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## **More than 90 projects for chemical recycling worldwide**

**At the end of 2021, more than 90 projects for chemical recycling of plastics were in various stages of development worldwide; more than 20 plants were in operation. This is the result of a trend study by ecoprolog GmbH.**

Currently, there are few topics in waste management that polarize as strongly as chemical recycling does. For supporters, chemical recycling offers the opportunity to fully recycle plastics in the future without downcycling. In addition, contaminated and mixed waste streams that currently cannot be recycled mechanically should also be possible to be recycled through chemical recycling. Critics, on the other hand, mainly criticize the high CO<sub>2</sub> emissions from chemical recycling. They fear that waste streams are being diverted from a more climate-friendly mechanical recycling process in order to be treated in this way.

In this context, ecoprolog has examined the global market for chemical recycling in detail.

There are currently about 20 chemical recycling facilities in operation worldwide. Most of these plants cannot be considered as final commercial plants but are mainly used for further research of this technology.

At the same time, the planning of chemical recycling plants is booming. Worldwide, more than 90 projects were planned at the end of 2021, an overwhelming majority of them in Europe.

The most important driver of the currently so dynamic market development is the potential of chemical recycling in plastics production, combined with possible recyclable quotas. On the positive side, there is speculation that chemical recycling will be recognized in the waste hierarchy, as is the case in the coalition agreement of the new 'Traffic light' government in Germany.

High energy consumption and the still uncertain technical issues speak against chemical recycling. This applies in particular to the purification of the output from depolymerization, such as pyrolysis oil, from contaminants and additives. The discussion about the political classification of chemical recycling also threatens the implementation of the same.

Nevertheless, chemical recycling is a potential key technology in the future production of plastics, which may account for large market shares in the coming years. It therefore primarily affects the business model of the chemical industry and the mineral oil industry, which produce plastics or provide the raw material for them derived from crude oil. Consequently, the companies that are currently particularly active in chemical recycling also come from these industries. In addition, there are mainly waste companies that provide the corresponding material streams and start-ups whose founding ideas relate to the technical evaluation of the process.

"Trend Study – Chemical Recycling" by ecoprolog examines the technical fundamentals, market factors, development status, plant inventory, projects and competition in the field of chemical recycling worldwide. The study is available at: [www.ecoprolog.de](http://www.ecoprolog.de)

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