World Academy of Science, Engineering and Technology
International Journal of Geotechnical and Geological Engineering
Vol:13, No:01, 2019

Effects of Climate Change on Floods of Pakistan, and Gap Analysis of Existing Policies with Vision 2025

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Abstract : The analysis of the climate change impact on flood frequency represents an important issue for water resource management and flood risk mitigation. This research was conducted to address the effects of climate change on flood incidents of Pakistan and find out gaps in existing policies to reducing the environmental aspects on floods and effects of global warming. The main objective of this research was to critically analyses the National Climate Change Policy (NCCP), National Disaster Management Authority (NDMA), Federal Flood Commission (FFC) and Vision 2025, as an effective policy document which is not only hitting the target of a climate resilient Pakistan but provides room for efficient and flexible policy implementation. The methodology integrates projected changes in monsoon patterns (since last 20 years and overall change in rainfall pattern since 1901 to 2015 from Pakistan Metrological Department), glacier melting, decreasing dam capacity and lacks in existing policies by using SWOT (Strength, Weakness, Opportunities, Threats) model in order to explore the relative impacts of global warming on the system performance. Results indicate the impacts of climate change are significant, but probably not large enough to justify a major effort for adapting the physical infrastructure to expected climatic conditions in Vision 2025 which is our shared destination to progress, ultimate aspiration to see Pakistan among the ten largest economies of the world by 2047– the centennial year of our independence. The conclusion of this research was to adapt sustainable measures to reduce flood impacts and make policies as neighboring countries are adapting for their sustainability.

Keywords : climatic factors, monsoon, Pakistan, sustainability
Conference Title : ICGESG 2019 : International Conference on Geotechnical Engineering and Structural Geology
Conference Location : Bangkok, Thailand
Conference Dates : January 17-18, 2019

Open Science Index, Geotechnical and Geological Engineering Vol:13, No:01, 2019 publications.waset.org/abstracts/102797.pdf