Actors: Recycling of chemicals is an important step towards circular economy and a greener future

Better corporation is needed between companies that can sell residual chemical substances and other companies that can benefit from utilising those substances, says The Danish Chamber of Commerce, Dansk Erhverv, and The Danish Association of Chemical Substances, Kemi & Life Science.

DEBATE: Circulation of chemicals will enhance the environmental performance, lower the product prices, and thereby increase Denmark's competitiveness. The legislation is in place, but they are not being exploited and implemented in the most optimal way, says Lisbet Hagelund and Rene Fleischer.

By Lisbet Hagelund and Rene Fleischer
Chief Consultant at Dansk Erhverv , The Danish Chamber of Commerce,

and Chairman of The Danish Association of Chemical Substances, Kemi & Life Science, CEO at Brenntag Nordic A/S

Circular economy is one of the hottest topics for business for the time being. If we want to make it fly, we will need a range of new initiatives from many stakeholders such as authorities, politicians, business, customers, science and others.

One initiative must be initiated from companies, i.e. ensuring that waste resources will be turned into raw materials, which in price and quality are competitive with new and virgin resources.

This means a circularity of materials, driven by market forces, and assuring that we avoid an overexploitation of planet Earth's resources.

In this way, we can increase circularity of chemicals

You should always learn and seek inspiration from those with experience. A project supported by the Danish Government and its action plan promoting environmental efficient technologies (MUDP), and driven by Dansk Erhverv, Juraad ApS and Kemi & Life Science and a row of value chain companies, demonstrates that we in Denmark are able to recycle chemical residual substances and amend the way the rules are being utilised, when it comes to residuals from industrial companies. The project also includes experience from a progressive market in Norway where an increased value creation is generated as a result of an effective resource utilisation within the process industry.

The legislations in both Norway and Denmark are based on EU legislation, but the interpretation in Norway seems to fit better into the circular way of thinking. This has a large environmental effect as well as it enables the companies to lower their production costs. Improved environmental performance and lower product prices will therefore also increase Denmark's competitiveness.

This is in particular about residual substances from the industrial producers - substances that are utilised during the production processes but not consumed and not becoming part of a finished end product.

These residual substances appear as constant and consistent output from the industrial company; hence providing a good ability for recycling and

stabile delivery, making them reliable sources for the next company using them in their production.

These residual substances can be defined as ”waste”, but may also be defined as ”by-product”. In Denmark they are typically classified as “waste”, while the Norwegians to a much higher degree are seeking to utilise the “by-product” definition – and this has a large influence on how salable the substances are.

Current legislation must support the circularity

The Danish project has a focus on solvents and acids. They are due to their purity the more straightforward substances to circulate. As an example solvents are being used in the pharmaceutical industry and afterwards serving as valuable raw material in the production of cleaning agents, glues, sealants and coatings.

The project aims to identify barriers, structural as well as of legal character, which may hinder increased circularity in this area.

The project concludes - if the circularity should be increased – that it will be a precondition also for these residual substances to comply with the general (chemical) legislation, which already applies to chemical substances on the market.

It is a fundamental precondition for new loops in new productions that these substances will follow the same criteria as for virgin substances.

This is in particular safe use, i.e. in the working environment in relation to the information, which must be supplied for the final product but also about traceability and a high level of knowledge about the content. Moreover, those criteria are part of the chemical legislation, primarily the REACH and the CLP regulations.

If the residual chemical substances will be defined as “by-product”, then REACH and CLP will still apply to the substances. This is not the case if the same substances are defined as waste. Because waste is not covered by REACH.

The waste legislation has a high focus on (safe) waste treatment while the by-product definition aims to equalise circular substances with the virgin chemical substances.

In addition, this is again crucial for the companies, that have high demands for traceability and knowledge about the chemistry in their productions and not least for a safe use. The waste legislation does not support safe use sufficiently well for these companies – on the contrary REACH and CLP do.

We must act active to support circular

Dansk Erhverv is in dialogue with The Danish Environmental Protection Agency about an amended practice in Denmark, by supervising authorities, that should largely classify residual chemical substances as by-product, when warranted by the directive and when circular utility is a real option. The municipal supervisors as well as the companies must be supported in seeing opportunities to define a residual chemical substance as a by-product instead of waste. The starting point should be an aim to generate a substance, which could be utilised in a new production rather than a waste product for disposal.

This will also help the companies to fulfil other market requirements, adding to the possibilities for circularity.

The Danish Association of Chemical Substances, Kemi & Life Science, will continue to build up a market for recycling of chemical residuals and work for improving the market coordination helping companies selling their residuals and other companies who potentially can make use of these substances.

Initiatives to establish such market corporations and synergies require a strong market knowledge and detailed knowledge about chemical and waste legislation. Distributors of chemicals should make efforts to get knowledge about the Danish market to become the link between the companies in the value chain. These companies are therefore a part of Kemi & Life Sciences' strategic and sustainable value chain thinking.

"Recycling of chemicals is a very important step forward to a circular economy leading to a more sustainable society."

Quote: Rene Fleischer - Chairman of The Danish Association of Chemical Substances, Kemi & Life Science

Kemi & Life Science – en del af løsningen DANSK ERHVERV