Federal Ministry of Education and Research

FONA Research for Sustainable Development BMBF

Innoredux– New Packaging Solutions Against Plastic Waste

Plastics in the Environment – Sources • Sinks • Solutions

When shopping, consumers need to make increasingly complex decisions with regards to packaging: Packaged? Unpacked? Bio-plastic? In view of the growing environmental pollution caused by plastic waste, the choice of the right packaging is becoming an increasingly important question for retailers and producers as well. The Innoredux joint research project brings together partners from various fields to look for innovative packaging solutions and implement them in mail-order and stationary businesses together with companies and municipalities.

Identify Successful Examples

Plastic waste in the environment and its consequences are a topic that is increasingly in the focus of consumers and politicians. However, companies have also recognized the need to develop new solutions for packaging along the value chain. The researchers in the Innoredux joint research project are investigating a number of questions in this regard: What business models already exist to reduce plastic waste? Which packaging innovations are already in use and which ones look promising? How can these be grouped together? How can innovative sustainable approaches evolve out of niches and find wider application?

The project partners examine the following product groups: foods, textiles, office supplies as well as cosmetics, hygiene, detergents and cleaning agents. With the help of ecological, social and economic analyses of the innovations, they identify successful examples in the respective sectors.

More and more textiles are purchased by mail order. This leads to an increased volume of packaging.

First Field Test in Living Lab

As the link between manufacturers and consumers, the retail sector plays a key role in the sustainable reorganization of value chains and the associated opportunities for influence. Consequently, the Innoredux project partners work together with associated partners from stationary and mail-order businesses to develop packaging solutions and test them in the city of Heidelberg in the form of a living lab. The living lab represents a new form of cooperation between science and society in which innovations are developed and tested for a certain period of time. The experience gained is incorporated into research.

Packaging research has so far concentrated primarily on technical innovations and has dealt less with issues such as waste reduction or the potential of retailers. In addition to new technologies, companies in the Innoredux joint research project are therefore testing new social innovations such as sales, purchasing and use patterns for products. Such changes in business models can make a significant contribution to reducing plastic discharges into the environment and at the same time create competitive advantages.

A Strategy against Plastic Waste

Based on the experience gained in the living lab, the researchers will develop a strategy for municipalities and companies to reduce plastic waste together with those involved in the project. This should facilitate the practical implementation of packaging solutions and spread existing trends.

The results will be made available as a company checklist and a conceptual guidance document for municipalities. The aim is to stimulate trade and the associated value chains to implement packaging-reducing innovations and thus to provide consumers with alternatives to conventional packaging.

Packaging-free shops allow customers to avoid plastics when shopping

Research Focus
Plastics in the Environment – Sources • Sinks • Solutions

Project Title
Business Models for Reducing Plastic Waste along the Value Chain: Paths to Innovative Trends in Retailing (Innoredux)

Grant Number
01UP1804A

Duration
February 1, 2019 – January 31, 2022

Funding Volume
EUR 1,457,808

Contact
Institut für ökologische Wirtschaftsforschung (IÖW) GmbH, gemeinnützig
Dr. Frieder Rubik
Bergstraße 7
69120 Heidelberg
Phone: +49 (0) 6221 64916-6
E-mail: frieder.rubik@ioew.de

ifeu - Institut für Energie- und Umweltforschung Heidelberg GmbH
Andreas Detzel
Im Weiher 10
69121 Heidelberg
Phone: +49 (0) 6221 4767 0
E-mail: andreas.detzel@ifeu.de

Website
www.plastik-reduzieren.de

Published by
Bundesministerium für Bildung und Forschung /
Federal Ministry of Education and Research (BMBF)
Division Resources, Circular Economy; Geosciences
53170 Bonn
Division Systematic Mobility; City of the Future
53170 Bonn

April 2019

Edited by
Project Management Agency Karlsruhe (PTKA), Karlsruhe
DLR Project Management Agency, Bonn

Layout
Project Management Agency Karlsruhe (PTKA), Karlsruhe

Printed by
BMBF

Photo Credits
Front page: Pixabay/falco
Back page: Unsplash/Brooke Cagle

www.bmbf.de