zero Plastic working group

MICRO2020

INTERNATIONAL CONFERENCE

23-27 NOVEMBER 2020 LANZAROTE AND BEYOND*

FATE AND IMPACTS OF MICROPLASTICS: KNOWLEDGE AND RESPONSIBILITIES

https://www.micro.infini.fr/

https://micro2022.sciencesconf.org/

On the road to……

MICRO 2022

ATLAS EDITION

INTERNATIONAL CONFERENCE PLASTIC POLLUTION FROM MACRO TO NANO

14-18 NOVEMBER 2022 ONLINE WITH PRESENTIAL LOCAL NODES

Research projects

2015 - The impact of climate change on island and coastal biosphere reserves
2017 - Establishment of strategies responding to climate change on island and coastal biosphere reserves
2021 - The value of island and coastal biosphere reserves as a source of carbon sink


Principe Island


Jeju Island


© Menorca BR
St. Mary's


Black River
Gorges-Bel Ombre

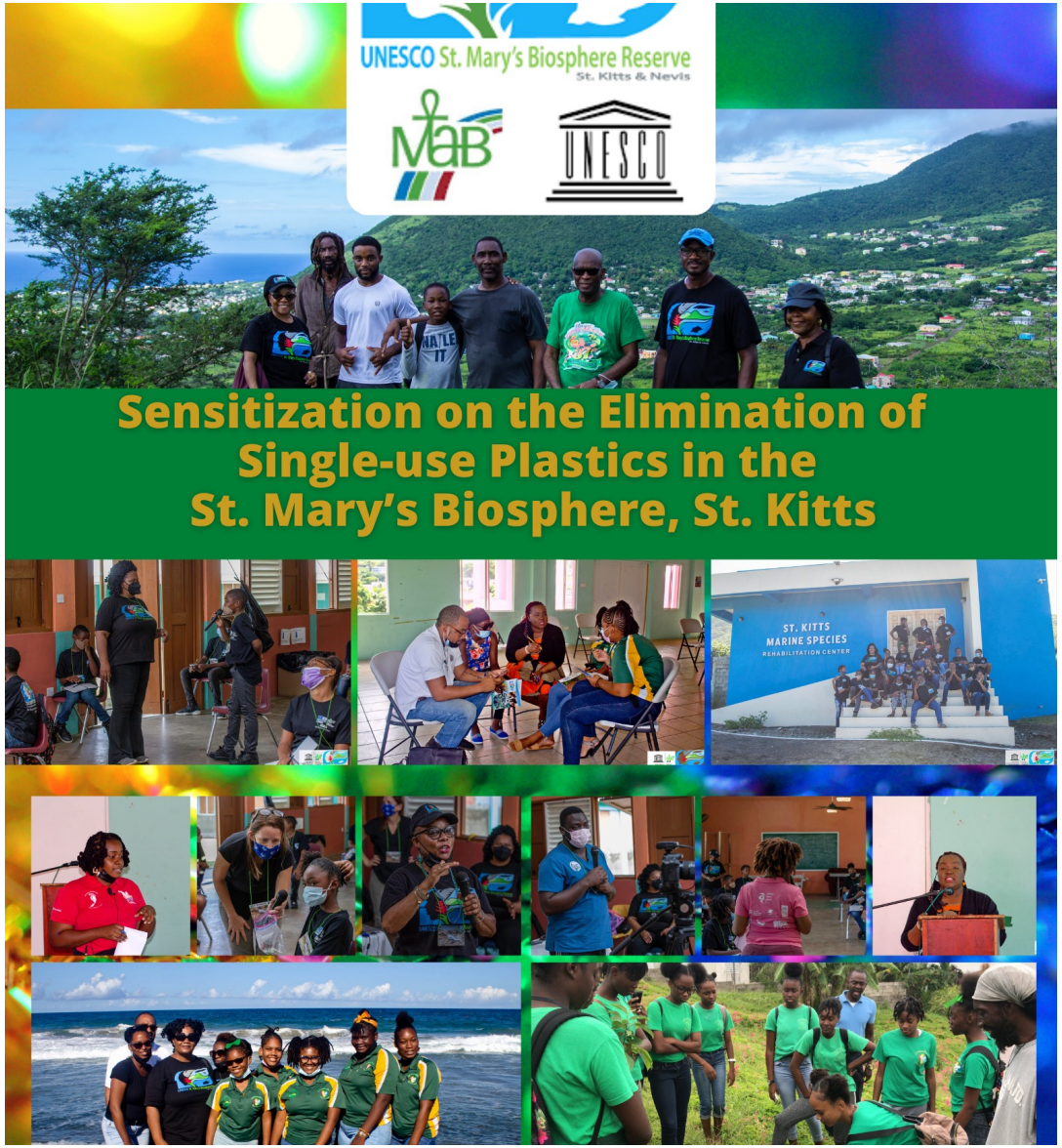

Menorca Island

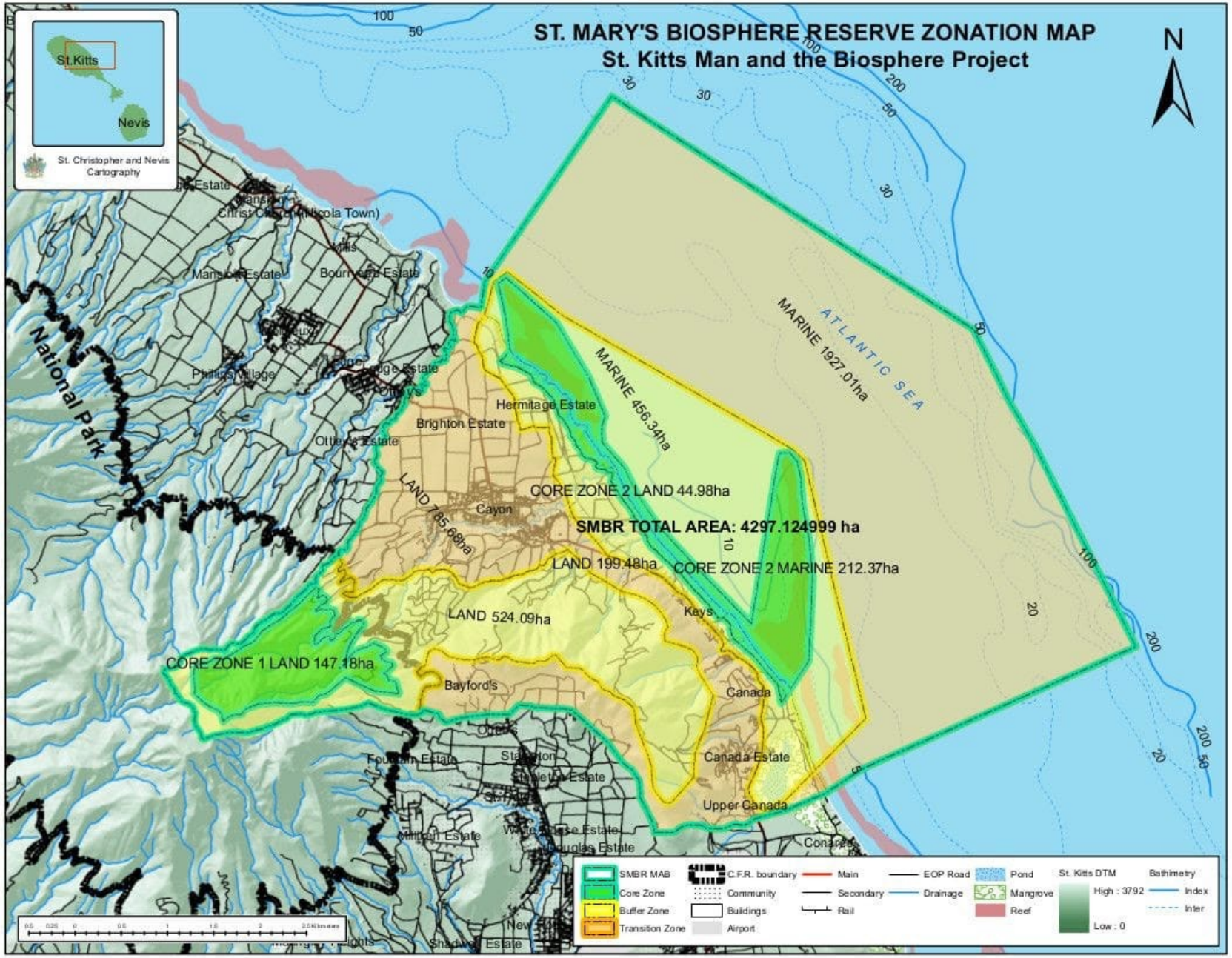
UNESCO St. Mary's Biosphere Reserve

St. Kitts & Nevis

MaB

UNESCO





Project Title:

Sensitization on the Elimination of Single-use Plastics in the St. Mary's Biosphere, St. Kitts

Background:

The St. Mary's Biosphere Reserve is the first Biosphere Reserve in the English-Speaking Caribbean (2012).

Plastic pollution, whether on land or as marine debris, is currently one of the most relevant and important issues facing the world today. On the twin island Federation of St. Kitts and Nevis, within the St. Mary's Biosphere, there is no exception.

On the island of St. Kitts, one can find the St. Mary's Biosphere, and here plastic pollution can be seen in rivers, ravines, abandoned properties, and the coastline and the sea.

The indiscriminate disposal of single-use plastics especially can lead to an increase in vector-related diseases and harbour other pests such as rodents. Dumping of plastic waste is unsightly.

This ruins the beautiful aesthetic that the St. Mary's Biosphere has prided itself on. Single-use plastics have entered or been dumped directly into the marine environment posing threats to species like turtles and fishes commonly becoming entangled or feeding on micro plastics.

The feeding of micro plastics then become an issue as plastics enters the food chain creating a build-up of microplastics in the human bodies can lead to an increase in cancers and other diseases.

Annually, the Department of Environment in St. Kitts and the Nevis Historical Conservation Society hosts coastal clean-ups in St. Kitts and Nevis. In 2019 at the annual beach clean-up hosted by the Department of Environment; the top three items recorded were: plastic pieces (2353); plastic bottles (1341) and bottle caps (1252). While Nevis clean-up showed similar results: plastic bottles (2285); bottle caps (1841) and plastic pieces (713). Therefore, it is evident that single-use plastics is an issue for the country.

Keys Beach within the St. Mary's Biosphere is an area for concern and is often cleaned by residents of the St. Mary's Biosphere as well as partners like the Man and the Biosphere Committee, St. Kitts Sea Turtle Monitoring Network, The Ripple Institute (Clean Seas SKN Project), The Department of Youth Empowerment, Anjolique Dance Company, St. Kitts Sustainable Destination Council and Chipeen Volunteer. Community and NGO collaboration, Awareness and clear Action items are all needed for mitigation of the plastic pollution issues.


Proto credit Clean Seas SKN Project


Proto credit Clean Seas SKN Project

Aim of the Project:

The project aims to educate the general public of the negative impacts associated with single-use plastics in order to increase knowledge and change the behaviours and attitudes of individuals.

Objectives:

1. To increase MAB community and wider general public's knowledge of the adverse impacts of single-use plastics
2. To change the MAB community and wider general public's attitude and behaviours regarding their usage of single-use plastics
3. To provide recommendations (based on findings) and assistance to the Government of St. Kitts and Nevis to guide decision making and national management of single-use plastics

Organizational structure:

The project will be coordinated by the St. Kitts and Nevis UNESCO Man and the Biosphere Committee. Partners will be integrated at appropriate areas during project implementation.

Project Timeline:

The knowledge-attitude-behaviour (KAB) model considers that knowledge is essential for effecting changes in behaviour. Pre and post surveys would be conducted to determine the effectiveness of the information shared. The MAB community would be given the needed knowledge regarding the negative impacts associated with single-use plastics. It is expected that the behaviour would then change to reflect this knowledge.

Ultimate Goal of the Project:

Ban single-use plastic from the Biosphere Reserve and the entire island an serve as model for the entire Caribbean .

감사합니다 !

ありがとうございました ! Thank you ! Merci ! Gracias! Спасибо ! 谢谢 ! !شكرا لك