



The Sediment Budget approach in Erosion and Sediment Studies

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The sediment budget approach in its highest form involves the measurement of all flux and storage components—gross upland erosion, colluvium, channel erosion, differential alluvial storage and loss in different parts of the basin, and sediment yield or efflux. The approach was conceptualized by USDA scientists in the late 1930s and has been increasingly used over the last 35 years or so. Because some components are so difficult to measure, models and estimates must sometimes be used. In other cases, values are tares. One advantage of the sediment budget approach is that because measured values are robust, other unmeasured parts of the budget take on more robustness. Additionally, long-term studies may show distributed processes in different part of the watersheds which, the forms of which may suggest possible causation. The disadvantage of the sediment budget approach is that it is highly labor intensive and sometimes requires decades of work to be ultimately useful