



# PABLO BINDER

ESR1: BIOACCUMULATION OF PHOSPHORUS (P) FROM ORGANIC RICH WASTE WATER AND DRYING TO A P-RICH BIOSOLID FERTILISER

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## Research goals and focus:

- The aim of ESR1 is the optimisation of enhanced biological phosphorous removal (EBPR) for nutrient removal at lab and pilot scale.
- Investigate the effect of the main operational parameters on the P recovery rate.
- Optimise of a sequential batch reactor (SBR) for simultaneous nitrification-denitrification and phosphorus (P) removal (SNDPR), P accumulation and recovery.
- Will couple a biodrying system to the SBR reactor as to obtain a dry solid which can be used either as a P-rich direct fertiliser or as a source of high quality and renewable solid fuel (RSF) as alternatives to non-renewable fossil fuels.

**Expected results:** Recovery of >95% soluble P from dairy effluent and the production of high-quality P-rich biomass that can be used as fertiliser.