Number/code: OM/E9

Title: Recycled Plastic from Oceans to realize football clothing

Guidelines section:

	Governance	X	Operational management

	Context of the event		*Procurement*
X	*Event*		*Mobility and logistics*
	Stadium management		

Description

In the past few years some companies started to produce clothes made of recycled plastics collected from the ocean. Adidas, for instance, started a collaboration with Parley for the Oceans, the largest ocean plastic advocacy group, with the aim to reduce the amount of plastic in the sea beds through the realization of highly performing sport clothes.

In 2018, Adidas and Parley for the Oceans started a collaboration within the program "Ocean Plastic" with the aim to reduce the amount of plastic in the sea beds through the realization of highly performing clothes. One of the initiatives regards the creation of the third-away shirt of the Football Italian club, Juventus F.C, made of 100% recycled polyester containing plastic materials extracted from the ocean. Other football clubs that wear Adidas Parley for the Oceans recycled shirts are Manchester United, Bayern Munich and Real Madrid. Nike is also involved in a similar project, and has made shirts from waste plastic for FC Barcelona and the national soccer teams of Australia, South Korea, and Saudi Arabia. Nike says a minimum of 12 recycled plastic bottles are used in the manufacture of its football shirts.

Environmental benefits

This initiative along with many others that Parley for the Oceans is building up, it is possible to reduce the amount of waste in the oceans and at the same time prevent the accumulation of plastics.

A key environmental benefit of these initiatives relates to the public awareness raising potential: with some of the biggest names in world football running out to play dressed in recycled ocean plastic, it's

hoped millions of people will think twice about where their waste plastic ends up when they have finished with it[1].

Economic benefits

The most important economic benefit deriving from this initiative is the possibility of redesigning sportswear through innovative materials and make new business out of it. However, this kind of initiatives are very costly under several aspects, and only a few big companies can afford it.

Ocean plastic is currently far more expensive than virgin plastic. One of the main reasons is related to the infrastructure challenges: the plastic collection process is fragmented – i.e. plastic marine litter is generally collected in relatively small quantities at many different locations, and "creating the infrastructure to bring all the waste together into an industrial-scale supply chain is a huge undertaking[2]." Some companies and organisations are tackling these waste collection challenges by involving fishermen to work with them in collecting marine waste[3].

But collecting the material is not the only challenge: turning the often decayed plastic into fiber is just as complex. Once a sizable quantity of ocean plastic is collected, it is sent to sorting centers where plastic is separated from non-plastic. Then each bit of plastic must be sorted into different polymer types before it is shredded into flakes. The flakes are then washed in order to remove residual waste, such as labels, glues and sand. They are then combined with post-consumer plastic from land sources and turned into resin pellets which can be melted to create new products. The resin pellets are sent to yarn manufacturers who melt the polymers into thread and spin the yarn. A quite complex process[4].

According to some estimates, it costs 10 to 15 percent more to make clothes with recycled plastic than to use synthetic fabrics. Fashion brands who want to keep their costs low and profit margins high simply won't see the need to make the switch until consumers demand it. Companies that choose this are banking on the fact that people will pay more to buy sustainably, and that as more brands incorporate recycled plastic into their designs, it will eventually cost less to turn that plastic into usable thread[5]. For instance, in the last two years, there has been a 660% increase in the search term "sustainable fashion". This has pushed fast-fashion behemoths such as H&M to look into revamping their supply chains and include more sustainable materials, among them recycled plastic[6].

Applicability and replicability potential

The practice can be applied in several other contexts. However, the replicability potential is conceivable as long as the clubs are committed to this kind of initiatives.

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[1] https://www.weforum.org/agenda/2018/09/real-madrid-football-shirt-is-ocean-plastic/

[2] https://ecocult.com/recycled-ocean-plastic-fashion/

[3] This is the case of the ECOALF Foundation, a non-profit organization founded in 2015, that has launched plastic collection projects in Spain, Greece, Italy and Thailand, working with thousands of fishermen that agreed to participate in the initiative: https://ecoalf.com/en/p/foundation-33?_adin=02021864894

[4] https://ecocult.com/recycled-ocean-plastic-fashion/

[5] https://www.wired.com/story/plastics-in-fashion-everlane-renew/

[6] https://ecocult.com/recycled-ocean-plastic-fashion/

Sources

JUVENTUS - Third Kit

ADIDAS - Parley products

JUVENTUS - Parley for the Oceans

Case study: Yamamay and the monopolymer swimwear

In its path towards sustainability, Yamamay, a Pianoforte Holding's brand, presented EDIT (Eco-Designed Innovative Textile), the first swimwear collection made of 100% recycled and 100% recyclable fabric. The innovative fabric, manufactured by Tiba Tricot, whose graphics were created by the students of the Academy of Fine Arts "Aldo Galli" in Como (Istituto Europeodi Design) in collaboration with Archivio Spadacini, was obtained from plastic recovered from the oceans thanks to the collaboration with Tide Ocean Material. The level of circularity of EDIT was measured, on assignment of Univa Servizi, through a check-up tool applied by the team of Ergo, a spin-off of Scuola Superiore Sant'Anna, and developed by the same school and Bocconi University.
Since 2018, Yamamay also supports the "Save The Ocean" campaign, promoted by One Ocean Foundation for the safeguard of the marine environment.
EDIT will be available from the beginning of June 2021 in limited edition in Yamamay flagship stores and on yamamay.com
EDIT is the mono-polymer swimwear project, created with product circularity in mind and in view of take-back policies for 2022.

Environmental benefits:

1. Recycling plastic saves 52% of energy
2. Upcycling creates 79% less CO_2 emissions than virgin material
3. 15 million bottles saved from polluting the oceans so far
4. Protect the fauna & flora in and around the oceans