

## Data Management & analysis Technology using tablet

database system for road disaster prevention using the tablet (iPad)



Hazard

Land Slide Avalanche

Solution Purpose

Prevention & Mitigation

Solution Theme

Research & Investigation Risk Assessment Disaster Prevention Plan Infrastructure Technology  
Information & Communication Technology

Technology Subject

Site Investigation Risk Monitoring Mitigation Plan Road Information Analysis & Judgement

## Advantages

Development of this technology has enabled the department to continuously manage and update information on road disasters and to establish the road disaster management plan based on the information.

## Solution Illustrated

This is a database system for road disaster prevention using the tablet (iPad), and its main functions are inspections for disaster prevention and analysis of data collected at disaster risk points. The six (6) types of disasters targeted are Rockfall, Bedrock Collapse, Slope Collapse, Landslide, Debris Flow, Avalanche, Snow Drifting and Riverbank Erosion.

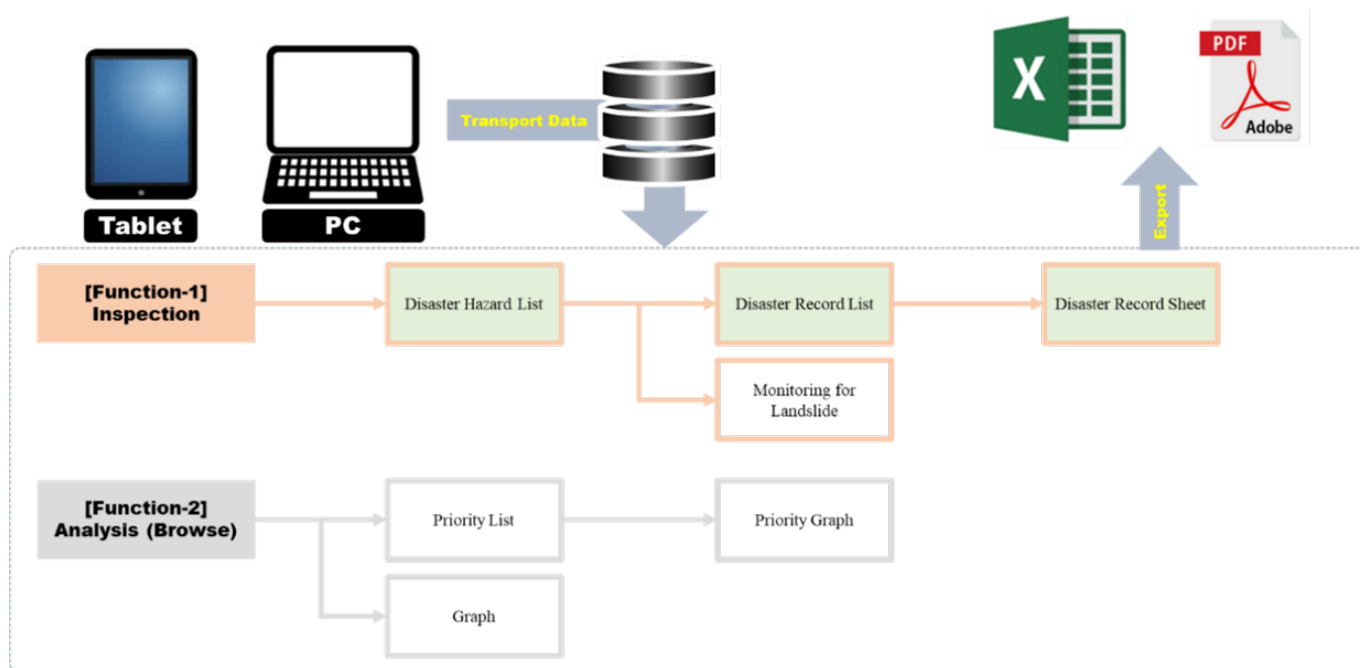


Figure: Outline of the System

## Background

In this database system, inspections for disaster prevention are conducted, diagnosed, and recorded by road administrators, and various data are stored in the database. Using the data accumulated in the database, the road administrators formulate the road disaster management plan and implements countermeasures in accordance with the plan.

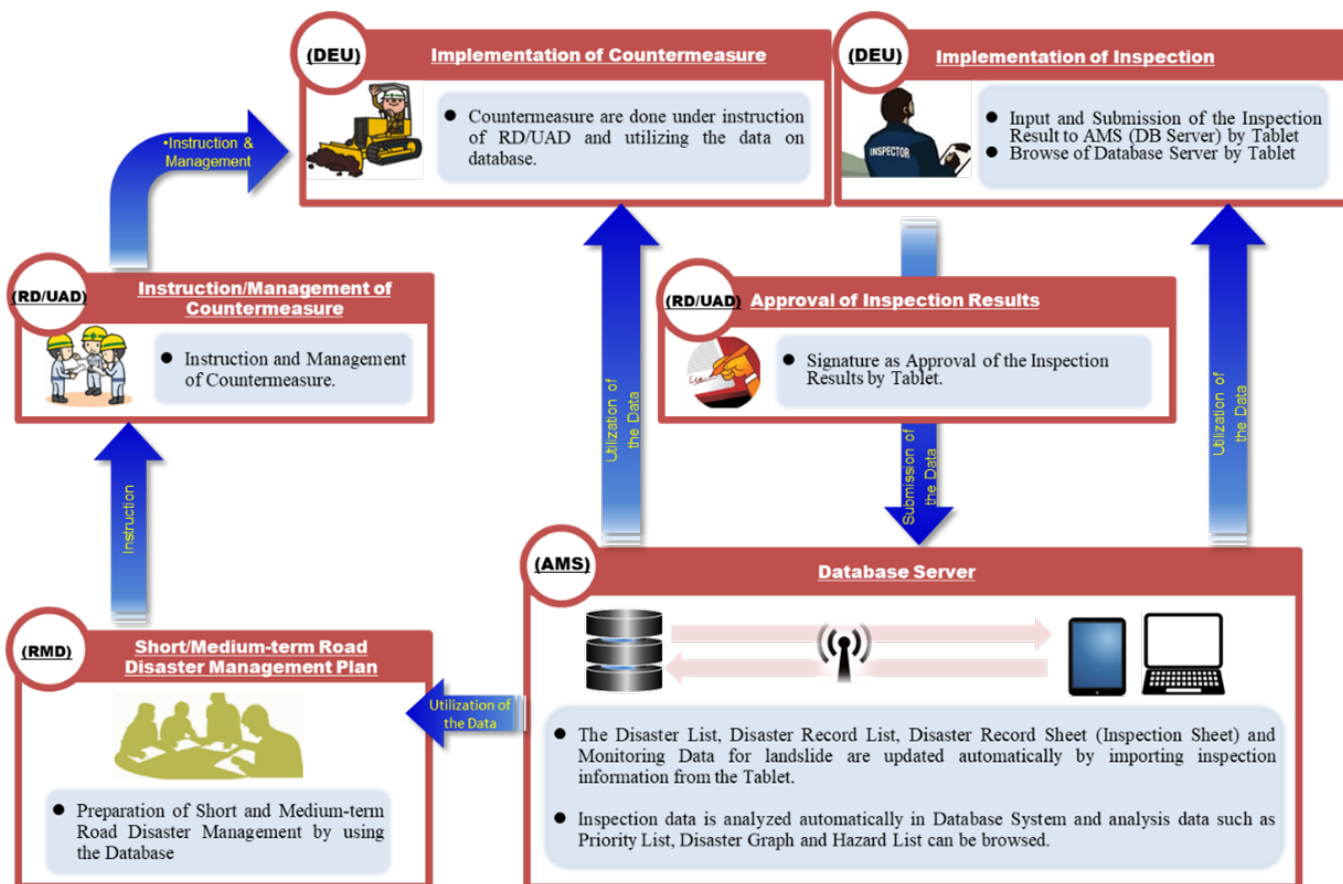


Figure: Operation Flow of the System

## Exposition of the Solution

Although road disasters (rockfalls, slope failures, etc.) occur frequently on several roads such as national roads and provincial roads in developing countries, sufficient and adequate countermeasures have not been often implemented. The main causes are insufficient budget and undevelopment of countermeasure plan based on disaster information.

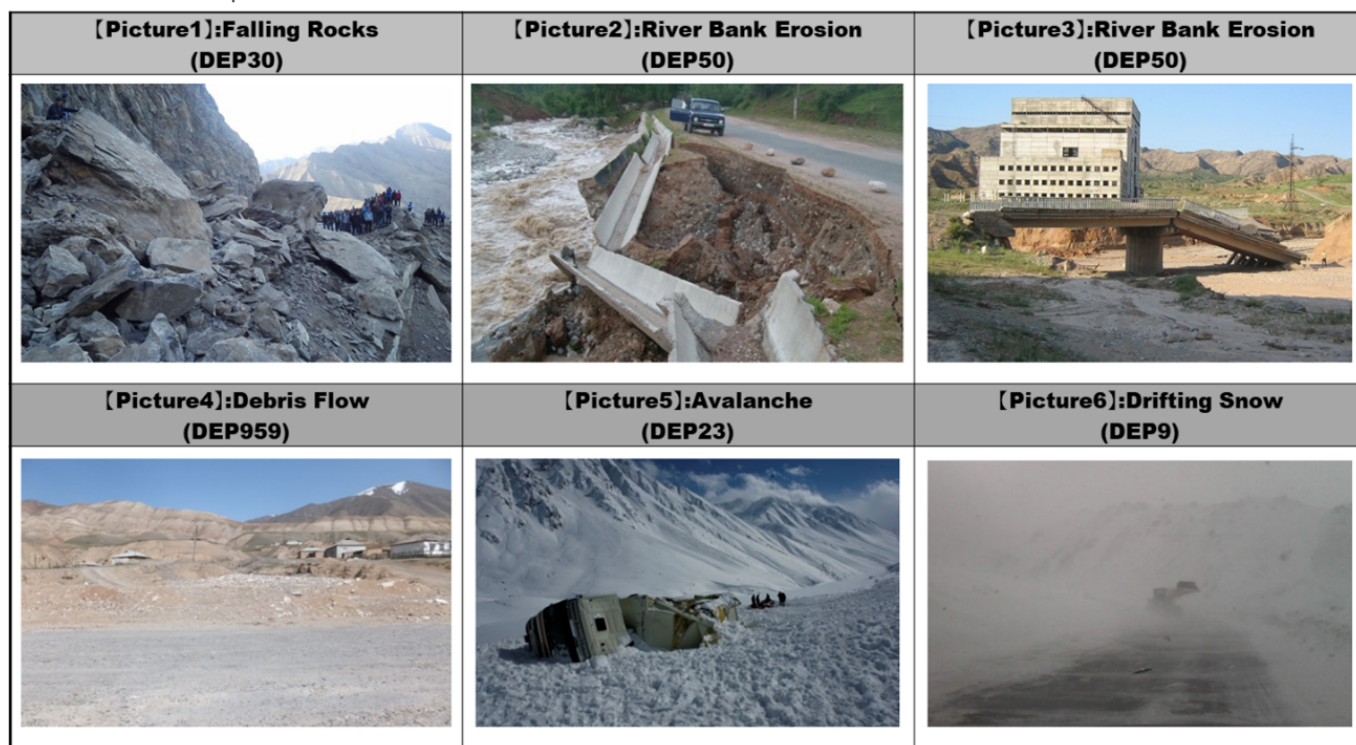


Figure: Examples of Road Disaster in Developing Countries

This technology can efficiently collect disaster information based on the inspection results by the tablet. Collected information can be transferred automatically to the data server via internet. Road administrators can comprehensively analyze the collected information and formulate appropriate countermeasure plans.

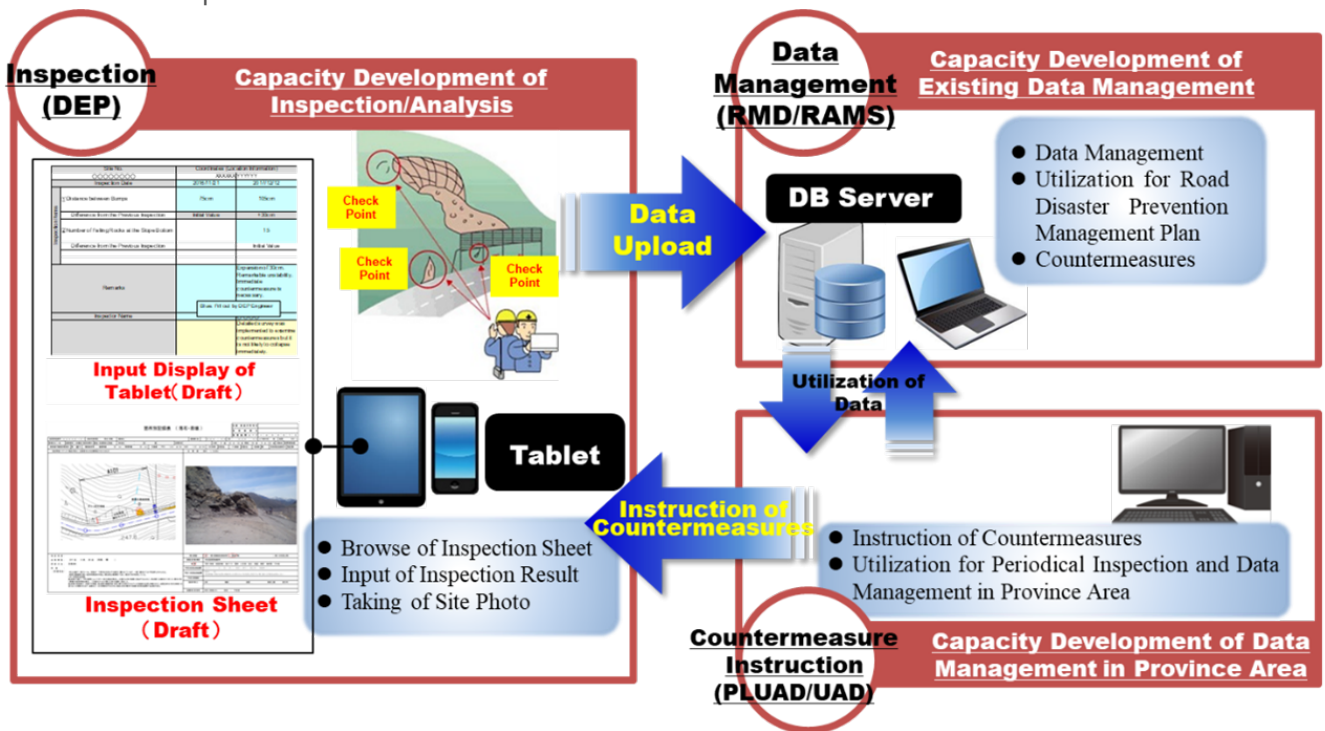


Figure: Utilization of Collected Information for Countermeasure Plans

## Achievements of Examples

Артка

Назад  
Back

1

Жолдун аты название дороги Road Name

Bishkek-Osh 9-209 km

2

Жаңы участка кушуу

Добавление нового участка Добавить новый участок  
Add New Disaster Hazard Site

карта		Стр. No. Чакырым (км) (m) Kilopost km m	Кендик N Узундук E широта N долгота E Latitude N Longitude E		Приоритетүүлүгү Приоритетность Priority	Record List	
не в сети no in online	онлайн online		Стр. No. Чакырым (км) (m) Kilopost km m	Кендик N широта N Latitude N			Узундук E долгота E Longitude E
Google Map	Google Map	110	450	42.43	73.81	Priority A	Record List
Google Map	Google Map	112		42.42	73.80	Priority B	Record List
Google Map	Google Map	116	500	42.39	73.80	Priority B	Record List
Google Map	Google Map	116		42.39	73.80	Priority A	Record List
Google Map	Google Map	119	300				Record List
Google Map	Google Map	119		42.39	73.82	Priority B	Record List
Google Map	Google Map	119		42.39	73.82	Priority B	Record List
Google Map	Google Map	119		42.39	73.82	Priority B	Record List

Figure: Disaster List (Based on Inspection Results)

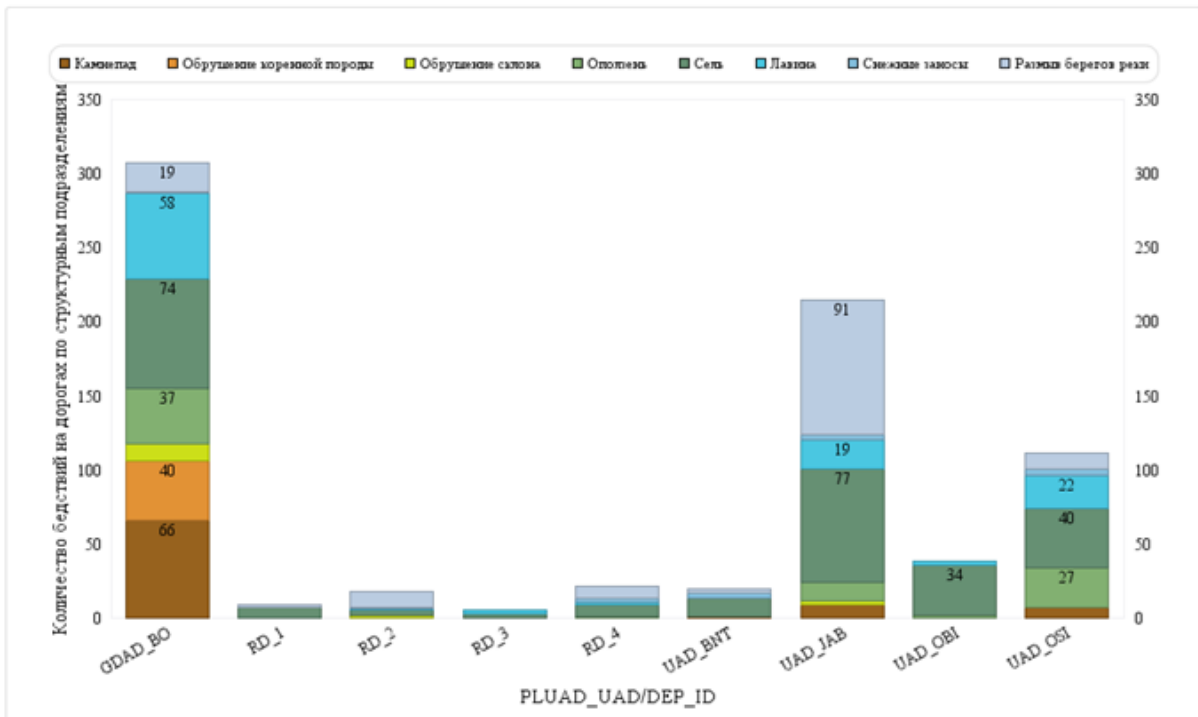
Количество бедствий на дорогах по структурным подразделениям

Структуралык бөлүмдөр боюнча автоунаа жолдорундагы табигый кырсыктын саны  
Number of Road Disaster by RD/UAD:

Rus

Артка

Назад / Back



## Corporate Profile

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