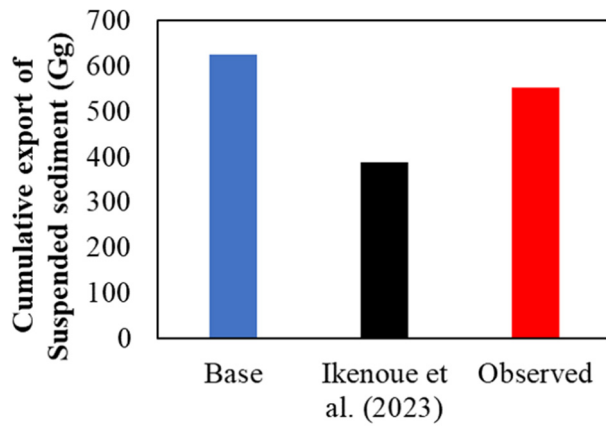
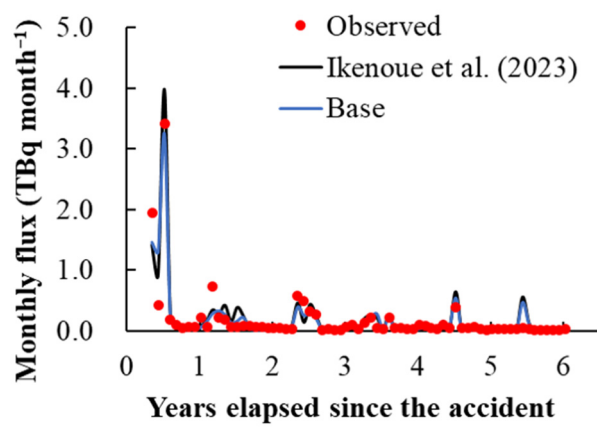


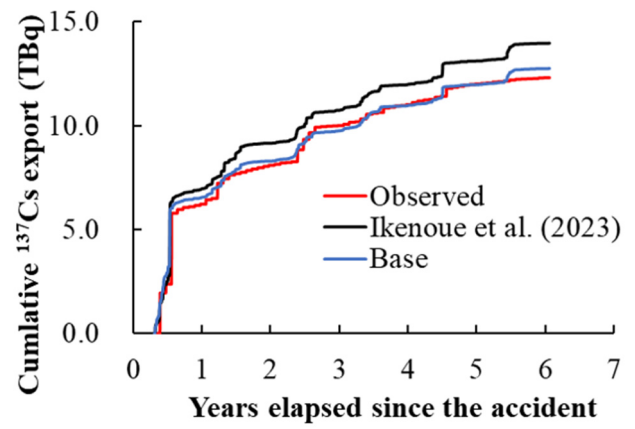
Figure S1. Outline of the computational domain in the Abukuma River basin. This figure was created using ArcGIS Desktop 10.6.1.



(a)



(b)



(c)

Figure S2. Model validation results in the Abukuma River basin. (a) Cumulative export of suspended sediment at the Iwanuma observatory from August 10, 2011, to May 11, 2012 based on observation [24] and the calculation using the model in Ikenoue et al. [15] and this study. (b) Monthly and (c) cumulative exports of ^{137}Cs at the Iwanuma observatory based on observation [12,13] and the calculation using the model in Ikenoue et al. [15] and this study.