

## Case Study 1: Plastic Packaging Waste Management in Germany

The foreground system scenarios S1-S3 describe options to achieve the recycling target for plastic packaging waste of 50% as defined in the European Directive on Packaging Waste for the year 2025. Taking into account a constant level of reuse of packaging (i.e. reusable PET bottles) as defined in 94/62/EC Article 5(2) and specified in the Commission Implementing Decision (EU) 2019/665 Article 1(7)), the recycling target is lowered to 49%.

Table 1: Plastic packaging waste management – Foreground system scenarios

Scenario-ID	Scenario Description
S1	182 kt plastic packaging waste from residual waste and littering (PW4, PW5, PW6) are directed to lightweight packaging waste collection (PW3).
S2	Lightweight packaging waste sorting yields are increased until the recycling target is achieved.
S3	Recycling yields are increased until the recycling target is achieved.
S4	37% of MSWI plants are equipped with carbon capture and storage (CCS) technology.

In view of the ambitious target to limit global warming to 1.5°C as declared in the Paris Agreement, drastic changes of material and energy systems can be expected in the upcoming years. The background system scenarios built on the anticipated changes of boundary conditions as described in IMAGE v3.2 SSP2-RCP19 until 2035.