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Application of MASCARET for modelling manganese dispersion during a dam-break flood

Application of MASCARET for modelling manganese dispersion during a dam-break flood

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Abstract:

A reservoir storing water with high concentration of manganese is located near the river Kwé in the southern province of New Caledonia. A one-dimensional numerical model of the river Kwé has been constructed for the purpose of evaluating the impact of a wave generated by the dam failure. Two cases were investigated: formation of a breach in the dam and overtopping of the dam under extreme hydrologic conditions. The transport of dissolved and adsorbed manganese in the river during the flood event was modelled using the module TRACER included in MASCARET.