

Sketch of PhD study

Microplastics assessment in wastewater plant – occurrence, removal and fate



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Question 1:

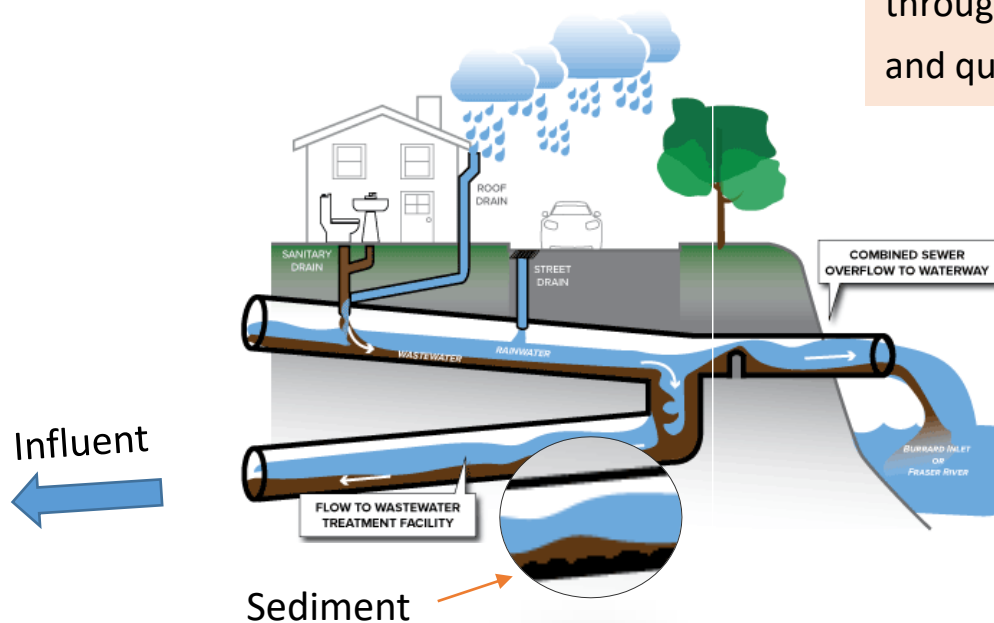
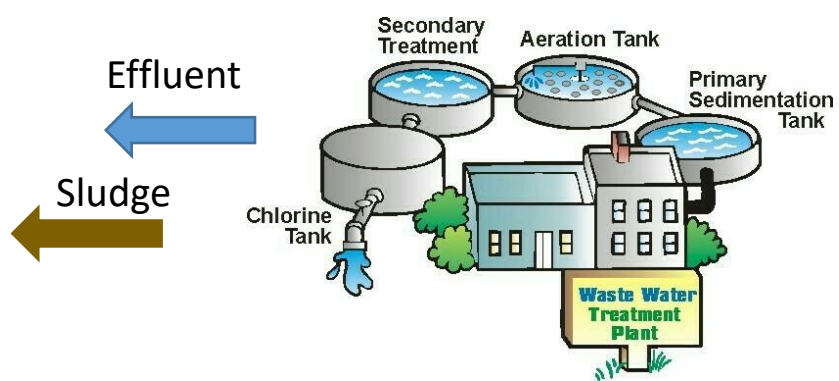
- MPs in/out (quantity and quality)
- Removal efficiency of different technologies both for water- and sludge ways

Question 2:

MPs in the sewer deposit/sediment
(quantity and quality)

Question 3:

MPs discharged to the recipient
through sewer overflows (quantity
and quality)



Mass balance of MPs in three compartments of the sewer systems

Assess MP contribution of different urban sources at the scale of Parisian conurbation to the surrounding water bodies

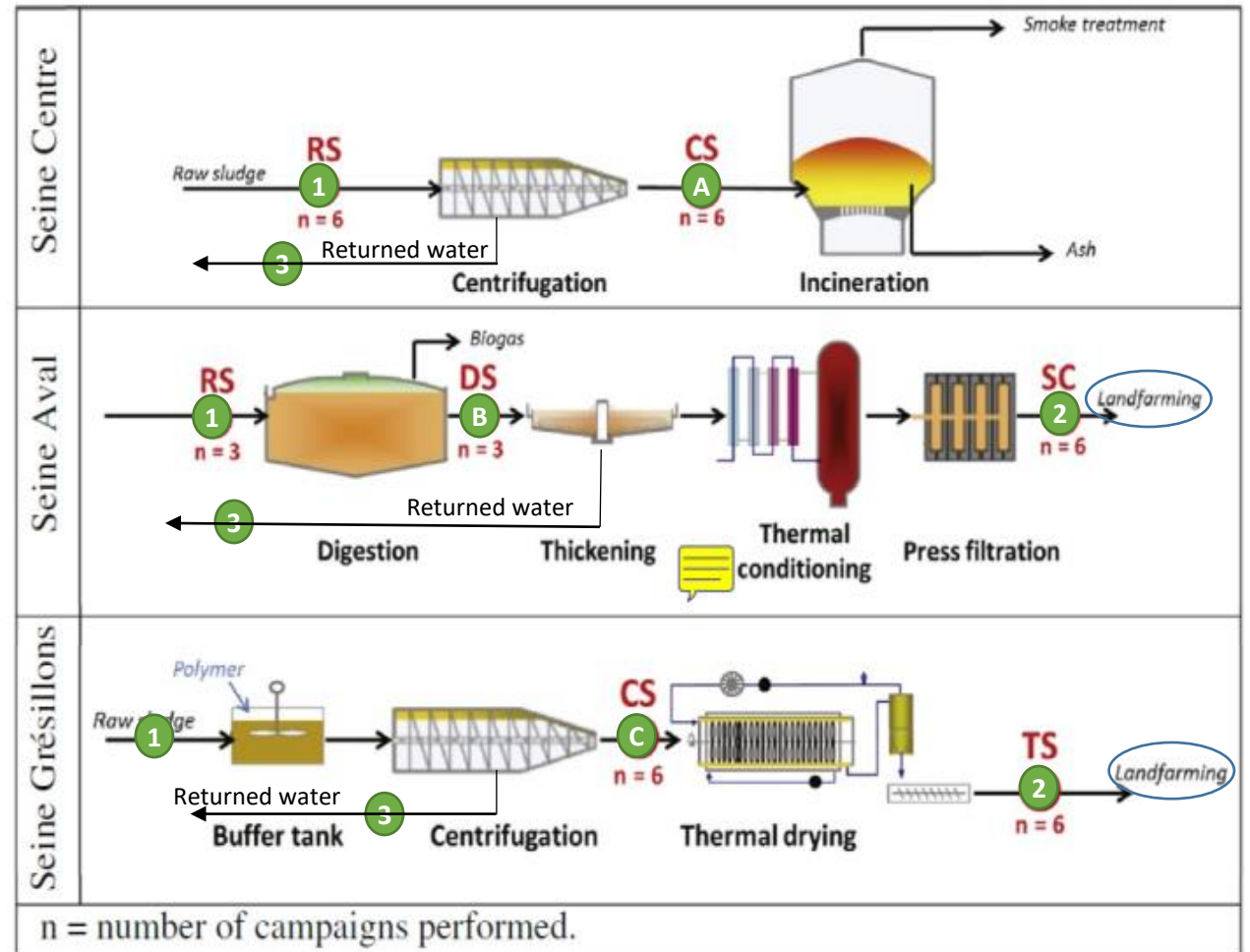
Question 1:

- MPs in/out (quantity and quality)
- Removal efficiency of different technologies both for water- and sludge ways

Sampling point → raw sludge
 dewatered sludge
 final treated sludge
 returned water

Sampling method → Grab sample

Sludge treatment processes



Question 1:

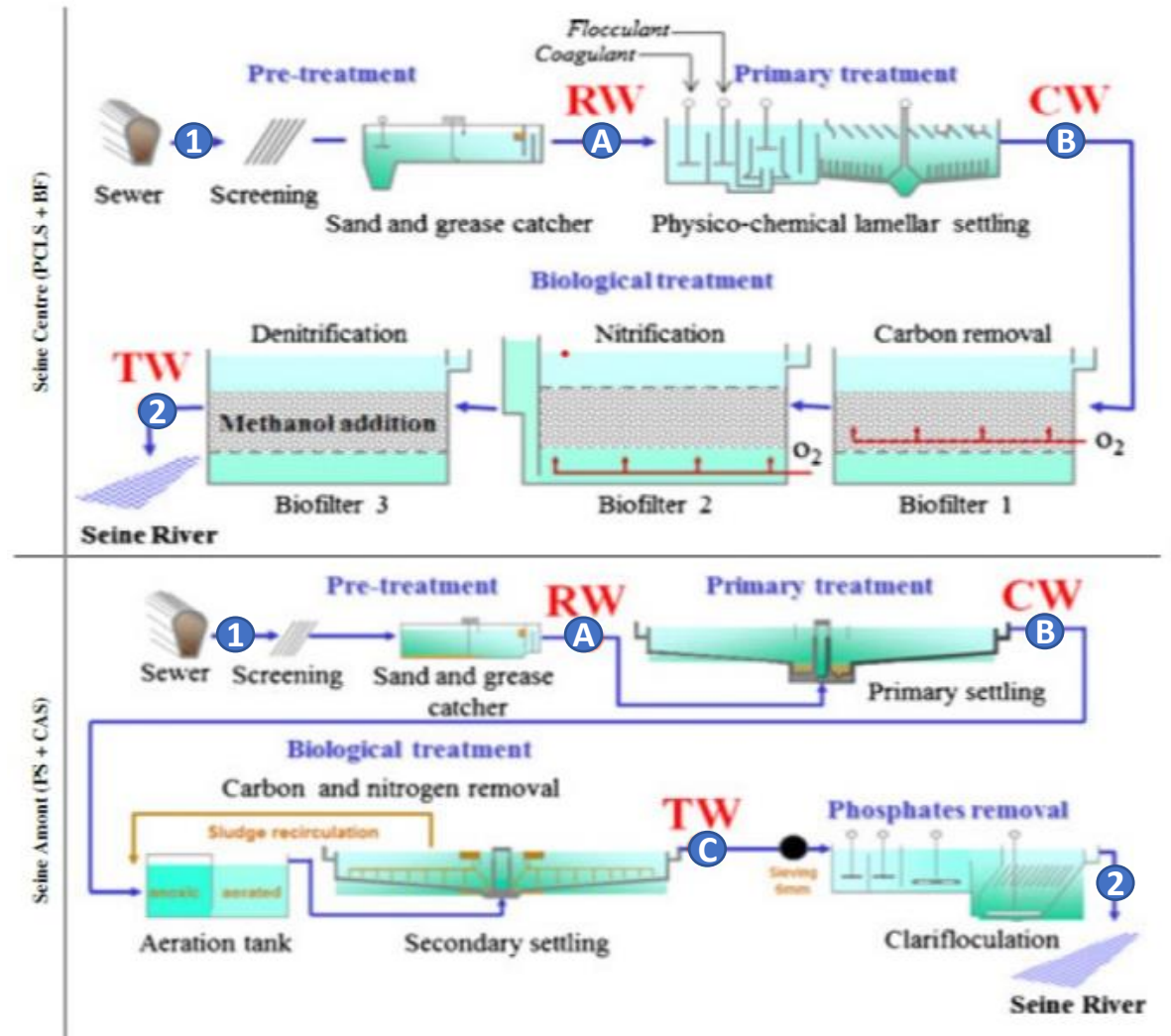
- MPs in/out (quantity and quality)
- Removal efficiency of different technologies both for water- and sludge ways

Sampling site → Seine Centre and Seine Amont

Sampling point → raw wastewater/influent
treated wastewater/effluent
before & after treatment stage

Sampling method → automatic sampler
filtration

Water treatment processes



Question 2:

MPs in the sewer deposit/sediment
(quantity and quality)

Sampling site → ???

Sampling point → ???

Sampling method → Grab sample

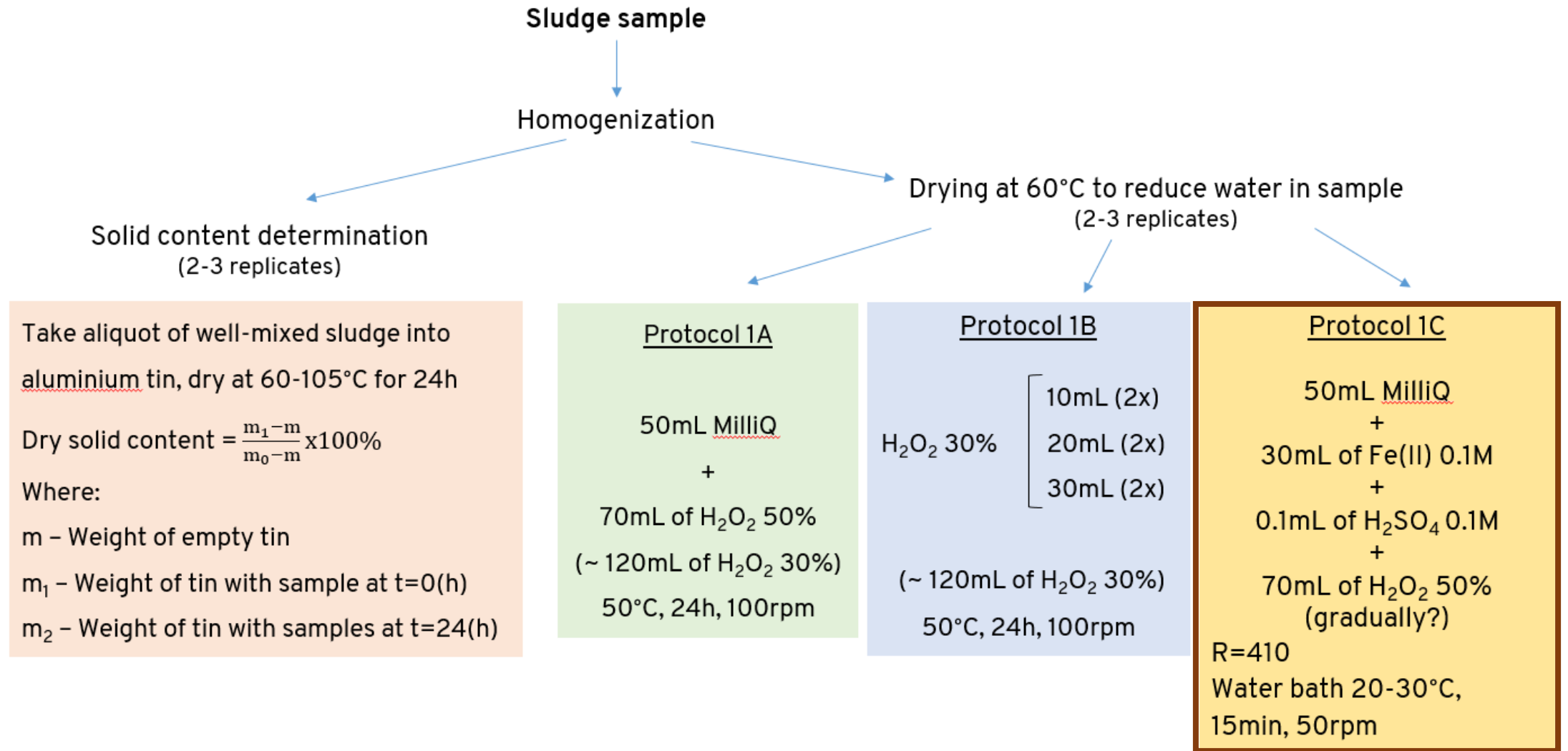
Question 3:

MPs discharged to the recipient through sewer
overflows (quantity and quality)

Sampling site → sur le quai de Clichy

Sampling point → ???

Sampling method → Grab sample?
Manta net?
Automatic sampler



(Tagg et al. 2016; Al-Alzawi et al. 2020; Danish team's protocol)

Thank you for your attention

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