Keynote Speech by Prof. Dr.-Ing. Ramesh Kumar Maskey at SRMIST, Chennai

Prof. Dr. Ramesh Kumar Maskey delivered a Keynote Speech on “Nature vs Technology: Where do Civil Engineers Stand?” at the International Conference on Theoretical and Experimental Advances in Civil Engineering 2018 in SRM Institute of Science and Technology organized by Department of Civil Engineering in Kattankulathur, Chennai, India from 9th-14th May 2018.

In his speech, Dr. Maskey gave a philosophical thought on how an engineer (Civil) in the pursuit of seeking comfort to humankind become powerful to counteract with nature through the help of technology. In the context of rapid population growth and the migration that is bursting in a massive scale, there is a dire need to have more infrastructures built in future that do also mean more incursion on natural habitat and triggering more catastrophes in turn. He thus questioned: Do we really understand the science of natural calamities and our responsibilities to solve the problems that we produced ourselves by providing the ‘luxury’ to humankind? How much comfort is needed and where should be the limit? Can the theoretical and experimental advancements in civil engineering strike a balance between the development and environment? Dwelling on these big questions, he concluded that civil engineers should comprehend the science of natural calamities and the technology they develop to strike a balance between Nature and the Technology in a reasonable way.

International Conference on Theoretical and Experimental Advances in Civil Engineering 2018

(ICONTEACE 2018)

Nature vs Technology: Where do Civil Engineers Stand?

Ramesh Kumar Maskey
Kathmandu University

Natural forces are incessantly doing its job by taking a fraction of solar energy very effectively. Massive hydrological cycle, tsunamis, landslides, floods, tides, tornados, hurricane, lightning etc. are the effects of these forces and they are necessary to make this blue planet function in a balanced way creating the atmosphere conducive for natural beings. Historically, civilizations learned how to cope with these forces for satisfying their needs for subsistence and praised these forces as God's deed in their belief without being over demanding. In the modern era, civilizations have formed a 'comfort zone' by keeping themselves away from being in harmony with such natural forces. More they desired for the comfort more they detached themselves from the very nature where they have to thrive. This 'comfort seeking habits' of modern people demanded civil engineers to advance the technology for building massive civil engineering 'marvels' that encroached the natural habitat. Nature seeks less energy for its functionality whereas technology demands high energy for the function of the society. However, these construction activities in itself posed an invasion in the time and spaces where these natural forces exist.

Our over creation and wrongly sited infrastructures have antagonized these forces and the results, in most cases, are devastating. We termed this phenomenon inherently as natural calamities and make ourselves find in a vicious cycle by fighting against such calamities using the same technology that generates these phenomena. In such a commotion, we pose the question again to civil engineers: where do they stand? In fact, civil engineers are meant to be solving problems related to conditions of human being and the planet Earth. Another fact is that nature do not need our help for its existence but human being do. As the population is growing fast and the migration, not only from rural areas to city but also from one country to another, is bursting in a massive scale, there is a dire need to have more infrastructures built in future that do also mean more incursion on natural habitat and triggering more catastrophes in turn. Do we really understand the science of natural calamities and our responsibilities to solve the problems that we produced ourselves by providing the 'luxury' to humankind? How much comfort do we need and where should be the limit? Can the theoretical and experimental advancements in civil engineering strike a balance between the development and environment? The big question thus 'where civil engineers do stand to comprehend the science of natural calamities and the technology they develop?' needs to be understood and answered in a reasonable way.

Keywords: Natural Calamities, disaster, vicious cycle, technology, civil engineer, environmental protection, infrastructure