

DEVELOPMENT OF SLUDGE WASTE MANAGEMENT MODELS IN SERBIA

In collaboration with SRH Hochschule Heidelberg & University of Novi Sad as a part of EU ERASMUS funding program

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- Sludge is resource not a waste.
- Every resource must be used to attain a sustainable environmental future.

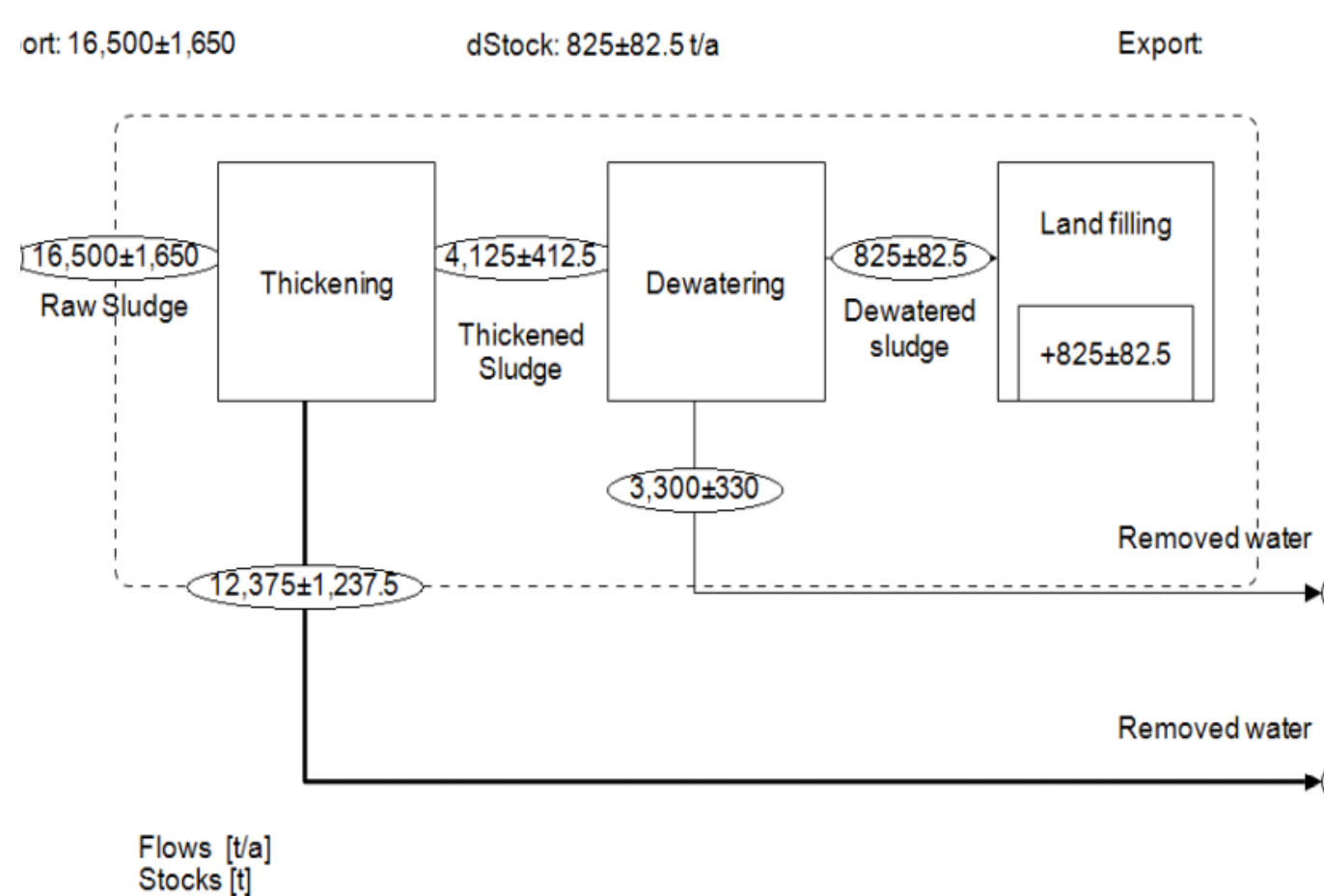
Research boundary

Sludge management is at the primary level in Serbia.

Most of the sludge generated is directly land filled.

The models are developed for the Northern Part of Serbia (AP Vojvodina).

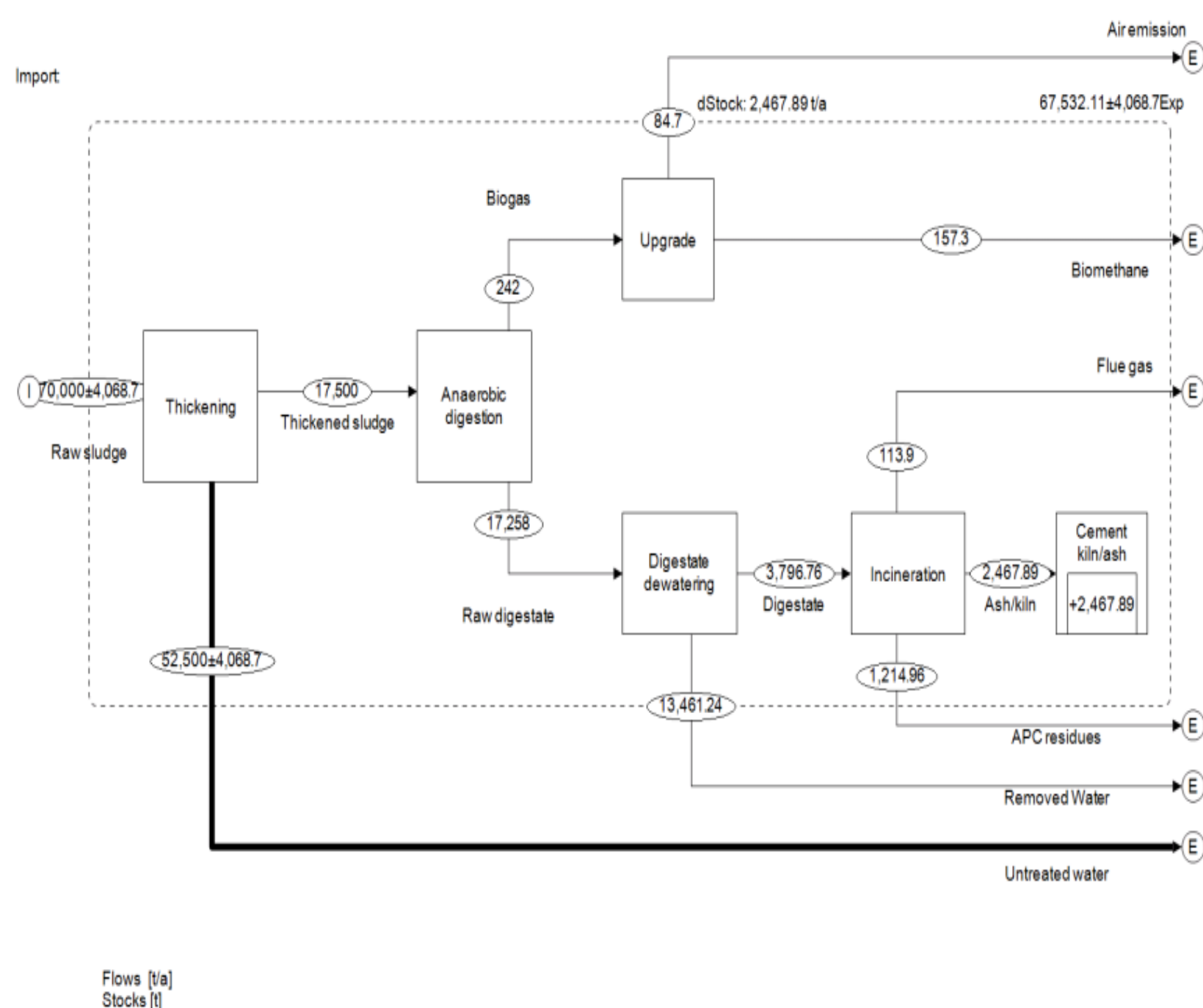
STAN (Substance Flow Analysis) software is used for model development



Model development

Different scenarios were developed.

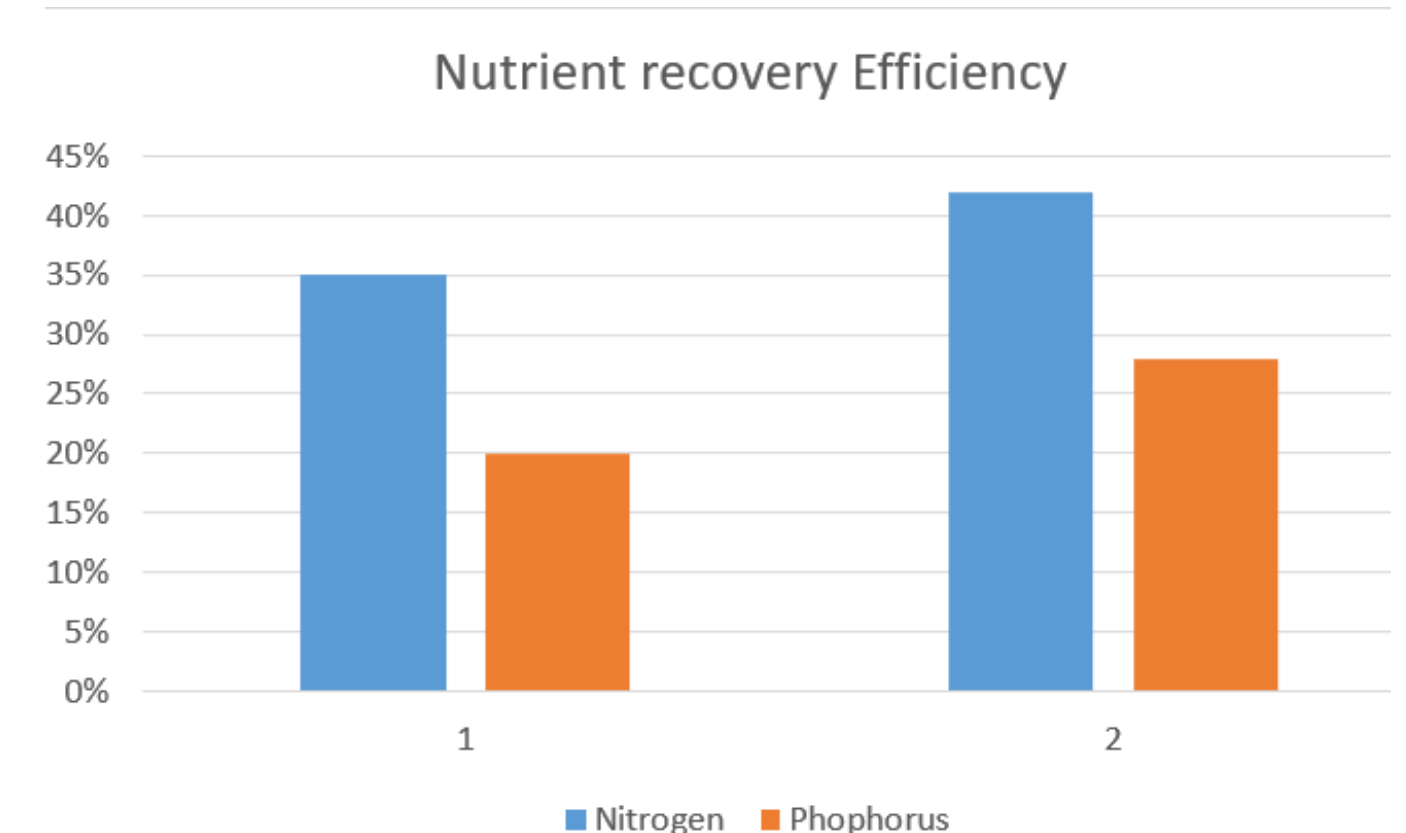
- 1 – combining composting with the existing methods and landfilling.
- 2 – combining incineration in cement kilns with the existing methods.
- 3 – combining anaerobic digestion and biogas upgrade with existing methods
- 4 – the combination of anaerobic digestion, biogas upgrading, and incineration.



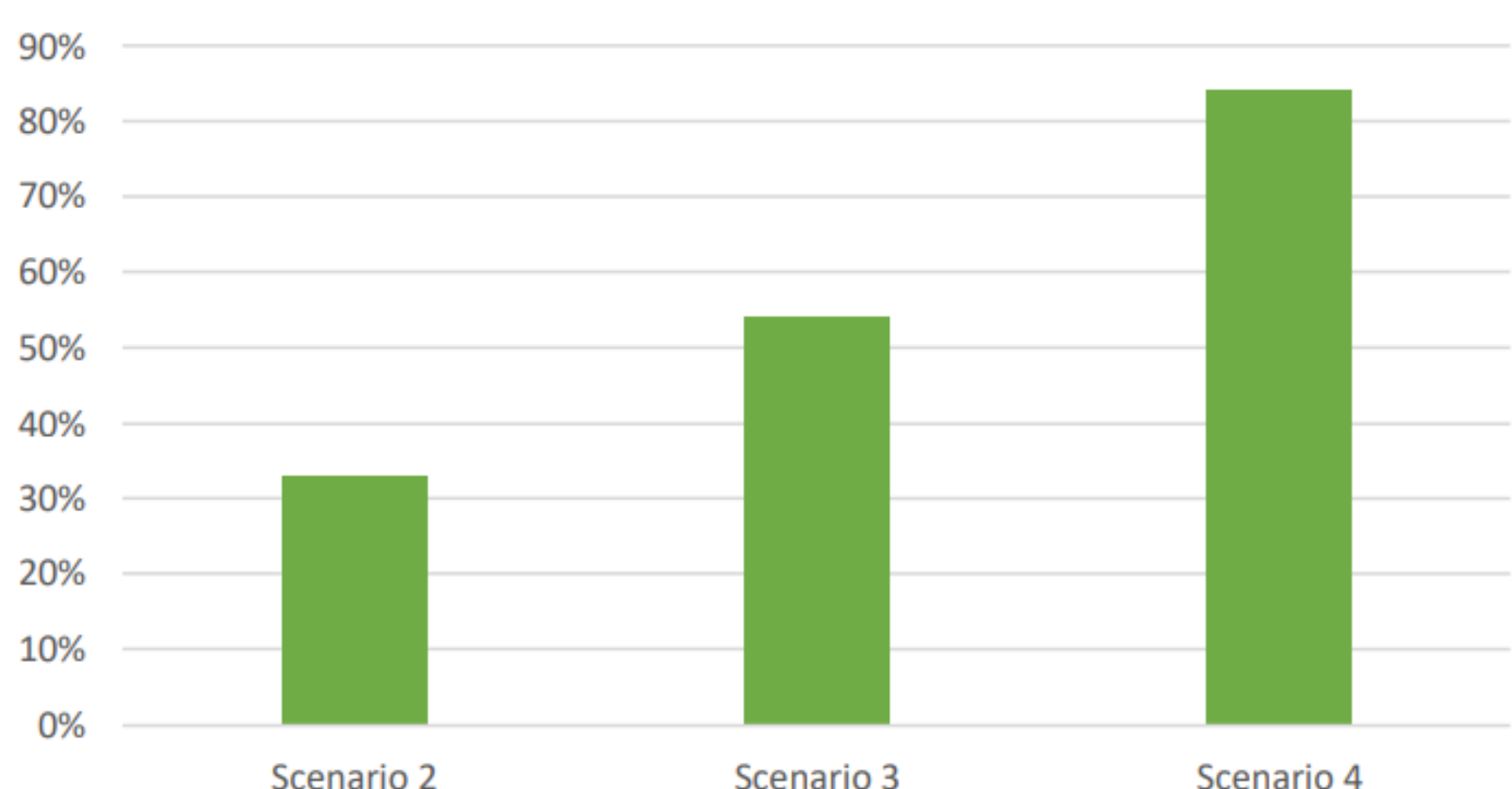
Resource management

All the models and calculations and models were developed abiding EU wastewater and sludge management regulations.

Based on these models, nutrient and recovery efficiency are calculated.



Energy recovery efficiency



Conclusion

The nutrients recovered can be useful for other purposes.

For any person, every resource is important as long as we find other ways to use it.

