Disaster Prevention Research Center,
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http://www.dprc.ncku.edu.tw

Outline

Established in October, 1996, the Disaster Prevention Research Center (DPRC) belongs to the Research and Services Headquarters of National Cheng Kung University, as well as one of the main institutions for disaster prevention and mitigation in Taiwan. The mission of DPRC is to reduce the natural hazard damage in Taiwan via knowledge of international scholars and experts, applications and research of updated technologies, as well as improving the skills of disaster prevention and rescue for the government. DPRC has six divisions and 40 employees in total. The facilities currently owned by DPRC include experiment equipment, investigation equipment, monitoring equipment, information system equipment, numerical simulation software and image analysis software.

Research areas:

The major research topics of the DPRC fall in ten categories: (1) disaster investigation, (2) disaster evaluation and prediction; (3) establishment and application of databases; (4) pre-warning and monitoring works for disasters; (5) watershed management and planning; (6) numerical model development and simulation of disaster scenarios; (7) consulting and cooperation works for disaster prevention and mitigation; (8) applications of satellite and remote sensing information; (9) applications of cloud computing technologies; and (10) policy research.

Features of Research Activities:

The DPRC has some research activities as follows: Research on identification of compound disaster potential area, monitoring system, forecast technology, and warning system; Improving the technologies and applications of disaster prevention and relief works using satellite and UAV images (Figure 1); Research on the cloud computing technologies and applications for disaster evaluation, forecast, mitigation and prevention (Figure 2); Establishment of digital simulation laboratory; Research on integrated strategies of watershed management and flood control (Figure 3); Improving the professional knowledge for consulting and cooperation with government offices.

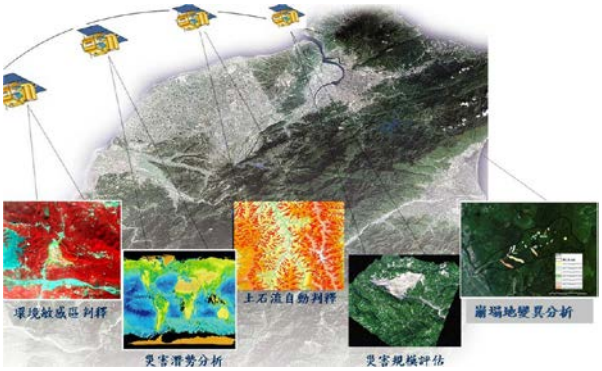

Figure 1 Application of the FORMOSAT-2

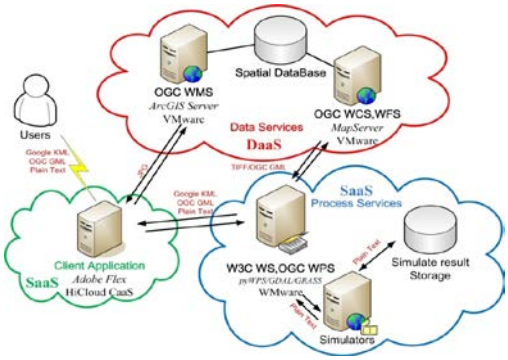

Figure 2 Cloud service architecture diagram

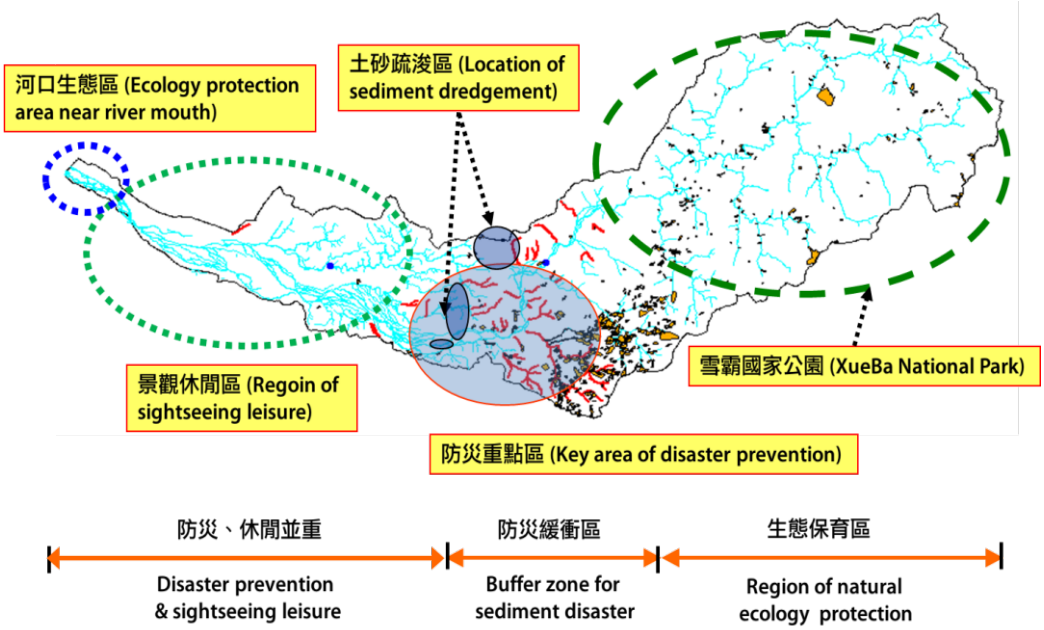

Figure 3 Example of integrated strategies of watershed management