

Figures for the article *Thesis: Sustainable recovery of nitrogen from sewage sludge.*

Dissertation of Ali Saud.

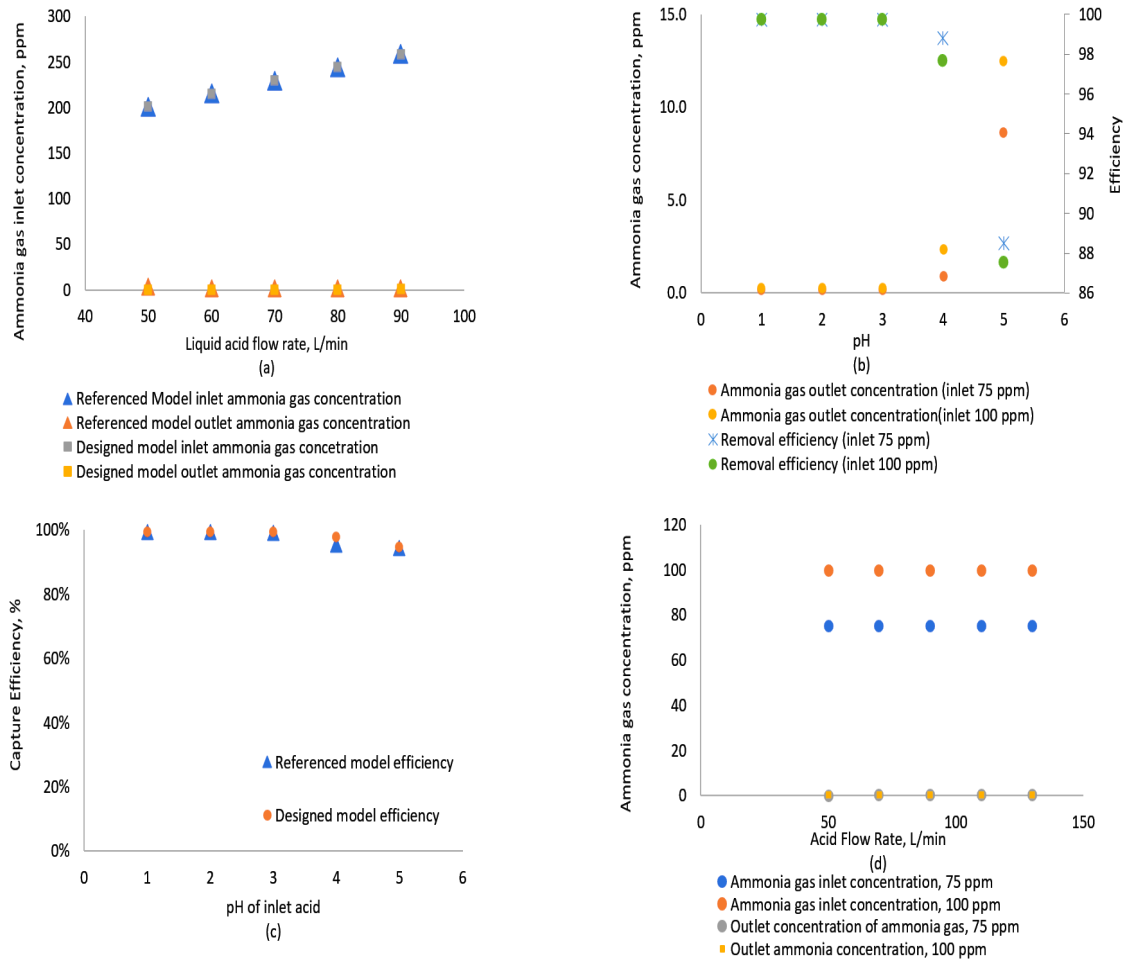


Figure 7. Results of the validation of the designed model with the referenced model with (a) the liquid flow rate and change in ammonia gas concentration, (b) the effect of the pH on the ammonia removal efficiency, (c) the pH of the inlet acid and the ammonia capture efficiency, (d) changes in the ammonia gas concentration with changes in the acid flow rate.

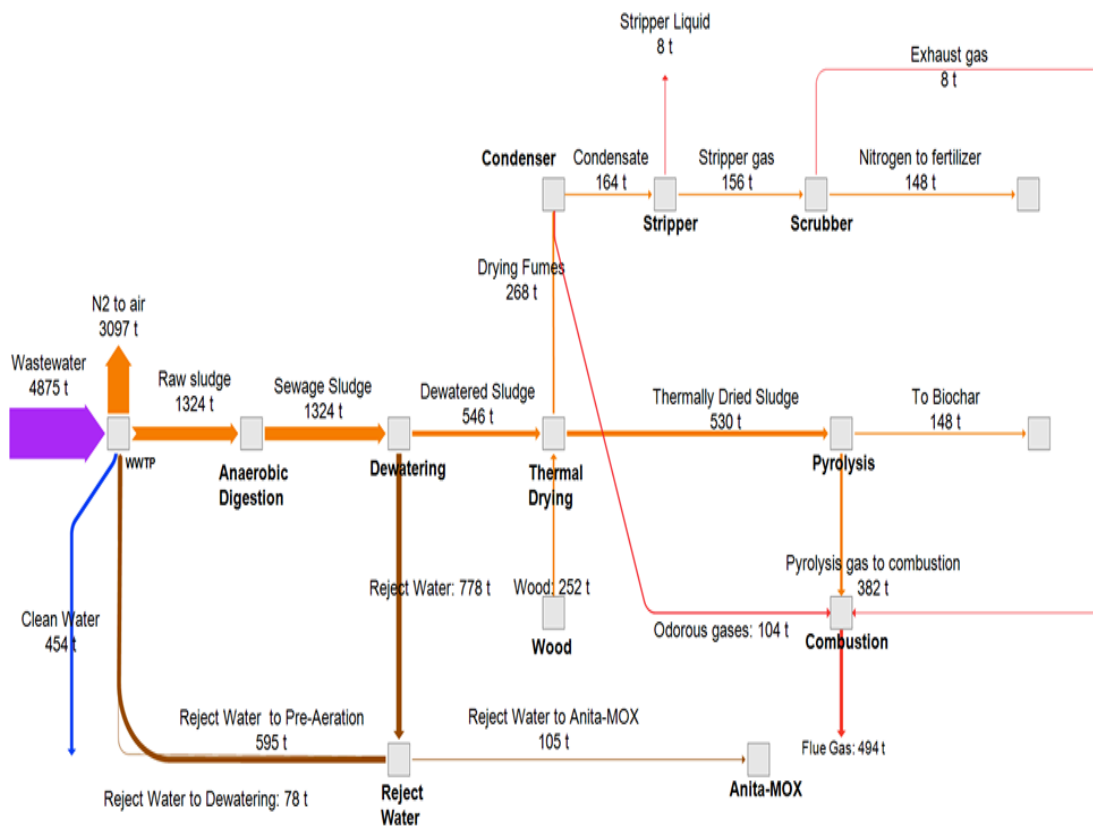


Figure 12. The nitrogen balance for PII-S1.1 (pyrolysis with N recovery from drying fumes).

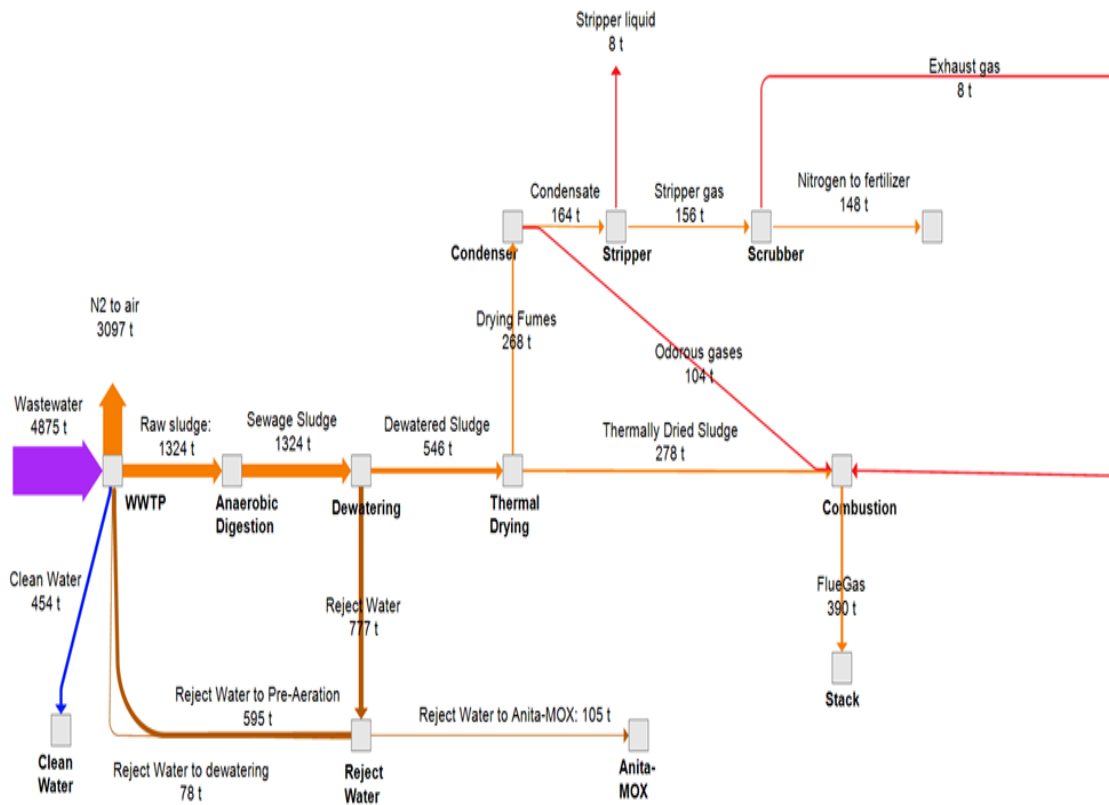


Figure 13. The nitrogen balance for PII-S2.1 (combustion with N recovery from drying fumes).

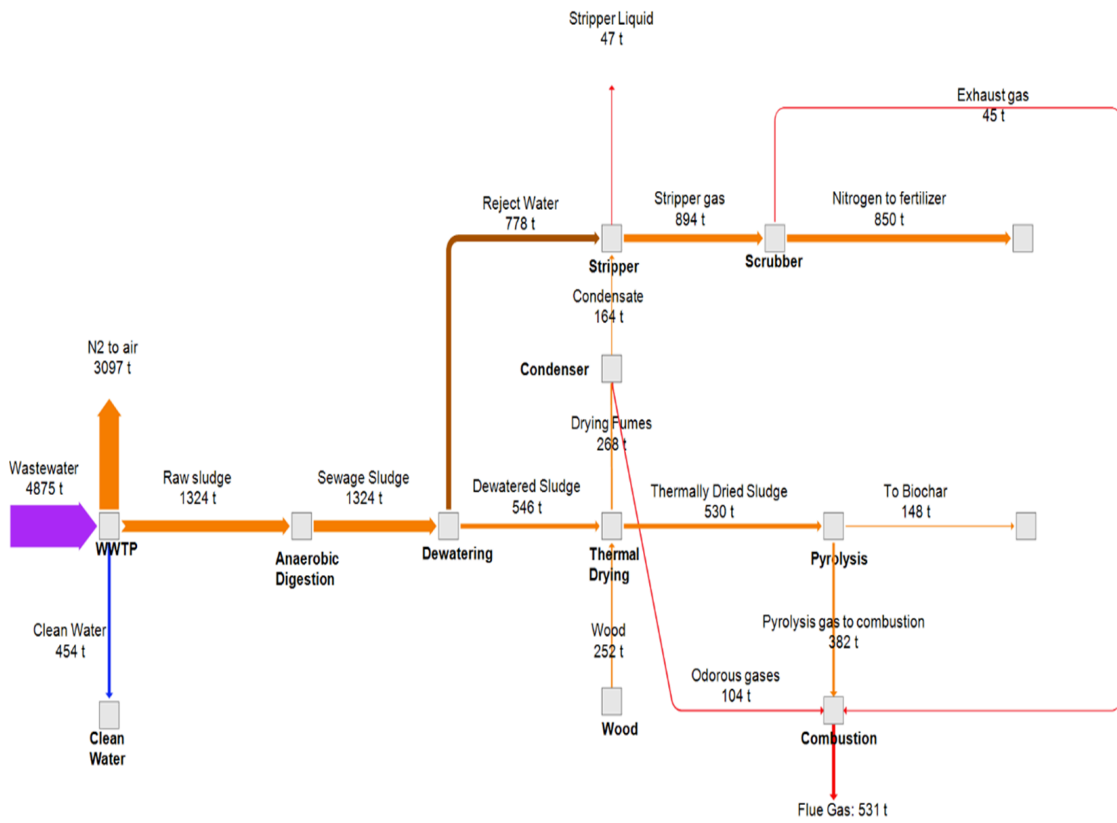


Figure 14. The nitrogen balance for PII-S1.2 (pyrolysis with N recovery from drying fumes and reject water).

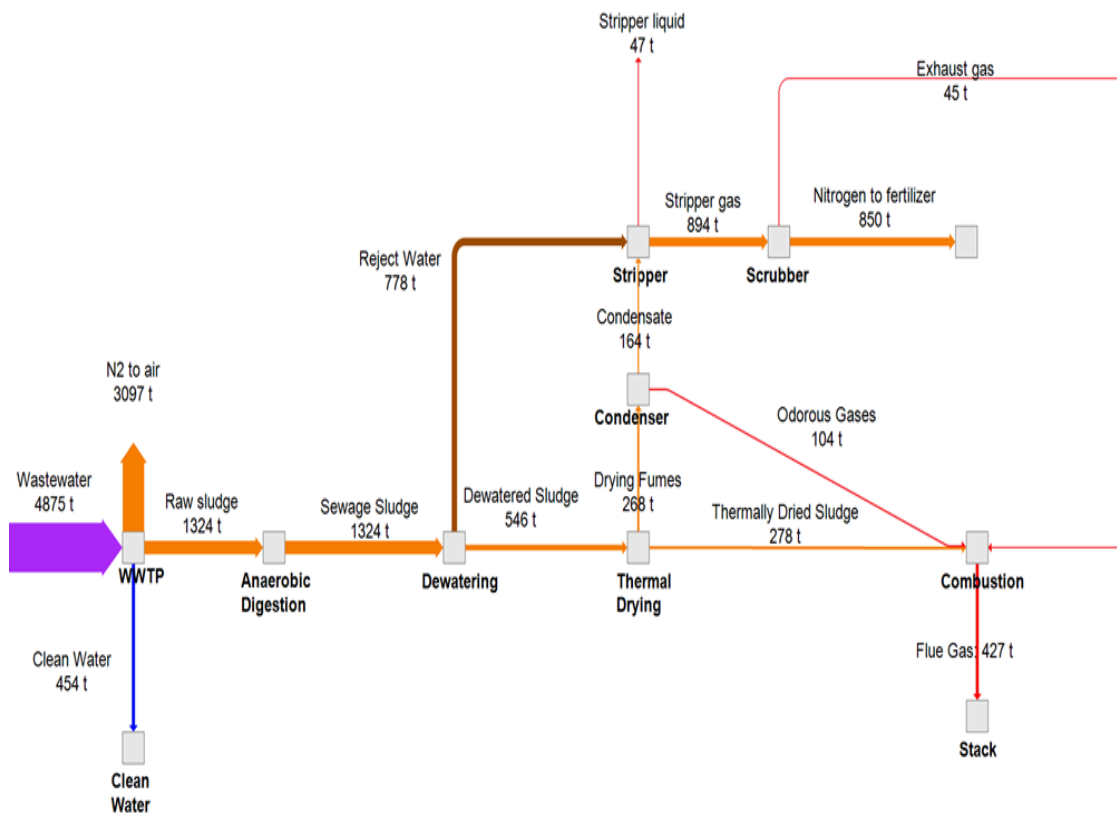


Figure 15. The nitrogen balance for PII-S2.2 (combustion with N recovery from drying (combustion with N recovery from drying fumes and reject water)).

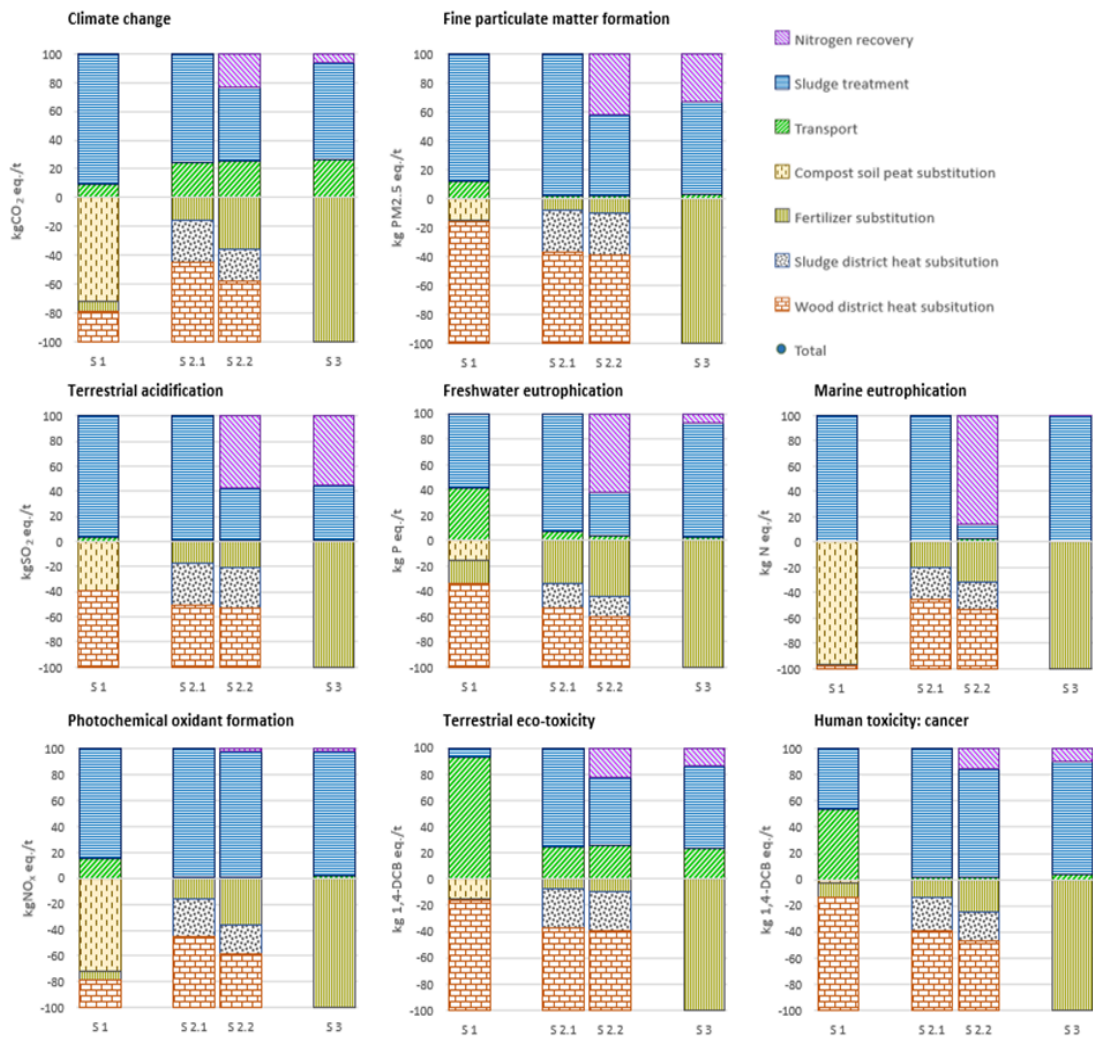


Figure 17. LCIA result of the relative contribution of direct and substituted emissions.

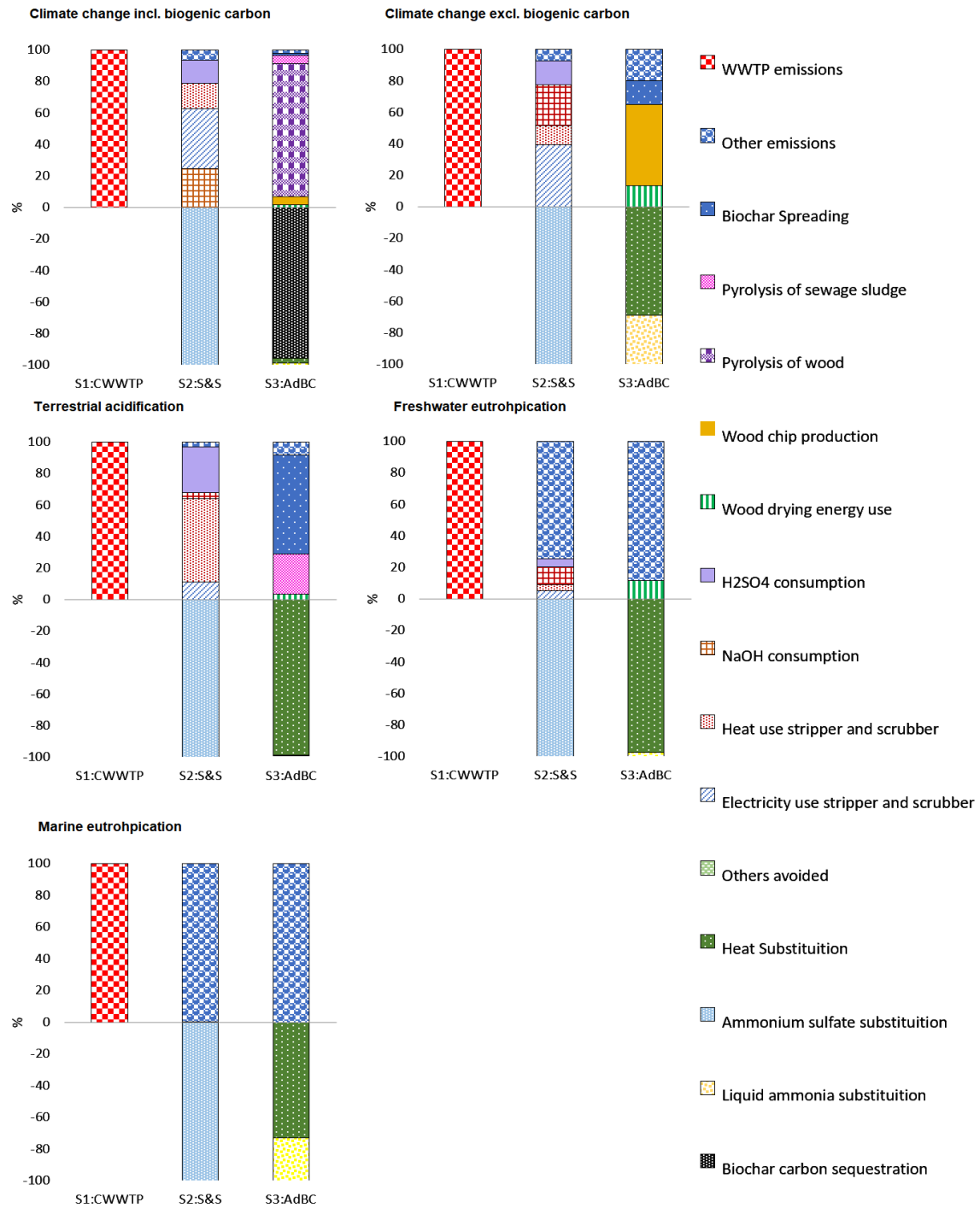


Figure 19. LCIA contribution assessment of scenarios PIV-S1 (WWTP), PIV-S2 (stripping and scrubbing) and PIV-S3 (adsorption) for the selected impact categories.