

Modeling river sediment load from a coastal forested catchment

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A considerable portion of suspended sediment discharging into the Pacific Ocean annually is contributed by forested catchments. It is important to find out the sediment source in such forested catchments. Here, we explored how sediment load occurs by rainfall and snowmelt runoff in the forested (ca 90% area) Oikamanai river basin, Tokachi, Hokkaido. Grain size and mineralogy of catchment soil and stream sediment, survey techniques, and turbidimeters provide the information that can be used to determine the sources of sediment. In this study we used semi-distributed model like ArcSWAT 2009 to find out the sediment source in the forested Oikamanai river catchments, Hokkaido, Japan by simulating sediment-load time series. This catchment is connected to the Oikamanai Lagoon opening sporadically to the Pacific Ocean. Hence, the sediment-load simulation is important to understand the sedimentation, water quality and ecosystem in the lagoon and the marine offshore region.

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