



**Co-organized and Co-sponsored by:**

International Flood Network (IFNet)

and

International Centre for Water Hazard and Risk Management ( ICHARM )

**in collaboration with :**

World Meteorological organization (WMO)

**Date & Venue:**

3-8 October 2008

ICARM, Public Work Research Institute (PWRI), Tsukuba, Japan

**Participants:**

Respective officials from 6 countries and an international organization were invited for the training workshop, to study applicability of the Global Flood Alert System (GFAS).

Country	Name	Affiliation
Ethiopia	Mr. Kaleab Habtemichael Mamo	Ministry of Water Resources (MoWR)
Zambia	Ms. Flora Sikamundenga Simumba	Department of Water Affairs, Ministry of Energy and Water Development
Argentina	Mr. Juan Agustín Borús	Institute Nacional del Agua (INA), Ministerio de Planificación Federal (Institute National of the Water, Department of Federal Planning)
Cuba	Mr. Roberto Aroche Ramírez	Institute de Meteorología de la República de Cuba (INSMET) (Institute of Meteorology of the Republic of Cuba)
Guatemala	Mr. Rafael Ignacio Anelu Fortuny	Universidad de San Carlos de Guatemala (University of San Carlos of Guatemala)
Bangladesh	Mr. MD.Saiful Hossain	Flood Forecasting & Warning Center (FFWC), Bangladesh Water Development Board
ICIMOD (Nepal)	Ms. Shrestha Mandira Singh	Integrated Water and Hazard Management (IWHM), International Centre for Integrated Mountain Development (ICIMOD)

## Overview of this training workshop:

Mr. Tyagi, the director of WMO as well as the chairman of IFNet, and Dr. Grabs, the chief of WMO, also attended the workshop this time.

Having started with greetings from Mr. Tyagi, Mr. Sasaki, the executive director, and Mr. Terakawa, the acting director of ICHARM, the following presentations were given in the first 2 days of the workshop.

- Remote Sensing of Precipitation from Space (by Dr. Oki and Ms. Kachi for JAXA)
- Introduction of GFAS (by Mr. Ito for IDI)

- The progress in IFAS development (by Dr. Magome for ICHARM)

- Operating procedures for IFAS (by Mr. Sugiura for ICHARM)

In the last 2 days of the workshop, the following lectures were given.

- Discussions on how to verify GFAS-rainfall through flood runoff analyses and the flood forecasting system with it (by Mr. Fukami for ICHARM)

- Example Validation of satellite rainfall data in Japan (by Mr. Ito for IDI)

- Verification method and the correction method of satellite-based rainfall (by Mr. Shiraishi for ICHARM)

- Satellite Precipitation Estimation (by Dr. Grabs)

After the lectures, the present conditions and problems of river management in each country are reported by the participants. Discussions on the subjects such as validation plans were also held.

On the final day, an inspection of the flood forecasting system in Arakawa basin was conducted.

The workshop which included exercises and discussions as well as lectures was significant for participants to make every effort to enhance applicability of GFAS in the future.

## Pictures



3<sup>rd</sup> October



6<sup>th</sup> October



6<sup>th</sup> October



4<sup>th</sup> October



7<sup>th</sup> October



8<sup>th</sup> October

## Schedule

### 3<sup>rd</sup> October

9:30 – 10:15am	Greetings from related organizations <i>WMO</i> <i>Mr. Avinash C Tyagi</i> <i>IDI-Japan</i> <i>Mr. Yosuke SASAKI</i> <i>ICHARM</i> <i>Mr. Akira TERAOKAWA</i>
10:15 – 11:40am	Orientation <i>IDI-Japan</i> <i>Mr. Yoshimasa ITO</i>
1:00 – 1:15pm	Introduction of participants
1:15 – 2:45pm	Remote Sensing of Precipitation from Space: Overview <i>JAXA</i> <i>Dr. Riko OKI</i>
2:45 – 3:00pm	JAXA's promotion video
3:00 – 5:20pm	TRMM Outcomes and Global Precipitation Map <i>JAXA</i> <i>Ms. Misako KACHI</i>
5:30 – 6:30pm	Reception dinner
6:30pm	Adjourn

### 4<sup>th</sup> October

9:30 – 11:00am	Historical evolution of flood management system in Japan and recent research activities at ICHARM <i>ICHARM</i> <i>Mr. Kazuhiko FUKAMI</i>
11:00 – 12:30pm	Introduction of Global Flood Alert System (GFAS) <i>IDI-Japan</i> <i>Mr. Kazuhisa ITO</i>
1:30 – 2:00pm	Progress in Integrated Flood Analysis System (IFAS) <i>ICHARM</i> <i>Dr. Jun MAGOME</i>
2:00 – 5:00pm	Operating procedures for IFAS <i>ICHARM</i> <i>Mr. Tomonobu SUGIURA</i>
5:00pm	Adjourn

### 6<sup>th</sup> October

9:00 – 9:45am	Discussions on how to verify GFAS rainfall through flood runoff analyses and the flood forecasting system with it (GFAS streamflow) <i>ICHARM</i> <i>Mr. Kazuhiko FUKAMI</i>
9:45 – 10:15am	Example Validation of satellite rainfall data in Japan <i>IDI-Japan</i> <i>Mr. Yoshimasa ITO</i>
10:15 – 11:40am	Verification method and the correction method of satellite-based rainfall <i>ICHARM</i> <i>Mr. Yoshiki SHIRAISHI</i>
1:00 – 2:10pm	Satellite Precipitation Estimation - Overview - <i>WMO</i> <i>Dr. Wolfgang Eric Grabs</i>
2:10 – 5:00pm	Present conditions and problems of river management in each country <i>ICIMOD</i> <i>Ms. Shrestha Mandira Singh</i> <i>Zambia</i> <i>Ms. Flora Sikamundenga Simumba</i> <i>Bangladesh</i> <i>Mr. MD. Saiful Hossain</i> <i>Guatemala</i> <i>Mr. Rafael Ignacio Anelu Fortuny</i> <i>Argentina</i> <i>Mr. Juan Agustín Borús</i>
5:00pm	Adjourn

## 7<sup>th</sup> October

9:00 – 10:30am	Present conditions and problems of river management in each country <i>Cuba</i> <i>Mr. Roberto Aroche Ramiréz</i> <i>Ethiopia</i> <i>Mr. Kaleab Habtemichael Mamo</i>
10:30 – 11:30am	Designing validation plans using this system
1:00 – 1:30pm	Proposal from Japan regarding validation plans <i>ICHARM</i> <i>Mr. Kazuhiko FUKAMI</i> <i>IDI-Japan</i> <i>Mr. Kazuhisa ITO</i>
1:30 – 4:00pm	Presentation in designing validation plans using this system <i>ICIMOD</i> <i>Ms. Shrestha Mandira Singh</i> <i>Zambia</i> <i>Ms. Flora Sikamundenga Simumba</i> <i>Bangladesh</i> <i>Mr. MD. Saiful Hossain</i> <i>Guatemala</i> <i>Mr. Rafael Ignacio Anelu Fortuny</i> <i>Argentina</i> <i>Mr. Juan Agustín Borús</i> <i>Cuba</i> <i>Mr. Roberto Aroche Ramiréz</i> <i>Ethiopia</i> <i>Mr. Kaleab Habtemichael Mamo</i>
4:00pm	Adjourn

## 8<sup>th</sup> October

7:30am – 7:30pm	Field trip <i>Arakawa-jyoryu River Management Office, MLIT</i> <i>Arakawa Dam Integrated Management Office, JWA</i>
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ICHARM :	International Centre for Water Hazard and Risk Management
ICIMOD :	International Centre for Integrated Mountain Development
IFNet :	International Flood Network
IDI-Japan :	Infrastructure Development Institute-Japan (IFNet Secretariat)
JAXA :	Japan Aerospace Exploration Agency
JWA :	Japan Water Agency
MLIT :	Ministry of Land, Infrastructure, Transport and Tourism
WMO :	World Meteorological Organization