

**Norsk hydrologiråd, 7th conference on Modelling Hydrology, Climate and Land Surface Processes:
*Modelling, forecasting, communicating, and handling weather-induced natural hazards***

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Abstract

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Global HYPE modelling as a short-cut to national/regional prediction systems

“Early warnings for all” is a mission raised by the World Meteorological Organisation at the [UN 2023 water conference](#), although production systems forecasting floods and droughts normally takes several years or decades to set-up, especially in sparsely monitored regions. The global catchment model HYPE (hydrological Predictions for the Environment) uses open data and source code in step-wise parameter estimation (Arheimer et al., 2020) to provide a modelling framework for regional refinements in data-poor regions (e.g. Andersson et al., 2017; Stadnyk, et al., 2020). In this presentation we will explain the global model concept, how it is shared and evaluated at various scales. We will show examples of model refinements using new data and local process knowledge, so that the results become applicable in national/regional planning to avoid hazards. We will also discuss capacity development needed for the model to be operated in different institutional settings.

References

<https://sdgs.un.org/conferences/water2023>

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