

Marine litter in the Adriatic & Ionian Sea

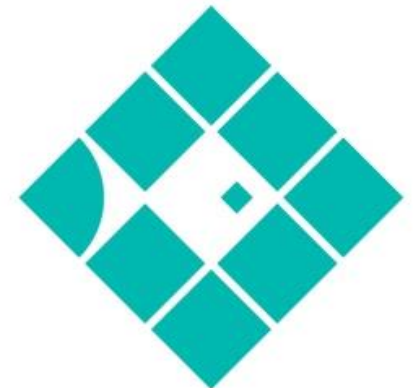


©Uroš Robič

Project co-funded by the European Union (ERDF, IPA funds)

Report on plastic waste status in the Adriatic & Ionian Sea

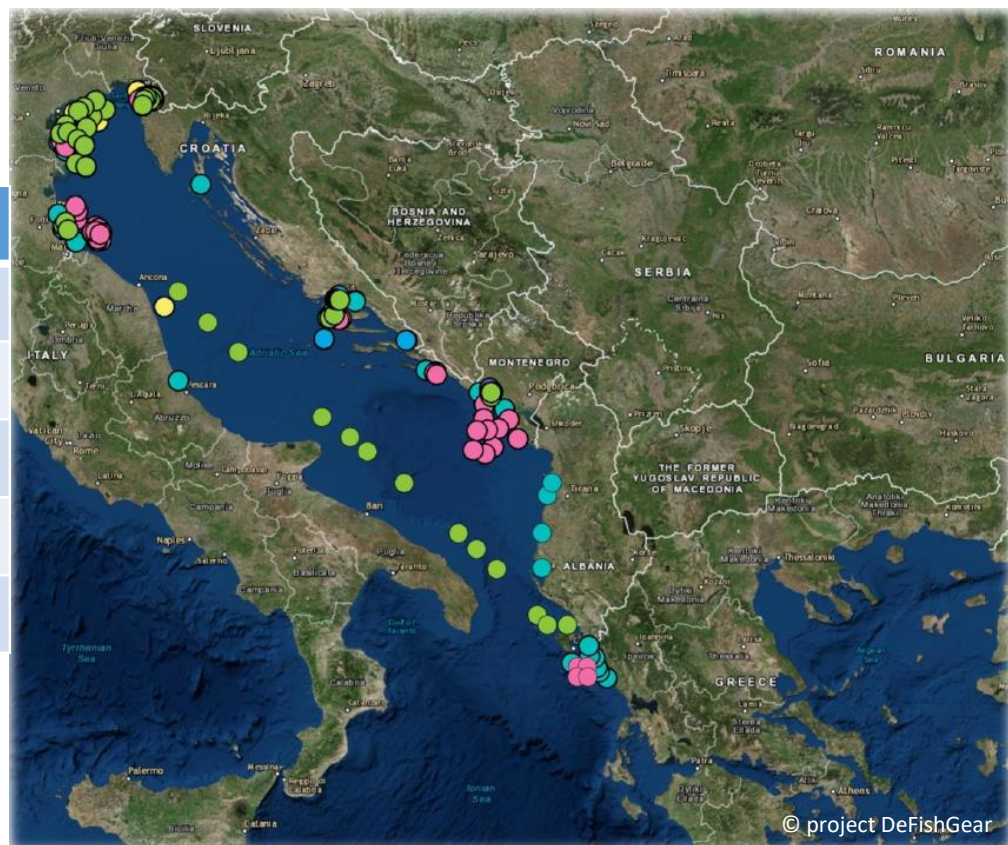
- Data and findings from DeFishGear project (IPA Adriatic CBC programme)
- 3 - year long project
- Harmonised and coordinated actions on the science-policy-society interface
- Provided strategic input to European and European Regional Seas to achieve good environmental status
- 16 Project partners from 7 countries
- Cooperation with fishermen
- www.defishgear.net



DeFishGear

Survey sites for macro litter

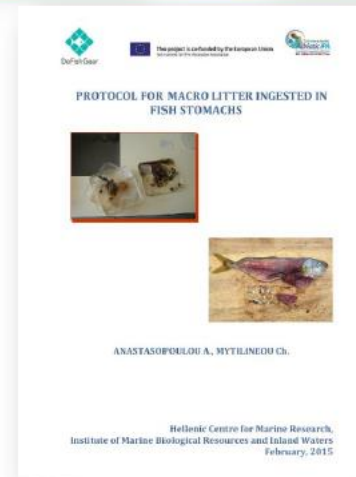
Compartment	Count of locations	Count of surveys
Beach	38	152
Biota	54	54
Seafloor	73	146
Sea surface	127	161
Total	292	513



Main goals of the project

- **Carrying out a comprehensive assessment of the status** (amounts, composition, impacts) of marine litter (macro-litter & micro-litter) in the Adriatic and Ionian Seas through harmonized and coordinated monitoring activities;
- **Development of recommendations and policy options based on sound scientific evidence and knowledge** to meet regional and national objectives regarding marine litter (EU Marine Strategy Framework Directive, UNEP/MAP Regional Action Plan on Marine Litter Management in the Mediterranean and Ecosystem Approach, EU Strategy for the Adriatic and Ionian Region, etc.).
- **Establishment of a Regional Network of Experts on marine litter;**
- **Development of capacities to monitor marine litter in a harmonized way** through reinforced exchange of experiences, techniques and know-how;
- **Setting up schemes to collect and recycle derelict fishing gear;** to carry out ‘fishing for litter’ activities in an environment-friendly way; to implement targeted recovery of ghost nets; to raise awareness of different target groups (fishermen, policy makers, educational community, etc.) on the impacts of marine litter and the types of action they should undertake to effectively address this issue.

Common protocols for monitoring of ML (macro)



Photoguide and database/web application/common data sheets/masterlist

http://defishgear.isvrs.si/DFG_codelists/default_view.html

G33 Cups and cup lids



G34 Cutlery and trays



G35 Straws and stirrers



G36 Fertiliser/animal feed bags



10 DATA REPORTING TEMPLATES

- ✓ Beach Macro (coded BeMa)
- ✓ Beach Micro (coded BeMi)
- ✓ Biota Macro (coded BiMa)
- ✓ Biota Micro (coded BiMi)
- ✓ Fishing litter (coded FiLi)
- ✓ Sea surface Macro (coded SsMa)
- ✓ Sea surface Micro (coded SsMi)
- ✓ Seafloor Macro Scuba (coded SfMaSc)
- ✓ Seafloor Macro Trawl (coded SfMaTr)
- ✓ Seafloor Micro (coded SfMi)



© project DeFishGear

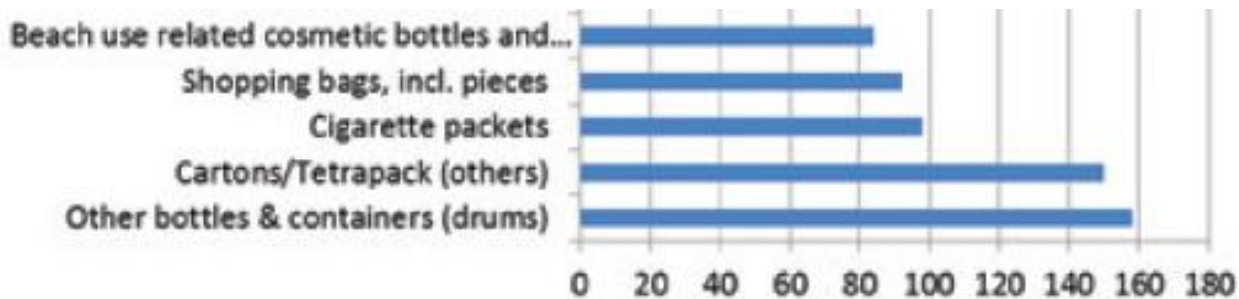
Building upon the different existing marine litter sources classification lists (UNEP/MAP, 2011; MCS, 2013; Veiga et al., 2016) and taking into consideration the 'Masterlist' of litter item categories, the specificities of the Adriatic and Ionian region with regards to the sources of the different litter items, as well as the beach compartment where these litter items were found, the existing classification list for items and their respective sources was refined.



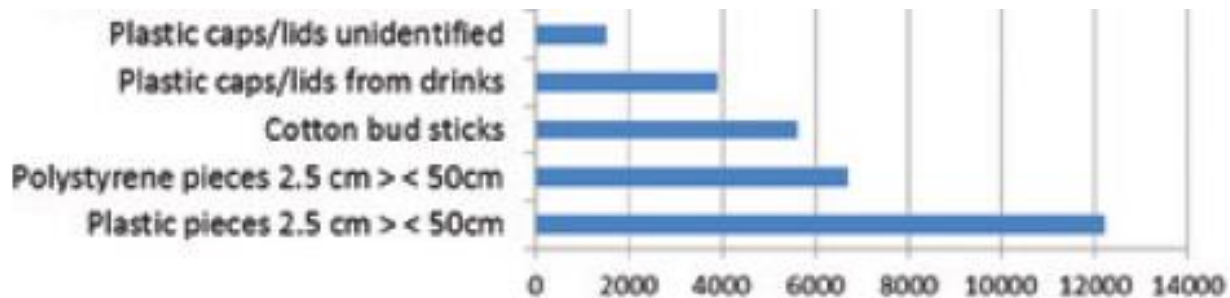


Marine litter on beaches per country (DefishGear project)

Albania*



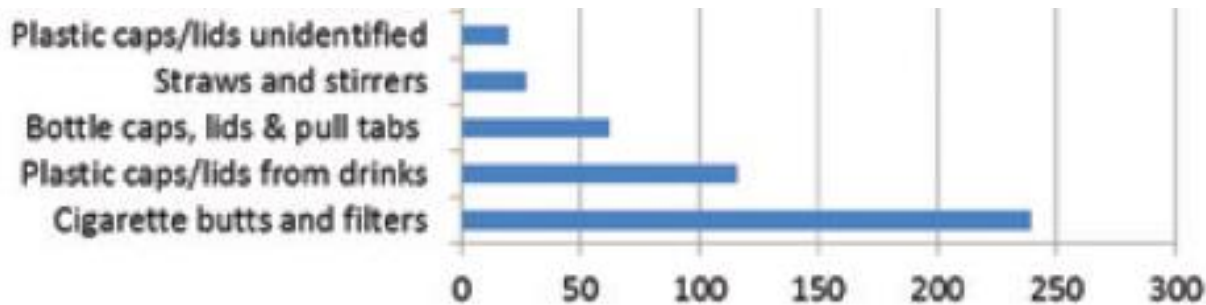
Croatia*



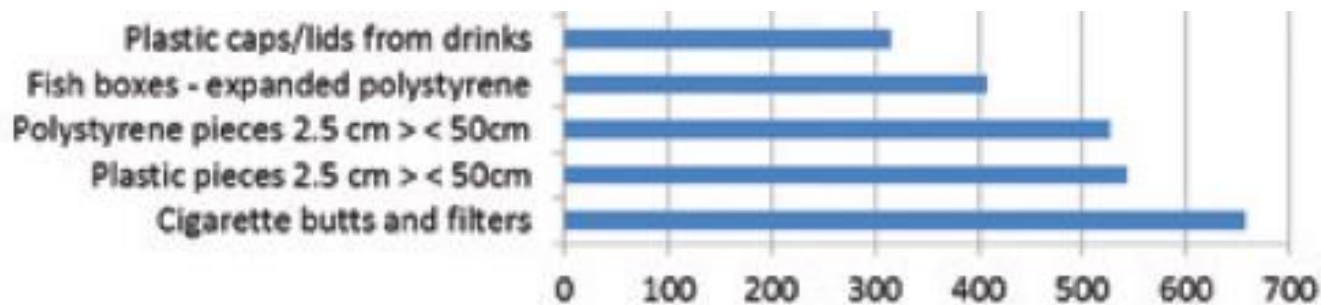
* Results shown on aggregated basis of total litter counts in all surveyed beaches in country

Marine litter on beaches per country (DefishGear project)

Bosnia and Hercegovina*

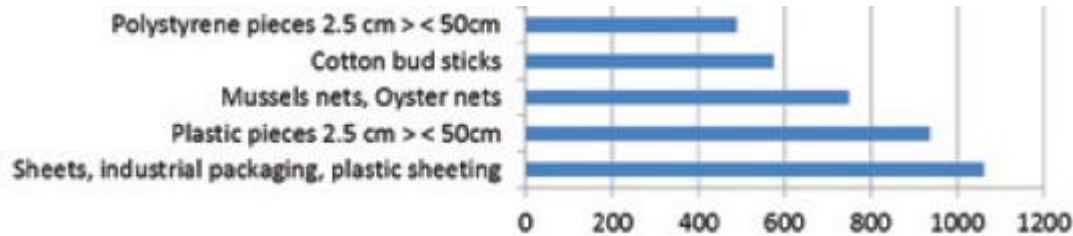


Greece*

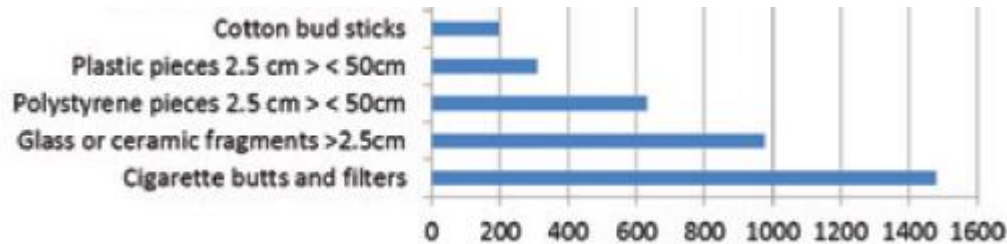


* Results shown on aggregated basis of total litter counts in all surveyed beaches in country

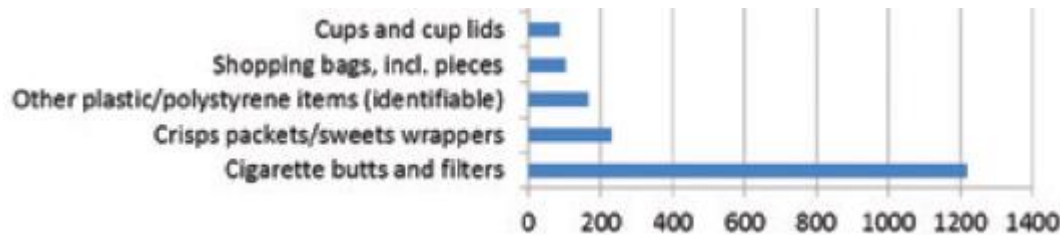
Marine litter on beaches per country (DefishGear project)



Italy*



Slovenia*



Montenegro*

* Results shown on aggregated basis of total litter counts in all surveyed beaches in country







Marine litter (macro) status – vary from country to country (2015) (DefishGear project)

Beach litter			
TOP5	Code	Items name	%
1	G79	Plastic pieces 2.5cm >> 50 cm	20
2	G82	Polystyrene pieces 2.5cm >> 50 cm	12
3	G95	Cotton bud sticks	9
4	G21	Plastic cups/lids from drinks	7
5	G27	Cigarette butts and filters	6

Sea surface			
TOP5	Code	Items name	%
1	G2	Bags	28
2	G79	Plastic pieces 2.5cm >> 50 cm	23
3	G95	Fish boxes – expanded polystyrene	15
4	G67	Sheets, industrial packaging	12
5	G38	Cover/Packaging	6

Sea floor - scuba			
TOP5	Code	Items name	%
1	G200	Bottles, including pieces	29
2	G6	Bottles	14
3	G175	Cans (beverage)	12
4	G10	Food containers	4
5	G124	Other plastic/polystyrene items	4

Sea floor - trawl			
TOP5	Code	Items name	%
1	G67	Sheets, industrial packaging	17
2	G2	Bags	16
3	G10	Food containers	14
4	G45	Mussel nets, Oyster nets	14
5	G6	Bottles	9







©Andraž Lavtižar



©www.beatthemicrobead.org



©Uroš Robić



©www.thespruce.com

Conclusions and recommendations

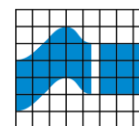
- Detecting the source is fundamental for identifying targeted measures
- Majority of litter items cannot be directly connected to a particular source e.g. plastic pieces (G79)
- Regional differences in the source of litter, different litter items
- Rivers as pathways of marine litter should be further researched
- Poor waste management practices, tourism and recreational activities significantly contributed to the amount of litter
- The use of the ‘Master List of Categories of Litter Items’ was an effective way to identify the main sources of marine litter in the Adriatic-Ionian macroregion
- The ‘Masterlist’ should be enriched, updated and refined in order to attribute more items to a certain source

Conclusions and recommendations

- The misconceptions and misunderstandings related to possible solutions, i.e. the case of biodegradable or bio-based plastics, or end-of-pipe solutions like cleanups or the not viable option of microplastics removal from habitats;
- The fact that marine litter is often considered as someone else's problem, inhibiting coordinated, diversified and multi-level actions;
- For a successful awareness-raising campaign include a celebrity whose promotional activities will have a bigger impact on target population
- For the current marine litter pollution don't blame your neighbours, the enemy might be yourself, because with consumption we are all part of this problem. 90 % of marine debris is made out of plastic and 60 % of all beach litter derives from tourism activities.
- Plastic pollution doesn't know borders, that's why a Regional Action Plan is required. The countries need to stop blaming each other and start to work together in prevention of plastic pollution. The exchange of good practices between neighbouring countries is necessary.

Thank you for your attention!

Uroš Robič
uros.robic@izvrs.si



**INŠTITUT
ZA VODE
REPUBLIKE
SLOVENIJE**

*Institute
for Water of
the Republic
of Slovenia*

Project co-funded by the European Union (ERDF, IPA funds)

Partners: General Directorate of Water Management, Hungary | Global Water Partnership Central and Eastern Europe, Slovakia | International Commission for the Protection of the Danube River | Ministry of Water and Forests, Romania | Ministry of Foreign Affairs and Trade, Hungary | National Administration "Romanian Waters", Romania | National Institute of Hydrology and Water Management, Romania | Public Water Management Company "Vode Vojvodine", Serbia | Regional Environmental Center for Central and Eastern Europe, Hungary | The Jaroslav Černi Institute for the Development of Water Resources, Serbia | Water Research Institute, Slovakia | World Wide Fund for Nature Hungary

Associated Partners: Interior Ministry, Hungary | Republic of Serbia Ministry of Agriculture and Environmental Protection – Water Directorate | Secretariat of the Carpathian Convention (SCC), Austria | State Agency of Water Resources of Ukraine | Tisza River Basin Water Resources Directorate, Ukraine