

Georisks and Sustainability Resource of The Mascarene Islands Territories to External Impacts

Viacheslav Iegupov¹, Rajeshwar Goodary², Yeshvin Goodary³

¹Kharkiv National University of Civil Engineering and Architecture
40 Sumska Street, 61002, Kharkiv, Ukraine
slavaegu@gmail.com

²Université des Mascareignes
Avenue de la Concorde, Roches Brunes, Rose Hill, Mauritius
rgoodary@udm.ac.mu

³McGill University, 845 Sherbrooke St W, Montreal, Quebec H3A 0G4, Canada
yeshvin.goodary@mail.mcgill.ca

Abstract: One of the most important tasks in making strategic decisions on the development of a particular region is objective information about geo-risks – natural or man-caused processes and phenomena that can cause damage to life, human health, or significant material losses. A reliable assessment of geo-risks, as well as the possibility of multi-risks, can be performed only by considering all the major impacts on existing natural and technogenic systems of urbanized territories and infrastructure facilities. At the same time, it is necessary to evaluate the ability of these systems to withstand external influences – a resource of sustainability. Geo-risks and the resource of resistance to external influences from a geotechnical and geological point of view were performed for the territories of the Mascarene Islands, which have both volcanic origin and predominantly biogenic. The advantage of the proposed approach is the unification of the principles of assessment, the need to take into account the capabilities of the natural resource and regulate its increase through preventive measures.

Keywords: *georisks, external impacts, sustainability resource, volcanic islands, atolls*