BUILDING GLOBAL IMPACT THROUGH MICROPLASTICS AWARENESS AND LOCAL ACTIONS

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ENVIRONMENTAL PROTECTION COLLEGE 2006 ...

FACULTY OF ENVIRONMENTAL PROTECTION 2022 ...







- ✓ an independent higher education institution that works interdisciplinary in the field of environmental sciences
- ✓ it combines natural sciences, technical, biotechnical, social sciences, and humanities

study programmes: ENVIRONMENTAL PROTECTION AND ECO-TECHNOLOGIES



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FEP PROJECTS

Name of the research group: INSTITUTE FOR ECOTECHNOLOGY AND SUSTAINABLE DEVELOPMENT

R&D and applicative projects:

- ✓ (co)financed by the Slovenian Research Agency (ARIS) & EU programmes (Horizon, Interreg Europe, Biodiversa, EFSA...).
- ✓ implementing projects within the former Lifelong Learning Programme (2007) and present Erasmus+ programmes (2014-2020, 2021-2027)

MicPla9ROB

Microplastics: tomorrow's macro problem















Co-funded by the European Union



https://www.iflscience.com/peanut-turtle-still-alive-and-saving-worlds-oceans-28694

POLLUTION DOESN'T RESPECT BORDERS







WHAT ARE PLASTICS?

Plastics are synthetic polymers, often derived from petroleum.

- Extremely versatile: lightweight, strong, flexible, and resistant to water and chemicals.
- ✓ Inexpensive to manufacture and mold into different shapes.
- ✓ Widely used in packaging, construction, automotive, textiles, healthcare, electronics, etc.

These properties make plastics popular, but also environmentally persistent.



PLASTICS

Leo Baekeland (1907) BAKELIT - the first fully synthetic plastic

MICROPLASTICS

Charles Moore (1997) Richard Thompson (2004)





MICROPLASTICS

Microplastics are solid, water non-soluble plastic particles consisting of polymers and functional additives with a size generally less than 5 mm.



EUFIC, 2021 (<u>http://www.eufic.org/en/food-safety/article/microplastics-in-food-and-water-are-they-harmful-to-human-health</u>)

• Unintentionally formed when larger pieces of plastic, unintentionally formed when larger pieces of plasticbreakdown due to environmental factors like sunlight, wind, and abrasion

• Intentionally manufactured and added to products for specific purposes.

WHY FOCUS ON MICROPLASTICS?

✓ SIZE

- ✓ Invisible but everywhere air, water, soil, and even our food.
- \checkmark Linked to health risks in humans and animals.
- ✓ Durability, non-degradability
- They enter the environment through many point & nonpoint sources hard to monitor and remove disperse particles
- ✓ Accumulation & Bioaccumulation
- ✓ Release of other chemicals **ADITIVES** (hormone disruptors, carcinogens,...)
- Binding of pollutants to the surface
 --> e.g. hydrophobic, insoluble molecules in water (POPs)
 --> input into the food chain
- ✓ Microorganisms proliferating on the surface --> impact on ecosystem ecology

TACKLING THEM REQUIRES EDUCATION, INNOVATION, AND BEHAVIOR CHANGE.





Bianco and Passananti, 2020

JUST LIKE PLASTICS, MICROPLASTICS ARE FOUND EVERYWHERE!



FROM AWARENESS TO EMPOWERMENT

We designed three age-specific workshops to raise awareness and inspire changes:

Age Group	Focus Area	Key Activities
Elementary School	Microplastics in Clothing	Games, Interactive Learning
High School	Everyday Plastics &	Experiments, Mini-Research
	Ecosystem Impact	
University	Innovations & Alternatives	Environmental Research
		Projects









MIKROPLASTIKA IZ NAŠIH OBLAČIL

















Mikroplastika – jutrišnji makro problem

Aprila se je končal leto in pol trajajoč mednarodni projekt evropskega programa Erasmus+, ki je obravnaval aktualno okoljsko tematiko današnjega časa – mikroplastiko



Na natečaju je sodelovala 34 videne, 26 iz Slovenije in 8 iz italije, 81 ph je pripravlo približno 100 tekmevalore.

dia, kakovot ja jasimot, kee so oddžati Sa padagi teh iakuterų priprediamo tudi nadales supe suruma natimitete projekta o mikroplastiki ter spano na najbūle, ė je poredala soordinatorka projekta Alenka Dermol.

Projekt je bil uzmetjen predventi v izbeljkanje uzavelovnesti gjede problematike mikroplastike med mladimi, uzbelje plastike med mladimi, usbarovami. Dijskom, itudientom in uči-



njem v pripravi najbrijšega in najbrij kreatitvnoga višna na borno «lovat inva nikraujatikes. Na mešaju je oslotivnaji 24 višeov. 26 iz Slovennje in 8 iz Italije, ki jih je priprevilo prihližnu 100 esimevalove Zmagovalni višes, ki je prejet nagvitjo oceso na politaji je na VituTube kanatu pro ješta ibral satvet všečkov, s ustvarili drijaši Gamazije i isetnje šok Rudniža Marati





NE BODI SUŽENJ PLASTIKI! ZMERAJ OBSTAJA ALTERMITIVA!







LET'S FOLLOW EDU4PlastiCircular

Reducing Plastic in Schools: EDU4PC Project Workshop

ALI SE UTAPLJATE V PLASTIKI?



POIŠČI ZELENO ALTERNATIVO! NF BODI SUŽENJ PLASTIKI!



www.fvo.si

FROM LOCAL STEPS TO GLOBAL IMPACT

The fight against microplastic pollution is not just a local issue but a global challenge

- Everyone can contribute to cleaner ecosystems.
- Let's rethink plastic and embrace circular, sustainable alternatives.
- Together, we shape a future where awareness leads to action.

EDUCATE. ACT. INSPIRE.

THANK YOU!

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