

Project for Capacity Strengthening on Development of Non-Structural Measures for Landslide Risk Reduction (Project SABO)
National Building Research Organization (NBRO) & Japan International Cooperation Agency (JICA)

Field Investigation for Debris Flow Site (WG1)
 June 20-21, 2019

The Project team conducted a field investigation at Morawakkanda in Matara district. The site was severely damaged by debris flow in 2017 and 23 lives were lost. The government is implementing resettlement program.

To prevent such sorrowful disaster, the Project work to identify the risk area and to control land development with the local authority. At the same time, we discuss appropriate structural measures to prevent the disasters. In the field investigation, the Working Group 1 (WG1) members checked the present condition unstable sediments in the stream and carried out soil sampling and laboratory tests. The results will be used to identify debris flow risk area in Morawakkanda area.

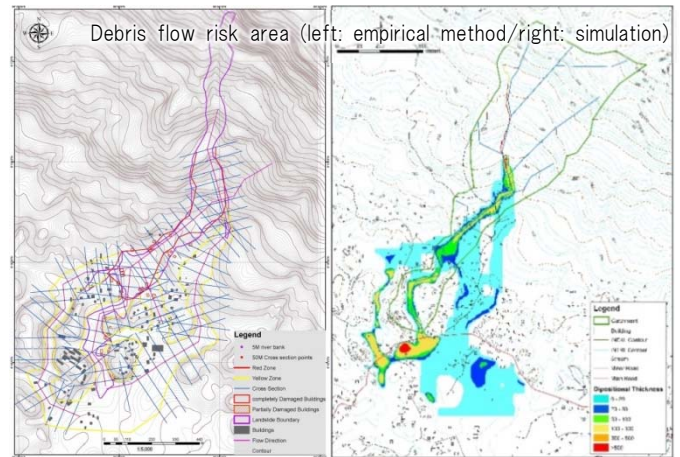


Site investigation at Morawakkanda, Matara district

Training on Flow-Path Simulation (WG1)
 July 2, 2019

NBRO has been developing landslide hazard maps (LHM) nationwide. In recent landslide disasters, however, the most of victims were killed not only in the mountain side but also in the foot area. Therefore, it is strongly required to assess how the sediments generated in the initiation area flow down to the foot area (Flow-Path), and how those sediments affect at the residential area.

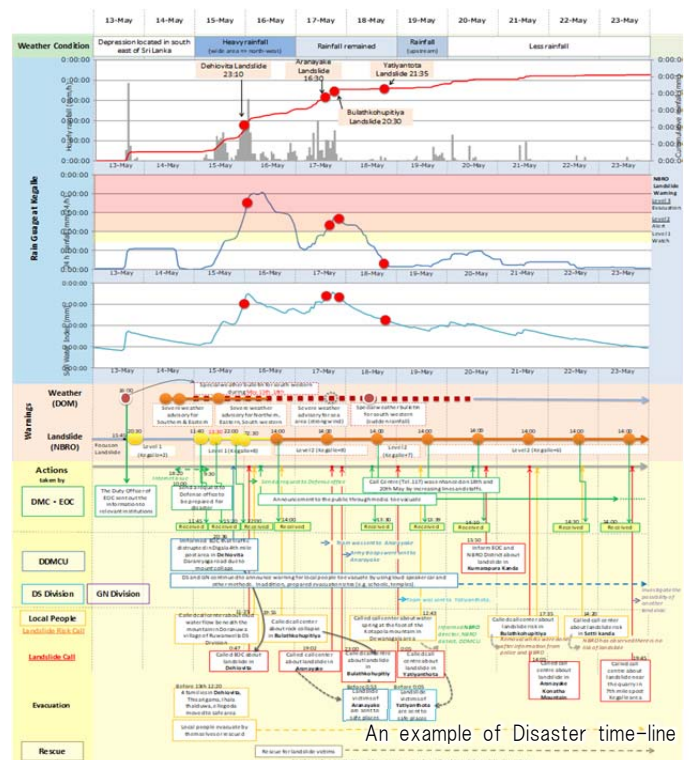
The Project examines identifications of debris flow affected area by using empirical method based on the past disasters statistics, as well as numerical simulation model. "Hyper-KANAKO" which is a popular debris flow simulation program in Japan, was introduced and used by WG1 members for the simulation.



Joint Meeting for Early Warning (WG2)
 July 4, 2019

For improvement of landslide early warning, not only technical aspects such as accuracy and swiftness of the warning but also developing mechanism to certainly deliver the warning messages to the local people are important.

Working Group 2 (WG2) is working in collaboration with DMC and Department of Meteorology. "Disaster time-line" is one of the most important information that indicates when and how each agency, local authority and people acted during past disasters in time-line basis. WG2 is discussing with concerned agencies based on the "Disaster time-line".



An example of Disaster time-line

■ Interviews with local people at pilot sites (WG2)
 July 4, August 9, October 30, 2019

To prepare “Disaster time-line”, interview with local people is essential. WG2 members conducted interview surveys at 3 pilot sites, and discussed about available warning information and way to obtain the information.

NBRO operates nearly 300 automatic rain gauge stations, however in the mountain area, the rainfall characteristic is completely different across villages. In order to interpolate these rain gauges, manual rain gauges are distributed in each village and utilized for warning for community levels.



Interview with local people

■ 1st Counterpart Training in Japan
 September 1-14, 2019

The Project plans to conduct counterpart trainings in Japan. The 1st training was held in September 1st and 14th and 5 NBRO official participated in the training.

At first the trainees visited Ministry of Land, Infrastructure and Transportation (MLIT) to understand overall image of sediment disaster management in Japan. They visited several central agencies and research institutes for hazard mapping and warning / evacuation system. They also visited Nagano prefecture and local authorities to know their collaborative works in sediment disaster management.

After return to Sri Lanka, the trainees reported what they found in the training. In order to utilize the training results, they are making efforts to set landslide risk zoning in Kegalle district and to improve rainfall observation system.



Sabo Department, MLIT

Japan Meteorological Agency



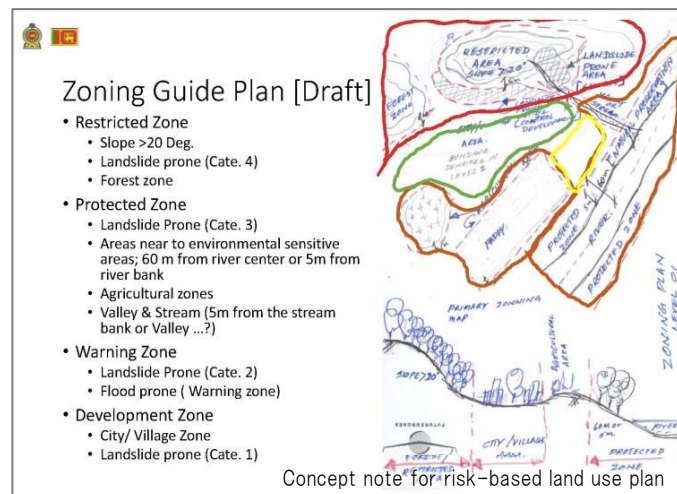
National Institute for Earth Science and Disaster Resilience

Sabo facilities in Nagiso Town

■ Introduction of Sabo Facilities (WG3)
 September 30 – October 3, 2019

Landslide risk areas (Yellow/Red zone) determined by WG1 at pilot sites will be used for land use planning at communities. Working Group 3 (WG3) members are discussing how regulate land use and how to use the land use plan for each landslide risk area.

In addition to land use regulation, we should consider what kinds of efforts are needed to deregulate the regulation in future. For instance, even in high risk areas of debris flow, the land can be developed by taking appropriate structural and non-structural measures.



Sabo-dam is one of the typical measures against debris flow, but there has not been applied in Sri Lanka. Thus, as a part of activities of WG3, the Project is introducing outline of Sabo project in Japan including field investigation, concept of designing, necessary technical standards and cost/benefit analysis. Through these activities, we expect Sabo projects will be implemented in Sri Lanka.



■ Project facebook page
 April, 2019 ~

We have a facebook page, in which project activities by Working Group members are updated. Please click “Like” !

<https://www.facebook.com/Project.SABO/>

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