

From Biodiversity Conservation to Educational and Sustainable Activities

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MARINE BIOLOGIST

Where I come from...



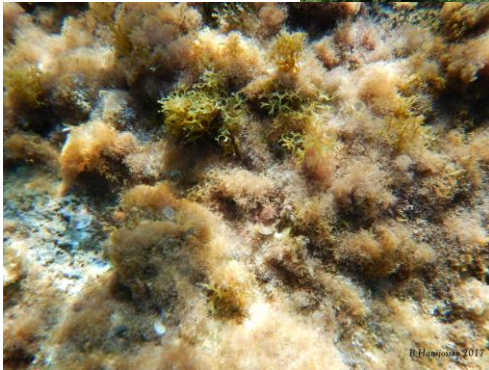
What is Biodiversity

Former definition: Number of species occurring in a site, region or ecosystem.

Actual definition: “Biological diversity, or biodiversity, describes the variety of life on earth, and this diversity operates at various scales, from genes, species to entire ecosystems. Biodiversity therefore refers to all life-forms and their behaviours, the environments or habitats in which they live, and the complex system of relationships between organisms, such as food webs and competition for resources.” - MSFD



Why is Biodiversity important



- ❖ Correct functioning of the ecosystem – biosphere
- ❖ More biodiversity more resilience towards environmental changes
- ❖ Marine ecosystem services for mankind

Threads to Biodiversity

Anthropogenic impacts

- Pollution
- Aquaculture
- Destruction of coastline

Invasive Alien Species → loss of endemic species

Global warming



Marine Protected Areas (MPA)



“MPAs are designated areas of our oceans, seas and coasts where species and habitats are protected (through legal or other effective means) from activities that are damaging or that cause disturbance to the environment. Activities, which do not have a significant impact on wildlife may be permitted, but other activities such as fishing may be restricted in certain areas, or modified to avoid disturbance to wildlife. In some marine protected areas, such as in the Arctic, human presence is not permitted at all.” - MSFD

How MPA's influence Biodiversity



- ❖ Help to maintain the existing biodiversity
- ❖ Safe place – Save haven
- ❖ They export biodiversity to the surrounding areas

Nature as an alternative to mass tourism

Environmental sustainability

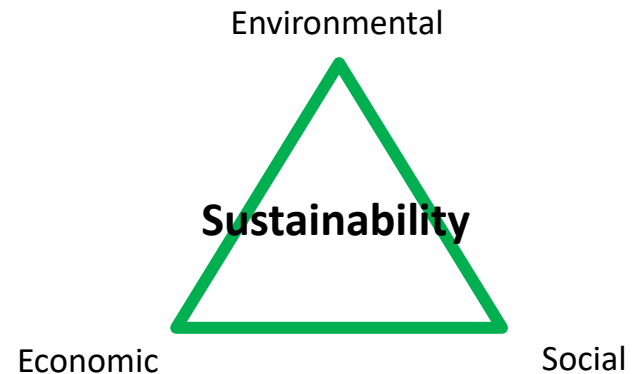
- Responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality

Economic sustainability

- The use of various strategies for employing existing resources optimally so that a responsible and beneficial balance can be achieved over the longer term

Social sustainability

- The ability of a community to develop processes and structures which not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community



"Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" - UNWTO

Nature as an alternative to mass tourism

MASS TOURISM

All Inclusive accommodations

- Low cost hotels
- Resorts

Organized by Tour Operators



Nature as an alternative to mass tourism

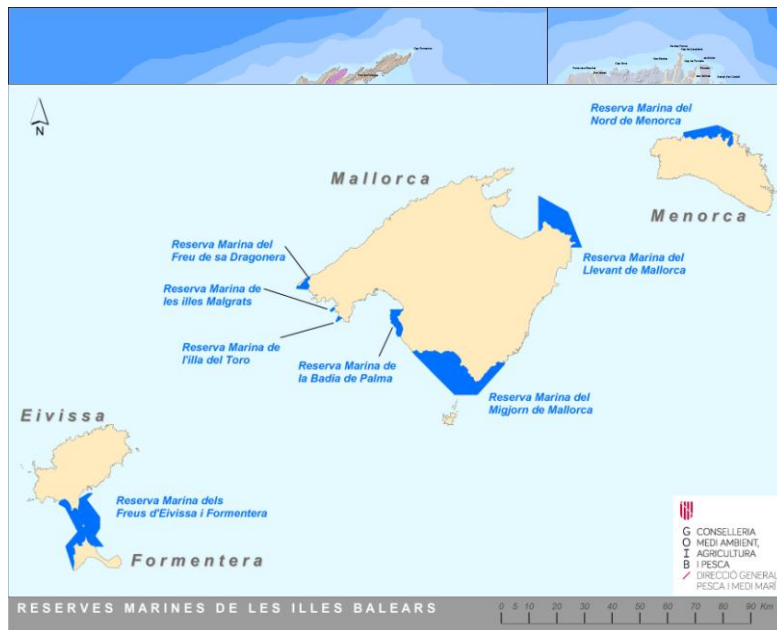
SPORTS & ADVENTURE

- ❖ Comes for a certain sport or activity
- ❖ Surf camps
- ❖ Hiking

NATURE LOVERS

- ❖ Visits a certain region to see a certain natural attraction
- ❖ Galapagos Islands
- ❖ Sa Dragonera / Cabrera

Visiting a MPA or PA



- ❖ The balearic Islands count with 12 protected natural areas
- ❖ National Parks, Natural Parks, Natural Reserves

Working with Cíee

CIEE – Council for International Educational Exchange

Aim: To help students gain the understanding, acquire knowledge, and develop skills for living in a globally independent and culturally diverse world by bringing the world together through the most meaningful exchange programs.

- ❖ Educator and teacher for biology/marine biology
- ❖ Content creator of course material



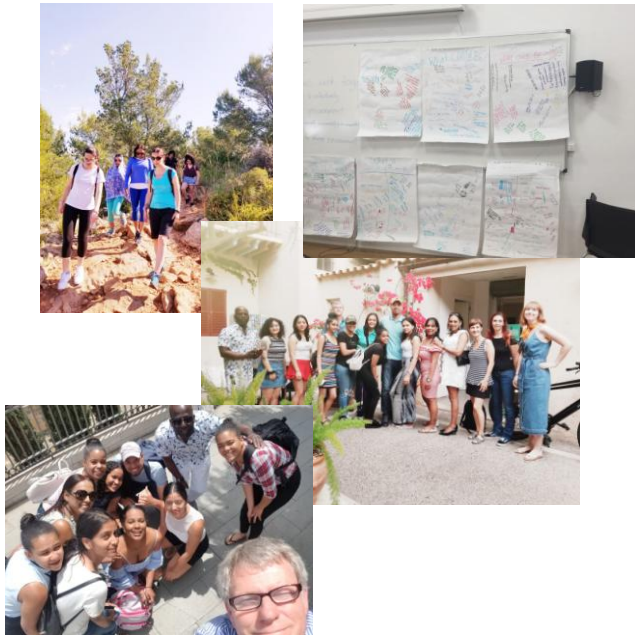
Bronx Community College – Environmental Science and Sustainability

Ten students and two faculties from BCC/CUNY, and Mr. Greg Bruce participated in a study abroad program focusing on sustainability in Palma de Mallorca

Visit to several protected areas

- Cabrera maritime-terrestrial national park
- Mondragó Natural Park
- Unesco World Heritage Serra de Tramuntana

Visit to the Seabin Project

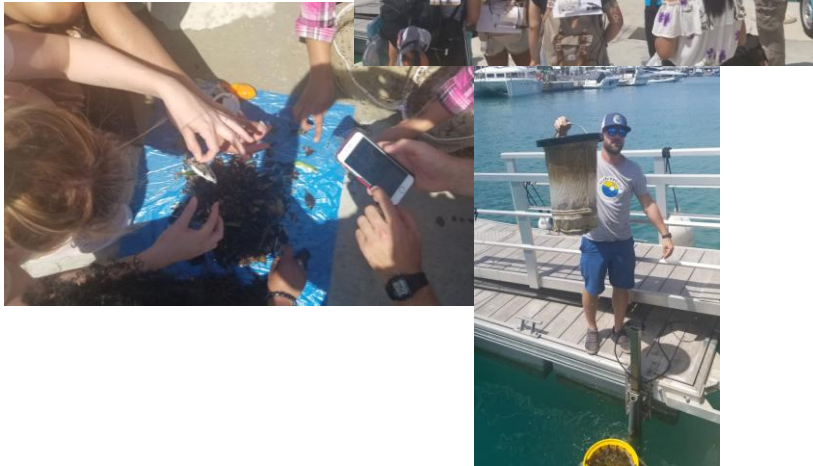


BCC/CUNY – Mondragó Natural Park

- ❖ Declared as Natural Park in 1992
- ❖ Area of Special Protection for Birds
- ❖ Has several auto-guided walking paths



BCC/CUNY – SEABIN PROJECT



Aim: Cleaner Marinas, Cleaner Oceans

Students visited the installed Seabin in Porto Adriano

Students learned how these Seabins work

Seabin Project as a sustainability initiative to maintain cleaner marinas and a more friendly image towards the nautical tourist

High School Summer Abroad

Marine Biology and Fieldwork

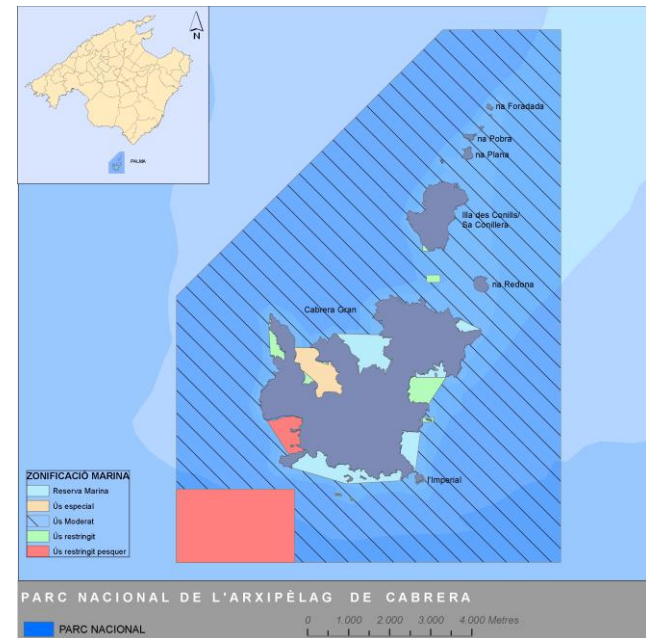
- ❖ High School students ages between 14 and 17
- ❖ From all over the United States
- ❖ With different knowledge levels of biology



HSSA - Fieldtrips

Cabrera Maritime-terrestrial National Park

- ❖ Declared as a National Park on April 29, 1991
- ❖ Made up by nearly 20 islands and islets
- ❖ Home to many endemic species
- ❖ Possibility to do guided tours or auto-guided tours



HSSA - Fieldtrips



Boat trip from Colonia de Sant Jordi to Cabrera

Hike to the castle and to see the Lilford's wall lizards (*Podarcis lilfordi*)

Snorkeling at Platja des Pagès

Creation of an inventory of the seen species



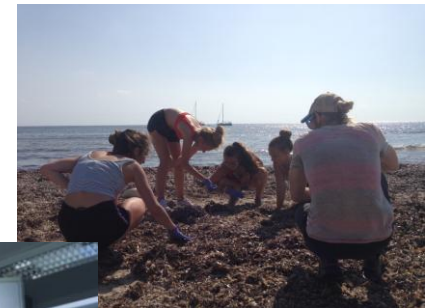
HSSA – Citizen Science

Beach cleaning

A standardized cleaning protocol was followed

- DeFishGear Project methodologies

Samples were taken and analysed later in the lab



Final Consideration

Education is Key

A Big Thank You to all my Sponsors

Specially to Mr. Greg Bruce,
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me

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Mom and Dad

