



BLUECYCLE

BEYOND MARINE PLASTIC WASTE

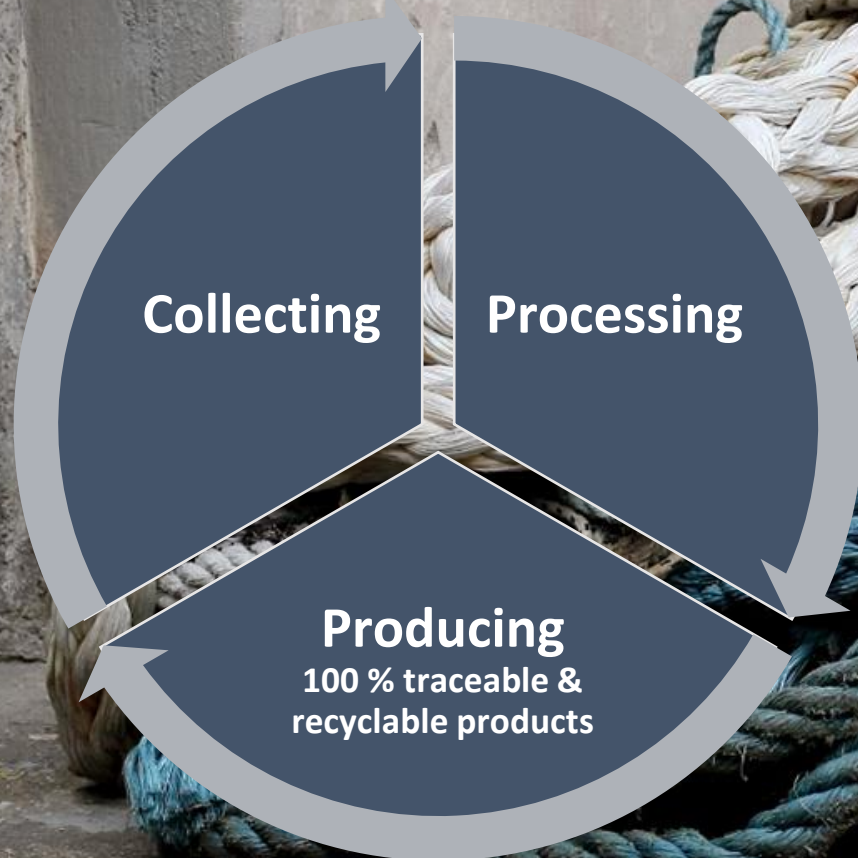


640,000 kgs fishing gear are lost at sea annually

30% of all marine plastic in the EU is fishing gear

Only **1.5%** of this fishing gear is recycled

Holistic Approach



Our sources

- BlueCycle fishing equipment collection points
- AR marine litter collection stations
- Manufacturers of fishing and shipping gear
- Aquacultures & Mussel farms
- Marine and Coastal clean-ups of collaborating institutions and NGOs



530,000 kgs

Material categorized depending on condition upon arrival (BlueCycle Condition Scale)



Category 1a. Pre-Consumer - Almost excellent condition



Category 1b. Pre-Consumer - Medium condition



Category 2a. Post Consumer - Good Condition. Minimal organic and other matter detected.



Category 2b. Post Consumer – Obvious organic and other matter and possible degradation detected



Category 2c. Mixed Waste - Maximum organic and other matter and possible degradation detected

Then by material type

- **PP** (ropes, nets, fabrication waste, mussel farm nets)
- **PE** (nets, aquaculture nets, mussel farm nets)
- **PA6** (ropes, aquaculture nets, gillnets)
- **PES** (ropes)
- **HDPE** (ropes, nets, coverings, casings)
- **Dyneema** (ropes, nets)

PRE CONSUMER FABRICATION WASTE
POST CONSUMER USED MATERIAL



Pollutants composition

- Algae (polyssacharrides, proteins, lipids)
- Seashells (calcium carbonate with only a small quantity of protein 2%).
- Egg case (Chondrichthyes) (collagen protein strands)
- Soil dirt primarily chemical composition is Chloride (<50%), followed by Sodium ($\sim\pm 30\%$) and Sulphate and presence of Magnesium >5%, >2%, Calcium and >2% Potassium.



The BlueCycle Lab

The first zero-waste specialized center for the treatment and recycling of marine plastic waste.

Hosting the first robotic Large-Scale 3D Printing Lab in Greece. Operated by The New Raw








A place to test innovative ideas and develop solutions to the marine plastic waste problem.





























R&D – product development, material composition, life cycle analysis, waste tracking


100% recyclable and traceable products



Ensuring Material Traceability for Life Cycle Analysis (in-house app development)

	STCK RM
ACNg2021624-cf247048 125.10	
	PE Aquaculture Cage Nets
ACNTw2021922-032ba82f 74.70	
	PA6 Aquaculture Cage Nets Treated
ACNw2021624-95abe1e5 104.20	
	PA6 Aquaculture Cage Nets
Cww20211022-d18d8c65 400.00	
	PE Caps white
ESNPA6w2021106-6b324844 12.00	
	PA6 Extruder Scraps Noise P A 6
 PROCESS (<30 day	

	PROCESS (<30 days)	  
Shredding		
ACNg2021624-cf247048 78.70		
ACNg2021624-cf247048 24.85		
12/10/2021, 11:52:48 am		
   		
ACNg2021624-cf247048 7.65		
13/10/2021, 07:31:32 am		
   		
ACNg2021624-cf247048 15.80		
13/10/2021, 00:56:34 pm		
   		
ACNg2021624-cf247048 30.40		
18/10/2021, 07:23:33 am		
   		
Clean/Drying		
ACNw2021624-95abe1e5 88.30		
Clean/Drying 0.00		
27/10/2021, 10:18:37 am		
   		
Clean/Drying 0.00		
02/11/2021, 11:26:07 am		
   		

	Outbound
All	
Pellet 472.10	
RM (Raw Material) 465.55	



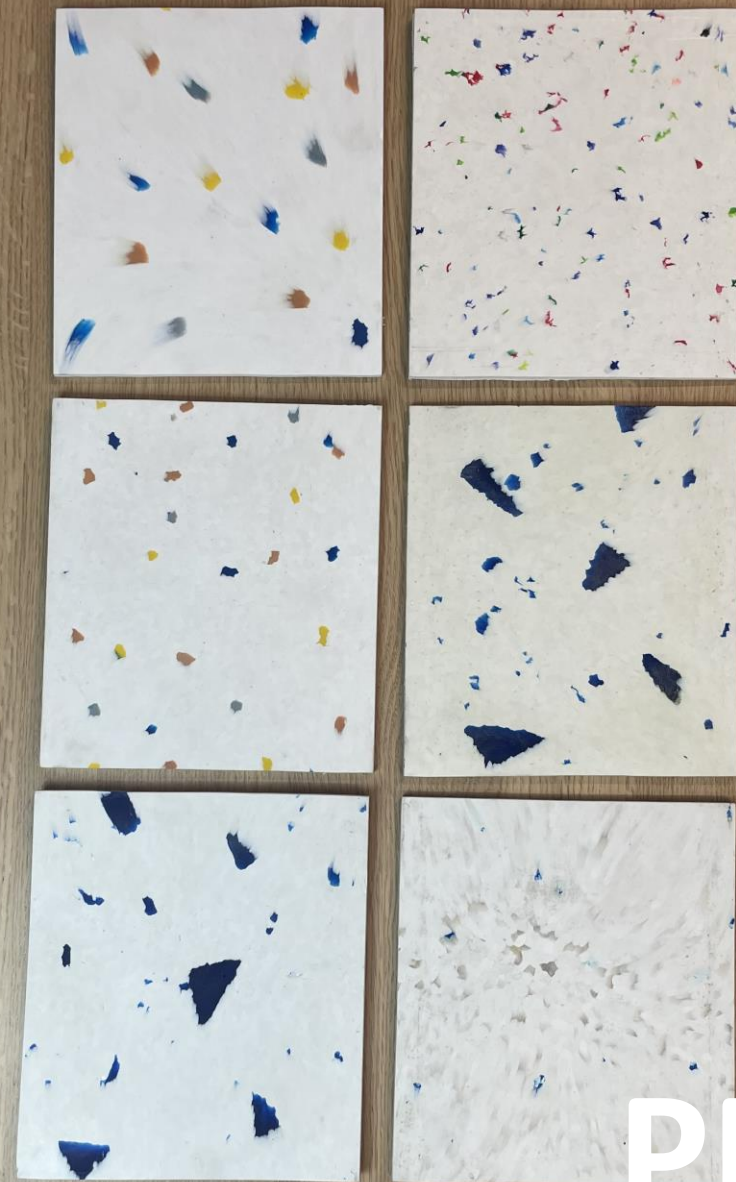
PE



PA6



PA6



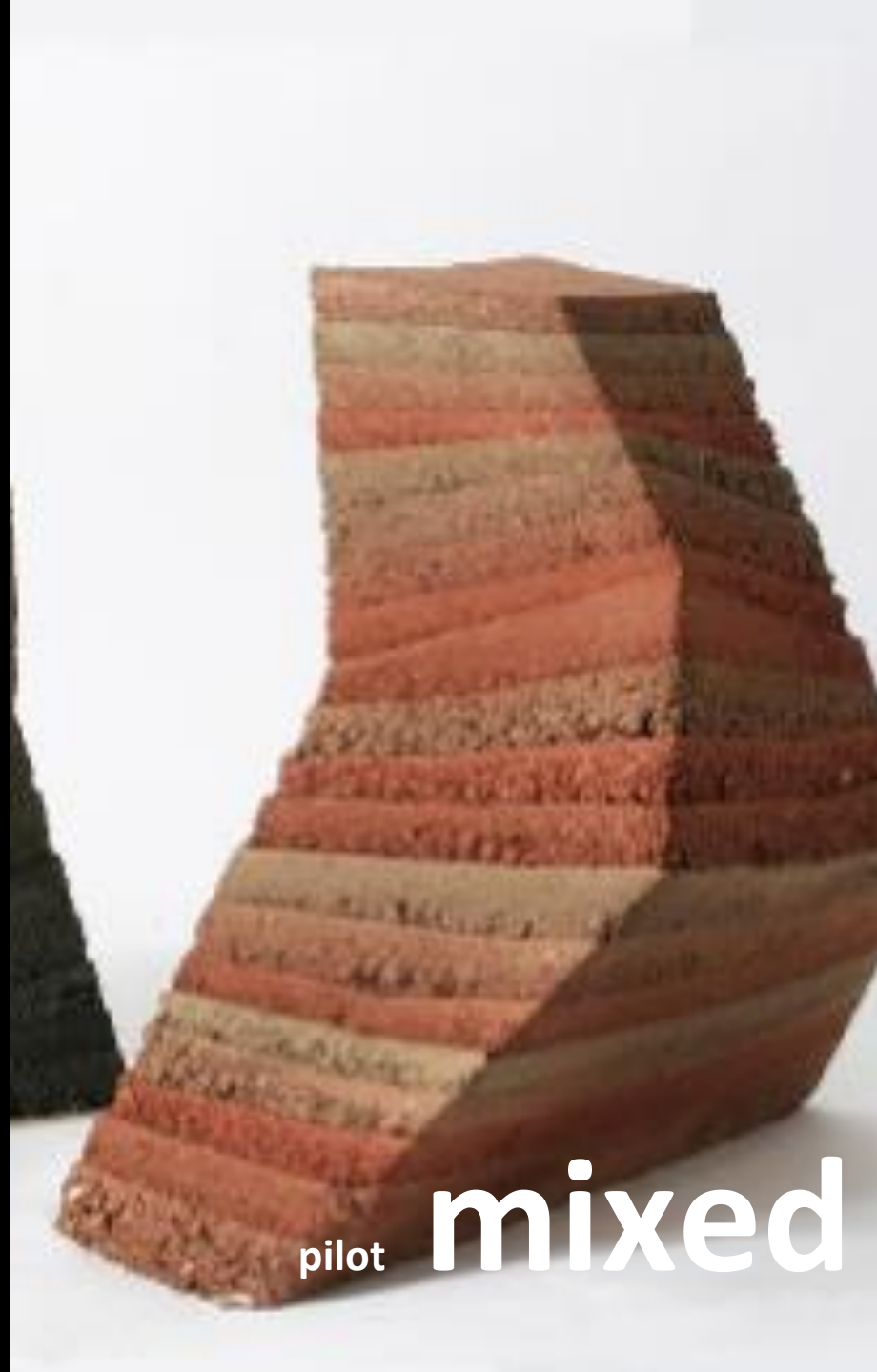
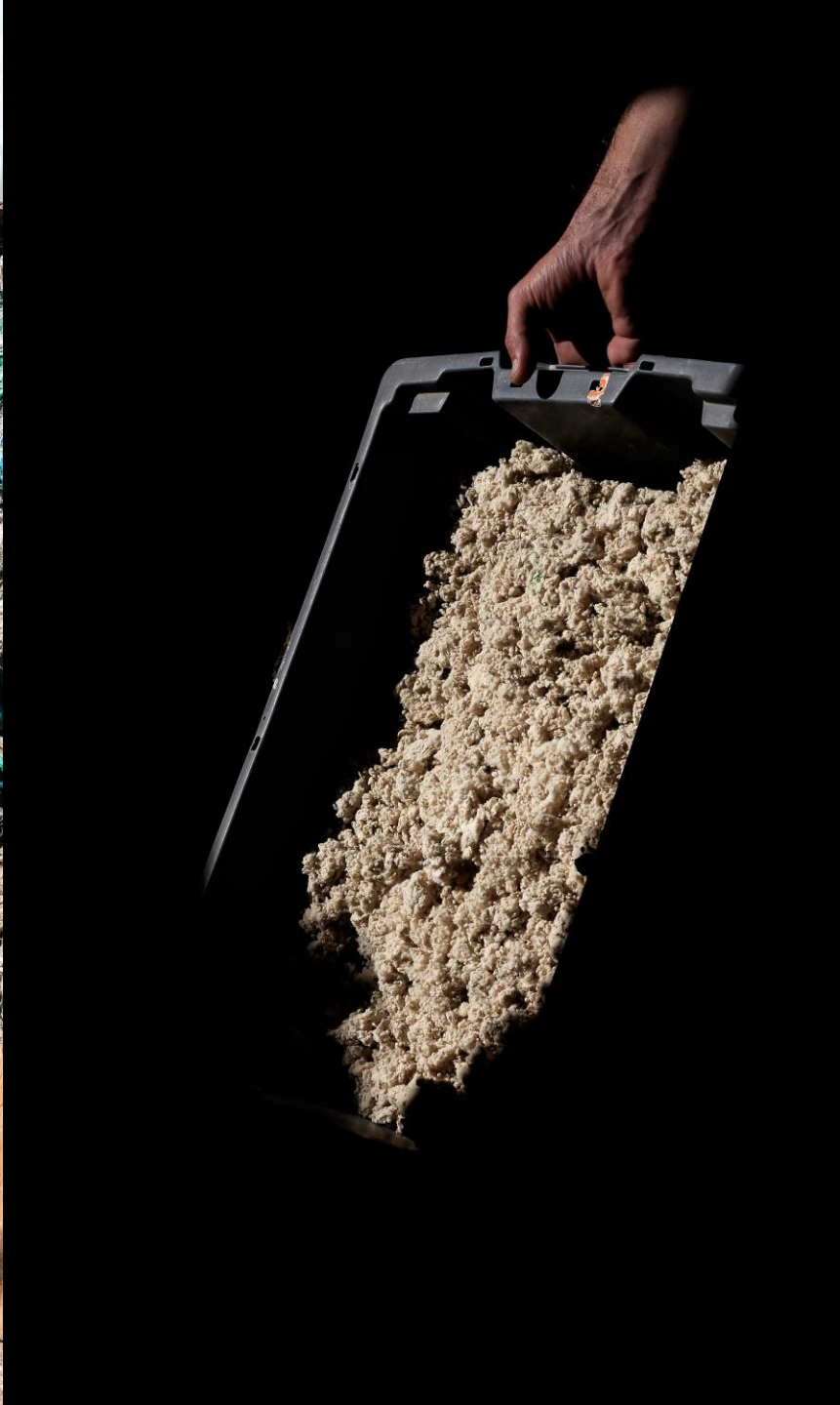
PP



PP



pilot **PA6**



pilot **mixed**

Our work in the community

Engagement with all stakeholders (government, industry, local communities)

Highlight the qualities of fishing and shipping equipment and its potential as a high-quality material and not as a waste

Go to the source (fishing harbors, industry)

Apply circular economy principles at every stage of the process.



Our Goals

Continuing research for fishing & shipping gear recycling

Optimization, certification of the 3-step “BlueCycle holistic process”

In- situ material Processing





Under the auspices of



Network of partners

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N E W
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