

Forecast: 2019 a crucial year for the plastics economy

by Dr. Holger Berg

2018 has been a year full of activities in the plastics sector. Among these are the EU's strategy on plastics, China's sword initiative taking effect, first bans on plastic products, and many initiatives that finally seek to address the challenges coming with large scale plastics use. Micro plastics have for the first time been found in human bodies – across the globe and despite the fact that the persons studied had different habits in nutrition. With all these developments going on, what is 2019 going to have in store for us?

First of all, expect more change!

The idea of *Circular Economy (CE)* is taking off and will gain even more support in 2019 with *stronger political interference and new regulation* on the horizon. In Germany, the new packaging law is such a point in case and the EU will also surely follow through on its strategy.

However, CE especially in plastics is in its infancy. Many questions still need to be answered and challenges need solutions. Last year the OECD presented an intriguing report on the shortcomings of the current plastics recycling systems. Strong efforts in *Research and Development* towards new approaches to not only recycle plastics, but for *more effective plastic waste prevention* are to be expected.

Many solutions will be digital in order to raise market transparency and to improve insights into products and material qualities. We expect especially more effective combinations of *sensor technology* and *data management* to be the first instances introduced. Furthermore we expect important progress in *sorting technologies* potentially in combination with means for *tracing and tracking* material and/or products.

2019 may also become the year of *strong alliances*. Many of them already formed around strong players in both Circular Economy and Plastics. This includes collaborations for circular plastics use, industry-related self-pledges, initiatives for CO₂-reduction in plastics and so on. It is to be hoped and indeed to be expected that some of these initiatives will escape infancy and reach a state where growth turns to maturity and hence to impact.

Lastly, with the plastics industry evolving towards a circular economy and with regulation becoming more distinct and pressing, 2019 will be *a year of experiments!* We expect many new approaches. Plastics have reached a high level of awareness. Many attempts will be made to address its challenges and these will be business-based, social *and* ecological.

Secondly, some challenges will stay with us

Plastics are among the most useful material that we have at our disposal. And that is not just economic, but also ecologic and even social. They are mostly cheap, can be

extremely robust and still easy to use, easy to form, light for transport and can be brought into virtually any form. We need plastics to keep our food fresh and hence to e.g. prevent food waste – maybe the saddest of all waste streams.

All these advantages come with one big challenge: The consumption of plastics is expected to increase over the next years, and at present that means to a large extent virgin material! We thus urgently need a better functioning secondary plastics economy.

With most plastics ever produced still somewhere in the system (approx. 6.3 out of 8.3 billion tons), plastic as a waste stream will hence remain a huge challenge. Marine litter and micro-/nano-plastics will be virulent among these, but they are not the only ones.

Thirdly, expect new topics!

New foci will relate to

- *Tire abrasion* (by far the highest source of micro-plastics e.g. in Germany!),
- *Agrarian plastics* left to decay on fields in large amounts and – probably most prominently,
- *Composite material* which comes with many hopes on light and yet sturdy applications in e.g. construction and cars but also with big question marks in terms of recyclability. The wings of wind turbines reaching their end-of-life are a prominent point in that direction.

These issues also touch upon other matters in a Circular Economy and in sustainability: New and unknown material lacking circular solutions, agriculture and food production, and the need to think on new solutions for mobility and transport.

With regulations in place that will demand much higher rates of material recycling, another development may be a push towards more *homogeneous plastics streams*. Currently, it is not much of an exaggeration to claim that every product is almost its own type of plastic. Different additives, colours etc. create literally millions of combinations in the supply and waste streams. This fact makes recycling much more cumbersome. Clearer, more unified streams could significantly improve uptake of recyclate. Regulation may now have put the right incentives into place.

Still more attention is also required for a topic that is not yet discussed enough: The nexus between a *circular plastics economy and health!* The challenges to create hygienic and especially guaranteed 100% non-toxic recyclate are extremely high and often neglected. If we want toys, food-packaging and many other applications to be made from secondary plastics material and to be safe for us and our children at the same time, we still need to go a long way.

All in all, look forward to 2019! It will be an exciting year for the plastics economy and its endeavour to become more circular. We look forward to working with you on making this come true.

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