

# Maritime safety and pollution

*III. gimnazija, Split, Croatia*

LET US SAIL TOGETHER - LTTA IN RETHYMNO, CRETE , GREECE  
10th - 14th October 2022



**1. Human activities as polluters**

**2. The biggest polluter**

**3. Effect on marine environment**

**4. EU solutions**

**5. Problem solving - own solutions**

*01 | Human activities as polluters*

**Marine pollution** - combination of chemicals and trash, most of which comes from land sources and is washed or blown into the ocean, which results in damage to the environment, to the health of all organisms, and to economic structures worldwide.



## Croatia:

- 80% of pollution comes from the land
- 20% of pollution happens because of an irresponsible sea travel and fishing

The **most common** things found in the Adriatic Sea:

- paper
- plastic
- glass
- wood
- metal
- clothing
- tires

## Human activities:

- mass tourism (throwing the things listed before in the sea)
- sewerage system
- construction waste
- fishery (fishing nets - takes 600 years to dissolve)
- irresponsible behaviour (cigarettes, plastic, clothing, ...)
- other countries' trash (Albania, Italy, Montenegro...)



02 | *The biggest polluter*

## Irresponsible behaviour + mass tourism

- area along the Adriatic Sea - densely populated, highly developed
- waste - 4 million people living along its coast
  - number multiplied 6 times during tourist season (passenger ships, yachts)
- Mljet







- RED: beach litter monitoring
- GREEN: floating litter monitoring
- BLUE: sea floor litter monitoring

- 1 T of marine waste:  
plastic and styrofoam

- 6 year research shows high plastic intake:

- Vis: 4kg (per km per day)

- Mljet: 18.8kg (per km per day)

+INFO

## 03 | *Effect on marine environment*

Water pollution is affecting marine life in many harmful and threatening ways.

Some effects of pollution are:

- killing of hundreds of sea animals
- mass extinction of many species
- global warming
- oxygen deficiency

Marine pollution also affects people.



04 | *EU solutions*

# Marine Strategy Framework Directive 2008 (MSFD):

- protects marine biodiversity
- reduce the impact of human activities
- new research
- legal initiatives
- aims for **Good Environmental Status (GES)**

## 2020 report from the Commission to the European Parliament and the Council:

- a mixed picture
- dominant problems are still there
- underwater noise- spatially restricted, but still present
- eutrophication, microplastic, climate change

# DeFishGear project

- october 2013 - september 2016
- goals: estimation of the situation, regional network of marine waste experts, recycling system of abandoned fishing equipment, raising awareness
- organized section for recycling in several fishing ports
- improved knowledge
- management of activities that create waste



DeFishGear

[+ INFO](#)

-made by Pero Tutman, Institute of Oceanography and Fisheries

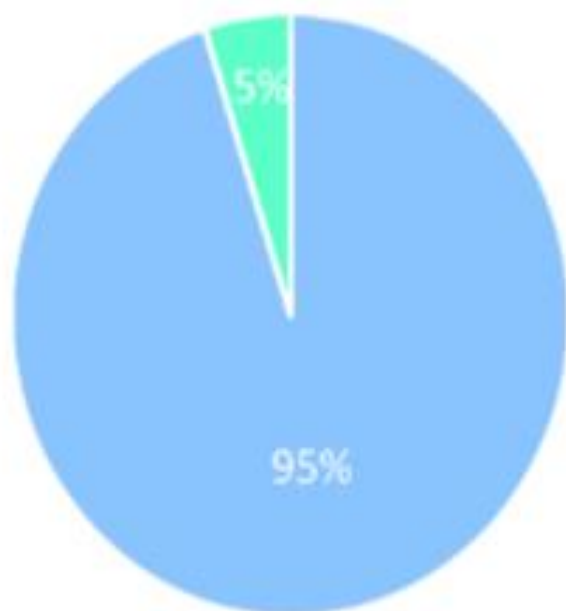


The Project is co-funded by the European Union,  
Instrument for Pre-Accession Assistance (IPA)



05 | *Problem solving - own solutions*

Do you think it is possible to solve the problem regarding marine pollution?



■ yes ■ no

If not, why not?

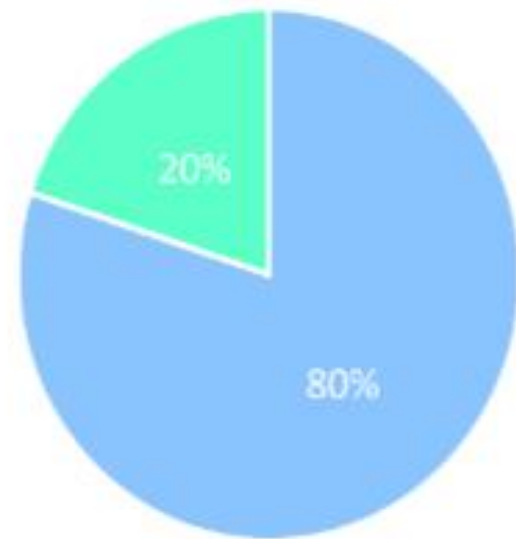
- Impossible to control
- people care more about themselves



What do you think would be the the best solution for this problem?

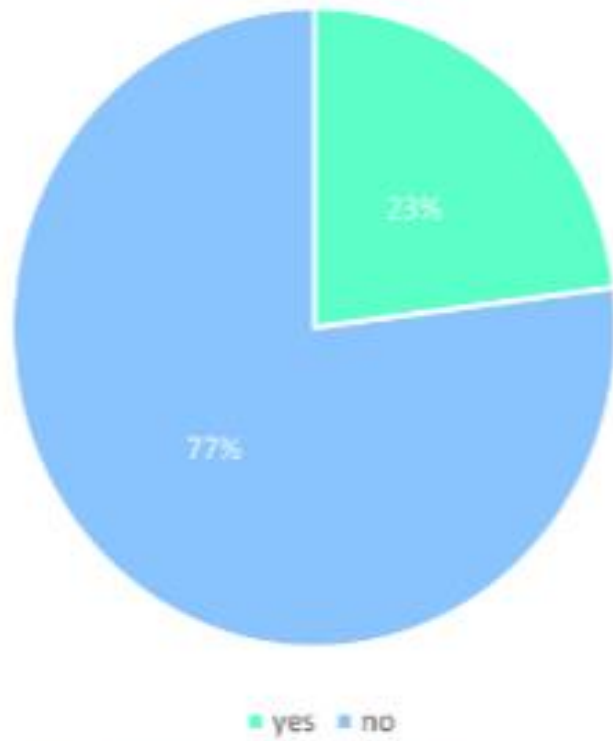
- higher punishments
- weekly clean the ocean partys
- organized sea cleaning
- raising awareness, education
- government working with environmental organizations
- reduce, reuse, recycle
- motivating, competition

Who do you think should do something about the problem?



■ you ■ everyone ■ the government ■ the EU ■ Environmental organizations

Have you already participated in any actions dealing with cleaning the beaches and helping the marine environment?



If yes, in what way have you participated?

- cleaning the beach
- picking up trash
- cleaning a local beach during science class
- self-initiated
- cleaning sea bottom for hobby
- cleaning with friends

What can we do in school to tackle this issue?

- raising awareness, educating, donating
- recycling bins
- cleaning during P.E. classes
- examining samples - Biology, Chemistry
- extra points
- volunteering actions
- making ashtrays for beaches
- pamphlets

## Not everything is all that bad:

- marine pollution - needs to be talked about
- sea quality research defined by a national regulation and EU directive



BLUE - excellent  
GREEN - good  
YELLOW - sufficient  
RED - poor

Thanks!



# Literature & Sources

- [https://civilnazastita.gov.hr/UserDocImages/CIVILNA%20ZAŠTITA/PDF\\_ZA%20WEB/Onečišćenje%20mora\\_brošura%20A5%20-%20web.pdf](https://civilnazastita.gov.hr/UserDocImages/CIVILNA%20ZAŠTITA/PDF_ZA%20WEB/Onečišćenje%20mora_brošura%20A5%20-%20web.pdf)
- <https://www.haop.hr/hr/kakvoca-mora-u-republici-hrvatskoj/kakvoca-mora-u-republici-hrvatskoj>
- [https://vrtlac.izor.hr/ords/kakvoca/kakvoca\\_detalji10](https://vrtlac.izor.hr/ords/kakvoca/kakvoca_detalji10)
- <https://mmpi.gov.hr/UserDocImages/arhiva/Projekt%20DeFishGear%20%E2%80%93%20sustav%20gospodarenja%20otpadom%20iz%20mora%20u%20Jadransko%20%E2%80%93%20jonskoj%20regiji.pdf>
- [https://www.europarl.europa.eu/doceo/document/P-9-2022-000605\\_EN.html](https://www.europarl.europa.eu/doceo/document/P-9-2022-000605_EN.html)
- <https://www.mdpi.com/2071-1050/13/9/4691>
- <https://www.green-sail.com/>

- [https://civilnazastita.gov.hr/UserDocsImages/CIVILNA%20ZAŠTITA/PDF\\_ZA%20WEB/Onečišćenje%20mora\\_brošura%20A5%20-%20web.pdf](https://civilnazastita.gov.hr/UserDocsImages/CIVILNA%20ZAŠTITA/PDF_ZA%20WEB/Onečišćenje%20mora_brošura%20A5%20-%20web.pdf)
- <https://www.haop.hr/hr/kakvoca-mora-u-republici-hrvatskoj/kakvoca-mora-u-republici-hrvatskoj>
- [https://vrtlac.izor.hr/ords/kakvoca/kakvoca\\_detalji10](https://vrtlac.izor.hr/ords/kakvoca/kakvoca_detalji10)
- <https://mmpi.gov.hr/UserDocsImages/arhiva/Projekt%20DeFishGear%20%E2%80%93%20sustav%20gospodarenja%20otpadom%20iz%20mora%20u%20Jadranskoj%20%E2%80%93%20jonskoj%20regiji.pdf>
- [https://www.europarl.europa.eu/doceo/document/P-9-2022-000605\\_EN.html](https://www.europarl.europa.eu/doceo/document/P-9-2022-000605_EN.html)
- <https://www.mdpi.com/2071-1050/13/9/4691>
- <https://www.green-sail.com/>