

Country Report:GEOSS/AWCI
MAE WANG BASIN



THADA SUKHAPUNNAPHAN
THAILAND

Beppu, Japan,3 December 2007

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FLOODS in MAE WANG BASIN



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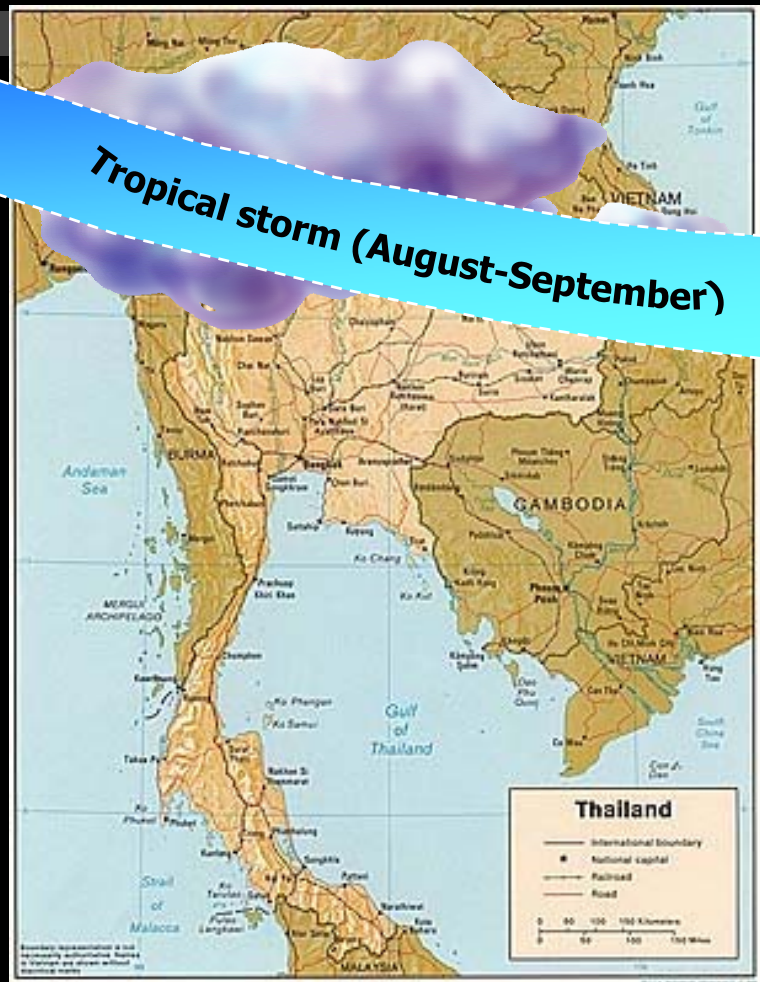
1. Basic Information of the basin

Factors of flood in Northern Thailand.

Flash flood and overbank flow inundation trend to occur mostly in the wet season from May to October of each year.

When there is continuous heavy rain influenced by southwest monsoon from Indian Ocean, tropical storm from South China Sea, low pressure trough or frontal encounter of different pressure air masses.

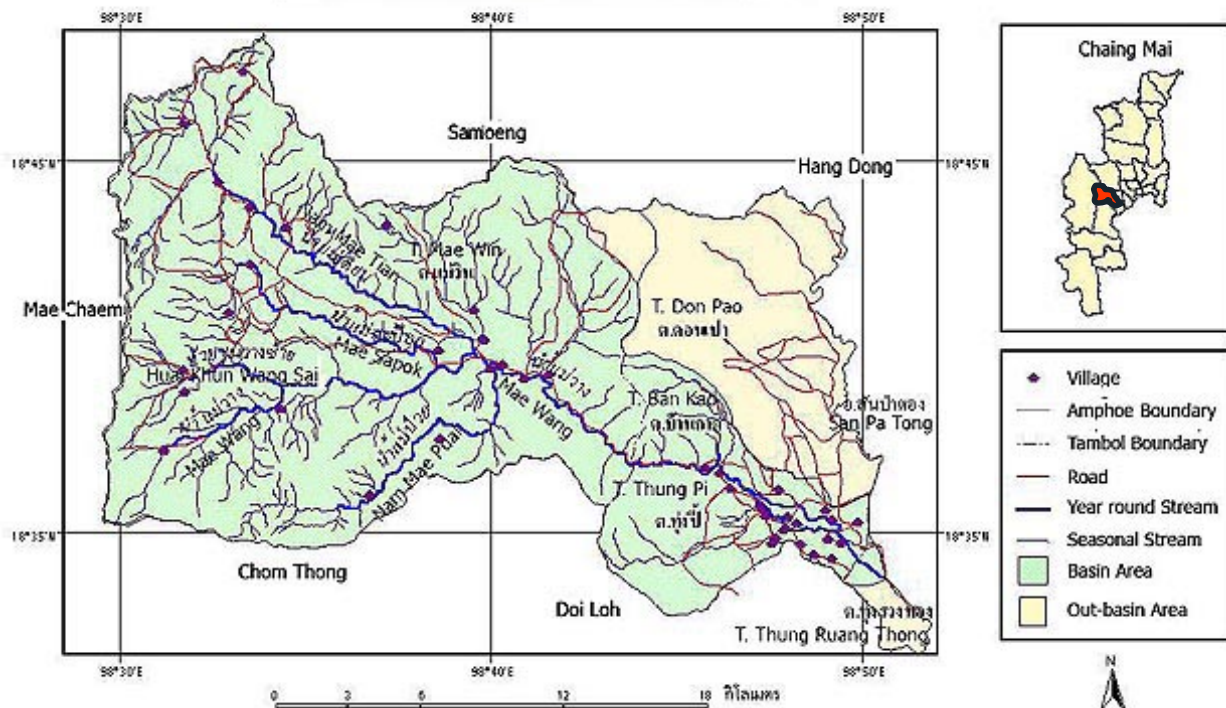
Tropical storm (August-September)



1. Basic Information of the basin

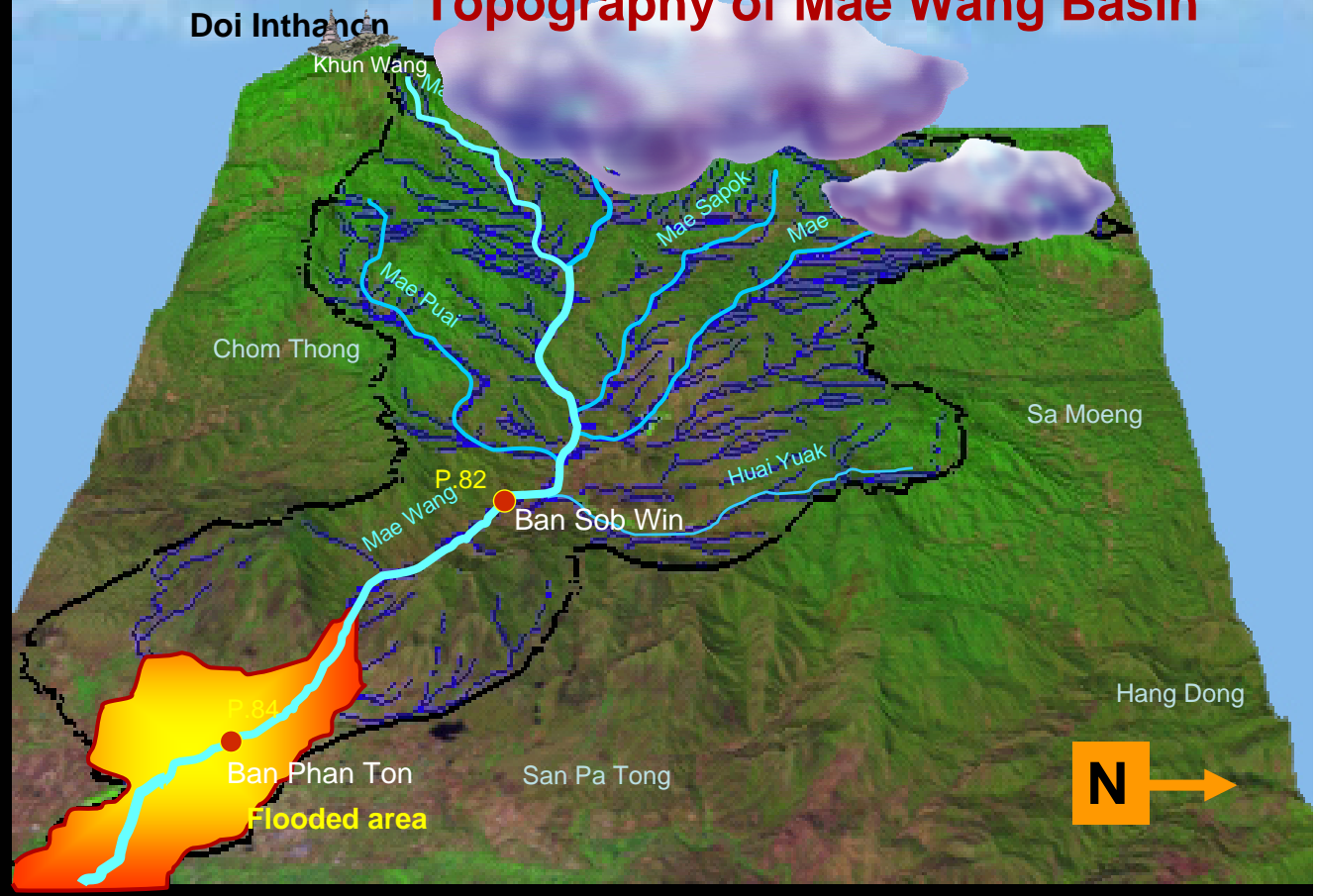
Location and Physiological characteristics

Mae Wang Basin - Mae Wang Dist. Chiang Mai



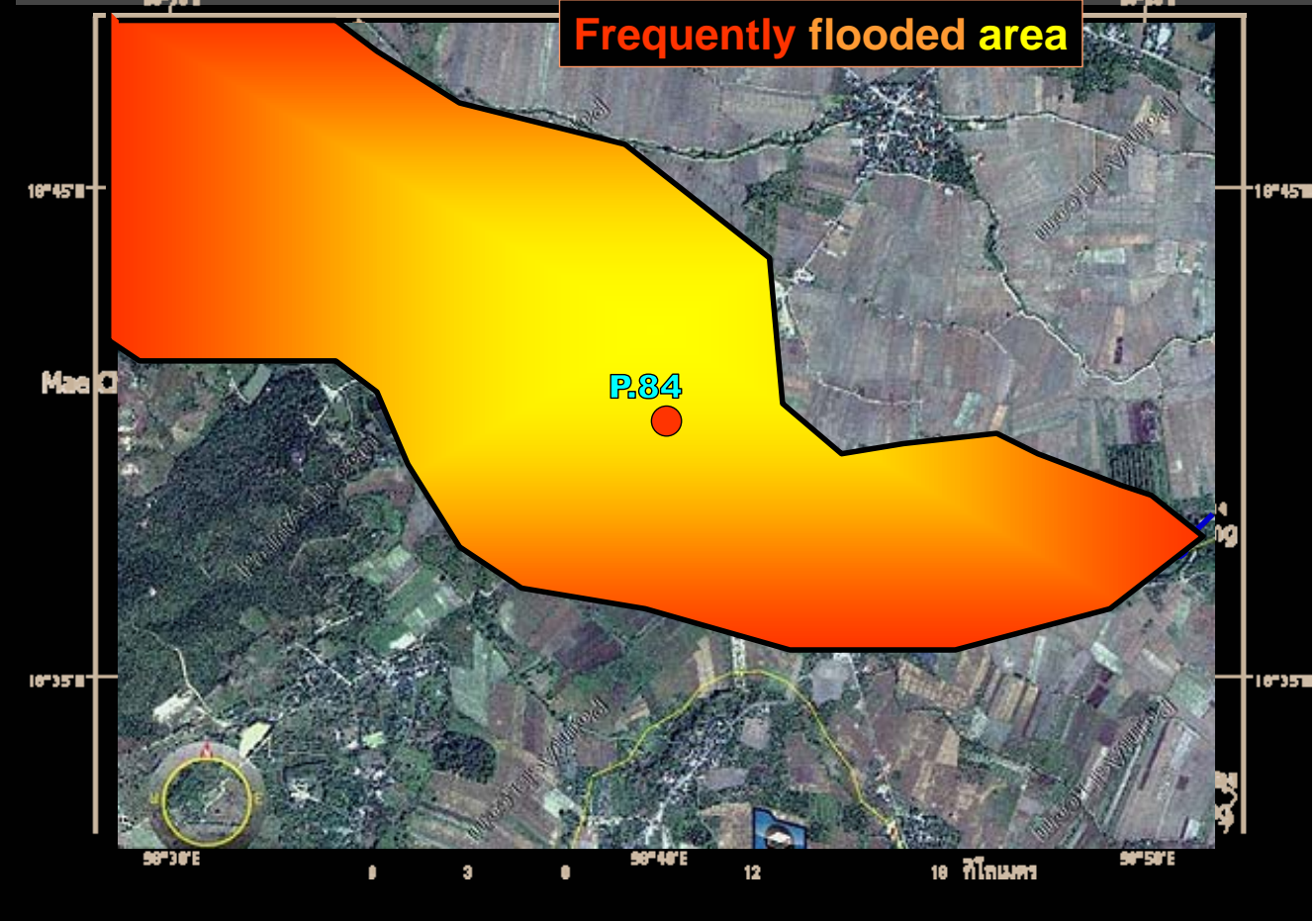
1. Basic Information of the basin

Topography of Mae Wang Basin



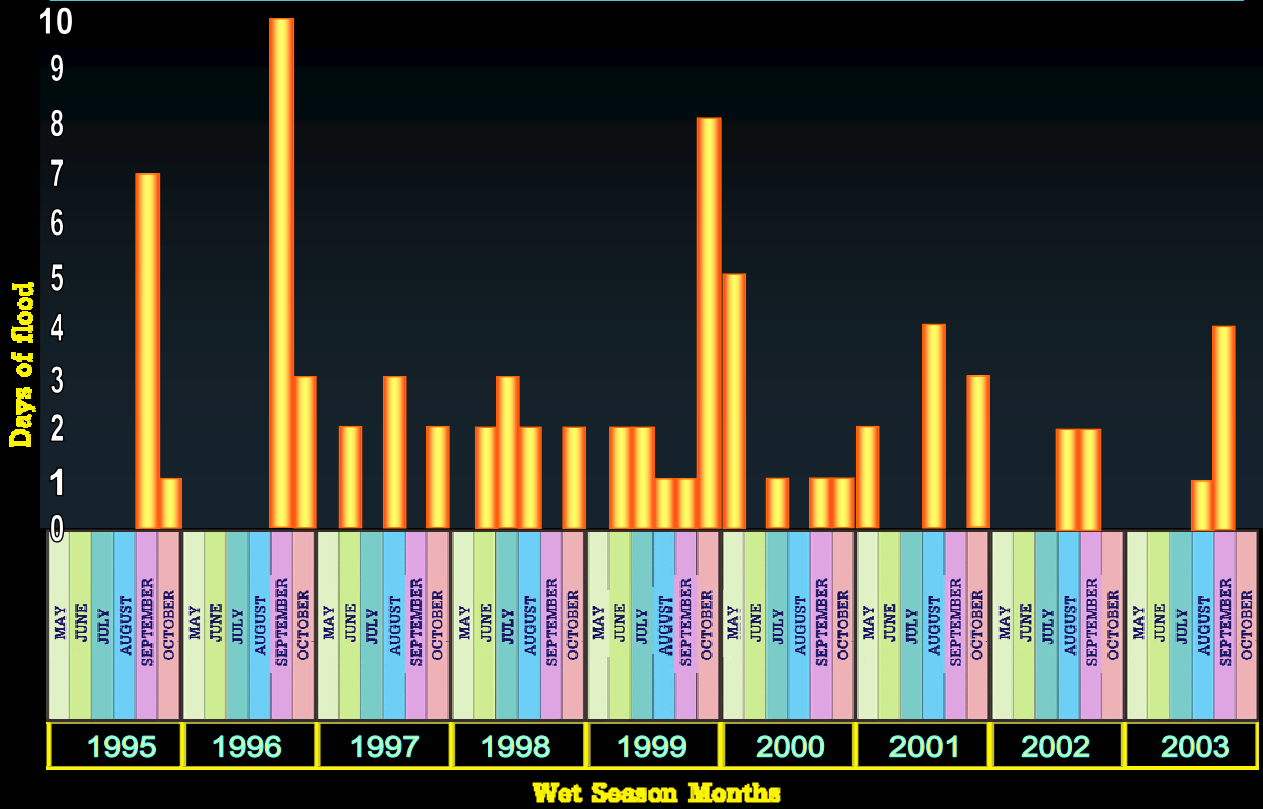
1. Basic Information of the basin

Frequently flooded area

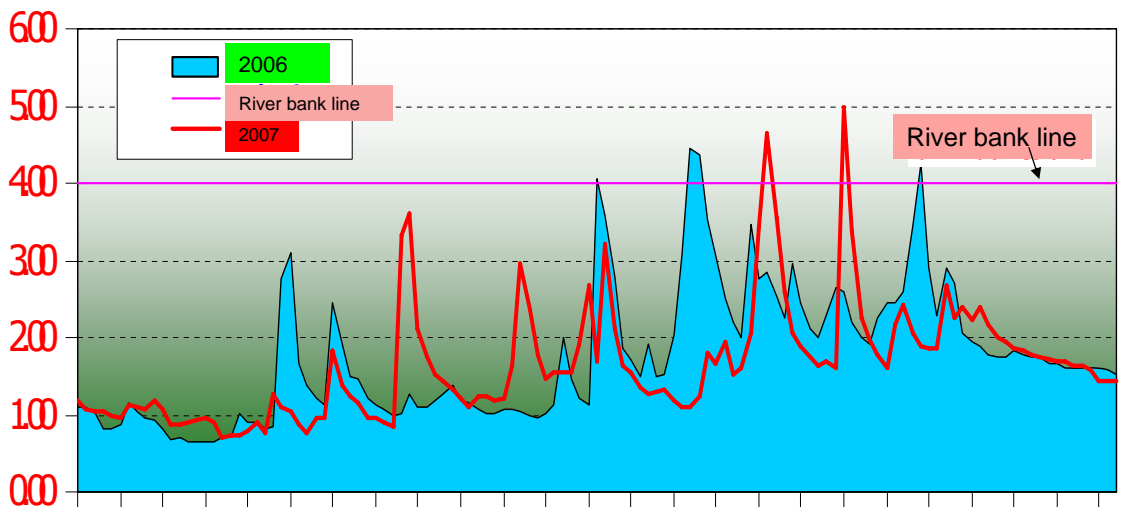


1. Basic Information of the basin

FLOODS RECORD OF MAE WANG BASIN 1995-2003



Maximum of daily water level at Mae Wang



1 6 11 16 21 26 31 5 10 15 20 25 30 4 9 14 19 24 29 4 9 14 19 24 29

Day

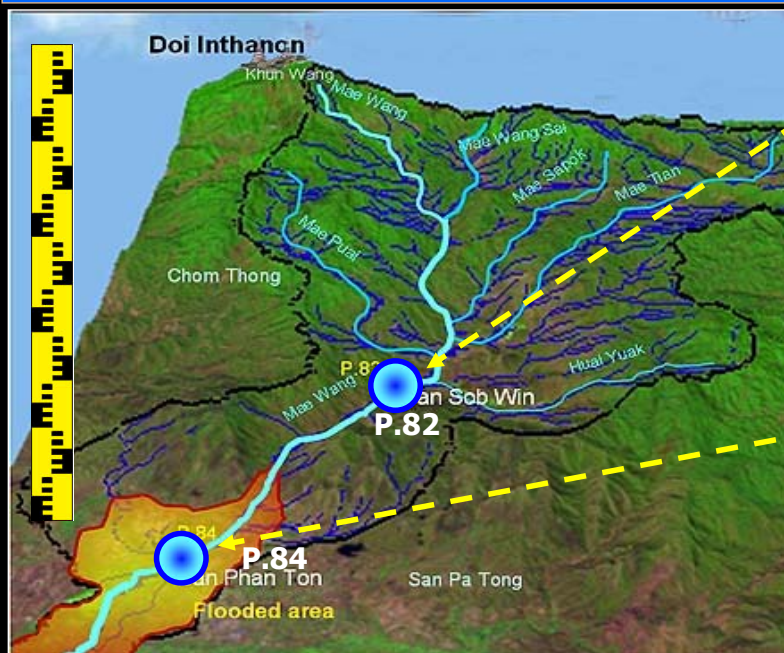
July	August	September	October
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2. River monitoring and Flood Warning system

2. River monitoring and Flood Warning system: Water level correlation and time lag.

Manual measurement

Discharge and water level measurement by hydrological stations



Hydrology and Water management Center
for Upper Northern Region



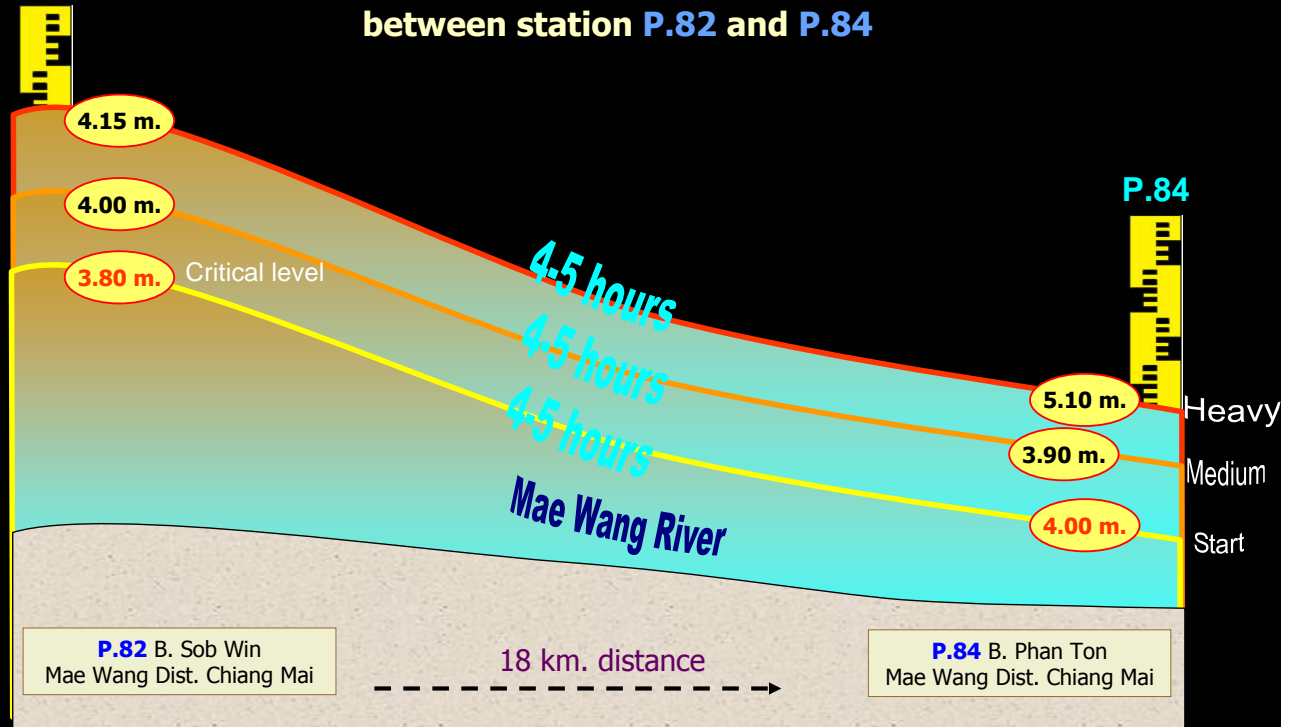
Station P.82 Ban Sob Win



Station P.84 Ban Phan Ton

2. River monitoring and Flood Warning system: Water level correlation and time lag.

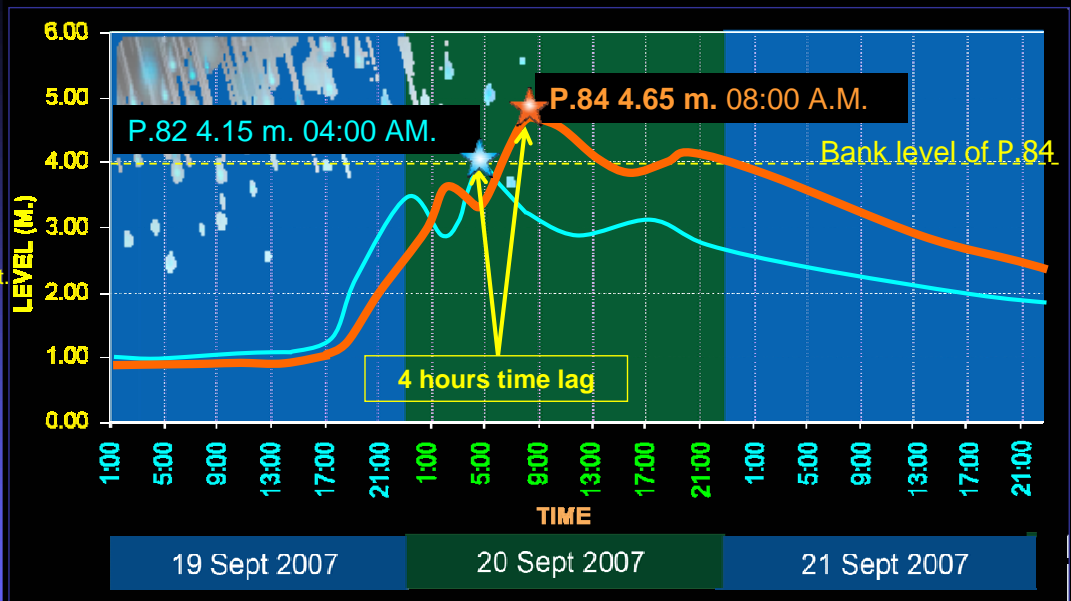
P.82 WATER LEVEL CORRELATION and TIME LAG OF MAE WANG RIVER between station P.82 and P.84



2. River monitoring and Flood Warning system: Water level correlation and time lag.

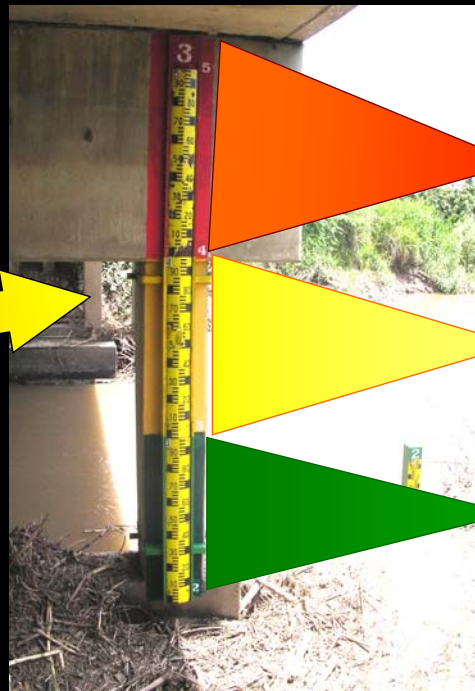
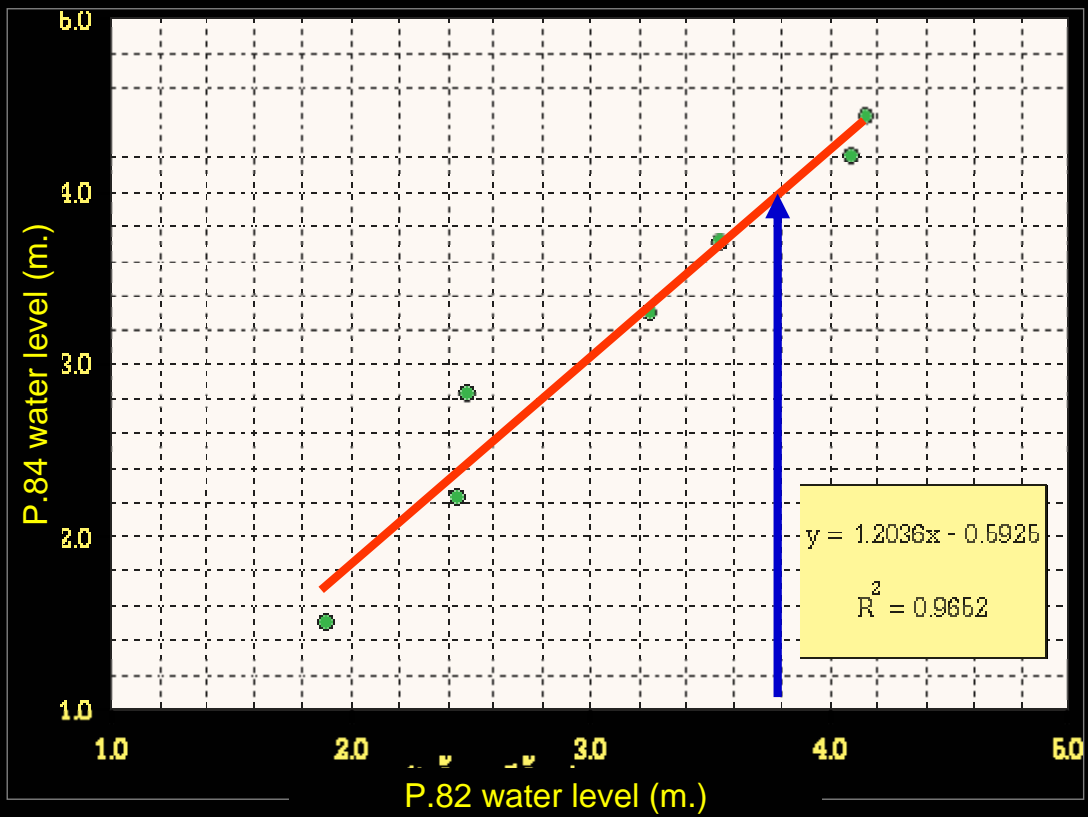
Water level time lag of Mae Wang River between station P.82 and P.84

Mae Wang



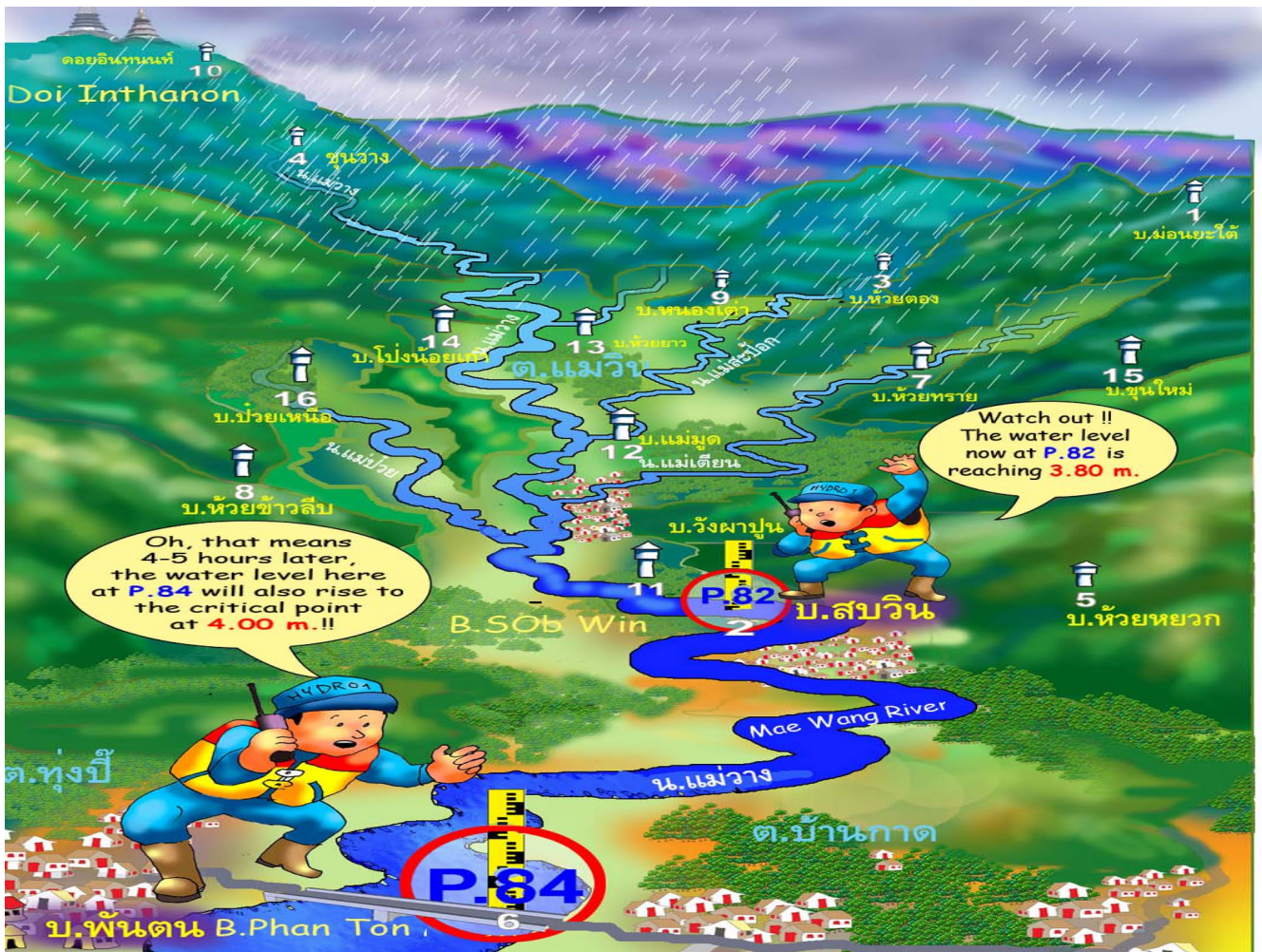
Water Level at **P.82**
 Water Level at **P.84**

Water level correlation between P.82 and P.84



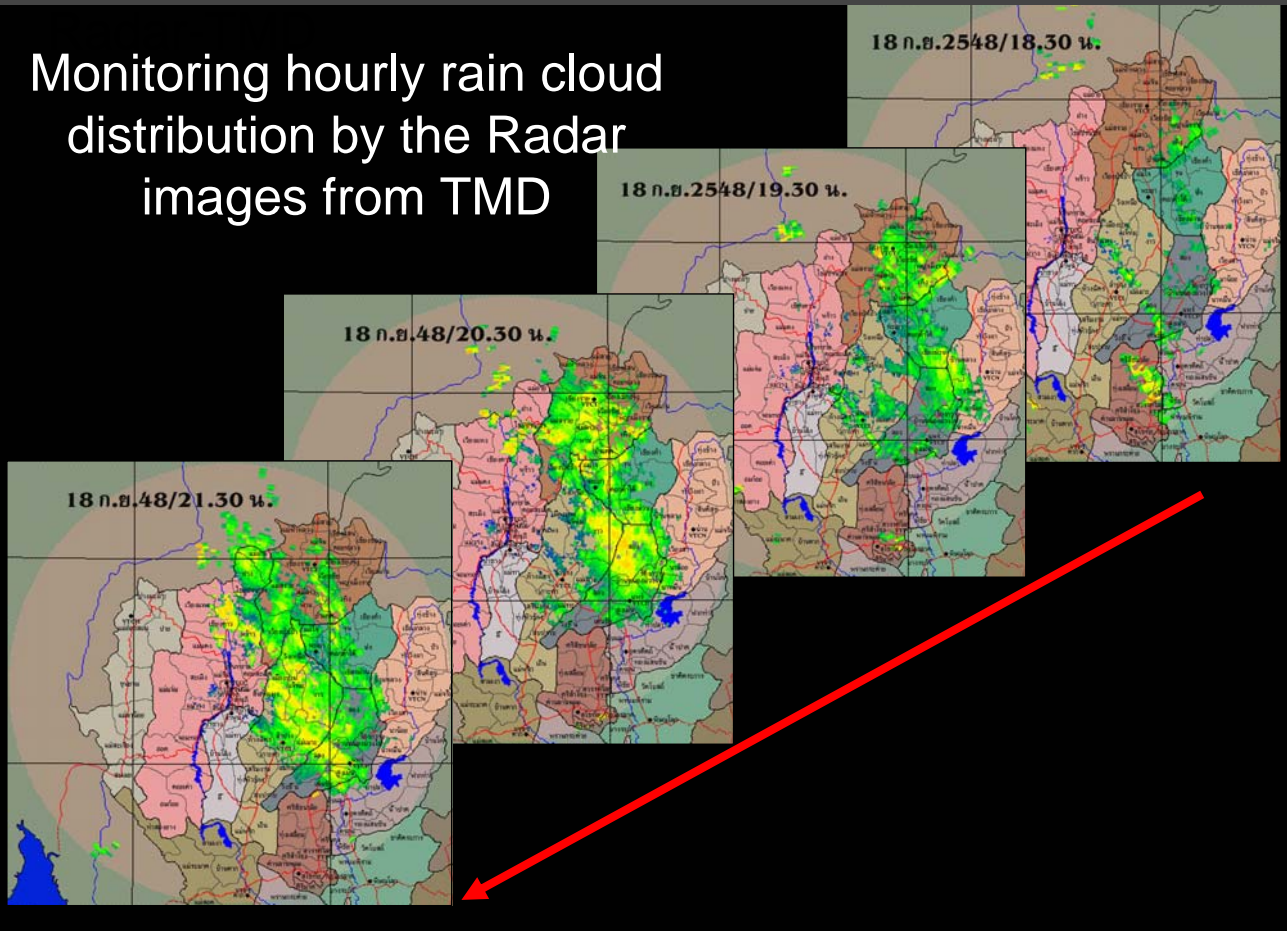
- Flood**
- Critical range**
- Normal**

River status indicated by colors on the staff gage

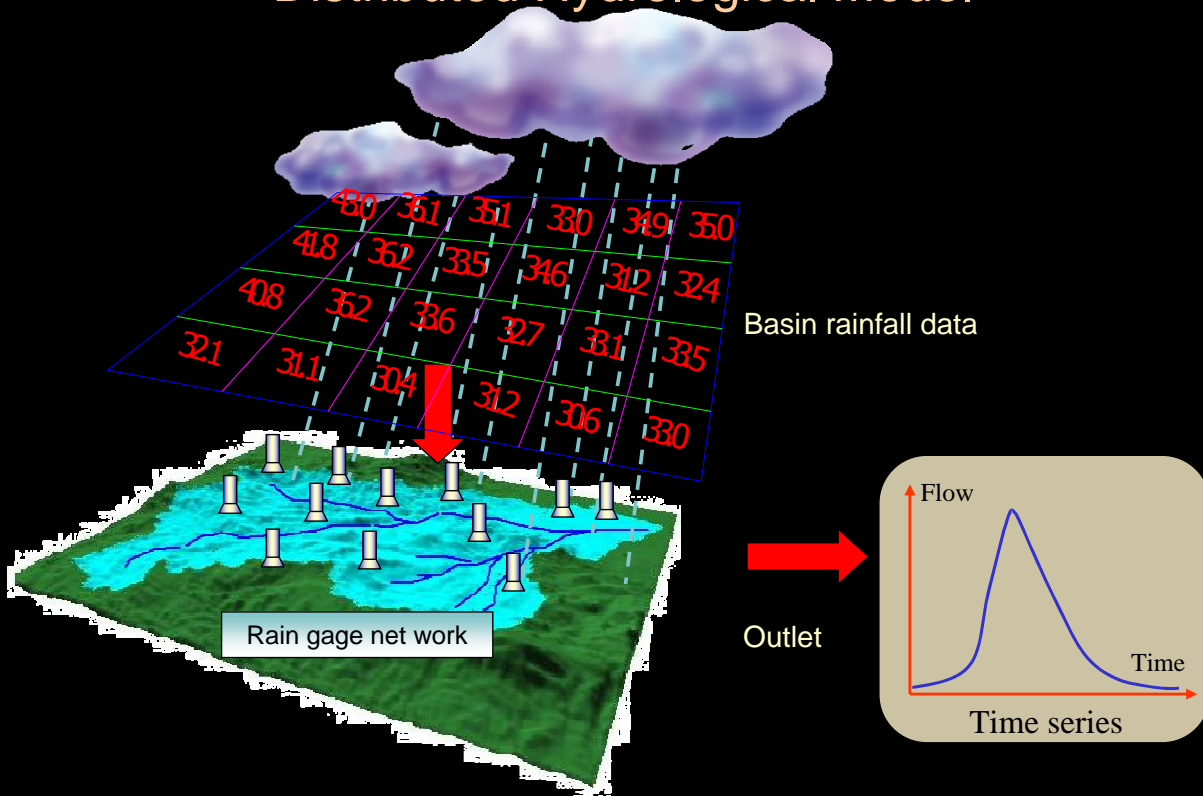


2. River monitoring and Flood Warning system: Involved information sources

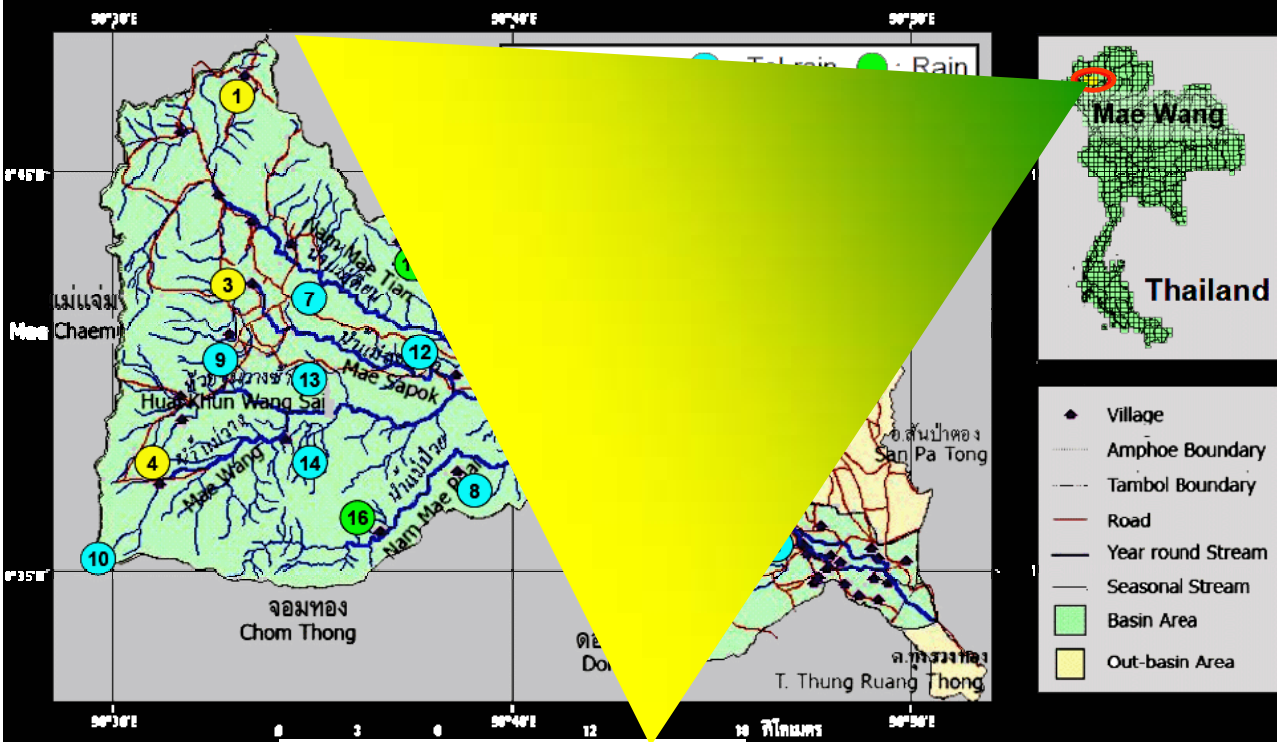
Monitoring hourly rain cloud distribution by the Radar images from TMD



Distributed Hydrological Model

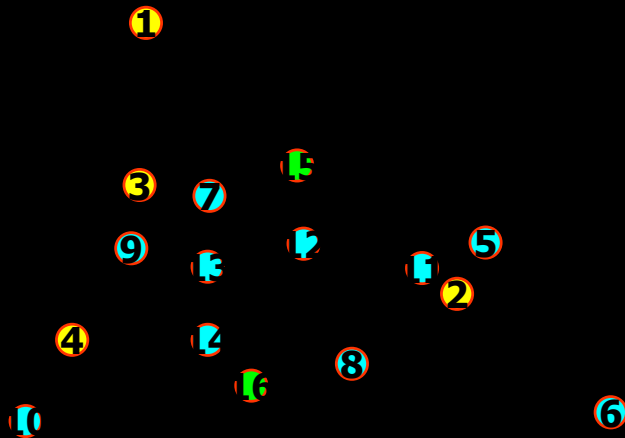


Pilot project GEOSS telemetry in Mae Wang Basin by the cooperation of Hydrology and Water Management Center and the University of Tokyo



2. River monitoring and Flood Warning system: Telemetry and automatic warning system

Pilot project GEOSS telemetry in Mae Wang Basin by the cooperation of Hydrology and Water Management Center and the University of Tokyo



● **Tele-super sites**

4 stations = Mon Ya Tai, Sob Win, Huai Tong and Khun Wang

● **Tele-rain sites**

10 stations = Huai Yuak, Phan Ton, Huai Sai, Huai Khao Leeb, Nong Tao, Doi Inthanon, Wang Pha Poon, Mae Mood, Huai Yao and Pong Noi Kao

○ **Rain gage**

2 Stations = Khun Mai and Phai Nua

2. River monitoring and Flood Warning system: Telemetry and automatic warning system

TELE-SUPER SITES



NO.1 Mon Ya Tai



NO.2 Sob Win

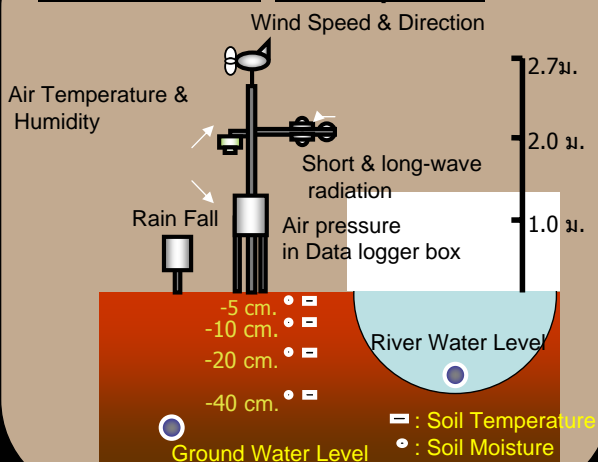


NO.3 Huai Tong



NO.4 Khun Wang

Instrumentation : Tel-super site



Data logger

Data is logging every 5 seconds and recorded by averaging every 10 minutes. Tel-super system can storage data for 6 month, Tel-rain system can storage data for 1.5 month.

GSM modem

◆ GSM is easily able to connect line directly by dial-up connection, although GSM (9.6 kbps) is low-speed access than GPRS (115 kbps).



Data transfer every 1 hour from all observation sites

2. Warning and Information dissemination channels:

The screenshot shows a web browser window displaying the GEOSS website. The address bar contains the URL <http://geoss.tkl.iis.u-tokyo.ac.jp/geoss>. The page features a form with several sections: 'Site' (with radio buttons for SuperSite and RainSite), 'Data' (with a dropdown menu for 'Wind_speed(S...)' and a yellow label 'data'), 'Month-Day' (with year and month/day dropdowns), and 'Term' (with a dropdown for '02 days' and a yellow label 'term'). A 'submit' button is located in the top right. Below the form is a plot area with a vertical axis labeled 'R' and a horizontal axis labeled 'River level (cm)'. A hand cursor is pointing at the 'site' label, and a yellow label 'submit' is placed over the submit button. The plot area shows a list of data points. At the bottom, there is a footer with the text: 'Tue Nov 20 13:17:49 JST 2007, 8320 access since Aug.2006', 'GEOSS MaeWang-River Data Automatic Crawling and Archiving System at IIS, The Univ. of Tokyo', and 'Developed by Eiji Ikoma, TKL-IIS/CSIS, The Univ. of Tokyo'.

3. Warning and Information dissemination channels

2. Warning and Information dissemination channels:

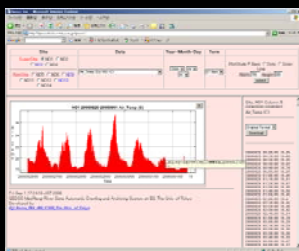


2. Warning and Information dissemination channels:

Instrumentation : Data acquisition and Telemetry system



GEOSS Data Server@RID Center 1



GEOSS Data Archive System@Univerisuty of Tokyo

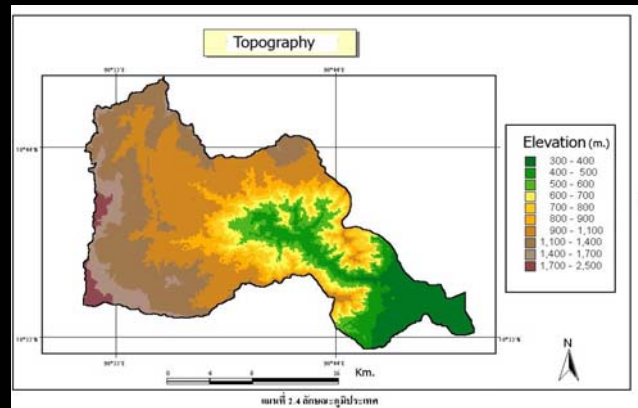


Conclusion

To improve Maewang Project We need...

Training of flood modelling

Flood hazard map training



**Thank you for
your attention**

