Commentary
Volume 11:S9, 2021

Environmental & Analytical Toxicology

ISSN: 2161-0525 Open Access

A Brief Note on How Flash Flood Effect on Environment

Naeem Qustya[1*], **Mulli Sai Kiran**[2]

[1]*Department of Environmental Science & Engineering, Harbin Institute of Technology, Heilongjiang, China*

[2]*Department of Pharmacy, Avanthi Institute of Pharmaceutical Sciences, Cherukupally, India*

Description

One of the most dangerous types of hazards is flash flooding. Their suddenness, rarity, small scale, heavy rain and peak discharge, and unpredictable, fast, and violent movement distinguish them. It has devastating consequences for human society, including loss of life, property destruction, road and communication disruptions, and environmental harm. Hydrology, meteorology, engineering, GIS, and remote sensing advancements have not been able to improve real-time forecasting. Researchers from industrialised countries have emphasised the importance of focusing greater attention on developing an effective early warning system in a short amount of time with local community involvement for flash flood risk management. Natural and social science contributions can play a critical role in risk mitigation. The examination of numerous morphometric parameters of river basins is particularly important in the flood hazard risk assessment.

Inundation zones, depth information, evacuation centres and routes, key facilities, communication lines, evacuation criteria, emergency kits, and many other items needed for an evacuation are all included in community-based participatory flood hazard mapping. The internal (assesses coping capabilities of people or systems) and external (exposure of people) sides of vulnerability are both important to consider. Hazard (connected to source and pathways) and susceptibility are the two fundamental components of risk assessment (related to the receptor and consequences). Flood catastrophe risk has grown in importance around the world, with vulnerabilities linked to demographic shifts, socioeconomic situations, unplanned settlements, environmental degradation, natural resource stress, and climate change.

A flash flood, also known as a quick onset flood, is a type of flooding that occurs in a short period of time and has a relatively large peak discharge of water. A flash flood happens within a few hours of severe rainfall, rapid snowmelt, or a sudden glacier lake outburst, embankment failure, or very rapid ice block breakup due to rapid temperature increase. Flash floods are caused by heavy rains (up to 100 mm in 6 hours) and an extreme rush of high water, and they usually occur in narrow dry valleys. Flash floods bring significant amounts of debris, boulders, uprooted trees, obliteration of infrastructures, and erected buildings in their path due to an unanticipated surge in water adjacent to streams and rivers and very rapid flow speed.

A flash flood's emergency reaction time is typically shorter than 6 hours. Flash floods are mainly caused by heavy rainfall in a specific area or a limited basin with a certain geological context such as relief, slope, and form factor, as well as the drainage density of a watershed. Flash flood discharge processes such as soil permeability, shrinkage, expansion, root distribution, and human activities are all influenced by soil contours. Hydro meteorological ambiguity in flash flood situations continues to provide problems in real-time forecasting. Flood prediction characteristics such as watershed conditions, rainfall and snowmelt must all be evaluated and addressed in the process of flash flood prediction. Flash floods are common in tiny catchments or drylands, which are frequently inadequately gauged or ungauged.

Thunderstorms, monsoon troughs, rapid melting of snow, and glacial lake outburst flooding are the main reasons. Increased likelihood of more frequent and severe flash floods in future is due to population development and climate change impacts. As a result, flash flood hazard vulnerability and risk assessments require special attention if significant losses are to be avoided.

How to cite this article: Qustya , Naeem . "A Brief Note on How Flash Flood Effect on Environment." *J Environ Anal Toxicol* 11 (2021) : 003.

[*]***Address for Correspondence:*** *Dr. Naeem Qustya, Department of Environmental Science & Engineering, Harbin Institute of Technology, Heilongjiang, China; E-mail: qustya@yahoo.com*

Received: December 02, 2021; **Accepted**: December 16, 2021; **Published**: December 23, 2021