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Editorial

Geomorphological Hazards: Past and Present – Introduction to the Special Issue

Olav Slaymaker[1], Andrei Panin[2], Mihai Micu[3] and Sunil Kumar De[4]
[1] University of British Columbia, Vancouver, Canada
[2] Lomonosov Moscow State University, Institute of Geography RAS, Moscow, Russia
[3] Institute of Geography, Romanian Academy, Bucharest, Romania
[4] North Eastern Hill University, Shillong, India

The International Association of Geomorphologists held its 2015 Regional Conference at Barnaul in southern Siberia. A number of participants determined to share their common interest in geohazards by collecting a coherent set of papers around the theme of "geomorphological hazards: past and present". A geomorphological hazard is defined as "any landform change, natural or otherwise, that adversely affects the geomorphic stability of a place". Three types have been identified: (1) a catastrophic event; (2) a progressive change that leads to an abrupt event; and (3) a progressive change with slow progressive results (Schumm, 1988; Alcantara-Ayala and Goudie, 2010). This definition is entirely consistent, but not coincident, with that of geohazard as "geological conditions capable of causing damage, or loss of property and life" (International Centre for Geohazards, 2016).

The papers contained in this Special Issue, though few in number, are sufficient to give the flavor of geomorphologists' interests in geohazards. It is important to note that geomorphology is both a historical science and an empirical science; geomorphologists are therefore equally interested in the past and the present (Lyell, 1830). They operate on the principle that the present is the key to the past and therefore an understanding of the dynamics and kinematics of contemporary geohazards is an essential prelude to interpreting the evidence of past geohazards. Slaymaker (1996) lists 18 geomorphic hazards by type (endogenous, exogenous or climate and land use change caused) and by magnitude and frequency. The list includes neotectonics, volcanism, mass movement, permafrost thawing, desertification, river floods and coastal erosion *inter alia*. In this Special Issue we highlight mass movement, neotectonics and river floods over Holocene time and assess their relative importance in terms of cost, fatalities and contribution to denudation over time. Examples are drawn from the Canadian Cordillera; the Forecarpathian Uplands in Southern Poland (Central Europe), the East Sayan Mountains and the Russian Altai Mountains (Southern Siberia); the south-eastern Turan Lowland in Uzbekistan (Central Asia); and Tripura in the northeastern hill country of India. It is no accident that most of the areas represented are mountainous or hilly as the high relief is conducive to geohazards. Management plans for shallow landslides at site scale, implications of strong earthquakes at regional scale and magnitude and frequency analysis of large landslides and catastrophic river floods from the past are all central components of the science of geomorphology.

The value-added of this Special Issue is that it considers geomorphological hazards from site to regional scale and from contemporary to Holocene time scale and

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demonstrates that a better understanding of the nature of geohazards requires the use of different approaches and methodologies at each scale.

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