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DC-3.5 Report on results of application of scaling methods for integrated modelling

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Abstract/Executive summary

Defining and estimating uncertainty in simulations is essential in order to quantify the reliability of the outcomes or when model improvement is sought. Several general definitions of uncertainty are given for model-based simulations. By defining the uncertainty from different sources, these can be quantified and assessed separately, as well as eventually their absolute or relative contribution to the total uncertainty. Therefore, different types and sources of uncertainty are given. Furthermore, the choice of method when assessing the uncertainty of a given simulation may depend on the purpose and the type of uncertainty to be assessed. Approaches of assessing uncertainty in process-based models are described in general and more specifically for crop models. As a simplistic method, the already established approach of variance decomposition is suggested.

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