RESEARCH AND DEVELOPMENT FOR REDUCING GEO-HAZARD DAMAGE IN MALAYSIA CAUSED BY LANDSLIDE AND FLOOD
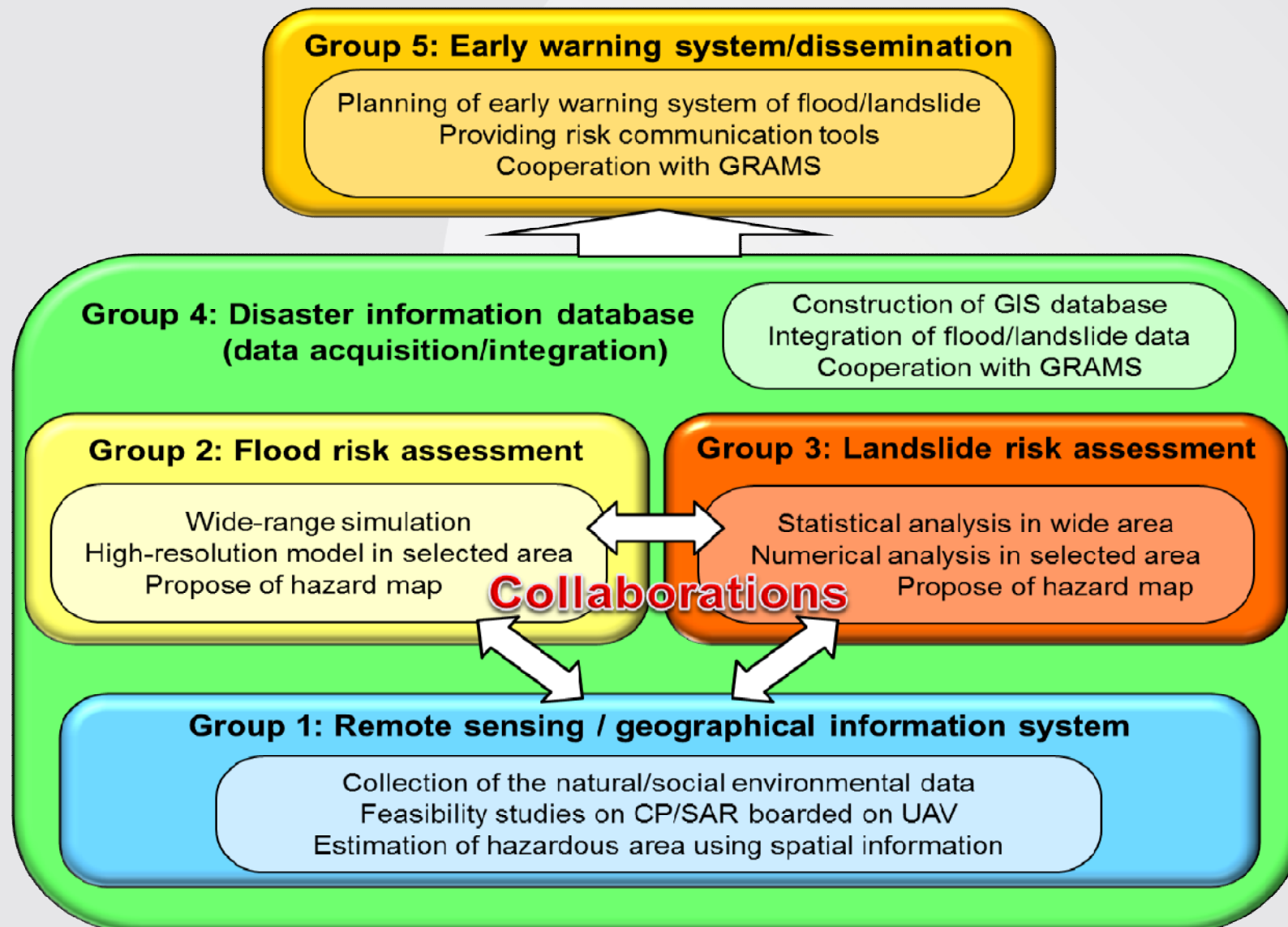
OBJECTIVES

- To investigate and construct an analysis system for temporal change and real-time condition of surficial environment using RS/GIS technologies.

- To study, construct and verify a comprehensive numerical flood-runoff analytical model in wide range and with high resolution in the Kelantan river basin.

- To study and construct a landslide hazard assessment system/model considering the impact of precipitation condition and urban development in Gerik (East-West Highway)

OBJECTIVES

- To construct a comprehensive disaster information database including satellite observation data, flood/ landslide hazard data and disaster mitigation information.

- To design a risk management system of flood/landslide disaster considering the effective utilization of risk information between local government and community.

- To produce landslide and flood hazard map using remote sensing and GIS techniques for Malaysia

RESEARCH FRAMEWORK

Group 5: Early warning system/dissemination

Planning of early warning system of flood/landslide
Providing risk communication tools
Cooperation with GRAMS

Group 4: Disaster information database (data acquisition/integration)

Construction of GIS database
Integration of flood/landslide data
Cooperation with GRAMS

Group 2: Flood risk assessment

Wide-range simulation
High-resolution model in selected area
Propose of hazard map

Collaborations

Group 3: Landslide risk assessment

Statistical analysis in wide area
Numerical analysis in selected area
Propose of hazard map

Group 1: Remote sensing / geographical information system

Collection of the natural/social environmental data
Feasibility studies on CP/SAR boarded on UAV
Estimation of hazardous area using spatial information

Japan International Cooperation Agency

COLLABORATION MODEL

Chiba University	Collaborations	USM
CEReS (Chiba University) — VTI	**Group 1 RS/GIS**	**MMU & UNITEN** — USM
UT (The University of Tokyo) — CEReS, ICHARM	**Group 2 Flood analysis**	**UNITEN**
NIED (National research Institute for Earth Science and Disaster Prevention) — CEReS, Kyoto U.	**Group 3 Landslide analysis**	**USM & UNITEN** — MMU
CEReS — VTI, NIED, UT, ICHARM	**Group 4 Data center/ integration**	**USM** — UniTEN, MMU
NIED — CEReS, NIED, UT, ICHARM	**Group 5 EWS/ dissemination**	**UNITEN** — USM, MMU