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How to Build Future Resilience to Natural Hazards Now: The Role and Effectiveness of School Education about Rivers

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ABSTRACT

With the growing recognition of the importance of public participation and involvement in environmental management, an increasing amount of attention and funding is drawn to communication of science and links between science and the society. This is particularly visible with regards to natural hazards and related risks, operation of natural processes that which may interfere or overlap with the use of space by people (such as floods) or restoration efforts. While communicating knowledge of natural phenomena to members of the public is of high value, the role of formal education system, particularly geography, as a major and most comprehensive pathway of teaching about the dynamic nature of the natural environment and sustainable development seems somewhat overlooked. Using the example of geography education about rivers, we identify factors that contribute to the effectiveness of that education and discuss societal implications for students' future perceptions of rivers and river-related phenomena. We argue that time lags and discrepancies between development of science in particular disciplines, transfer of that knowledge into school system and into core curricula, long-term teacher training system and coordination of content throughout the education cycle and across subjects are critical factors that may diminish the otherwise powerful effect of comprehensive school education on students' understanding of the dynamic nature of processes in the geographical environment.

Keywords: communication of science, education on sustainable development, perception, rivers, teacher education