Slashing Plastic Pollution and Breaking Away from a Throwaway Society: Turning Science into Policy & Actions

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Marine Litter Expert of WES



For more than twenty five years joining forces & building bridges in the Euro-Mediterranean area

MIO-ECSDE's KEY ROLE IN ADDRESSING MARINE LITTER

Promoting coresponsibility & consensus building

Building capacities

Filling in the knowledge gaps

Strengthening decision making & implementation

Raising public awareness

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OUR PROJECTS ON MARINE LITTER MONITORING & PARTICIPATORY SCIENCE

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UNESCO & aCF Marine Litter Project (2022-2023)

ENI CBC Plastic Busters CAP (2021-2023)

EU-funded Water and Environment programme (2019-2023)

LIFE+ OPERATING GRANT FOR NGOs (2020-2021)

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Interreg Med PlasticBusters MPAs (2018-2022)

Interreg Med ACT4LITTER (2017-2018)

EU SWIM-H2020 SM (2017-2019)

FIT-FOR-PURPOSE DATA FOR A COMPREHENSIVE DIAGNOSIS OF THE MARINE LITTER PROBLEM TO SUPPORT TAILOR-MADE ACTIONS ON THE GROUND!







MARINE LITTER MONITORING & KEY LEGISLATIVE FRAMEWORKS

KEY LEGISLATIVE FRAMEWORKS

EU Marine Strategy Framework Directive Plastics Strategy Single-Use Plastics Directive Barcelona Convention Ecosystem Approach Regional Plan for Marine Litter Management in the Mediterranean



A MAJOR RECENT POLICY ADVANCE



A beach litter threshold value has been adopted

< 20 litter items for every 100

Environmental

THE SCIENCE WE NEED FOR THE OCEAN WE WANT

PARTICIPATORY SCIENCE is a more inclusive term that refers to research conducted in partnership between trained experts and members of a "community" or CSOs, including NGOs.
Environmental NGOs are in many cases groups of professionals with strong competences in environmental research dedicated to the production of accurate, up-to-date research and data on the most pressing environmental issues.

Researchers	Competent authorities	Environmental NGOs
MPA managers	Educators & students	Citizens



GENERATING FIT-FOR-PURPOSE MARINE LITTER DATA WITH NGOs



Science of The Total Environment Available online 23 November 2019, 135058 In Press, Journal Pre-proof ?

Plastic pollution on the Mediterranean coastline: generating fit-for-purpose data to support decision-making via a participatory-science initiative

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- e Hellenic Marine Environment Protection Association. Athens, Greece
- f Marevivo, Rome, Italy
- g Association Sunce, Split, Croatia



7 environmental NGOs: AKTI PROJECT AND RESEARCH CENTRE (Cyprus), MAREVIVO (Italy), HELMEPA (Greece), MIO-ECSDE (Greece), SEAQUARIUM MARINE INSTITUTE (France), SUNCE (Croatia) and U MARINU (France).

Beach litter surveys in **5** Mediterranean countries; a total of **23** sites surveyed; a total of **62** beach transects performed, extending over a distance of 6,200 m and covering an area of 113,780m²

MARINE LITTER DENSITIES & COMPOSITION







SINGLE-USE PLASTICS







Plastic pieces 2.5 cm > < 50cm (G79)



Cigarette butts and filters (G27)



Plastic caps/lids from drinks (G21)



Cotton bud sticks (G95)



Straws and stirrers (G35)





Glass bottles (G200)

Crisps packets/sweets wrappers (G30)

String and cord (diameter less than 1cm) (G50)



SMOKING RELATED ITEMS



Smoking related items (%)

Non-smoking related items (%)



PLASTIC POLLUTION & SUPs IN MEDITERRANEAN MPAs

Beach code	Beach name	Average number of items per	
		100m stretch	
GRE-ALI	Alyki Kitrous	12896*	
ITA-MIR	Miramare	2050	
FRA-CRO	Crouste	1182	
SPA-MES	Cala Mesquida	1134	
ITA-TOR	Tordigliano	752	
ITA-MAR	Marina del Cantone	681	
ITA-PAL	Cala Palme	535	
SPA-TGA	Torre Garcia	467*	
ALB-ZVE	Zvernec	444	
ITA-PIS	Cala Pisana	430	
ITA-CAP	Capo San Marco	405	
TUR-ACK	Akcapinar	399	
SLO-STR	Strunjan	323	
SLO-BEL	Bele Skale	315	
SPA-EMB	Embarcadero de los Escullos	296	
GRE-SCH	Schinias	174	
GRE-CHE	Cherronisi	167	
FRA-ESP	Espiguette	113	
FRA-FOU	Fourat	106	
FRA-BOU	Boucanet	78	
GRE-KAZ	Kazarba	61	
SPA-SER	Serrallo	46	





Vlachogianni , 2019. Marine Litter in Mediterranean coastal and marine protected areas – How bad is it. A snapshot assessment report on the amounts, composition and sources of marine litter found on beaches. Interreg Med ACT4LITTER & MIO-ECSDE.

PLASTIC POLLUTION & SUPs IN MEDITERRANEAN MPAs



Item code Item name Items count % G79 Plastic pieces 2.5 cm > < 50cm 4012 16,3 G82 1382 5,6 Polystyrene pieces 2.5 cm > < 50cm 5,0 G45 Mussels nets, Oyster nets 1221 2 G23 Plastic caps/lids unidentified 1217 5,0 G124 Other plastic/polystyrene items (identifiable) 1203 4,9 G8 Drink bottles >0.51 946 3,8 6 G21 Plastic caps/lids from drinks 3,5 850 3,3 G210 Other glass items 814 3,2 Drink bottles <=0.51 789 G7 9 3,0 G171 Other wood < 50 cm 731 10





Vlachogianni, 2019. Marine Litter in Mediterranean coastal and marine protected areas – How bad is it. A snapshot assessment report on the amounts, composition and sources of marine litter found on beaches. Interreg Med ACT4LITTER & MIO-ECSDE.

PLASTIC BUSTERS MPAs: A HARMONIZED DIAGNOSIS OF THE ML PROBLEM IN MPAs

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THE JOINT LIST OF LITTER CATEGORIES



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THE USE CATEGORIES



Type-code	Name
ag_	agriculture related
aq_	aquaculture related
cl_	clothing
co_	building & construction related
fc_	food consumption related
fi_	fisheries related
hy_	personal hygiene and care related
md_	medical related
nn_	undefined use
re_	recreation related
sm_	smoking related
vk_	vehicle related
hu_	hunting related

THE JOINT LIST & ITS HIERARCHICAL STRUCTURE



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THE FIRST OF ITS KIND DIAGNOSIS OF THE ML PROBLEM IN THE MEDITERRANEAN





PREPARED BY THE INTERREG MED PLASTIC BUSTERS MPAs PROJECT http://platicbusterimpas.interreg.med.eu

Mediterranean



Report on the results and findings of the piloted marine litter monitoring approach to assess the impacts of marine litter on biota

> PREPARED BY THE INTERREG MED PLASTIC BUSTERS MPAS PROJECT Mediterranean PLASTIC BUSTERS PLASTIC BUSTERS MPAS





Self-paced distance learning course

Plastic Busters MPAs module on how to monitor the presence and effects of MARINE LITTER <u>https://envirolearning.net/c</u> <u>atalog/info/id:153</u>

TRANSLATING SCIENCE INTO ACTIONS





NOVELTY – MARINE LITTER PREVENTION & MITIGATION ACTIONS AT THE HEART OF THE PLASTIC BUSTERS MPAs

Source:

MSFD TGML, 2021. List of Research Projects prepared for the MSFD Technical Group on Marine Litter.







FROM THE ANTHROPOCENE TO THE PLASTOCENE...



WISE USE OF PLASTICS WITHIN A CIRCULAR ECONOMY



THE PILOTED & REPLICATED MEASURES





Setting up a SUPs-free network of coastal food and beverage outlets



Setting up the adopt-abeach scheme



Establishing an ALDFG scheme to tackle fisheries & aquaculture litter



Promoting the sustainable management of mussel farming nets



Developing an awareness raising campaign for cigarette-butt free beaches



Developing a network of collection points for beverage containers



Setting up a reusable cup delivery system for beach bars

PLACE THE EUROPEAN WASTE HIERARCHY AT THE HEART OF MARINE LITTER PREVENTION & MITIGATION ACTIONS

Phase out or eliminate	This option refers to the absolute removal of a SUP-related item from a business, i.e. no bottled water is given to customers.	
Reuse	This option refers to deploying a reusable alternative, i.e. by joining a reusable coffee-to-go cup scheme.	
Reduce	This option refers to the reduction of the use of a SUP-related item, i.e. by providing it to a customer only when requested (handing out a carrier bag only upon request).	
Replace with a sustainable or more sustainable alternative	This option refers to replacing a SUP-related item in use with a less harmful alternative i.e. replacing a plastic straw with a 'straw' straw or replacing a plastic cup with a FSC non-plastic-coated paper cup.	
Improve recycling	This option refers to ensuring that a SUP-related item that is necessary due to a regulation or due to the unavailability of alternatives, is fully recyclable, is appropriately collected and recycled.	

MPAs

BUST THE MYTHS & MISCONCEPTIONS ABOUT MARINE LITTER SOLUTIONS

Substituting 'conventional' plastics with biobased plastics is merely a distraction to the marine litter issue. End-of-pipe solutions such as cleanup operations cannot address the issue.

Biodegradable and compostable plastics pollute our coasts and seas just like conventional plastics, as they behave quite differently in the marine environment than in a terrestrial setting (landfill, composter) where the conditions required for rapid biodegradation are unlikely to occur. In addition, mixing of such plastics with normal plastics in the recycling stream may compromise the properties of the newly synthesised polymer.

PHOTOGRAPH BY JUSTIN HOFMAN



TURNING SCIENCE INTO POLICY & ACTIONS THE MAIN CHALLENGE OF OUR ERA

Fit-for-purpose data

Participatory decision-making & bottom up approaches

Feasible & effective solutions

Coordinated & multilevel actions

Methodologicallysound & sciencebased processes Social innovations for a paradigm shift in the way we produce & consume











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For more than twenty five years joining forces & building bridges in the Euro-Mediterranean area

THANK YOU FOR YOUR ATTENTION!

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