DEVELOPMENTS IN EROSION AND SEDIMENT MODELLING IN NEW ZEALAND

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New Zealand is characterised by erosion rates that are naturally high but are also exacerbated by land use. The sediment that is produced is often regarded as a key environmental stressor on freshwater and marine ecosystems. Models have been developed to assess erosion rates and to predict sediment yield. Many of these tools have limitations that limit their application for operational purposes and local to regional scale policy guidance.

SednetNZ is being developed to provide a model with better erosion process representation than a number of existing models such as SPARROW (Elliot et al. 2008), the Suspended Sediment Yield Estimator (Hicks et al. 2011), NZeem (Dymond et al. 2010), and the Highly Erodible Land Model (Dymond et al. 2008).

In this paper we compare a range of existing models, describe their limitations, outline where they have particular benefit, and update where development of SednetNZ is at with reference to some recent case studies.

Editor's Note: An extended manuscript has not yet been submitted for this presentation.