GREINING SJÁVARKLASANS

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Í nýrri greiningu Íslenska sjávarklasans er fjallað um hættuna sem stafar af aukinni plastmengun á allan sjávariðnaðinn á Íslandi. Árið 2014 er áætlað að um 269 þúsund tonn af plasti séu í sjónum og að á hverri mínútu fari sem nemur eitt bílhlass af plasti í sjóinn í heiminum. Talið er að árið 2050 verði meira af plasti í sjónum en fiskum í tonnum talið.

Hérlendis er vaxandi áhugi fyrir minni plastnotkun. Þá er í greiningunni fjallað um þau tækifæri sem íslendingar hafa til að vera fyrirmyndarþjóð um hreinsun strandlengjunnar og endurnýtingu plasts. Lagt er til að ný ríkisstjórn setji heildstæða framkvæmdaáætlun í samvinnu við fyrirtæki og stofnanir og frjáls félagasamtök á borð við Bláa herinn, um hreinsun strandlengjunnar og endurvinnslu plasts.

Greiningin er unnin af Alexander C. Barber sem verið hefur í starfsþjálfun í Húsi sjávarklasans í vetur.

Plastic pollution could become a threat to Iceland's fisheries

In 2014, it was estimated that nearly 269,000 tonnes of plastic waste was floating in the world's oceans. Plastic in the marine environment threatens the viability of the ocean as a livable habitat. The seafood sector is one of the cornerstones of the Icelandic economy, and healthy and clean oceans are therefore crucial to the well being of the Icelandic people. Iceland can lead by example to combat marine plastic pollution in the oceans.

Plastics are among the most common materials that exist in our world today. They are lightweight and malleable material, making them versatile for a wide variety of uses. Production of plastic has increased exponentially since 1950, when 1.5 million tonnes were produced, to more than 245 million tonnes produced in 2007. Plastic is used in a multitude of products from machinery and electrical equipment, to packaging products and single use bottles. While the ease of production and variability of plastic products is attractive, the end life of used plastic is a cause for concern. Plastic pollution is a global problem impacting communities everywhere. The extent of plastic recycling varies greatly among countries and regions, and results in considerable amounts of plastic entering the waste stream, rather than a recycling stream. The Ellen MacArthur Foundation estimates that only 14% of plastic around the world is collected for recycling. This low level of plastic collection is particularly troubling for coastal communities, where plastic has leaked into the natural habitats and water sources.

Species in the ocean are prone to ingesting plastic particles or becoming entangled in larger objects. Smaller fish that consume plastic are likely to pass the pollution up the food chain, as they become consumed by larger fish, and in some cases, by humans. This presents a threat not only to marine species consuming plastic, but also represents possible negative health effects to humans. Most plastic is buoyant in water, but in some cases fragments can accumulate bacterial growth and sink to the ocean floor. These unseen presences could dramatically increase the estimates of the total weight of plastic in the ocean. While ocean plastic pollution is a problem, efforts exist to clean up shorelines and the ocean from plastic and fishing gear. For example, the Global Ghost Gear Initiative is an international organization that aims to remove ghost fishing gear from the marine environment. Ghost gear is defined as any fishing equipment that is abandoned, lost, or discarded. In many cases, this equipment will circulate in the ocean currents and continue to 'catch' fish unintentionally as the gear is no longer being operated. As another example, in Spain, a fashion company, Ecoalf, pays fishermen for their plastic by-catch. So, fishermen are not only fishing for fish, but also can make a profit by capturing plastic waste and relocating it onshore. This creates an incentive for fishing boats to retain, and not cast overboard the plastic that enters their nets, instead returning it to land for a profit. Organizations around the world are looking to collaborate on finding solutions to fight ocean plastic pollution and reduce marine litter.

New ways to create value

Many companies around the globe are finding ways to create value-added products from recycled material collected from the oceans. One such enterprise, Bureo, a Chilean based design company, creates skate boards and sunglasses from recycled fishing nets. By setting up a collection system with sites in various locations near docks, Bureo is able to source nets and create value from waste.

Bureo's goal is through financial incentives to prevent nets and harmful materials from entering the ocean. Another leader in this field is Aquafil, an Italian nylon yarn producer. Aquafil has created an Econyl line, which is 100% regenerated nylon thread sourced from discarded fishing nets. The Econyl yarn has the same quality and properties as virgin nylon and can be used for a variety of products, from carpeting to clothing. More than 40 brands are using Econyl yarn for fashion products, ranging from swimwear to outerwear. Through providing a financial incentive, Aquafil sources discarded fishing nets and creates value from waste.

As plastic pollution increases globally, there is a need to continue to find innovative solutions to reduce the amount of plastic entering the ocean. It is estimated that 8 million tonnes of plastic waste are released into the ocean every year. This is equivalent to one garbage truck load of plastic emptying into the ocean every minute. If the current trend of plastic consumption and pollution continues, the rate of plastic pollution will increase to the equivalent of two garbage truck loads of plastic per minute by 2030, and up to four garbage truck loads per minute by 2050. If plastic production and pollution are not controlled, it is possible that by 2050 the amount of plastic in the ocean would be greater than the total weight of fish. With 50% of plastic being produced for single use purposes, a paradigm shift is necessary. Plastic collection and recycling needs to be increased in order to minimize and mitigate the effects of this already serious problem.

Coastal communities are well positioned to increase efforts to clean up the ocean, because their livelihood depends on maintaining a healthy ocean to produce healthy fish. Here in Iceland, plastic pollution could become a threat to Iceland's fisheries and to ocean health, as more and more plastic enters the territorial waters from littering and leakage from waste streams. Plastic circulates through the oceans with wind and water currents, leading to large collections. As the currents shift and plastic increases in quantity, more plastic could find its way into Iceland's waters. Already a leader in sustainable fisheries, Iceland has the additional ability to lead in ocean protection and sustainable oceans.

Opportunity for Iceland?

Iceland has a great opportunity to advance current initiatives and devise new ones to maintain healthy waters. By collecting plastic from the country's shorelines and territorial waters, Iceland can set the standard combatting plastic pollution. The Blue Army (Blái Herinn) is a strong example of community coordination in the Reykjanes peninsula, through its actions in shoreline cleanups on the coastlines of southwest Iceland. The Blue Army has organized over 100 service projects, and has been able to collect more than 1100 tonnes of material. Through its extensive work and observation, the Blue Army has estimated that every 1 kilometer of shoreline contains 1 tonne of waste. With larger coordinated efforts, the impact of the Blue Army can be expanded throughout the country and all of its shoreline. Another leader in Iceland is Pure North Recycling, located in Hveragerði. Pure North Recycling is leading domestic recycling efforts for plastic film and creating solutions for recycling nylon nets in Iceland. By taking advantage of affordable and renewable energy resources, Pure North Recycling can continue to be a leader for recycling in Iceland and help move the industry forward.

As is often the case with devising workable outcomes to complex, challenging problems, the most effective solution to address marine plastic pollution might be an 'all-hands' approach, involving public, private sector and NGO collaboration. Working with industry and environmental organizations, the Icelandic government could devise a comprehensive strategy to clean shorelines and recycle plastics. This collaboration with industry, clusters, local government and environmental organizations could develop a multi-tiered approach to increase awareness of seafarers about ocean waste, to examine models providing financial incentives for collecting ocean plastics, to incorporate ocean cleanup messaging and projects into local schools, and to create an interest in the startup and industry communities to find uses for recycled plastics. Involvement from every sector will be critical to ensuring a holistic and creative approach is taken to have the most positive impact possible. While plastic pollution poses a clear threat, there also exists a great opportunity, and Iceland is in an ideal position to develop for its own benefit innovative and imaginative solutions to create value from waste, and in yet another way, to provide global leadership in tackling marine plastic pollution.

Written by Alexander Barber
alexandercbarber@gmail.com

For more information contact author or
Thor Sigfusson at IOC thor@oceancluster.is

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