



Section E3

Role of ICT in multidisciplinary approach for sustainable development

Gamini Wijayarathna

Faculty of Computing and Information Technology, University of Kelaniya

According to NASA, nine of the ten warmest years have occurred since the year 2000. In 2012, the Arctic summer sea ice recorded the lowest level and during the last 100 years, the global sea level has risen by 178 mm. Greenhouse gases are the main contributors to these climate changes. Even if emission of greenhouse gases is stopped today, global warming and climate change will affect future generations (Figure 1). Ecosystems and agriculture will be affected by these climate changes. Therefore, achieving the sustainable development goals 'Climate action', 'Life below water', 'Life on land', 'No poverty', 'Zero hunger', and 'Good health and well-being' will not be a reality, if the global warming is not monitored and controlled. Collection of data from the environment, processing using computers, storing in storage devices and sharing data and information among engineers, scientists, social scientists, healthcare professional, farmers, managers, academic community, policy makers and general public through networks is essential to reduce climate change (mitigation) and to adjust to living in a changing climate (adaptation). This shows that the fight to eradicate global warming is clearly a multi-disciplinary effort. NASA collects climate data and makes the data available to the public, policy makers, decision makers, and scientific community around the world using Internet. ICT has reduced the cost and effort of sharing data around the globe while increasing the availability of accurate data and information, efficiency of storing and maintenance in a central location.

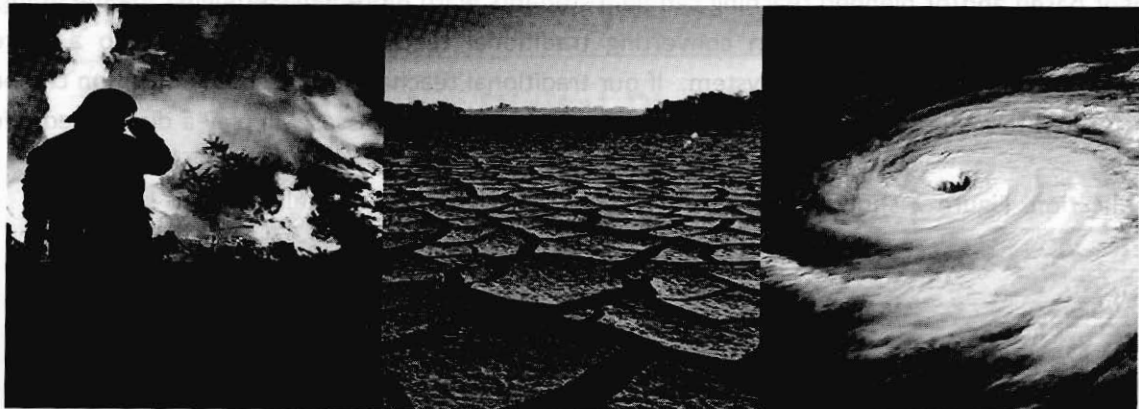


Figure 1: Potential future effects of global climate change

Source: <http://climate.nasa.gov/effects/>, accessed on 10/10 2016

Quality education is one of the important sustainable development goals. The idea is to promote quality education and lifelong learning opportunities for all. A couple of decades ago these goals were not achieved due to the 'rich' and 'poor' division of society. Quality education was not available to poor people in the society while the rich enjoyed the luxury of education. A bestselling

book 'A letter to a teacher by the School of Barbiana' written in 1967 by eight students from the School of Barbiana, in the Tuscany region of Italy, tells how the low quality education for poor people affected their lives. This heartbreaking story will open the eyes of decision makers and policy