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Activated Sludge Modelling in Practice – An International Survey

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The Good Modelling Practice Task Group (GMP-TG) of the International Water Association (IWA) is developing guidelines for the use of Activated Sludge Models (ASM). As part of this work the group created and sent out a first questionnaire to current and potential activated sludge model users in 2007. Ninety-six answers were received from all over the world from several types of organisations. This survey provided useful insights into the use of activated sludge models. It also pointed out the main limitations of modelling and the expectations of users for improvements. The full results of this survey are described in Hauduc *et al.* (In press).

A second questionnaire was developed in 2008 to:

- clarify some results of the first questionnaire
- provide inputs for the GMP task group report such as typical values and case studies from several countries and different wastewater treatment conditions

Probably due to the higher complexity of the second questionnaire only twenty-eight answers were received. The repartition of the answers among continents is better than in the first questionnaire as presented in *Figure 1*.

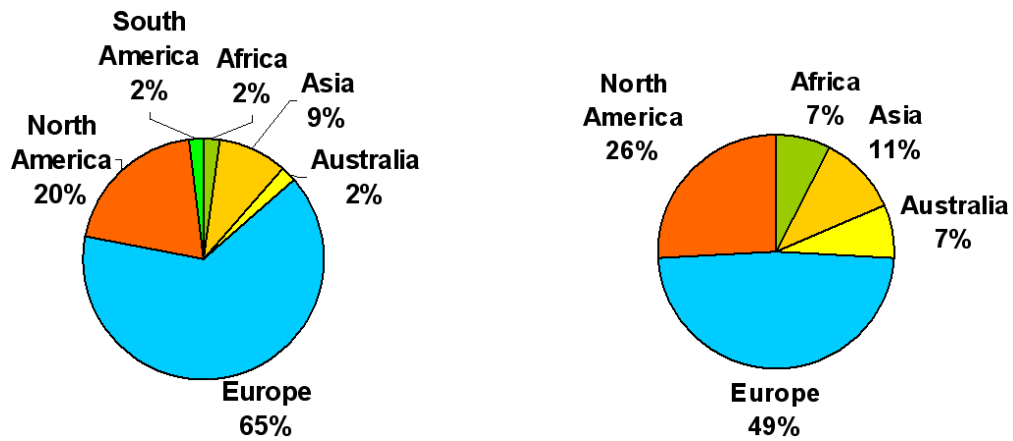


Figure 1 – Geographical repartition of answers for questionnaire 1 (left) and 2 (right).

These answers enabled the task group to build a database of modelling projects that contains 20 parameter sets so far:

- 14 parameter sets obtained through 11 full plant modelling studies
- 6 default parameter sets from expert knowledge.

Figure 2 shows the number of parameter sets obtained per model.

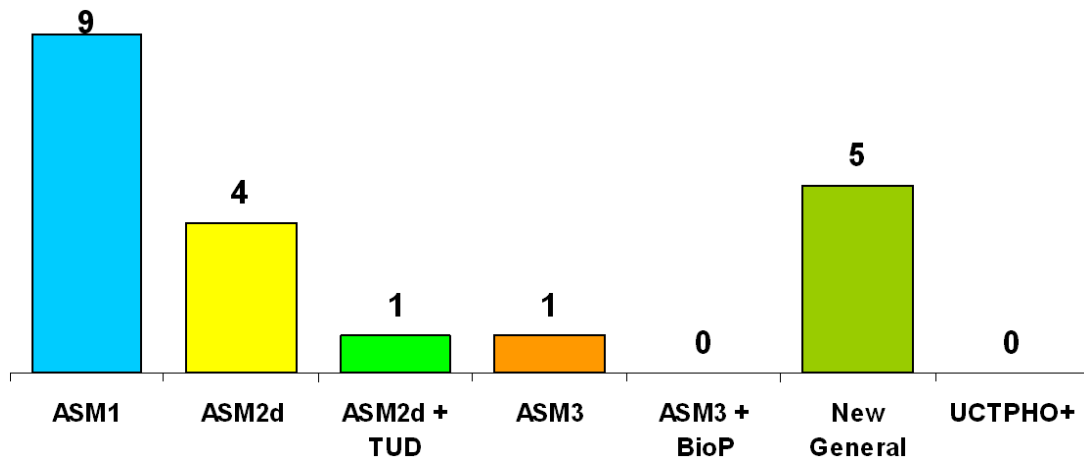


Figure 2 – Parameter sets obtained per model. Remark: no datasets for ASM3+BioP and UCTPHO+ so far.

The aim of this database is to provide ranges and typical values and parameters depending on the environmental and wastewater treatment conditions. Thus it is important to have both a good geographical repartition of the answers and parameter sets for all models.

This database will be complemented by published modelling and experimental parameter determination studies.

The Good Modelling Practice TG would still appreciate your contribution to get a better coverage in terms of models, environmental conditions and regions.

Please download the questionnaire No.2 here

{http://www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=676413}

and send it to H el ene Hauduc: helene.hauduc@cemagref.fr.

REFERENCES

H. Hauduc, S. Gillot, L. Rieger, T. Ohtsuki, A. Shaw, I. Tak acs, S. Winkler (2009). Activated Sludge Modelling in Practice - An International Survey. *Water Science and Technology* (In Press).