

National Building Research Organisation

# PROJECT FOR CAPACITY STRENGTHENING ON DEVELOPMENT OF NON-STRUCTURAL MEASURES FOR LANDSLIDE RISK REDUCTION IN SRI LANKA

## WORK PLAN

February 2019

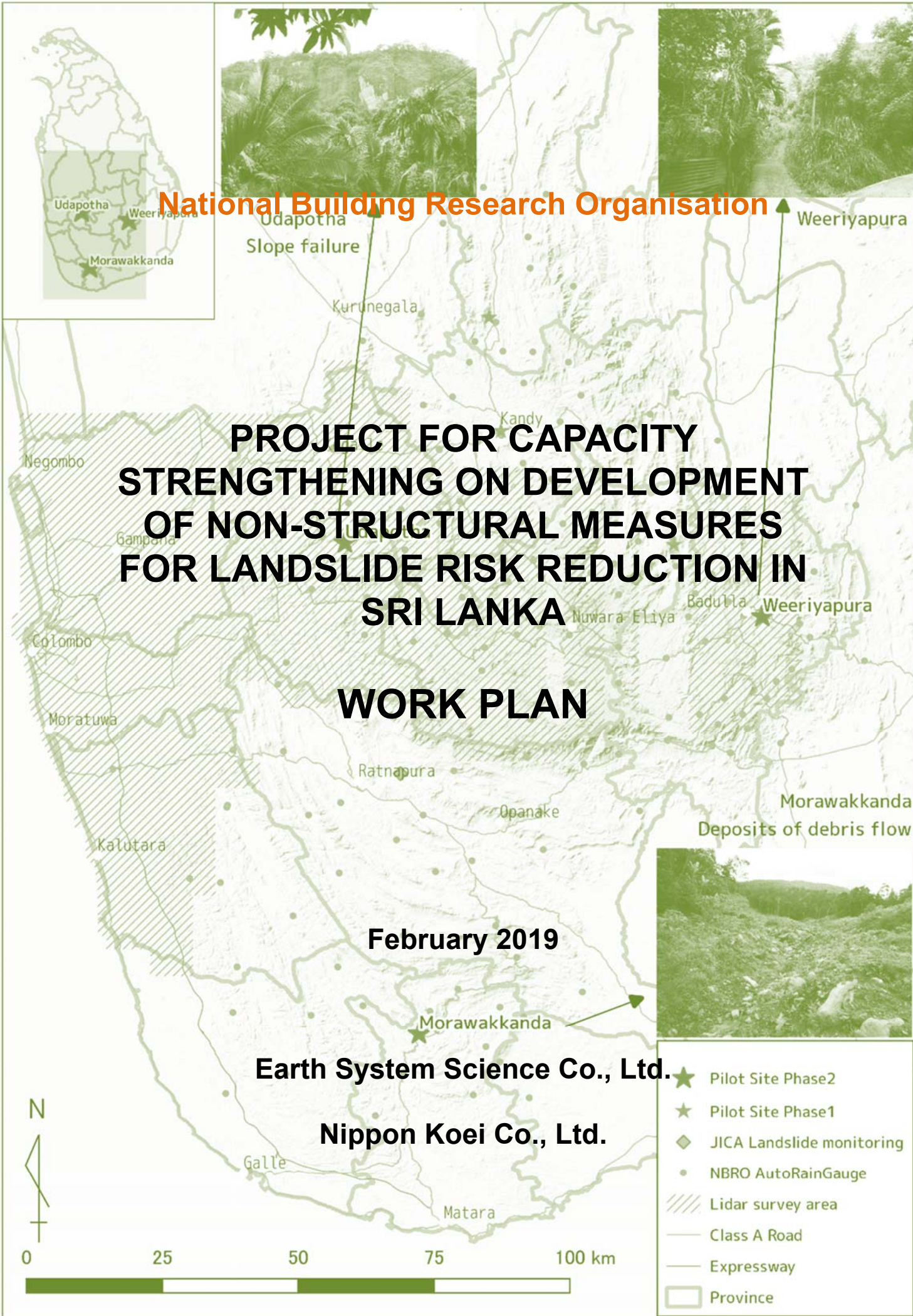
Earth System Science Co., Ltd.

Nippon Koei Co., Ltd.

- ★ Pilot Site Phase2
- ★ Pilot Site Phase1
- ◆ JICA Landslide monitoring
- NBRO AutoRainGauge
- //// Lidar survey area
- Class A Road
- Expressway
- Province



0 25 50 75 100 km





## NBRO-JICA technical collaboration projects

### Technical Cooperation for Landslide mitigation Project (TCLMP-Phase I & II)

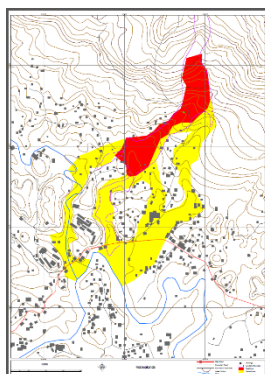
Mitigation work of 4 hazardous sites (landslide sites in Badulusirigama, Udamadura & Kandy and Alagumale rockfall site), had been completed under Phase – I of the Technical Cooperation for Landslide mitigation Project (TCLMP) with the assistance of JICA. The project works were carried out by NBRO, Koiwa Corporation and Earth System Science Limited with Nippon Koei working as the consultant.

### Development and deployment of structural and non-structural measures for effective mitigation of landslides and associated hazards and related capacity strengthening (JICA) [TCLMP Phase II ]

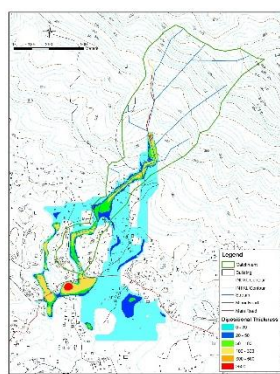
Phase – II of the TCLMP now referred to as Project “SABO” commenced as a three-year project aiming at capacity strengthening on the development of non-structural measures for landslide risk reduction in Sri Lanka with especial emphasis on conducting site specific hazard mapping and risk assessments, issuing landslide early warning at local level, improving existing observation system and alerts, and applying risk assessments of sediment disasters to land-use planning and development standards. At the beginning, three pilot sites from Kegalle, Badulla and Matara were selected for project implementation. In order to achieve the targeted outputs of the project, the following three working groups have been appointed.

- Working group 1 (WG1) - Hazard Analysis and Risk Assessment
- Working group 2 (WG2) - Sediment Disaster Early Warning System
- Working group 3 (WG3) - Land Use Planning and Development Standards

Under WG1, the following works were carried out: review of the existing methodology on Landslide Hazard Zonation Mapping and Risk assessment; improving system for managing landslide disaster records; collecting and analyzing records of past landslide disasters; preparation of draft manuals on site specific hazard mapping and risk assessment; preparation of site specific hazard maps for the three pilot sites using Red zone and Yellow Zone concept; conducting landslide flow path simulation using Hyper KANAKO model for three pilot sites, and conducting site-specific hazard mapping in areas other than pilot sites. In addition, workshops, training and mini-seminars were conducted for the NBRO staff.



Site specific Hazard Map, Morawakkanda pilot site



Output of the flow path simulation, Morawakkanda pilot



Workshop on Site Specific Hazard Mapping



Field survey conducted to verify the prepared Site Specific Hazard Maps