

Press Release

June 25th, 2020



The European Commission and the Bio-based Industries Joint Undertaking invest 4,1 M€ in a project to drastically diminish ocean plastic pollution

25 June 2020 – Glaukos a four-year European project that will develop biodegradable and biorecyclable textile fibres and coatings to be used in fishing gear and clothing, kicked off this month. This European research project brings together a prestigious partnership of 14 partners from 9 European countries and is financed with over 4.1 million euro from the **Bio-based Industries Joint Undertaking (BBI JU)**, a public-private partnership between the European Commission (Horizon 2020 programme) and the **Bio-based Industries Consortium (BIC)**.

Abandoned, lost or discarded fishing gear (ALDFG) accounts for about 27% of all marine litter found in European oceans¹, the equivalent of 11.000 tons ALDFG entering the marine environment each year². Evidence has been mounting that the synthetic fibres which make up much of our clothing and fishing gear, are also a major source of textile-related microplastic pollution in marine environments. Clothes simply wear off during use and in particular during washing. It was found that in a typical wash, up to 700.000 microparticles can be released. Glaukos aims to develop innovative textile fibres and textile coatings that are adapted to the 21st century needs: they reconcile excellent technical performance with a low environmental impact. The focus of the project lies exactly on the two abovementioned ocean polluters: **fishing gear and clothing**.

The Glaukos project will redesign the complete life cycle of these textiles. As key concept in polymer design to mitigate pollution caused by fibre fragments, the project will build upon triggerable biodegradability to increase the degradation rate of the (micro)plastics. From Glaukos materials compared to conventional (micro)plastics. In parallel, a bio-recycling process will be developed to incentivise collection of the textiles at the end of their life, thereby further reducing pollution. In addition, the supply chain distance will be substantially reduced by scaling up a disruptive fermentation process for value-adding polymer building blocks from several European bio-based feedstocks. This will increase the biobased content of the Glaukos textile products. Glaukos will also develop eco-friendly fishing gear coatings with increased biobased

¹ https://rethinkplasticalliance.eu/wp-content/uploads/2020/03/2019_22_10_rpa_bffp_fg_guide.pdf

² <https://www.umsicht.fraunhofer.de/content/dam/umsicht/de/dokumente/forschung-fuer-markt/kunststoffe-in-umwelt/wwf-studie-verlorene-fischernetze-umsicht.pdf>

content and reconcile the product characteristics described above with technical performance and durability, to ensure the effective and long-term use of textile products such as fishing gear and clothing and to significantly reduce their carbon and plastic footprint.

Stakeholder Labs will be set up to involve end-users as well as brands from the clothing and fishing gear industry and consumer awareness will be raised via e.g. influencer marketing. New Life Cycle Assessment methods will be developed to better assess the plastic footprint of textile value chains. Finally, integrated methods to assess the biodegradability and ecotoxicity of microplastics in marine environments will be developed and their standardization initiated.

Zsófia Kádár, Glaukos Project Coordinator says: “We are looking forward to tackling one of the biggest problems our society is facing with ocean pollution. According to the latest studies marine microplastic concentration have been vastly underestimated. Plastic leakage can only be truly mitigated if polymers are developed that are prone to recycling and biodegrade rapidly and completely. Glaukos’ ambition is to pave the way for this transition. We have all the partners to succeed.”

Notes to editors:

The Glaukos partners

- # Belgium: [Bio Base Europe Pilot Plant](#) (Coordinator), [B4Plastics](#), [Eurocord](#) and [I-Coats](#)
- # Denmark: [Novozymes A/S](#)
- # Germany: [Forschungszentrum Jülich](#) and [Bundesverband der Deutschen Sportartikel-Industrie](#)
- # Italy: [FVA new media research](#)
- # Netherlands: [Universiteit Maastricht](#) and [van Beelen Group](#)
- # Slovakia: [Nexis Fibers A.S.](#)
- # Spain: [Universidad de Vigo](#)
- # Switzerland: [Quantis](#)
- # Turkey: [Pakmaya](#)

Funding source: Bio-based Industries Joint Undertaking (BBI JU)

The project is financed under Grant Agreement No. 887711 with over 4.1 million euros from the Bio-based Industries Joint Undertaking (BBI JU), a public-private partnership between the European Union (Horizon2020 programme) and the Bio-based Industries Consortium (BIC), an organization that connects large and small / medium enterprises, research institutions, universities and public and private bodies at European level involved in the development of the circular bio-economy.

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