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Where does Biodegradation Make Sense?

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In the project “BioSinn – Products for which biodegradation makes sense”, which was funded by the Federal Ministry of Food and Agriculture (funding code 2219NR197), experts from the nova-Institute in Hürth near Cologne investigated whether there are applications and products for which biodegradation is a sensible or even the best end-of-life option. The products selected for the study were those for which collecting them (or their remaining parts), separating them from other organic waste or material recycling, was not possible, economically feasible or practised. Further criteria were that the use of biodegradable materials can avoid the input of microplastics into the environment or achieve indirect positive effects.

The project's outcome was a brochure, for decision-makers from industry and politics but also for the general public, containing 25 fact sheets and extensive background information on biodegradation. For each product, it explains to what extent biodegradation is a sensible and feasible option and what technical substitution options are available for a more sustainable use of materials. In addition, political framework conditions and regulations were highlighted and evaluated on a product-specific basis and market volumes for Germany and the EU were also surveyed and estimated. The estimated total volume of the 25 applications in the European Union was approximately 1 million tonnes, the majority of which ends up in the environment.

The main findings of the BioSinn project will be presented, highlighting the significant benefits of using biodegradable materials in these applications as an alternative to conventional, non-biodegradable products. However, the brochure was published in 2021 — four years ago. What has happened since then? Have there been any new or updated standards and certification schemes? Are there any new biodegradable alternatives available that can replace traditional non-biodegradable products? Have political frameworks evolved to better manage the entry of products into the environment and guide the regulation of biodegradability? These are some of the topics that will also be explored during this presentation.