



Slobodan P. Simonovic

The University of Western Ontario, Canada

Flood risk management under climate change

Climate change and global warming of the atmosphere are very likely to lead to an increase in flooding, and there is now an urgent need for appropriate tools to tackle the complexity of flood risk management problems and environmental impacts. This lecture presents the flood risk management process as a framework for identifying, assessing and prioritizing climate-related risks, and developing appropriate adaptation responses. It integrates economic, social and environmental flood concerns, providing support for interdisciplinary activities involved in the management of flood disasters. A methodology is developed to quantify the risk to municipal infrastructure and applied for the assessment of climate change caused flood risk to the City of London, Ontario, Canada. The risk is measured using a combination of flow/frequency, stage/damage and damage/frequency curves. The measure of risk is termed the Risk Index and calculated for each infrastructure element within a municipality. The risk is aggregated and summed by spatial unit and presented in the form of risk tables and maps. The risk index takes into account both quantitative and qualitative information obtained from research and interviews with technical experts. The results from the application of the methodology to a municipality will lead to better policy and informed decision making.

Biography

Simonovic has over thirty years of research, teaching and consulting experience in water resources engineering. He actively works for national and international professional organizations. His primary research interest focuses on the application of systems approach to, and development of the decision support tools for, management of complex water and environmental systems. Most of his work is related to the integration of risk, reliability, uncertainty, simulation and optimization in hydrology and water resources management. He has received a number of awards for excellence in teaching, research and outreach. He has published over 350 professional publications and three major textbooks.

simonovic@uwo.ca