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On reconciliating the one-size-fits-all and the tailor-made modelling philosophies in hydrology.

As the PUB decade comes to an end, we would like to take the time to discuss an issue that has been raised repeatedly over the last ten years, the question of the genericity of hydrological models. When designing any new model, should we aim for a generic structure (i.e. aim at a one-size-fits-all representation of the hydrological cycle) or should we construct a specific structure (the tailor-made solution). While reviewing the arguments in favor of 'one-size-fits-all' (OSFA) models and the counter-arguments in favor of 'custom-made' (CM) models, we will try to show that the present controversy is, for its greater part, based on a misunderstanding. Concerning the ungauged catchment issue, we show that the OSFA approach presents serious advantages, which can also be useful in an evolving climate, and more generally, whenever model extrapolation is required. In our conclusion, we underline the future challenges for hydrological model conception and parameterization. We insist on the fact that a notable part of the hydrological cycle will remain hidden, so that our challenge will be to make the most of what is observable and cope with what is hidden.