Date of Submission	30th March 2018

Progress Report of WCoEs 2017 - 2020

Reporting period: 1 June 2017 to 31 December 2017

1. Short Title of WCoE :

   Developing Model Policy Frameworks, Standards, and Guidelines on Landslide Disaster Reduction

2. Name of Institution (Name of leader and email):

CENTRAL ENGINEERING CONSULTANCY BUREAU (CECB)

Team Leader : Eng. A A Virajh Dias, BSc(Civil)Eng, PGDip, CEng., MIESL, MASCE, MTIEMS(Norway)

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3. List of core members

   Eng.(Ms) S. S. I. Kodagoda(BSc(Hons)Eng,MEng.,CEng,; Deputy General Manager

   Ms H.M.J.M.K. Herath(BSc(Geology Special).- Engineering Geologist

   Eng.(Ms) M A S N Mallawarachchi (BSc Eng(Hons)-Civil Engineer

   Dr J S M Fouze(BSc Eng., Ph.D.(Geotechnical Eng.)-Deputy General Manager

   Ms Nimesha Katuwala, B.Sc.(Hons) Computational Chemistry, Env. Scientist

   Mr P V I P Perera, BSc(Environmental Management), MSc; Env. Scientist

   Eng. Kumari Weerasinghe, BSc(Hons)Eng.,MEng(Geotechnical Eng);- Numerical Model Studies

4. Progress report of activities up to 31 December 2017

   a. **E-Conference in 2017 (mini conference for sub themes of 2015 e-conference) – Closed October 2017**

      Team Leader in E-conference 2017– Eng. A A Virajh Dias, and Theme Coordinator- Ms. Nimesha Katuwala

The mini-conference for sub themes of the main conference of e-conference 2015 was conducted and more than 58 participants representing 6 continents in the world and 3 keynote experts/facilitators supported to create an effective communication platform throughout the project. The conference was carried out through an official website (http://e-conference2017.crdcecbsl.lk/) specifically created as an open source media to enable all the viewers to connect simultaneously to share their ideas and comments related to the topic. Three major topics were discussed throughout the conference proceedings. Participants

have expressed their ideas on technical issues, social and ethical aspects, required recommendations and regulations in the discussion sessions. Theme A: Youth Empowerment in Landslide Disaster Risk Reduction through Knowledge Sharing; Theme B:Disaster Resilient Housing, Building, Land Management and Agricultural Development; Theme C: Indigenous Knowledge in Landslide Disaster Management

b. IPL - 155; 2012 - 2019: Team Leader - Eng. A. A. Virajh Dias

Determination of Soil Parameters of Subsurface To Be Used In Slope Stability Analysis in Two Different Precipitations Zones of Sri Lanka – On Going Project

The study on evaluation of E_{50} (Secant modules) is an experiment setup to understand the behaviour of residual soils under changing stress conditions at site due to various reasons such as prolong period of rainfall precipitations, movement of soils, unloading effects and re-loading effect caused by deposition. The results do not conclude a strong interdependence of e_o and E_{50} with the shear strength characteristics due to a small sample represented in this study. Therefore, it is advised to explore more sample representation in a detail study before the comparison or evaluation of the interdependence of sub coefficients of soils.

c. IPL -199 ; 2015 2020 : Team Leader – Mr. Ishastha Perera

The Effect Of Root Systems In Natural Slope Erosion Protection In The Hill Country Of Sri Lanka.- – On Going Project

This study reports the observed details and patterns of vegetation which support slope protection and the roles played by different species in such scenarios. It is understood that not one, but a collection of species contribute to this end through the setting and functions of each type of vegetation and their positioning. Thus results of the study can be directly used for practical application in critical slopes.

d. IPL -200; 2015-2020 : Team Leader – Ms. H M Janaki M K Herath

An Assessment Of The Rock Fall Susceptibility Based On Cut Slopes Adjacent To Highways And Railways – On Going Project

The main target of this research is to carry out appropriate improvements for rock fall hazard assessment by introducing appropriate Rock fall Hazard Rating System (RHRS). This method is indicating various judgment matrices but it does not clearly define a method of assigning individual weights by prioritizing the significance. These research findings have been published in the ICL Publications such as the Proceedings of WLF2, WLF3 and the WLF4.

e. **World Centre of Excellence on Landslide Disaster Reduction (2017-2020): Model Policy Frameworks, Standards, And Guidelines On Landslide Disaster Reduction;** Team Leader - Eng. A. A. Virajh Dias ;

The Central Engineering Consultancy Bureau has been approved and entitled as "World Centre of Excellence on Landslide Disaster Reduction" during the period of 2014-2017 under the theme of "Model Policy Frameworks, Standards, and Guidelines on Landslide Disaster Reduction" by the Global Promotion Committee of the ICL held at the award ceremony of World Landslide Forum 4- in Ljubljana, Slovenia, 2017.

f. **Short Term Monitoring And Technical Evaluation Of The Stability Of The Waste Dump at Meethotamulla, Sri Lanka, 2017**

The Central Engineering Consultancy Bureau (CECB) was one of the organizations identified in the said TOR to implement the short term monitoring and technical evaluation of the stability of the waste dump. Accordingly, CECB submitted a proposal to the Ministry of Megapolis and Western Development for implementing the scope of work which was declared at the above referred meeting. The specified period of the study was from 20th April 2017 to 20th June 2017.

5. **Plan of future activities**

Planned future activities	**Expected Results**	**Work phases and Milestones**
Development of Design Specifications, Standards and Guideline for the Hill Country Road Construction in Sri Lanka	Regional events and workshops would be organized to facilitate the interface among the Ministries/ universities/ institutions/NGOs representatives to share and exchange their experience for incorporating the Landslide Risk Reduction in hill country road development projects	July 2017 to December 2018
Conducting a 3rd E-Conference on **Developing Model Policy Frameworks, Standards and Guidelines on Landslide Disaster Risk Reduction**	Organize capacity building events on Road Base-Landslide risk reduction and management at various levels to integrate Landslide risk management practices	May 2019 to November 2019

Monitoring of ongoing research works and development of web based data gathering on major landslides	Organize capacity building events on Road Base-Landslide risk reduction and management at various levels to integrate Landslide risk management practices	June 2017- August 2020

6. Publication (in Landslides, proceedings, meeting reports, or WEB)

1. "Soil Moduli E50 of Residual Soil Slopes, Sri Lanka"; A A Virajh Dias, L K N S Kulathilaka, W M J K Wendakoon & E M T M Ekanayake; Proceeding of the UNESCO – IPL Symposium, November, France, 2017.
2. Report on "Proposal for carry out technical rapid assessments of the status of municipal solid waste dumpsite and advanced monitoring and evaluations; submitted for the Ministry of Megapolise & Western Development"; August, 2017
3. Report on Short Term Monitoring And Technical Evaluation Of The Stability Of The Waste Dump at Meethotamulla, Sri Lanka, 2017
4. The e-conference was carried out through an official website; (http://e-conference.crdcecbsl.lk/) specifically created as an open source media to enable all viewers to connect simultaneously to share their ideas and comments related to the topic.
5. "Soil Moduli E50 of Residual Soil Slopes, Sri Lanka"; A A Virajh Dias, L K N S Kulathilaka, W M J K Wendakoon & E M T M Ekanayake; Proceeding of the UNESCO – IPL Symposium, November, France, 2017.
6. "Comparison of soil modulus E50 of residual soil slope failures in two different rainfall zones"; Proceeding of the World Landslide Forum3 (WLF3), Beijing, China, 2-6 June 2014; Volume 1, Landslide Science for a Safer Geoenvironment, PP 135- 141.; Authors were M A S N Mallawarachchi, E M T M Ekanayake, S S I Kodagoda and A A Virajh Dias; ISBN 978-3-319-04998-4; Springer.
7. "Empirical Relationships of Elastic Modules and Uniaxial Strength of Intact Metamorphic Rocks of Sri Lanka"; Proceeding of the International Conference of Geotechnical Engineering(ICGE) 10th – 11th August 2015 in Colombo, Sri Lanka; PP 515 -518; Authors were E M T M Ekanayake , H M J M K Herath and A A Virajh Dias; ISBN 978-955-1411-01-5.