ADRC Highlights

Asian Disaster Reduction Center Monthly News

Vol. 193
April
2009

TOPICS

Asian Disaster Reduction Center

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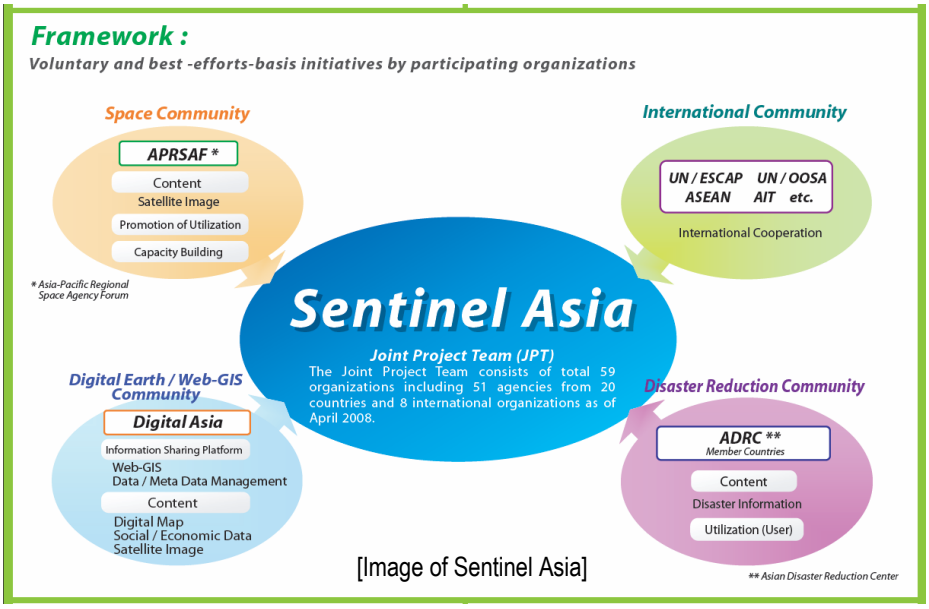
●Promoting Cooperation with Affiliated Institutions

Disaster Reduction Project Using Satellite Imaging (1)

The Asian Disaster Reduction Center (ADRC) is working with the Japan Aerospace Exploration Agency (JAXA) to promote a disaster reduction project using satellite imaging data in the Asian region. ADRC Highlights will describe these cooperative efforts in two segments.

1. Sentinel Asia



[Image of Sentinel Asia]

Sentinel Asia is a disaster management support system that was proposed by the Asia-Pacific Regional Space Agency Forum (APRSAF). It was designed to provide satellite photos of regions where large-scale disasters have occurred, along with disaster information derived from an analysis of those images, to the countries of the Asia-Pacific region. Its use has been promoted since October 2006, and Step 1 of the program was completed in December 2007.

Step 1 consisted of the realization of a system for communicating disaster management information via the Internet. The transition to Step 2 occurred in January 2008. We are currently developing the systems needed for Step 2, that is, the systems for disseminating and expanding the use of Sentinel Asia using new satellite communications systems.

Activities currently being implemented as part of Step 2 include the followings.

(1) Today, only the Japanese and Indian space agencies are participating in this project, but the Republic of Korea and Thai space agencies will also start participating during Step 2.

Continued

(2) The use of JAXA's high speed communications satellites will improve data access quality. Efforts are also being made to improve accessibility by developing mirror sites.*
(3) Efforts are focused on providing value-added disaster information.
(4) During Step 1, a working group was established to focus on the monitoring of flooding and forest fires. In Step 2, a group focused on the monitoring of glacial lakes will also be added.

Increases in the size and number of glacial lakes are already being observed, and the development of response measures is an issue of urgent importance in the ADRC member country of Bhutan.

In Step 3, which is due to start in 2010, we plan to establish a Disaster Management Support System (DMSS).

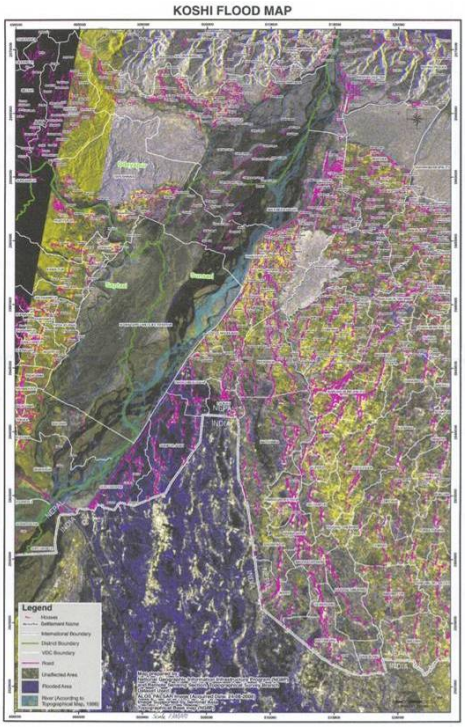
2. Emergency Observations

In FY 2008, 22 requests for emergency observations were received, and 20 of these requests were fulfilled.

The emergency observation request process is as follows. Upon receiving an emergency observation request from a country affected by a disaster, the ADRC emergency observation coordinator confirms the relevant disaster information, determines whether the situation justifies an emergency observation request, and if so, promptly forwards the request to JAXA and the Indian Space Research Organization (ISRO).

Once the emergency observation is performed, the image data is simultaneously provided to the country making the request, and uploaded to the Sentinel Asia website so that all relevant parties can freely access the imaging data.

At right is an example of an image created by a local institution that issued an emergency observation request, using image data provided by Sentinel Asia. This figure shows an area flooded by a levee breach that occurred along the Koshi River in the Sansari District in southeastern Nepal on 18 August 2008. It was created by combining a color composite image provided by Sentinel Asia with the Nepalese Survey Department's own GIS information. The Nepalese Ministry of Water Resources expressed its gratitude for the information it received from Sentinel Asia in the aftermath of this disaster.



[Koshi Flood Map]

The next issue will provide follow-up information on this program and will outline future plans for the use of satellite imaging in disaster risk reduction.

*A mirror site is a website created to mirror another website whose content is frequently accessed. A mirror site is created to prevent communications delays and loss of access due to server overloads. The information shown on mirror sites is identical that shown on the original site.

●ADRC Visiting Researcher Report

Ms. Areerat Wijitpatcharaphon from Thailand

Hello. My name is Areerat Wijitpatcharaphon from Thailand. I am spending six months as a visiting researcher at the ADRC to learn about the Japan's disaster management system.

In recent years, many unprecedented natural catastrophes have occurred in regions around the world. Asia has suffered numerous disasters, including earthquakes, tsunamis, wind storms, droughts, floods, and landslides. In other regions of the world, large numbers of people have been killed every year by many different types of disasters. The statistics show that over the last 30 years, Asia has been the most disaster-affected region in the world, accounting for about 90% of those affected by natural disasters, and more than 50% of the total fatalities and economic losses. Furthermore, the statistical trends suggest that the incidence of natural disasters is going to rise in the future. It is therefore vital that the countries of Asia take actions to address this situation and that they launch such actions immediately.

Like the other countries of Asia, Thailand faces threats from natural disasters such as droughts, floods, landslides, cold spells, fires, and wind storms. Geographically, Thailand is located at the middle of a tropical zone called Mainland Southeast Asia. The total land area of Thailand is approximately 513,115 km^2, and it has a population of 65 million. Thailand shares borders with Laos, Myanmar, Cambodia, and Malaysia. It consists of mountainous regions in the north, a plateau in northeast, an alluvial plain in the center, and virgin forest in the south. Before 2004, Thailand had never experienced any large-scale natural disaster. The gigantic tsunami of 26 December 2004 caused financial losses of more than USD 2 billion and caused overall GDP growth to fall by 0.4%. In spite of the negative impacts of this disaster, it served as reminder that Thailand needs to pay attention to its disaster risks and prepares for unexpected disasters that might occur in the future.

Disaster risk reduction can be achieved through mutual assistance between developed countries and developing countries. Fortunately, Asia has the ADRC, which serves as a key institution for the exchange of knowledge, technology, and information on disaster management.

Before I joined the ADRC, I had been working in Thailand as an official involved in policy and plan analysis of the Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior of Thailand. My main responsibility was to coordinate disaster management activities between national and international actors.

During my term at the ADRC (January-June 2009), I will be studying the Japanese flood prevention system. I have chosen to focus on flooding because it is the most devastating type of disaster in Thailand in terms of economic losses. I personally believe that Japan is one of the most advanced countries in the world in terms of effective flood management. I am also interested in learning about the flood prevention systems that have been adopted in other ADRC member countries. What I learn from my study here should be useful for the future development of flood prevention measures in Thailand.

As the ADRC has been known for its expertise in the field of disaster risk reduction, I am certain that I can learn a great deal while working here as a visiting researcher. At the same time, I am committed to sharing what I have learned from my work at the DDPM with the ADRC so that I can help strengthen and sustain the important work performed by this Asian disaster reduction institution.

* Country Report of Thailand
http://www.adrc.asia/countryreport/THA/2008/thailand2008.pdf

●Announcements

ADRC Website Gets a Facelift!

In commemoration of its 10th anniversary, the ADRC has moved its online presence to a new domain, adrc.asia. The ".asia" domain was newly introduced in 2008 for sites dedicated to the Asian community. We think that using the ".asia" domain will better highlight the focal point of our activities.

The ADRC website (www.adrc.asia) facilitates the collection of necessary information by officials in charge of disaster management in the countries of Asia, including ADRC member countries, and others involved in disaster reduction activities around the world. The information is updated as needed through the use of a database-driven framework. In March 2009, the ADRC revised the web pages that contain disaster risk reduction information of ADRC member and advisor countries, and added a new web page for ADRC activities.

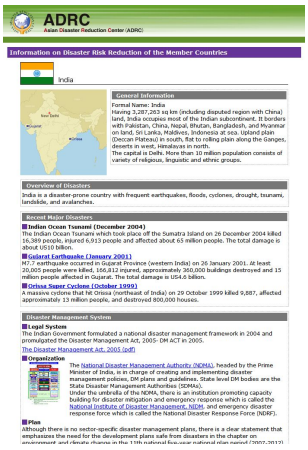
The upgraded web pages for the individual ADRC member and advisor countries provide country profiles, summaries of major disasters in those countries, and brief explanations of their disaster management systems, including relevant laws and regulations, organizational structures, and plans for disaster risk management.

The newly developed web page highlighting ADRC activities is configured as a blog, enabling ADRC staff members to report on activities immediately as they occur. This format will allow us to update our activity information in a more timely manner.

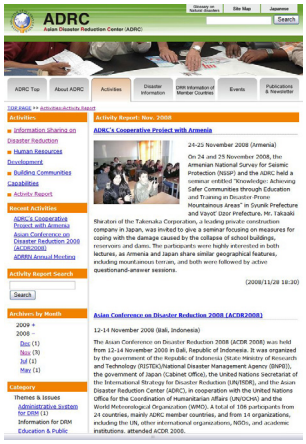
Please click here to visit our new site!

<Country Information>
http://www.adrc.asia/disaster/index.html

<ADRC Activity Report>
http://www.adrc.asia/adrcreport_e/



[Country Information]



[ADRC Activity Report]

Personnel Changes

Senior Researcher Ms. Etsuko Tsunozaki resigned from the ADRC on 31 March 2009. In addition, ADRC Senior Researcher Mr. Shuhei Tanaka returned to his original post at Hyogo Prefecture, and International Recovery Platform (IRP) Researcher Mr. Kiyoshi Kayashima was transferred to the Cabinet Office on 31 March 2009. All of us at the ADRC offer our best wishes for their continued success.

Several new additions have also been made to the ADRC office on 1 April. Mr. Tetsuo Ibaraki was assigned to the position of ADRC Senior Researcher, Mr. Akira Morimoto to the position of IRP Senior Researcher, and Mr. Gerald E. Potutan to the position of IRP Researcher.

For Inquiries & Subscription Information

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