

# MARE PLASTICUM

## Art helps science to raise awareness



Margarita Cimadevila & Wolfgang Trettnak

---



Book presentation: Mare Plasticum - The Plastic Sea  
17th September 2020

©2020 M. Cimadevila & W. Trettnak

# Europe



Margarita  
Cimadevila



Wolfgang  
Trettnak

Galicia 

Spain



**A Coruña**

**Sada**



**Atlantic  
Ocean**

**Galicia**

**1200 km of coast line**



**300 km of beaches ...**



**... more than 700!**

**Very clean in  
summer!**



**In winter...**

A wide-angle photograph of a beach littered with plastic waste and debris. In the foreground, a large pile of trash is visible, including a clear plastic cup, a white plastic bag, a blue tarp, and various pieces of wood and twigs. The middle ground shows a sandy beach with scattered plastic items and seaweed. In the background, there is a dense forest of trees, a small town with houses on a hill, and a body of water under a clear blue sky.

**...lots of plastics!**

# 1. What is it?





## 2. Where does it come from?



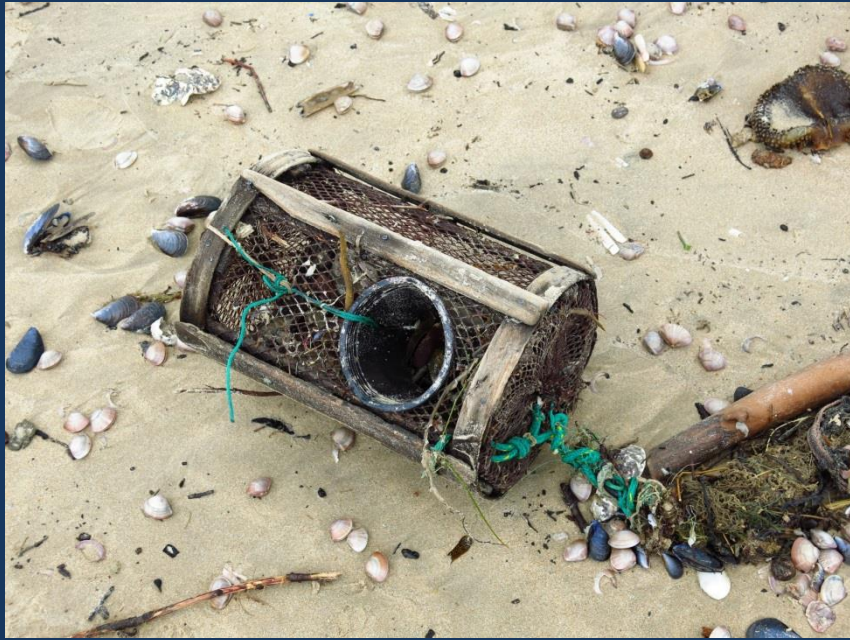
# Fishing



# Ropes



# Nets



**Trap boxes**

**Floats**



# Aquaculture



**Net bags**



**Agglomerations**



**Gloves**

**Boots**



# Urban and domestic litter





# Plastic bags



# Shoes

# Packaging



# Toys

# Objects of daily life



# Sanitary products



**3. Which problems do they create?**



# Damages to the habitat



# Ingestion



# Entanglement

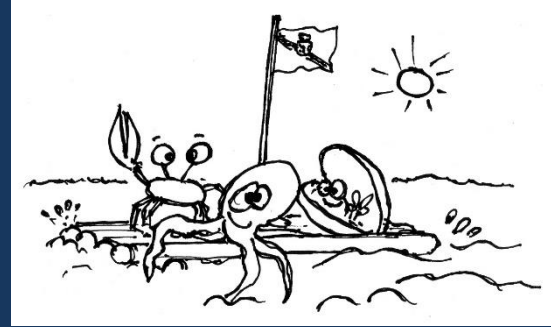


Photo: Chris Jordan (via U.S. Fish and Wildlife Service Headquarters) / CC BY 2.0

**Toxicity**



**Mortality**



**Invasive  
species**

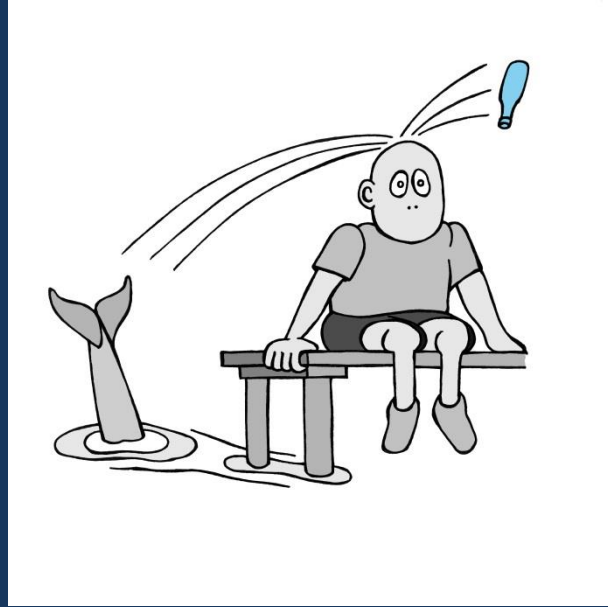
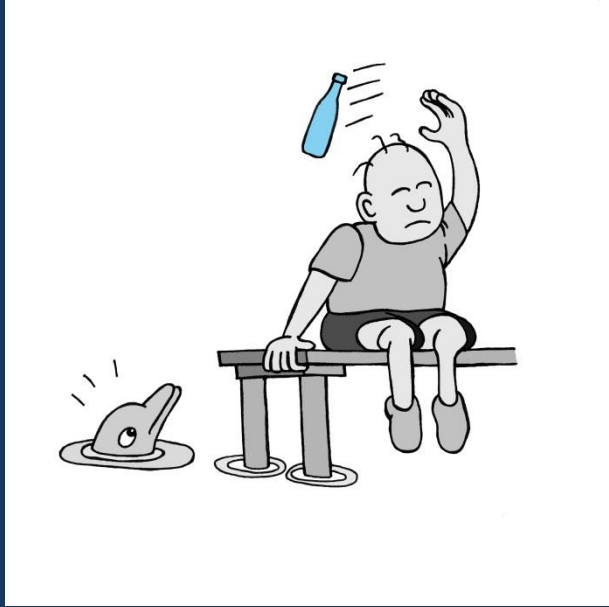


# Microplastics





# How to make known these problems?



**The answer was to created the  
eco-exhibition:**

# **MARE PLASTICUM**

**Art and Science for the Environment**



**Recycling & Reuse**

# The making of

We use plastic marine litter, which we collect on the beaches:



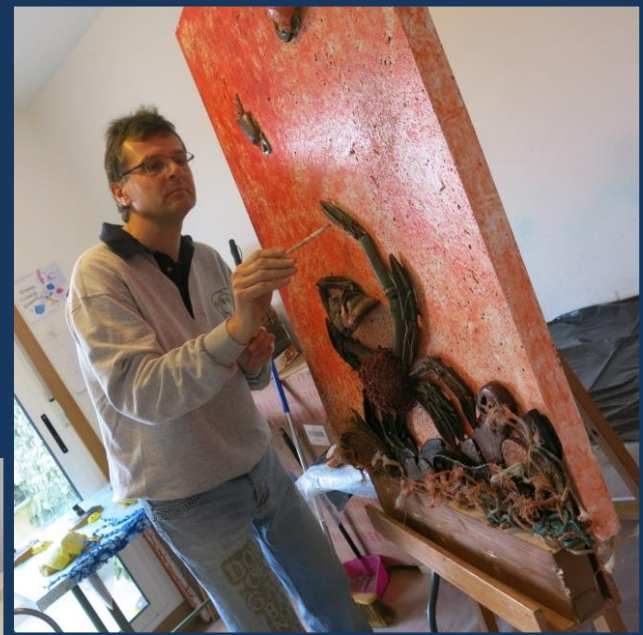
# Nets





The entangled dolphin

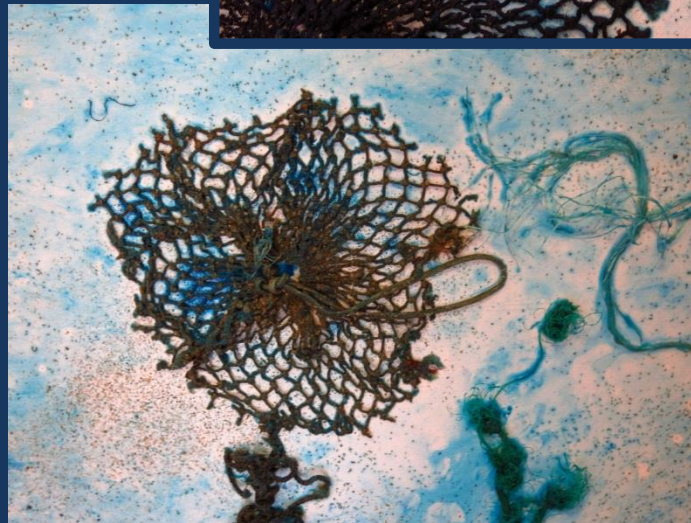
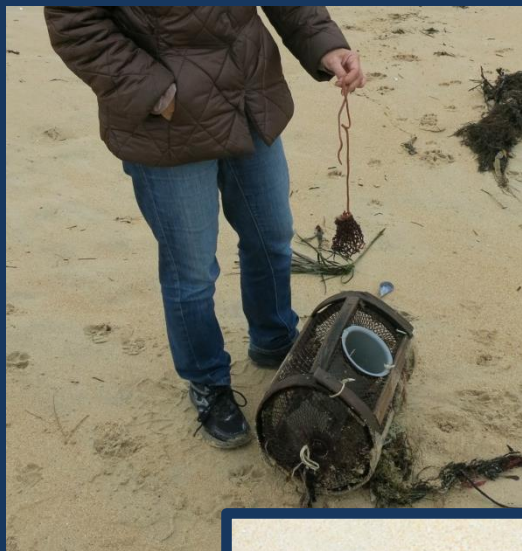
# Shoes



# The marine shoe shop



# Trap boxes







The submarine garden

# Plastics from fish stomachs



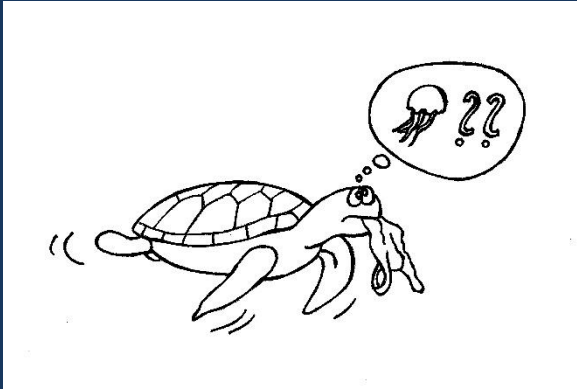
# Alepisaurus ferox



- Cimberius

W. TRETTAK

# Bags



**Jellyfish or plastic bag?**



Jellyfish

# Bottles





Fish mobile

# Science & Art

- Investigation (start 2011!)
- Documentation (photos)
- Contacts with scientists

*Basis of:*

- Art work
- Posters
- Videos
- Presentations
- Workshops

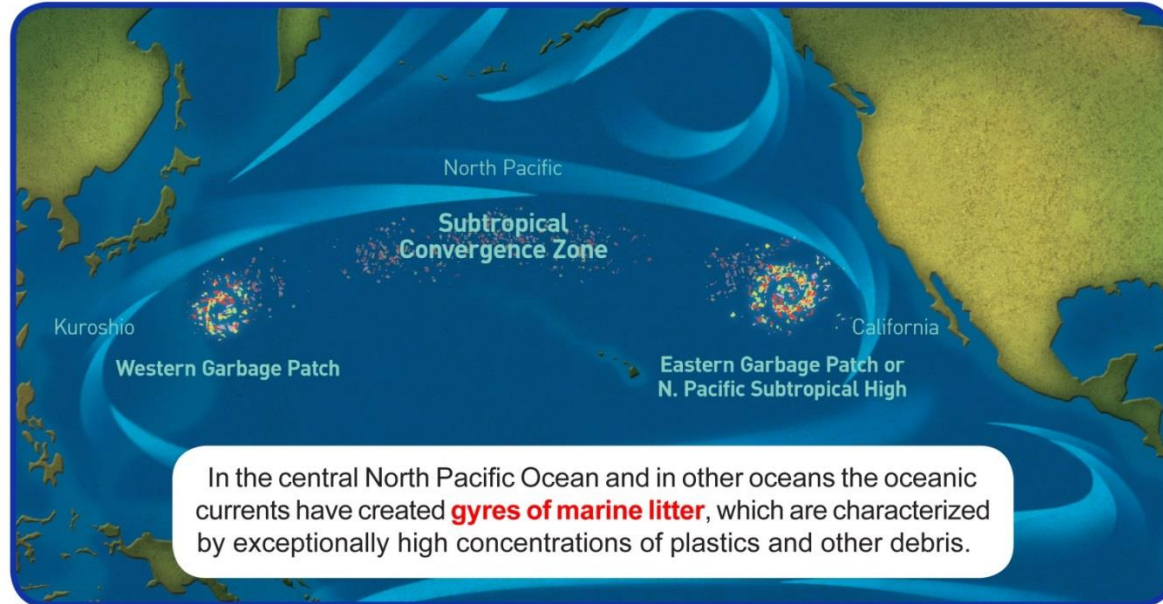




# Informative sheets

## BELOW THE GREAT GARBAGE PATCH

Marine debris and mixed technique on canvas; 80 x 100 cm; 2012



In the central North Pacific Ocean and in other oceans the oceanic currents have created **gyres of marine litter**, which are characterized by exceptionally high concentrations of plastics and other debris.



# Target audience:

---

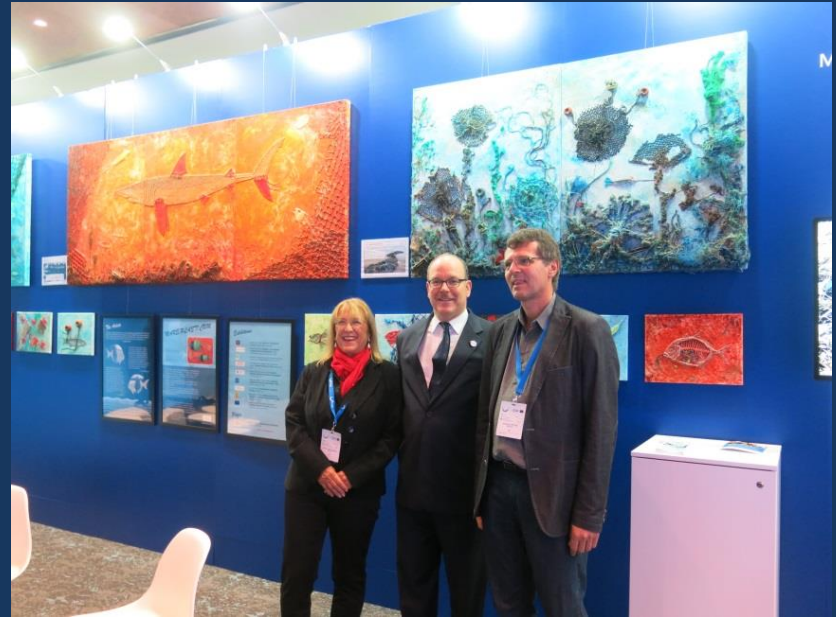
All kind of people, specially young people



# Exhibitions:



**CERN 2015**



**International Conference  
OUR OCEAN  
Malta 2017**

# Launch of the China No Plastic in Nature Action Network Beijing 2019



Environmental Conference  
CONAMA  
Spain 2016

# Conferences



## Conference

26 May 2015 at 18:30  
CERN Meyrin, Main Building,  
Council Chamber

Wolfgang  
Trettnak



Plastic waste enters the ocean and is distributed around the world by global currents. Marine animals confuse the plastic debris with food or plankton and ingest it, with devastating effects on the marine life. Other dangers arise from entanglement with marine plastic litter or from species invading new ecosystems by using plastic as a float.

It is our duty to protect our oceans with their huge biodiversity and their rich food and other resources. One important way is by avoiding the pollution of the seas, especially by plastic materials. An overview on the issue and on scientific results and ongoing investigations on the subject will be presented.

Wolfgang Trettnak received a PhD in Chemistry from the University of Graz (Austria) and worked in applied scientific research on sensors and biosensors for many years before becoming a free-lance artist. His work links science with art and in the past years he has been concerned especially with the threats to marine life.

**Plastic waste  
is TODAY  
a worldwide  
problem.**



[www.transciencia.org](http://www.transciencia.org)



# CERN 2015

# Educational activities

---

- European Maritime Day
- Congresses for Teachers
- Science & Art Courses
- Didactic materials
- Presentations at schools
- Art works at school
- Beach cleaning
- Competition Science on Stage





# European Maritime Day 2019

More than 1000 pupils involved!



Arte y Ciencia contra el plástico marino



## MARE PLASTICUM

EXPOSICIÓN DE ECO-ARTE

Margarita Cimadevila & Wolfgang Trettnak



European Maritime Day in My Country  
2019

# Beach cleaning actions

## IV Encontro Internacional do Lixo Mariño

October 2019



# Prize



## SCIENCE ON STAGE SPAIN 2015

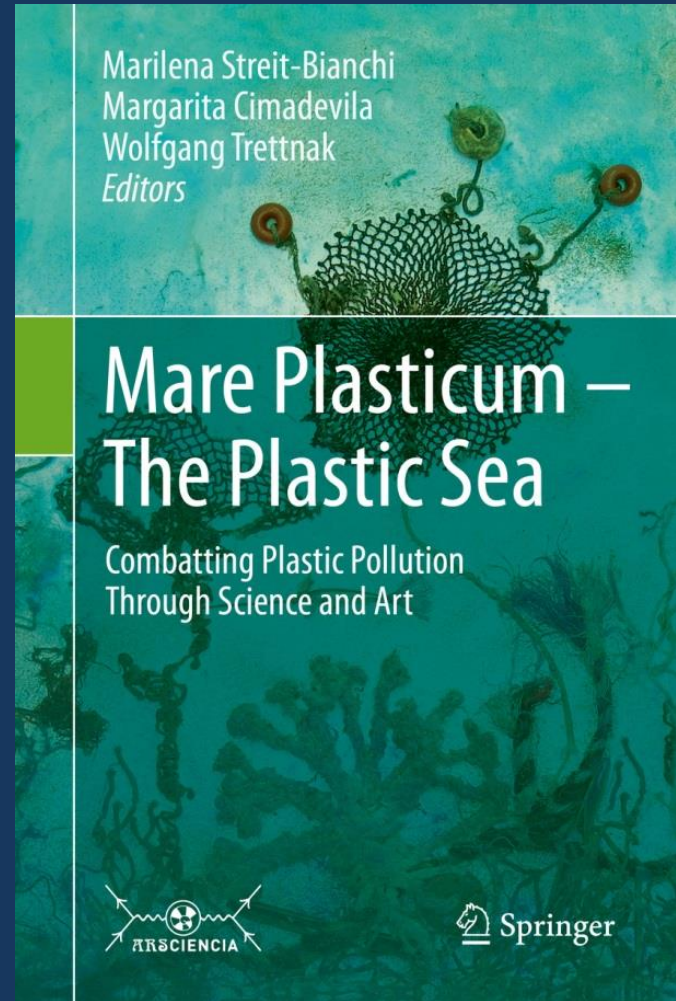
### **1<sup>st</sup> Prize in Sustainability**

*“For its originality in showing an urgent problem in a creative manner, but without losing sight of scientific severity...”*

# Spreading

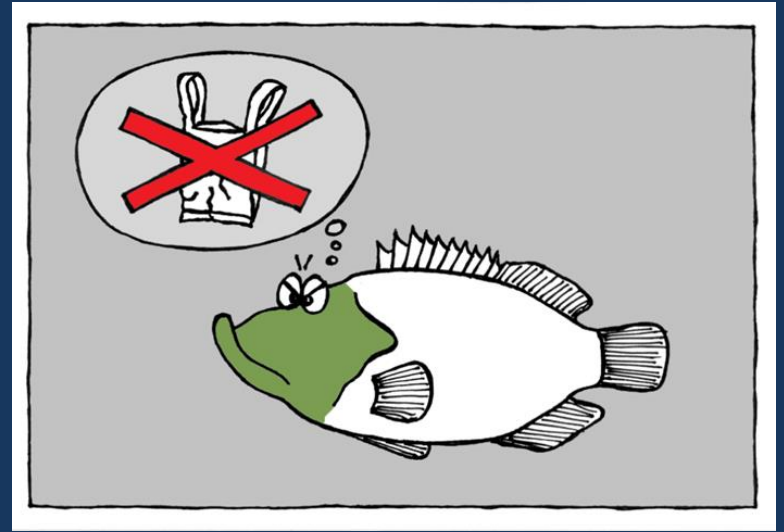
- Websites, social media and networks
- TV, radio, print media
- Print materials: flyers, posters ...

... and the book:



# CONCLUSION

It is time to  
act!





**Margarita Cimadevila**

[www.cimadevila.tk](http://www.cimadevila.tk)

**Wolfgang Trettnak**

[www.trettnak.com](http://www.trettnak.com)

**Curator:**

**Marilena Streit-Bianchi**