Thames21 participates in RECOUP's 2021 plastics recycling and resources conference

Recycling charity RECOUP recently organised its 2021 conference around the theme 'plastics resources and recycling'. Our CEO Debbie Leach was invited to participate in this event and was delighted to introduce the 400-strong audience to the Plastics Free Mersey project. Debbie highlighted the positive changes that Thames21 has enabled in its 27-year history through programmes such as Thames River Watch. She also stressed how more and more people now appreciate the value of our waterways and rivers in London.

Our work and that of many other organisations has helped increase public awareness, with countless litter picks taking place in and around waterways worldwide. Through Plastic Free Mersey, we are bringing together businesses across the plastics value chain, NGOs, communities, and academics to tackle the issue of plastic pollution in the natural environment via citizen science and public and stakeholder engagement. There is more. We can announce that, thanks to RECOUP CEO Stuart Foster and Plastic Europe's Adrian Whyle, Thames21 has become an affiliate member of RECOUP. The charity's mission is "to explain to people how easy it is to recycle plastic containers, so they never become a blight on the natural environment".

Here, *Project Coordinator Luca Marazzi* gives us the key facts and highlights from the event, which he attended online.

Industry

The global production of plastics might increase from 300 million tonnes to more than1 billion tonnes by 2050. Across their lifecycle, plastics account for 3.8% of global greenhouse gas emissions, higher emissions than the fifth-highest emitter country in the world. To produce the plastic products, various phases are required: refining, cracking, production of monomers and then polymers, conversion, packaging, transport. Therefore, every tonne of plastics recycled means saving approximately 2.5 tonnes of the CO_2 emitted in the production of plastics. However, without plastics, the planet's atmosphere would have arguably been even warmer than it is now; plastics are often more durable and lighter materials that are used as components in the aviation and road vehicle sectors. Recycling plastics is important, but not easy, and production efficiency and product quality often decreases after recycling. There are two main ways to recycle plastics. Mechanical recycling (i.e., collecting plastic debris, washing, melting and transforming the waste into raw material for a new productive process of plastic transformation) is a technology that currently causes lower CO_2 emissions than chemical recycling (i.e., technologies to recycle plastics that are difficult or uneconomic to recycle mechanically by turning them back into base chemicals and chemical feedstocks)saved. In future, the two types of approaches might become more complementary and beneficial as innovation proceeds.

Consumers

Campaign groups and NGOs often refer to turning off the tap of plastics production and slowing the flow whilst preserving the benefits of the most necessary and useful plastics might be a better phrase, as other materials may and do have bigger environmental impacts, e.g. in terms of CO_2 emissions through transport. According to a finance expert, 20% of people will change their behaviour, 60% might be persuaded to do so and 20% will "unlikely" change their behaviour (20-60-20 model). However, carrot-stick incentives/deterrents might change these proportions. Refill systems are promising, but not widespread and people's take up is still low, linked to inconvenience and habits (people need to remember not just their reusable bags but specific containers on their way to grocery shopping); it will take time for social norms to change. The collection of household waste from the kerbside and of on-the-go litter are two complementary challenges; moreover, flexible plastic packaging and multi-layered plastics pose even more challenges than rigid plastic

packaging because films and food wrappers are much more difficult to recycle than, say, bottles. Some of the plastics industry conference participants suggested that a 'pay as you throw' system would support better waste disposal by consumers/people because disposing waste would become a 'metered' activity, just like using energy or water.

Policy

Deposit Return Schemes (DRS) and Extended Producer Responsibility (EPR) are government policies being defined and discussed in the UK. DRS charge people when they purchase a drink in a single-use container with a nominal fee (e.g., 20p per bottle) as a deposit that is reimbursed upon returning the container. DRS could be tested and improved and such schemes do work in other countries (e.g., >90% return rates of plastic bottles +in Norway). Some conference participants, such as Valpak's Director of Policy Adrian Hawkes, however expressed concerns about the costs and the marginal impact of the policy and suggested that we haven't yet made the most of our current waste collection and recycling systems. The EPR policy would mean that, from 2023, UK businesses will be financially incentivised to use packaging from items collected in household recycling and to increase recycled content in packaging. This is pursued through a proposed plastic packaging tax: plastic producers and importers will have to pay £200 for every tonne of plastic packaging that does not contain at least 30% recycled plastic by weight (expected to come into effect from April 2022). Overall, it is important to identify who the polluter is, so that people and businesses / organisations who litter and thus pollute the environment should be made to pay, which comes with the need for enforcement and waste crime prevention.

A senior consultant in the sector recommended creating and using fiscal links to account for environmental impacts of various sectors, such as greenhouse gas emissions; he also stressed that packaging made from other materials and other products such as plastic toys should not be excluded from possible policy changes. Products need to be designed for recycling rather than landfilling or incineration, but there are marketing challenges; for example, some consumers prefer black products, but these are not detected by near-infrared technology as part of the sorting to process. Encouraging results have been obtained by companies recycling trays and packaging and produce tools and components for the automotive, construction and horticulture sectors.

Take home messages

The precautionary principle mandates that we should not wait for proof of the emerging negative impacts of microplastics and nanoplastics on human health and on wildlife (globally, 1 million birds and 100,000 marine mammals killed by plastics every year). Citizens, the media and the government have responsibilities. People need to do their part by not littering and using the right litter bins; but clearer and simpler labelling and constructive information programmes are needed so that people do not get confused about what and how to recycle. Enforcement to stop waste exports to locations where they may be burnt is essential to reduce environmental pollution and improve people's confidence in our waste management system. Ultimately, disposing of plastics and other litter correctly and producing more plastics from recycled products, rather than from natural gas and feedstocks derived from crude oil refining (99% are currently made from these sources), will help us get closer the UK government's goal of Net Zero greenhouse gas emissions by 2050.

Thames21 are fully committed to working with industry, NGO partners, and government on a range of projects to reduce plastic pollution, restore waterways and woodlands (thus increasing their resilience to climate change), improve people's behaviour and (better) connect them with their river environments and wildlife.