



## Taking care of the next generation

In January 2019, the then sixteen year old Greta Thunberg said the following historic words at the World Economic Forum in Davos: "Adults keep saying: 'We owe it to the young people to give them hope.' But I don't want your hope. I don't want you to be hopeful. I want you to act as you would in a crisis. I want you to act as if our house is on fire. Because it is."

At least just as confrontational were the words of Sir David Attenborough at Davos: "Global businesses, international cooperation and the striving for ideals, these are all possible because for millennia, on a global scale, Nature has been largely predictable and stable. Now, in the space of one human lifetime, indeed, in the space of my lifetime, all that has changed. The Holocene has ended. The Garden of Eden is no more..."

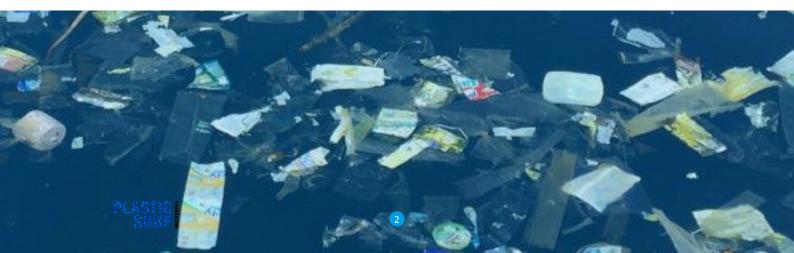
They are both right. Both the famous young girl and the even more famous elderly man. The earth is warming and becoming more polluted very fast. Biodiversity is reducing fast. The relationship between climate change and the plastic soup has been proven. The ecological balance has tipped.

According to some scientists, this is also the reason that the coronavirus has been able to hit so hard.<sup>1</sup>

This is why we need plans. Smart plans and even smarter strategies to turn the tide. We owe this to the future generations.

This is our plan for 2020.

(1) Given the Covid-19 pandemic, we have had to review our original plan of activities. This is the second version.



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# PLASTIC SOUP

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# A brief look back

From a small, almost niche, grassroots organisation in 2011 to one of the undeniable world leaders in the fight against the plastic soup in 2020. This is what we have become over the last nine years. In this time we

have celebrated many successes, but have also had to deal with enormous blows. Both the production of plastic and plastic pollution have only increased.

# Where we are now

Misschien was 2019 wel ons meest succesvolle jaar ooit.

- In terms of substance, the organisation professionalised so strongly that on 1 August 2019 we were awarded the coveted CBF Keurmerk certification.
- In our first Plastic Health Summit, we reached a
- couple of billion people and sped up scientific research into the connection between plastic and human health.
- The Dutch Post Code Lottery approved a new proposal that we submitted in September 2019.
   This time it was worth EUR 1 million for the next three years.

# No plastic in our water

This was our mission in 2018, but this is no longer enough. Plastic is now even found in the deepest point of the earth, the Mariana Trench, as well as at the highest, the top of Himalayas, and in the melting Arctic. We know that it rains plastic everywhere on earth. The miniscule synthetic clothing fibres in particular can travel across the world in the air and in

the water. **We eat, drink and breathe plastic.**This led to our reviewing our mission and at the beginning of 2019 it became

NO PLASTIC IN OUR WATER OR IN OUR BODIES!

But in 2020, we will be even more personal.

# What if we do nothing

To our surprise, the plastics industry is taking advantage of the coronavirus to sow fear. It is manipulating scientific fact by claiming, as it did seventy years ago, that disposable plastic is more hygienic and therefore safer than any other alternative. Through open letters to leading newspapers in countries such as the USA, UK and France the industry is trying to prevent legislation against disposable plastics. Clever lobbying is assuring

us that single-use plastic bags could save our lives.

And this while science has irrefutably proven that the coronavirus survives for several days on discarded damp plastic.

If we do not resist this, much of what we have achieved will be lost in 2020. We will not let that happen.

# Ongoing campaigns, projects and new activities

## **Microplastics**

#### Beat the microbead

In the summer of 2018, year six of this s. campaign, the Committee on the Environment of the European Parliament spoke in support of a ban on microplastics that are intentionally added to products such as cosmetics, paint and cleaning agents by industry. The Committee also argued for a ban on oxo-degradable plastics. This type of plastic degrades into small particles but does not biodegrade in the environment.

The European Commission also asked the European Chemical Agency (ECHA) for scientific information on the risks of microplastics in the environment and on human health. This would then lead to the enforcement of a ban on microplastics. The Plastic Soup Foundation was involved as a relevant stakeholder.

In November 2018, the ECHA revealed that it was much more likely that more microplastics accumulate in groundwater and inland waterways than in oceans.

This led to the ECHA issuing an advisory that about 550 intentional microplastic additives and combinations of these to cosmetics, detergents, paint and agricultural and industrial products pose a potential threat to humans and the environment. On these grounds, an EU wide ban is justified, though it

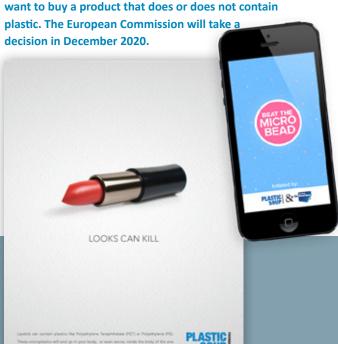
EXPOSURE TO MICROPLASTICS

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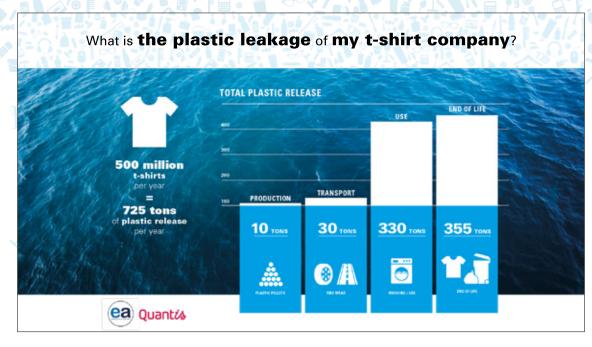
unfortunately did not include the semi-liquid and liquid polymers that Plastic Soup Foundation views as a potential hazard. Apart from this, it is a wonderful triumph for the Beat the Microbead coalition that consists of 100 NGOs in 42 countries.

Should the European Commission adopt the proposed ban, this could reduce the emission of microplastics by about 400 million kilos over 20 years. For Plastic Soup Foundation, this was the reason to write a position paper in 2019 to the European Commission urgently advising the ban on all unnecessary added microplastics. Apart from this, the Beat the Microbead website was also overhauled and got a new look & feel.

In 2020, as the cherry on the cake, we launched the new and very successful app. The updated version can read just about all the labels in the world so that consumers can decide for themselves if they want to buy a product that does or does not contain plastic. The European Commission will take a







#### Ocean clean wash

When the results of the

Mermaids Life+ were made known in 2017 – an average of nine million fibres released in each wash – the fashion industry barely responded. Our response was to work with our Italian research partner Consiglio Nazionale delle Richerche (CNR) to examine four major fashion brands. We shared the anonymised results in May 2018 in Vancouver in the presence of all the members of the Sustainable Apparel Coalition at their annual meeting.

This resulted in the very first Coalition of the Willing – a group of companies throughout the chain, from yarn makers, fashion brands to recyclers – who were prepared to look for solutions.

The first effective 3D printed add-on washing machine filter for consumers also crossed our path in 2018. Made by PlanetCare in Slovenia, the filter, that uses recyclable cartridges, was tested by three universities and was found to retain 80% of the synthetic fibres.

An American dry cleaning chain, Green Earth Cleaning, is making the filter available for testing in more than 100 branches in California. This pilot will start in 2020. Further, the Dutch Postcode Lottery gave 50,000 plaids away as prizes in 2020. These blankets, produced in India, were first washed with a PlanetCare industrial filter to ensure that they would release very few fibres afterwards. This was done because Mermaids Life+ had shown that pre-washing fabric five times in the factory would catch most of the fibres before the fabric goes to the consumer. All the plaids were thus given the Ocean Clean Wash label.



At the end of 2020, the Dutch Postcode Lottery will give blankets away again, this time to 40,000 prize winners.

CNR are also researching the efficacy of a coating of pectin right at the start of the chain that may reduce the fibre loss by 80%. The German Sympatex, one of the stakeholders in the Coalition of the Willing, is now investing in this solution and is collaborating with CNR to improve the protective layer.

Our goal is for one clear solution in each step in the chain is implemented by the end of 2021. The PlanetCare washing machine filter has one important advantage in this: it gives consumers a personal choice to take action.

In February 2020, the Plastic Soup Foundation was invited to attend a workshop of the French Government that has adopted a law in which all new washing machines must be fitted with an effective filter by 2025.







### **Macroplastics and litter**

#### **Trashhunters**

There are Zwerfinators, Ploggers and volunteers that join the North Sea Foundation's Boskalis Beach Clean Up once a year. But there are also TrashHunters. These are individuals and groups of people or children who go hunting for litter on behalf of a company or school. Whenever possible, they record what they find on the Litterati app, thereby becoming an affiliate of the Plastic Soup Foundation. TrashHunters are doers who want to be a part of citizen science by collecting data which helps the Plastic Soup Foundation map the sources of litter and address those responsible for pollution.

During the course of 2020, we hope to launch a digital platform for the programmes that fall under Macroplastics – Litter. This platform is an extension to the digital map for World Cleanup Day.

#### World cleanup day

In 2019, the Plastic Soup Foundation organised the second World Cleanup Day in the Netherlands on 19 September. Worldwide, 180 countries joined the activity.

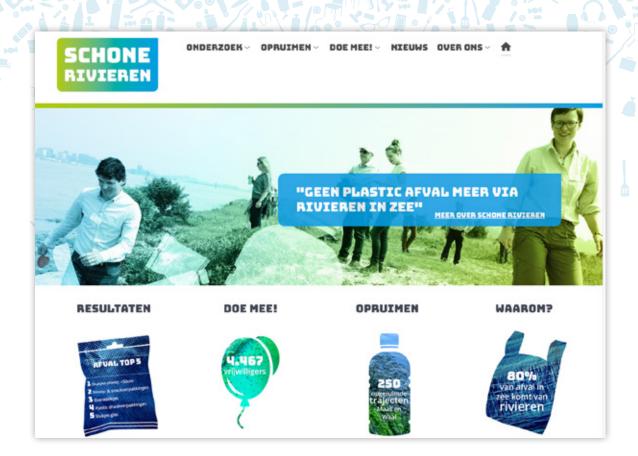
In the run-up to the event, people were called upon to join in. There were billboards along roads, displays in bus shelters, radio and television spots and even ads in the cinema. People could sign up on www.worldcleanupday.nl. The number of registrations was impressive. On the day itself, an incredible 16,000 individuals and 395 organisations in the Netherlands cleaned up thousands of kilos of litter in 1,500 clean ups spread around the country. Part of that rubbish was recorded in the Litterati app. The information will help gain a better understanding of the litter problem so that structural solutions can be found.

On the day, the national press showed great interest. In one week's time, more than EUR 300,000 worth of earned media was achieved in just one week. The free advertisements represented a procurement value of about EUR 2.2 million.

If it were up to us, the 2020 World Cleanup Day will be even bigger. This depends on the corona pandemic though. We are currently talking with a few large potential partners. More news will follow in June.







#### **Clean Rivers**

The Clean Rivers initiative is an alliance of IVN, Plastic Soup Foundation and the North Sea Foundation The objective is to stop the flow of plastic from rivers into the North Sea at source. Over a time span of five years we will check the river banks of the Meuse and Waal rivers with volunteers. Not only do we clean up the litter, but we also carry out extensive research into the rubbish we find. Clean Rivers is working to get a better understanding of the amount, composition and origins of the waste along the rivers. This is the first time in the Netherlands that research into river waste has been set up at such a scale. Clean Rivers uses citizen science whereby data is gathered by volunteers for scientific research.

The research started in the summer of 2017. In 2018, the project gained nationwide exposure through the frequent interest of national, regional and local press. This led to the training of more than 200 volunteers to become river waste researchers by the end of 2018.

In 2019, a donation of almost EUR 2 million from the National Postcode Lottery meant that the project could be expanded. The counter jumped up to over 500 volunteer researchers. The volunteers have been grouped into pairs and each pair is assigned a particular route where they monitor and clear the river rubbish twice a year. The various waste items are then recorded and the sources of the rubbish identified so that they can be dealt with. This feeds into Clean Rivers' ultimate goal – not even one piece of plastic flows from the rivers into the sea.

Our shared vision of a plastic free river delta by 2030 has made a giant leap forward.

Unfortunately, the activities are currently at a standstill because of Covid-19. As soon as the pandemic has passed, more stretches of the rivers' banks will be covered.

Apart from Meuse and Waal rivers, in 2020 we will also start work along the Haringvliet, the North Sea Canal and the IJ river.



#### **Amsterdam Clean Water**

Between September 2016 and September 2019, seven organisations entered a cooperation covenant to reduce the amount of floating debris in Amsterdam waters. The Municipality of Amsterdam, Waternet, Plastic Soup Foundation, Port of Amsterdam, Dutch Federation of the Rubber and Plastics Industry, Plastics Europe Netherlands and Berenschot are uniting behind projects and activities that work towards clean water in the city. These include:

- cleaning and keeping the IJ river banks in the city clean;
- researching the potential of 'grachtenhekjes' (canal fencing) to catch litter before it lands in the canals;
- launching refillable 'I AMsterdam' water bottles to discourage the sale of small single-use PET bottles;
- installing 500 public water taps;
- placing a Great Bubble Barrier in the Westerdok waterway to see how much rubbish it catches.
   The principle of the Bubble Barrier is that fish and vessels can pass through a screen of air, but plastic cannot.

Amsterdam Clean Water is now called PLASTIC SMART CITY. The Municipality, the World Wildlife Fund Netherlands, and the Plastic Soup Foundation signed a declaration of intent on 20 June 2019 to significantly reduce the level of plastic pollution in the city. The role of the Plastic Soup Foundation is to help the city in this and advise on bringing about and executing a plan of action. This will lead to a clean city free of plastic pollution by 2030. Industry will be involved in the approach to reduce plastic waste and to promote circular solutions.

The Bubble Barrier was installed at the beginning of 2020. Plastic Soup Foundation is monitoring the rubbish that is being caught by the bubbles with the intention of dealing with the source of the pollution. This is being done on the invitation of Waternet.

The other plans are also taking shape, particularly since the appointment of an ambitious Amsterdam manager who is keen to reduce the plastic footprint of the city.







#### **Education**

#### **Primary school**

Thanks to the generous gift of Aldi Netherlands (generated from the returns generated by phasing out plastic bags), we were able to develop a completely new education pack for primary schools in 2018. It consists of a Plastic Soup Education Pack in an attractive box with exciting and adventurous lesson materials about the plastic soup, an online platform with digital lessons for children from 6 till 12 years old, an animation about the World of OZ, activity cards, ocean plastic from Hawaii and a special edition of 'Kidsweek' magazine. It meets the Dutch national learning objectives.

Between the beginning of the 2018 academic year and the beginning of 2020, 2,500 schools requested a pack. This is more than one third of all the primary schools in the country. Interest from abroad quickly followed. At present we are working on a Plastic Soup Atlas of the World Junior that will be ready in 2021.

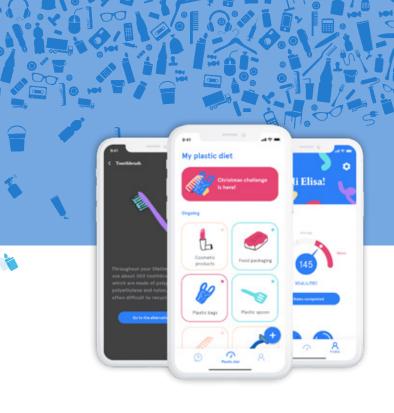
Apart from the education pack, we have also built a new website. Children can learn about the plastic soup through films and facts on

#### Secondary school

In the 2019-2020 academic year, free online lesson material was made available online for lower secondary school. The education pack was designed with the financial support of the C&A Foundation and donations from several secondary schools. The education pack consists of an introductory lesson of thirty minutes and fourteen challenges. Dutch celebrities such as the singer Maan, 3FM DJ Sander Hoogendoorn and vlogger Iris Enthoven challenge pupils to dive into problems related to plastic, to research possible causes and to come up with solutions. The challenges relate to various school subjects such as geography, biology, chemistry and physics.

In 2020, the plan is to design lessons for preparatory and advanced secondary vocational education. This is made possible through a donation from members of BNN/VARA television broadcasters. After the successful international adult version, we are also now working on the Plastic Atlas of the World Junior.





# Ik ga op plasticdieet. Jij ook? Download de app My Little Plastic Footprint For Rep 1987 PLASTIC SOUP

#### My Little Plastic Footprint

As early as October 2017 we quietly launched an app that anyone anywhere in the world could use to help them reduce their plastic footprint while, at the same time, learning about the plastic soup in the ocean. The app was well received, but did not fulfil our requirements despite the 60,000 pledges that it generated in a short space of time.

Thanks to a gift from the Cloverleaf Foundation, we were able to start redesigning the app into a plastic diet app at the end of 2018. We are now looking for a link with the European Single-Use Plastics (SUP) Directive that was drawn up by the European Commission in 2018 to reduce disposable plastics in rivers and oceans. It covers the ten products made of

disposable plastics that are most frequently found on Europe's beaches, river banks and streets. Making up 43 percent of all the rubbish in the sea, these include cotton buds, straws and plastic bags.

The Directive must be incorporated into the national legislation of all EU member states by July 2021. After that, plastic plates, cutlery, straws and cotton buds will be permanently banned.

Our Plastic Diet makes it easy for users to reduce their personal plastic footprint.

The My Little Plastic Footprint app has been downloaded almost 30,000 times.





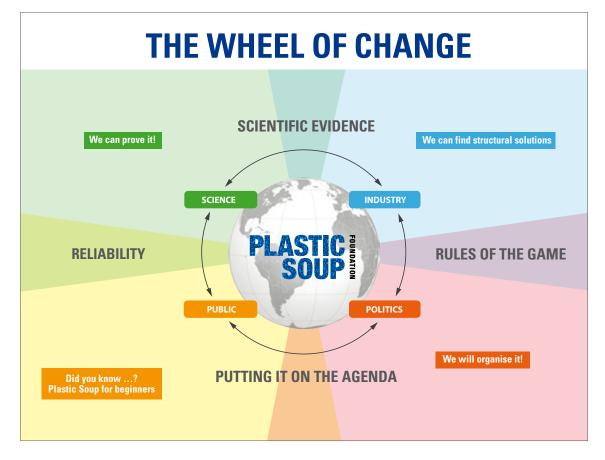
#### Health

#### What is going on

We introduced the subject for the first time in 2016 by stating 'We believe that HEALTH is a determining changemaker in tackling the plastic soup'. Over the last three years our search for proof has grown both stronger and wider. In our research, we always base our work on our own wheel of change that uses science as the starting point.

Plastic not only poses a serious threat to the environment, but is highly likely to pose a threat to

our health too. We eat, drink and breathe plastic, allowing minuscule particles of plastic to enter our bodies. We know that the chemicals that are added to plastic are hazardous to our health, ranging from slightly to highly hazardous. There is a likely link to fertility problems, language development delays among children, cancer, obesity and ADHD. But there is as yet no hard evidence. This is why we are asking how dangerous plastics and additives are? Are our children and foetuses at risk?







To answer these questions, Plastic Soup Foundation took the initiative to establish a new alliance with prominent scientists, front runners and changemakers. Called The Plastic Health Coalition, in 2018 it brought various national and international environmental and research organisations that work on the effects of plastics, microplastics and/or additives on our health together. Our objective is to have more scientific research started and funded as soon as possible. We are also looking at what the front end is doing to prevent plastic from entering our bodies and any potential solutions.

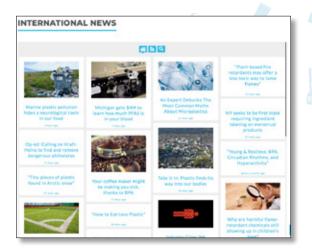
#### Fifteen areas of research

One of the first tasks that Plastic Soup Foundation took upon itself was to disseminate fifteen research pilots. ZonMw, the Dutch organisation for research into health, gave researchers the chance to submit proposals. On 22 March 2019, fifteen pioneering pilot projects were given the green light. With financial support from the Netherlands Organisation for Scientific Research (NWO), the Gieskes-Strijbis Fund and the Ministry of Infrastructure and Water Management, the important work on the effects of microplastics and nanoplastics on our health could start. The research will take one year.

The questions that lie at the heart of the research include:

- how do plastic particles enter our bodies;
- do size, shape and composition play a role;
- do pathogenic and other micro organisms that attach to plastics have an effect and, if so, what parts of the body would be affected?

In 2019, Plastic Soup Foundation frequently reported on the progress of the project on the Plastic Health Coalition website. Unfortunately, Covid-19 is putting the research on hold. (www.plastichealthcoalition. org/latest-news/?lang=nl). The information gathered clearly shows the urgency of this issue.



The absolute high point was the Plastic Health Summit, held in Theater Amsterdam on 3 October 2019 for the first time. Scientists, influencers, advocacy & policymakers, inventors, industry, activists and the press from around the world came together to share scientific knowledge, create partnerships and discuss legislation. Their core question was 'How can we take care of the next generation?'. We reached two billion people worldwide through the Summit. It was such a success that it will be held again in the next couple of years. The second Summit will again be held in the Theater Amsterdam in April 2021. We had to cancel our plans to hold a Summit in October 2020 because of Covid-19.

Instead of a Summit in 2020, we will start a YouTube channel about Plastic & Health during the course of 2020.







# Where do we want to go

If there is one point in time to turn the tide, it is now. Billions of people abhor plastic pollution and it affects us all. Whether you live in Kenya, the Netherlands or the Seychelles, the leakage of plastic into the environment is an increasing threat to the ocean and to humanity. Plastic litter is piling up everywhere and the coronavirus is making us fearful of touching it. Sir David Attenborough was right when he said "The Garden of Eden is no more ...". Greta Thunberg was also right when she said that she does not want hope but action. "I don't want your hope ... I want you to feel the fear I feel every day, and then I want you to act. I want you to act as you would in a crisis. I want you to act as if our house is on fire. Because it is."

And that is exactly what Plastic Soup Foundation will do.

While industry has its scientists ready and a huge media offensive has started, we are choosing a different way of thinking and system change. Forget resistance and bring forward the scientists, physicians, policymakers and daring companies. Of course it will be painful, but the reward is massive, definitely for our children and grandchildren.

Because our world is ablaze.

# How will we get there

To put that fire out, we have put three specks on the horizon.

#### 1. Does plastic make us sick?

A disturbing question, but looking at the array of scientific indications and the scale of plastic pollution in the world, a justified question. This is why we will continue researching the relationship between plastic and health. This brings the plastic crisis to a very personal level. It is no longer an issue of faraway countries and rivers, it is something that could jeopardise the futures of your children and grandchildren.

# 2. We will profile ourselves more as an empirical knowledge holder

We already did this on World Cleanup Day 2019 through the Litterati app by mapping and clearing up litter. We can identify the types and brands of the litter that most appear on the street.

The Clean Rivers project does about the same thing, but we use the Ospar method along with the Litterati app.

Completely new is the research that we are doing ourselves into serious sources of plastic leakage. In the last months of 2019 we carried out research in dozens of places in the Netherlands into the structural pollution of the environment from plastic granules – the material that plastic items are made of. We showed that more than eight trillion granules are discharged into nature every year. This amounts to 23 billion every day.

At the beginning of 2020, we submitted a Government Information (WOB) and Enforcement request against plastic producer Ducor Petrochemicals in the Port of Rotterdam. We did this in part to alert the plastics industry to its responsibility to comply with environmental law, and in part to force the Government to monitor activities.

*Nieuwsuur*, the current affairs programme, reported extensively on this in January

#### 3. Find solutions

Because our house is on fire, we have to find solutions to putting out the fire faster than ever. Among the action being taken is the Mirpuri Foundation in Portugal that has given EUR 5 million to a university to design an alternative to plastic, and the International Energy Agency in Monaco that is trying to split polymers.

We believe that in ten years' time, and maybe sooner, there will be an alternative to plastic. One that is biodegradable, non-toxic, with no negative emissions for the environment and no impact on the planet. There are solid prospects, in contrast to what Big Oil and plastic producers will have us believe. Not everything needs to be made of plastic. In this case it is true that things used to be better.

Since our founding, the Plastic Soup Foundation has monitored possible solutions and, after some years of preparation, we are now introducing the Plastic Mass Index (PMI). This gives small and large companies as well as individuals the opportunity to go on a Plastic Diet. We make the environmental and health risks of plastic visible and at the same time offer actionable solutions.

We plan to expand this *and* integrate it into everything we do.

