



Interactive comment on “The catastrophe of the Niedów dam – the dam break causes, development and consequences” by Stanisław Kostecki and Robert Banasiak

Anonymous Referee #2

Received and published: 23 March 2021

The discussed problem is highly interesting from a scientific perspective but principally in terms of operational safety of this type of structures. All aspects listed below require detailed explanations. If the above requirement is met, necessary information in ICOLD can be supplemented. There are numerous doubts at present. The study is a monograph and addresses a wide range of problems; this impedes arriving at conclusions for ICOLD and for an international Journal.

The following details form a set of key information necessary to analyze disasters of hydraulic structure, especially dams: 1. Functions to be performed by the structure – a description 2. Geomorphological and hydrological conditions 3. Design guidelines (ap-

[Printer-friendly version](#)

[Discussion paper](#)

plicable during design work), data adopted for designing purposes, obtained final flow capacity parameters of the structure, geotechnical parameters of the structure, device output curves 4. A short operational description of the structure, technical assessments made, hydrological events, structure condition (maintenance status), changes in geotechnical parameters, dislocation of land-surveying points, filtration through the structure and results of control operations 5. complete probabilistic and physical characteristics of the input function that directly caused the disaster 6. indirect conditions, here e.g. instructions for water management in the reservoir as a principal document binding upon the operator and deviations in control processes with their reasons 7. An analysis of simulation results and an assessment of potential differences compared to ICOLD data, applicable assessment methods that were used (e.g. empirical formulae) 8. If a structure with the same cross-section is to be reconstructed, a rationale must be given with applicable regulations and new characteristics of devices

Considering the number of problems addressed in the study, detailed comments can be compiled by April 2, 2021

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2020-372>, 2020.

[Printer-friendly version](#)

[Discussion paper](#)