# Training and Awareness Programmes, Seminars and Workshops

## **Training and Awareness – 2019**

1. Training and Awareness Programmes conducted by NBRO for Capacity Building on Disaster Preparedness and Resilience of Hazard Vulnerable Communities in Sri Lanka

NBRO annually conducts training and awareness programmes to various identified communities such as disaster vulnerable communities, persons engaged in construction activities in disaster-prone areas, and officials engaged in disaster mitigation activities to strengthen and enhance their capacities in relevant disaster risk reduction (DRR) activities. NBRO allocated Rs. 3.4 Mn in 2018 and Rs. 5.0 Mn in 2019 respectively for such training and awareness programmes.

In 2019, NBRO conducted awareness programmes for the senior government officers and technical officers in landslide vulnerable districts (3 programmes); awareness creation of masons and beneficiaries of the Resettlement Programme (19 DSD level programmes); awareness programmes for professionals in Plantation Human Development Trust (PHDT) on disaster resilient human settlement planning in estate sector in Sri Lanka; awareness building of school students on proper land-use practices in landslide prone districts, and awareness building among university students on disaster resilient construction methodologies. Further, NBRO promoted disaster resilient housing models in national level exhibitions as well.

NBRO expects extending training and awareness programmes in 2020 as well as promoting provision of recommendations by NBRO for a safer built environment, often in contrary to common practices in land selection, land development and housing construction in Sri Lanka. Being placed under the ministry for disaster management, NBRO is privileged to have been assigned with the responsibility of promoting safety of the housing stock of the country. And, NBRO will endeavour dissemination of technical-know-how among all DRR stakeholder groups in Sri Lanka to make the vision a reality.



Awareness for Government Officials involved on Hazard Resilient Construction



Training for Masons, Involved in Housing Construction on Hazard Resilient Construction



Workshop on Estate-Sector Resettlement Planning for Plantation Human Development Trust (PHDT)



Beneficiary Awareness of National Resettlement Programme



use Methods for University and School Students



### 2. Training programme on "Upgrading of real time air quality monitoring sensors for application in Sri Lanka"

Dr. Ajith Kaduwela from California Air Resource Board conducted a training program for NBRO staff from 5th November to 21st November 2019 at NBRO on further upgrading of real time air quality monitoring sensor unit. Set of assembled sensor units were tested and data were validated by crosschecking with a high-tech standard method using "Beta Attenuated Technique". It was statistically proven that there were no significant differences between the data obtained by sensor units and data from standard Beta Attenuated Technique for ambient suspended particulate matter monitoring. The results were published and presented at the International symposium organised by NBRO at Colombo, Sri Lanka on 17th & 18th December 2019. During November and December period of 2019, these developed sensor units were used to collect field data in major urban cities; Colombo, Kurunegala, Vavuniya and Puttalam.





#### 3. Nature-Based Landslide Risk Management Project

Workshop 1 (30-31 May 2019)

- Application aspects of Geo-engineering and Bio-engineering methods (and hybrid methods) for mitigation of landslide risk;
- Different methods of improving mechanical and hydrological properties of soil through vegetation:
- Quantitative assessment of impact of bio-engineering applications using a computer model employing limit equilibrium and finite element analysis;
- Practical aspects of analysis of the impact and contributions of vegetation in slope stabilization in a given vulnerable slope;
- Understanding on the approach for site selection, planning and implementation of hybrid (geoengineering and nature based) solutions for landslide risk management;
- Mechanical consideration of tree root in a slope;
- Contribution of tree root in different compositions of a hill-slope and some idea on modelling root reinforcement in unstable slopes;

• Limitations and challenges in landslide risk management activities including nature-based solutions through case studies from Taiwan.





#### Workshop 2 (21 October 2019)

- (i) Review of Guidance Document on use of Nature-based Solutions for Landslide Risk Management
- (ii) Root testing and modeling of effects of vegetation in strengthening sub-soil formations and in improving slope stability



