International Flood Network - IFNet -

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Deputy Director General

IFNet Secretariat

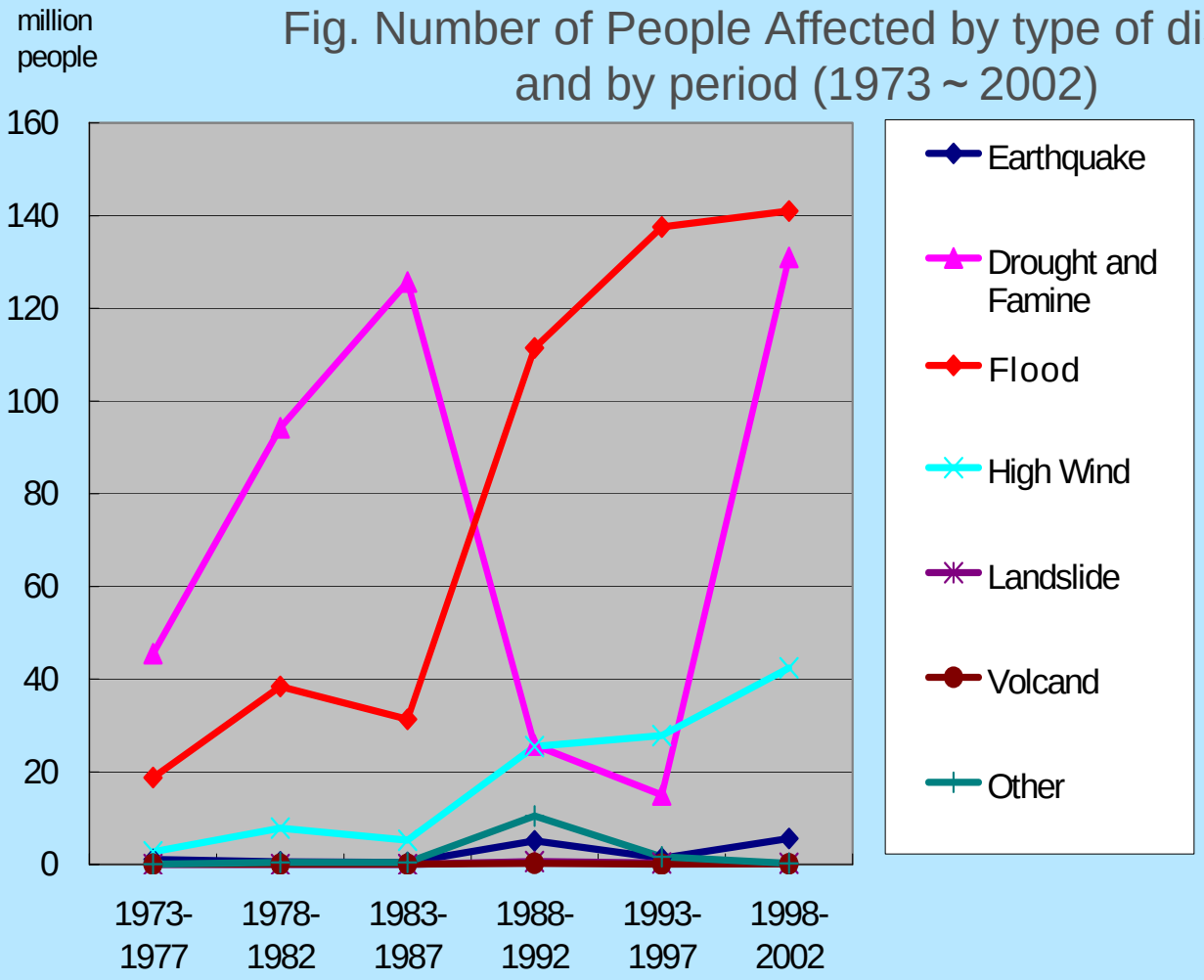
Today's Contents

- **1. IFNet**

  (International Flood Network)
- **2. GFAS**

  (Global Flood Alert System)

Increasing Flood Damage



Source: World Disasters Report, International Federation of Red Cross and Red Crescent Societies

Floods in Bangladesh in 2004

Two young girls push a pot full of relief food as they swim back to their submerged homes at the downtown of Dhaka July 25 while flood victims queue up before a homoeopathic dispensary at the neighbouring locality as the government is yet to offer healthcare service.

Courtesy — New Age

BANGLADESH

Floods in Bangladesh in 2004

Septuagenarian Tafurunnisa sloshes her way through stinky floodwaters in Dhaka on July 25 to buy essentials at a nearby market that now seems light years away.

BANGLADESH

Flood in Fukuoka City, Japan (June 1999)

Inundation of Underground Spaces

1. What's IFNet ?

Concept

Assisting activities to cope with floods and its related matters

Before establishment

Launched by the initiative of MLIT-Japan and IDI-Japan

Establishment

At the 3rd World Water Forum in Kyoto

Governance of IFNet

As of 1 April, 2004

Chairperson: *Mr. Avinash C. Tyagi*

Director of Hydrology and Water Resources,
World Meteorological Organization (WMO)

Vice Chairperson: *Mr. Akihiko Nunomura*

Director of River Planning Division, River Bureau,
Ministry of Land, Infrastructure and Transport (MLIT), JAPAN

Vice Chairperson: *Mr. Kees P. van Laarhoven*

Director General for Water, Ministry of Transport, Public Works and Water Management, THE NETHERLANDS

Acting Director General : *Mr. Kazuo Umeda*

Director of 2nd Research Department,
Infrastructure Development Institute (IDI) JAPAN

IFnet
International Flood Network

Objectives

- **Platform for Exchanging Information**
  - Flood Related Activities
- **Providing GFAS information**
  - Global Rainfall Map and Rainfall Probability Map
  - Flood Alert
- **Promoting Flood Management Policy**
  - Flood Hazard Map

Overview of IFNet

MLIT (Ministry of Land, Infrastructure & Transport)

WMO (World Meteorological Organization

WWC (World Water Council)

JICA (Japan International Cooperation Agency)

ADB (Asian Development Bank

Others

IFNet International Flood Network

Exchange of Information and Opinion

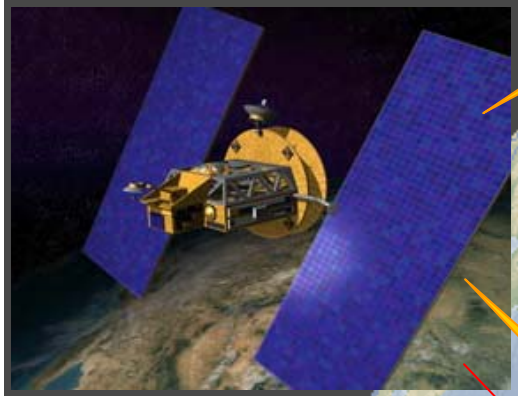
Global Flood Alert System (GFAS)

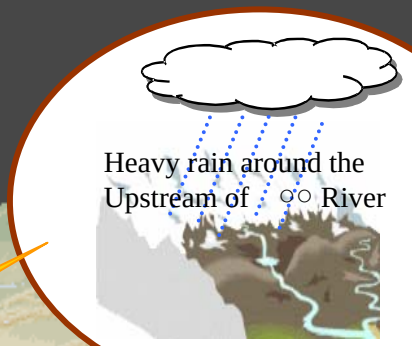
Flood Management Policy

2. Global Flood Alert System (GFAS)

Rainfall information

Observation Satellite (GPM)





Global Rainfall Map
FLOOD ALERT

Grand Stations

Raw Data

Organizations in Charge of Meteorology and Disaster Prevention

Secretariat of IFNet

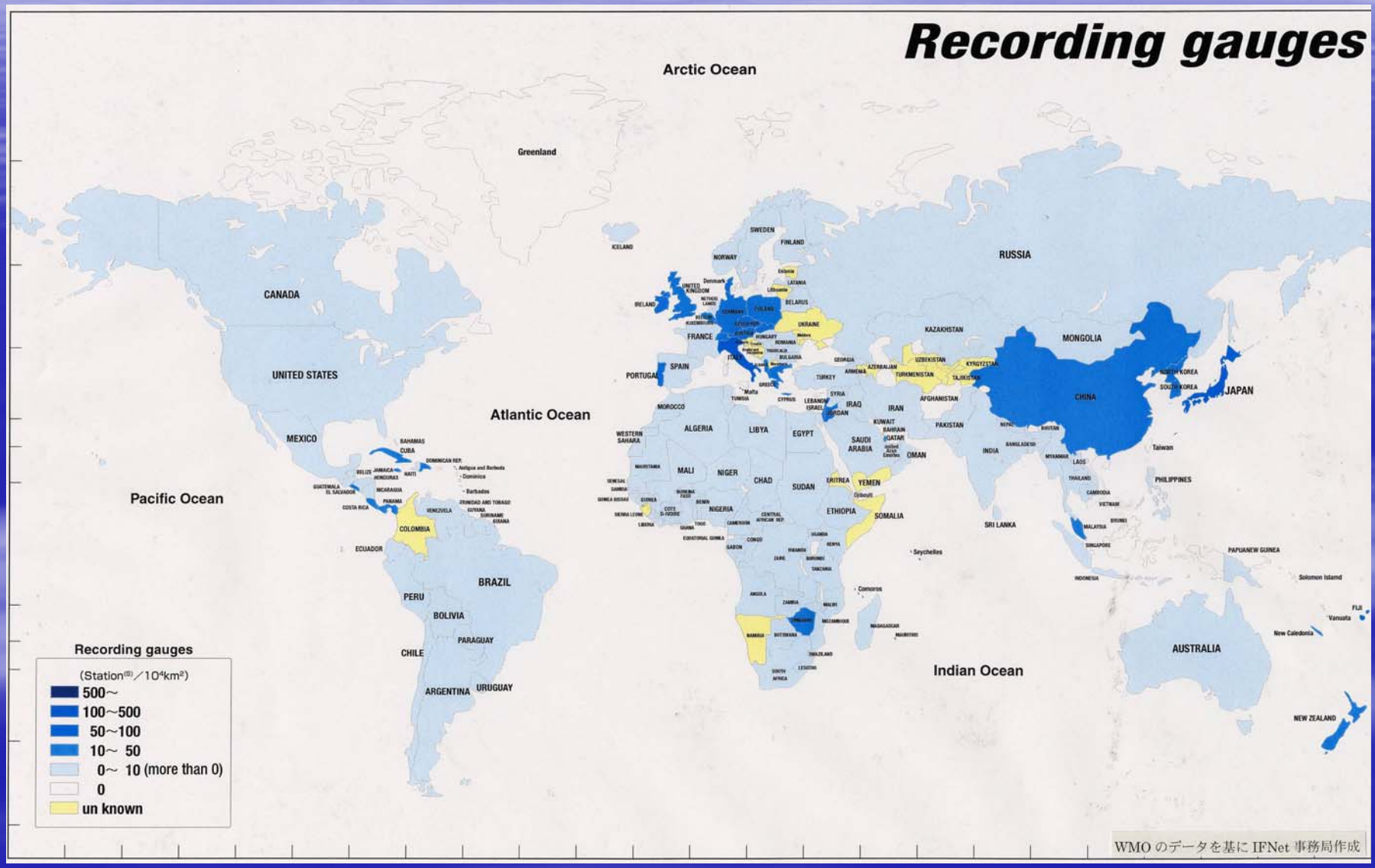
Data Processing System

- Data for climate forecasts (real time/near real time data)
- 3-hour global precipitation map (real time/near real time data)

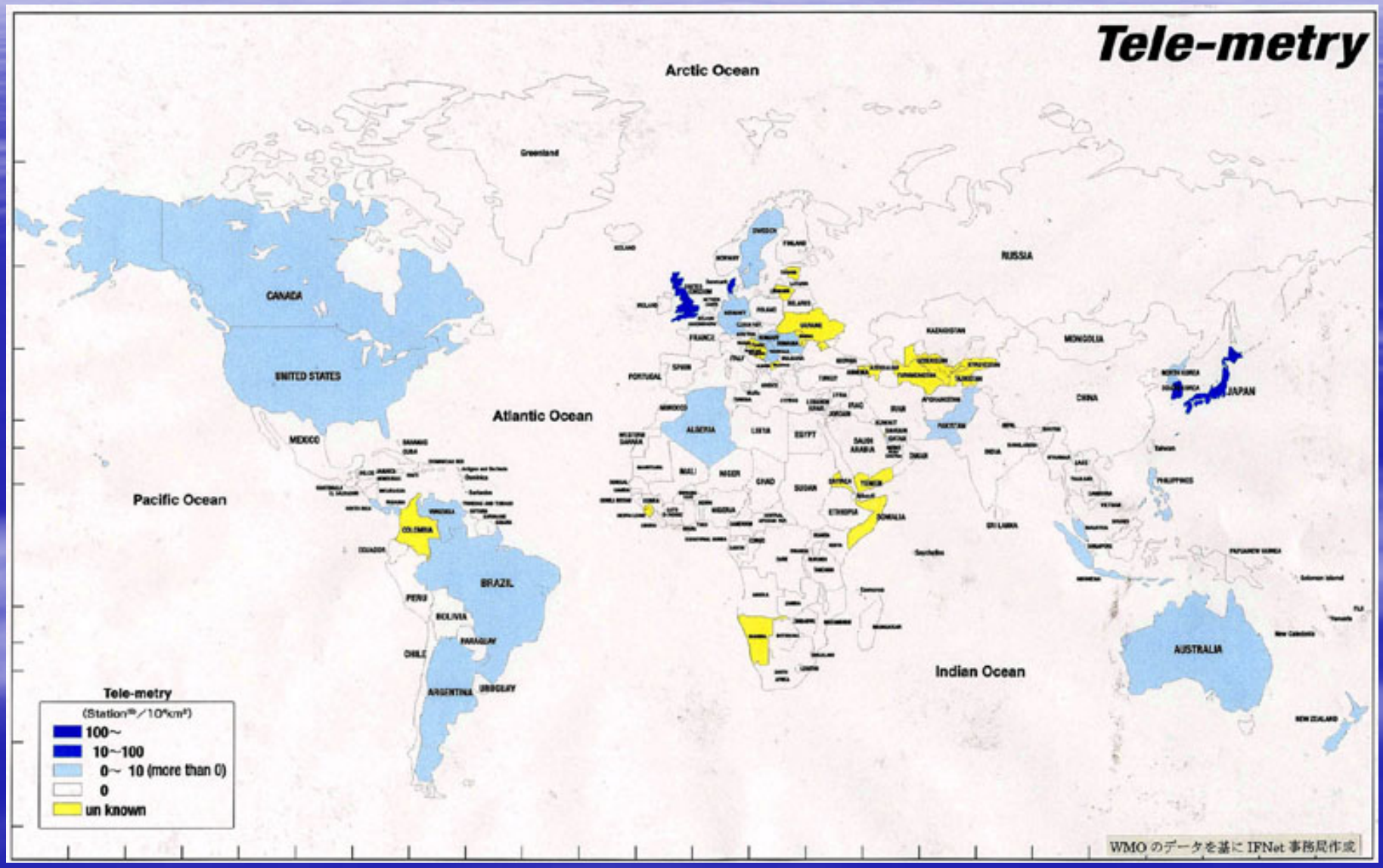
On-Line

Rainfall Prediction
Flood Prediction

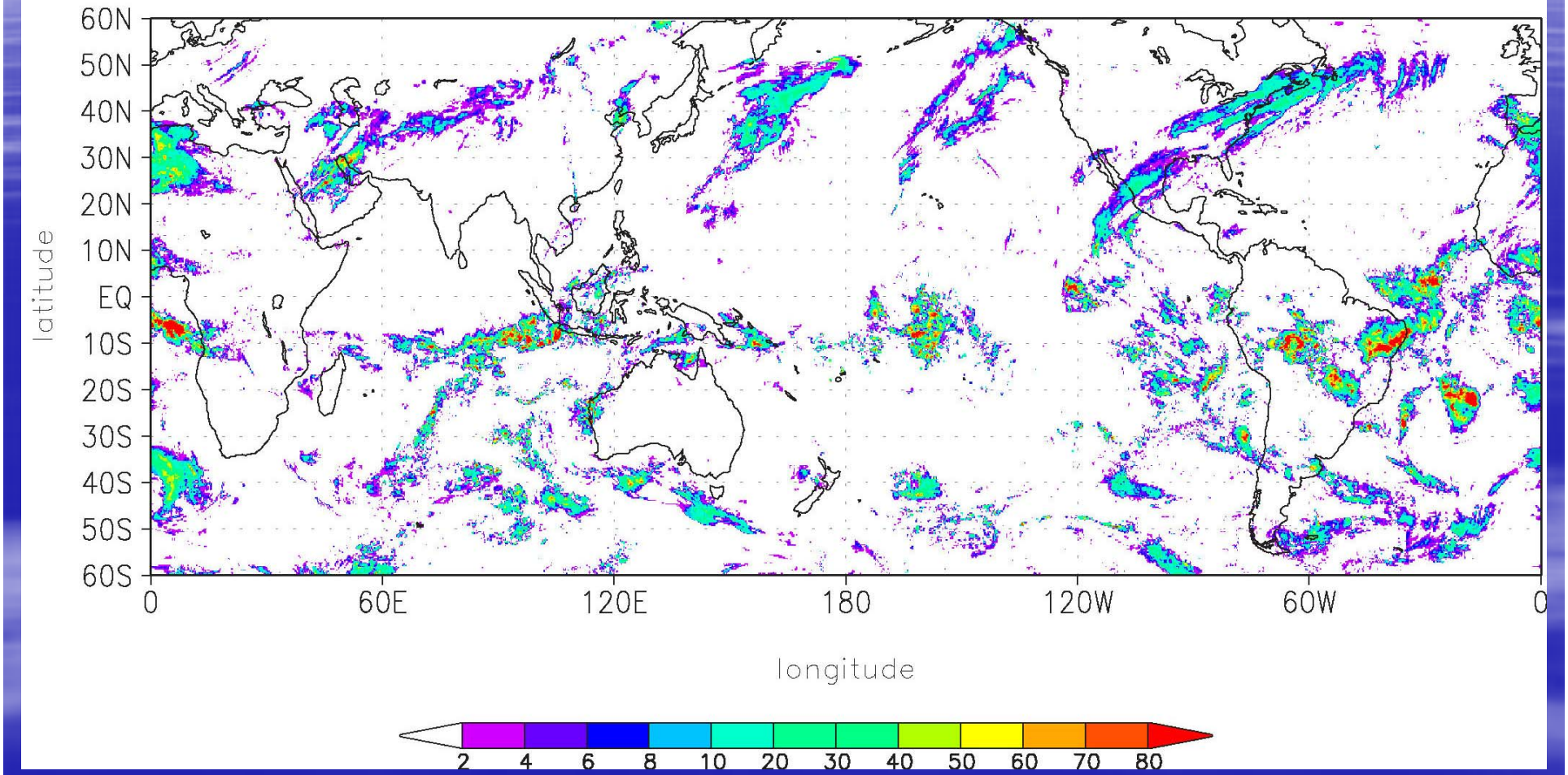
Recordable Gauges



Telemetry System



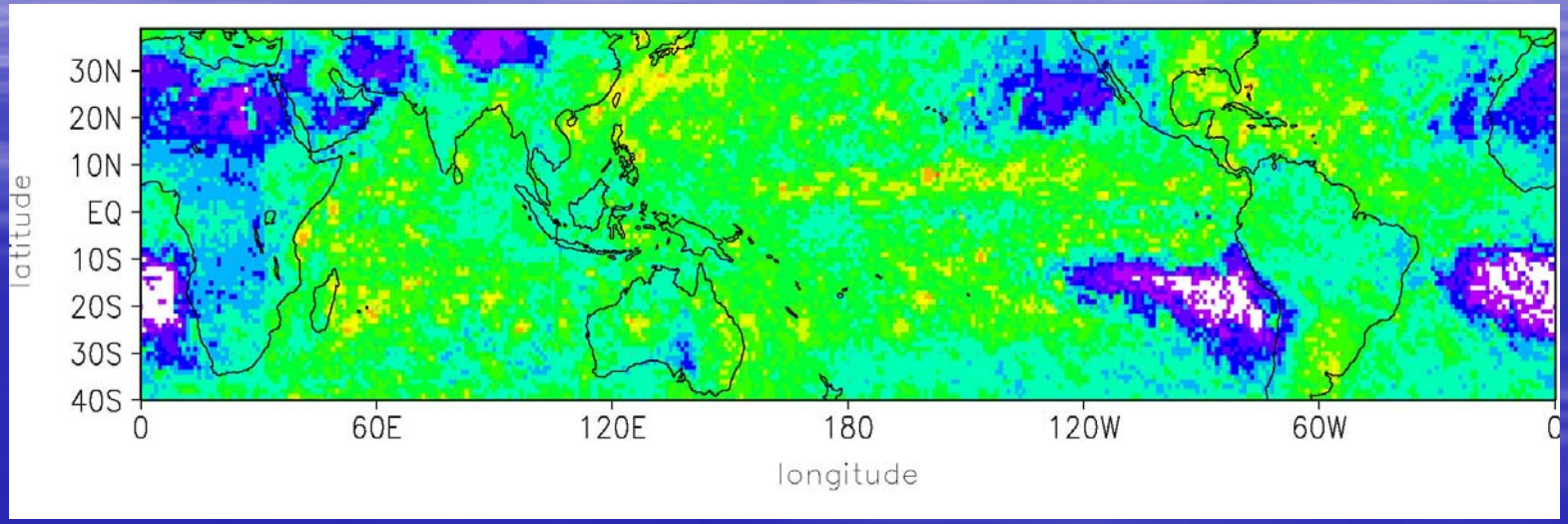
Daily Precipitation of Aug 1, 2003



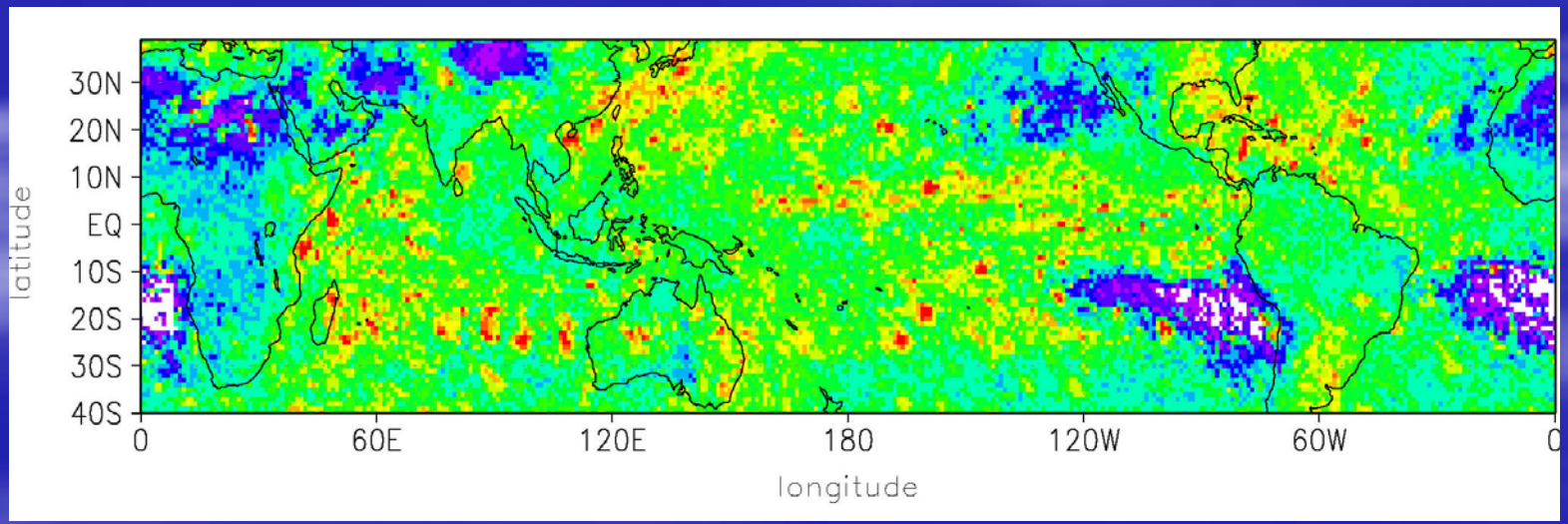
Derived from TRMM Data of Global Real-Time 3-Hourly Precipitation Analyses (3B42RT) by N A S A

Daily Precipitation Probability

10-year Return Period



30-year Return Period



Derived from TRMM Data of Rain Accumulation (3B42RT) by N A S A

Effectiveness of GFAS

GFAS is effective especially for the following conditions:

- **Large River Basin** where near-real-time and not hourly data are acceptable,
- **Without Telemetry**
- **Trans-boundary River** where prompt data transmission between countries is difficult.

Characteristics

- **Internet-based** Rainfall Information System
- **Global Coverage** by using **Global Satellite** Data
- **Near-real-time** Rainfall Data with Probability Analysis
- **Email Alert** System
- **Free of Charge**

Schedule of System Development

2003

- System Development using Current Available Satellite Data

2004

- 1st Launch of GFAS
  - Global and River Basin Rainfall Maps
  - Excessive Rainfall Area Maps

2005

- Flood Alert Email

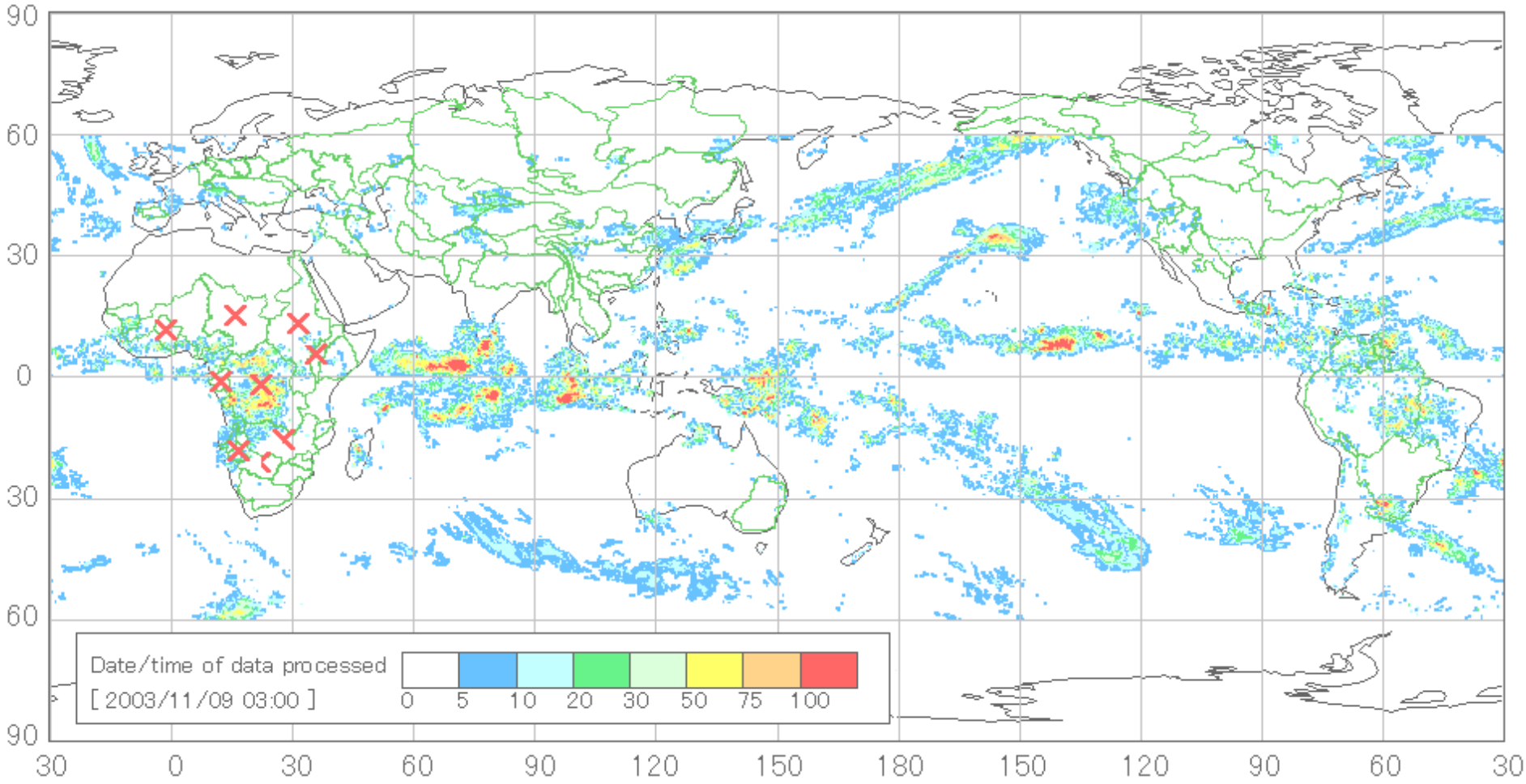
2006

- 4th World Water Forum in Mexico

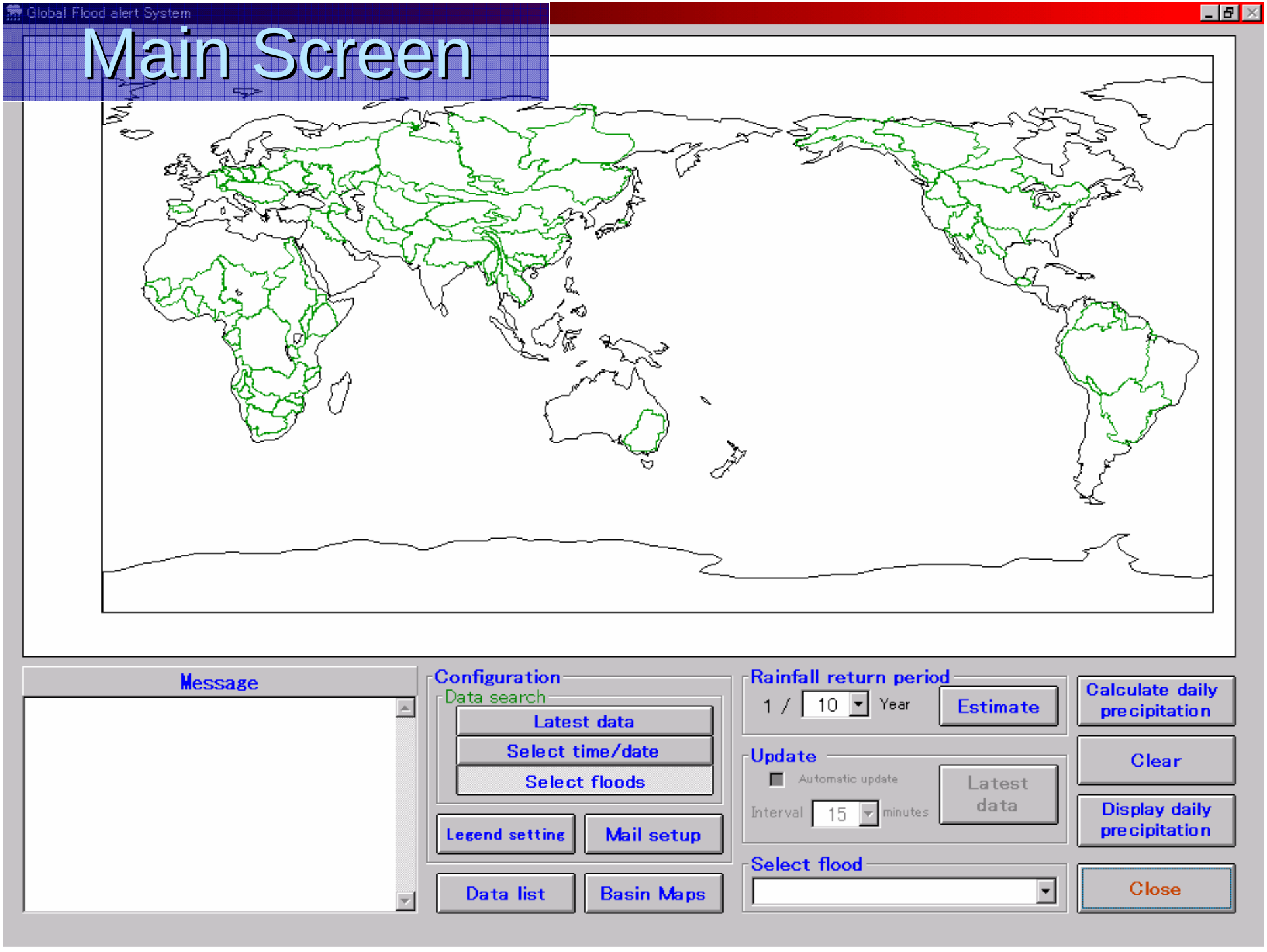
200?

- Establishment of GPM

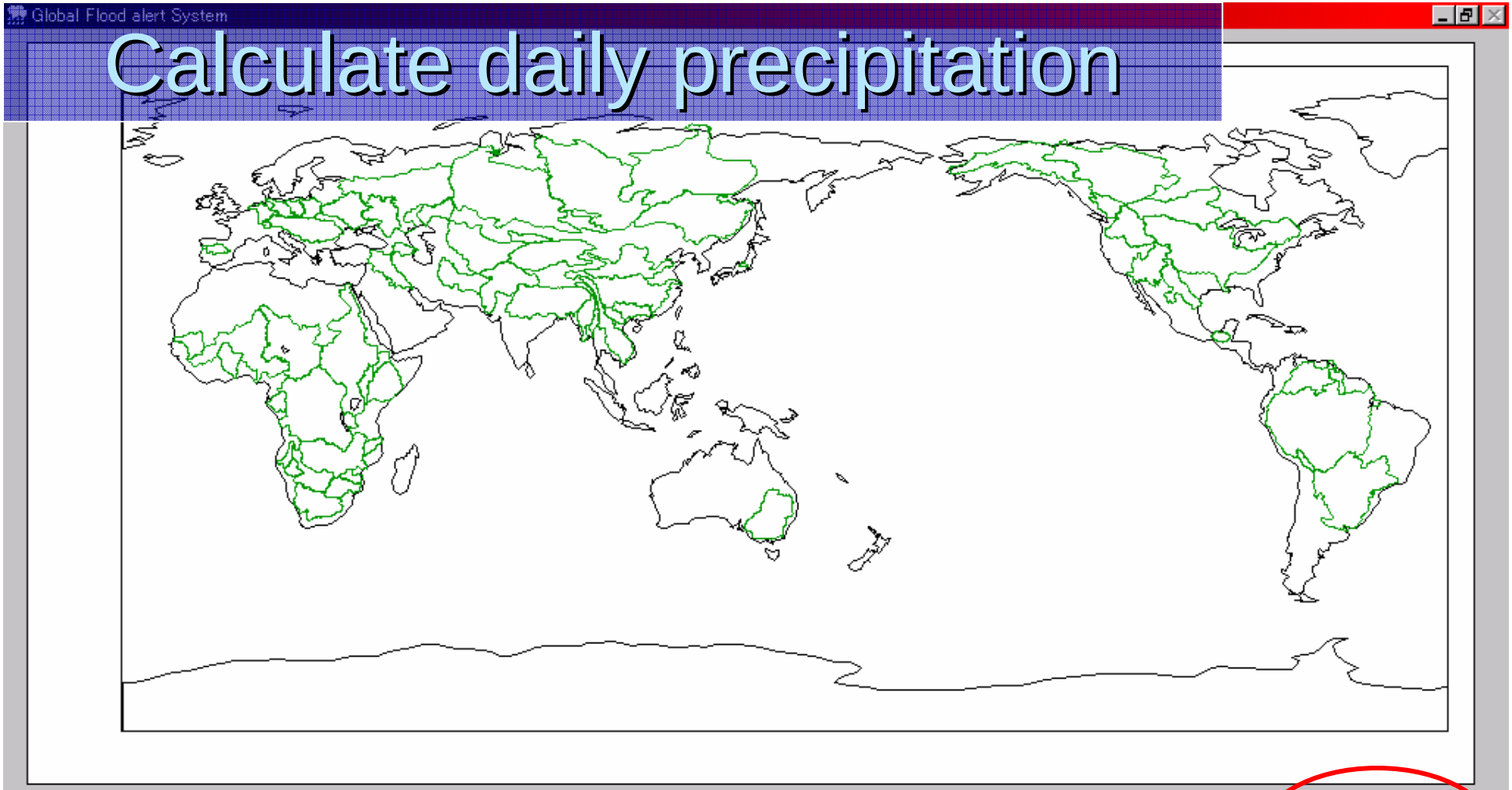
Global Flood Alert System



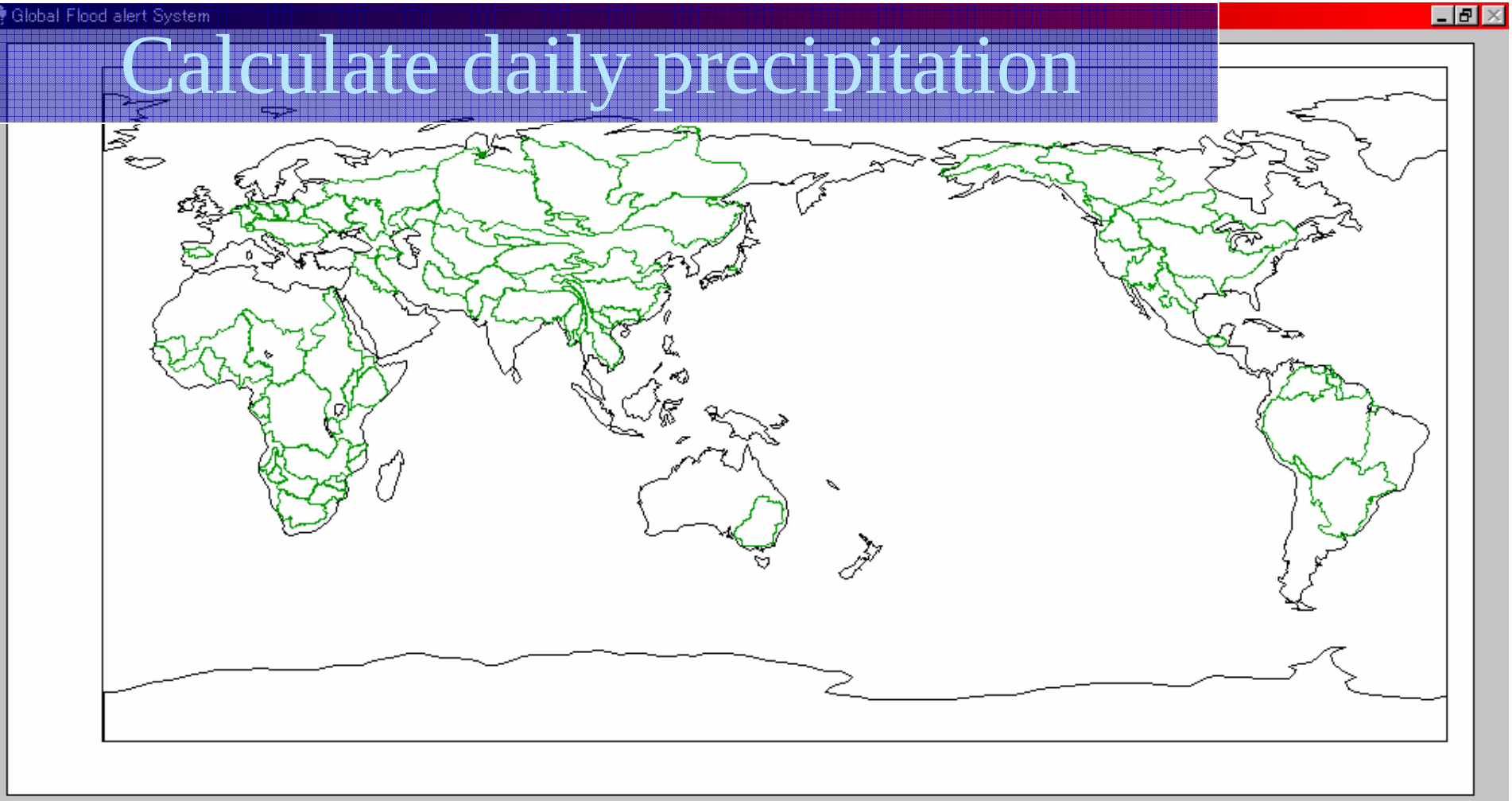
Main Screen


Global Flood alert System
Message
Configuration
Data search
Latest data
Select time/date
Select floods
Legend setting
Mail setup
Data list
Basin Maps
Rainfall return period
1 /
10
Year
Estimate
Update
Automatic update
Interval
15
minutes
Latest data
Select flood
Calculate daily precipitation
Clear
Display daily precipitation
Close

Calculate daily precipitation



Calculate daily precipitation



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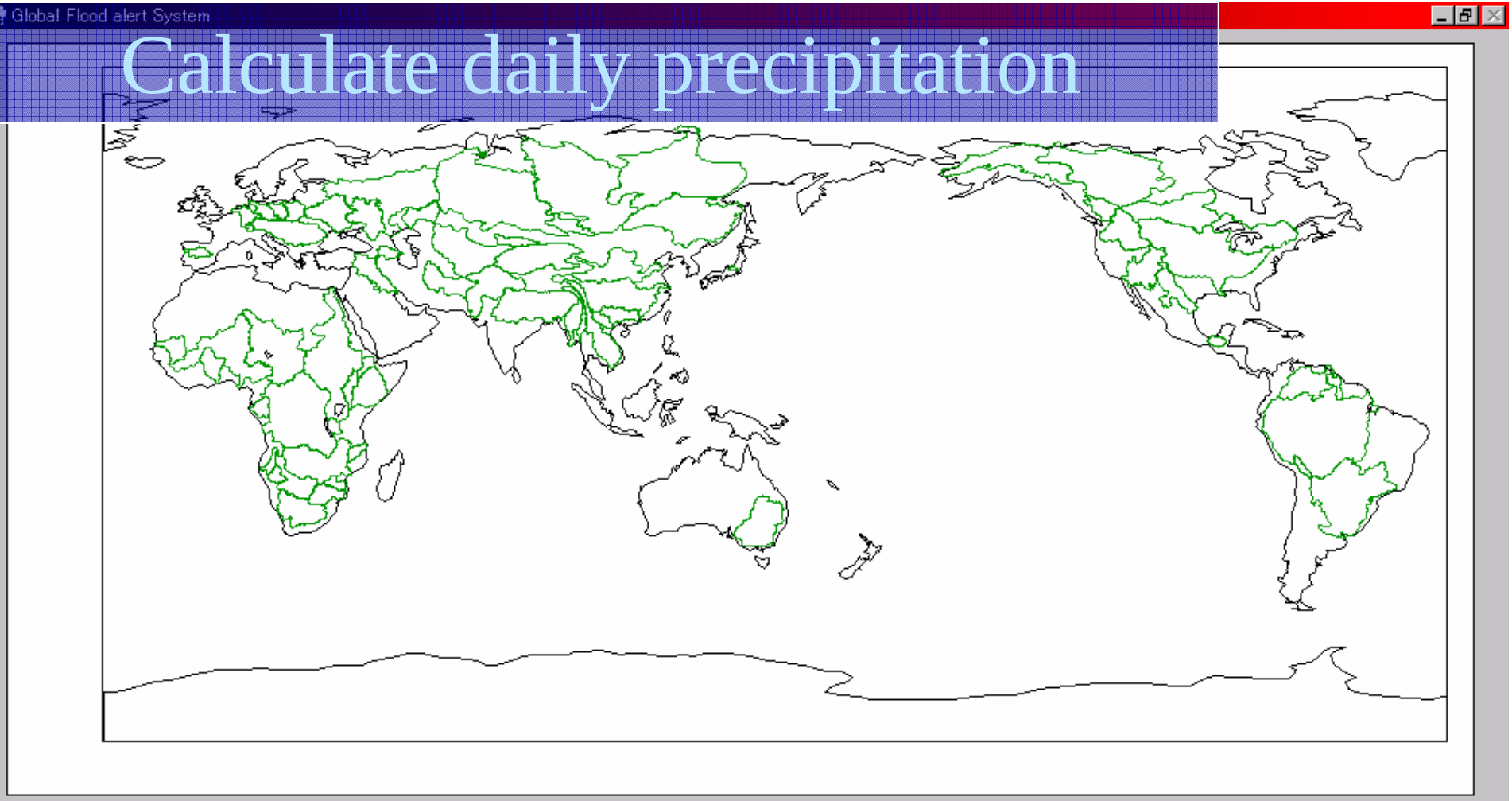
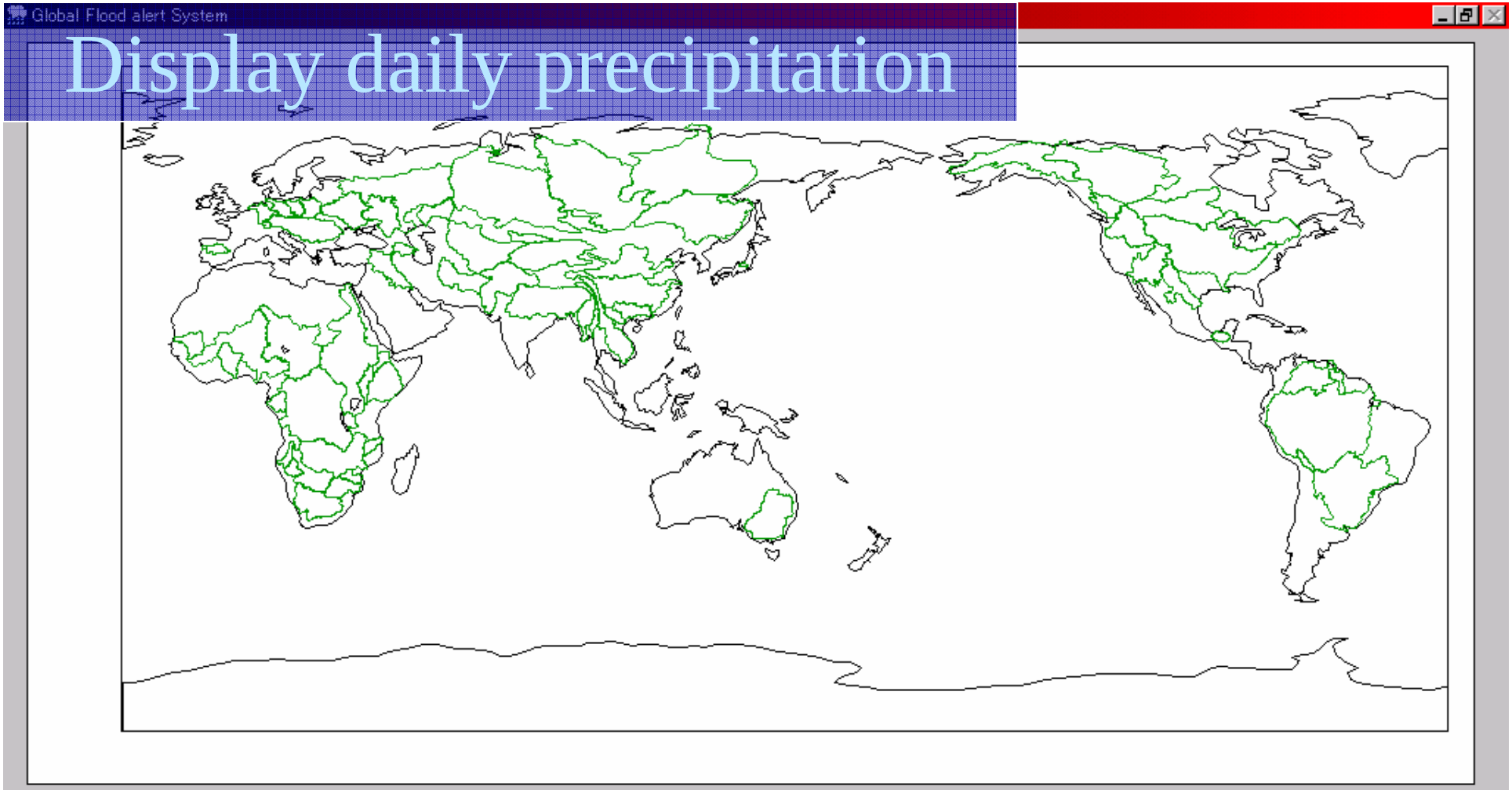


Display daily precipitation



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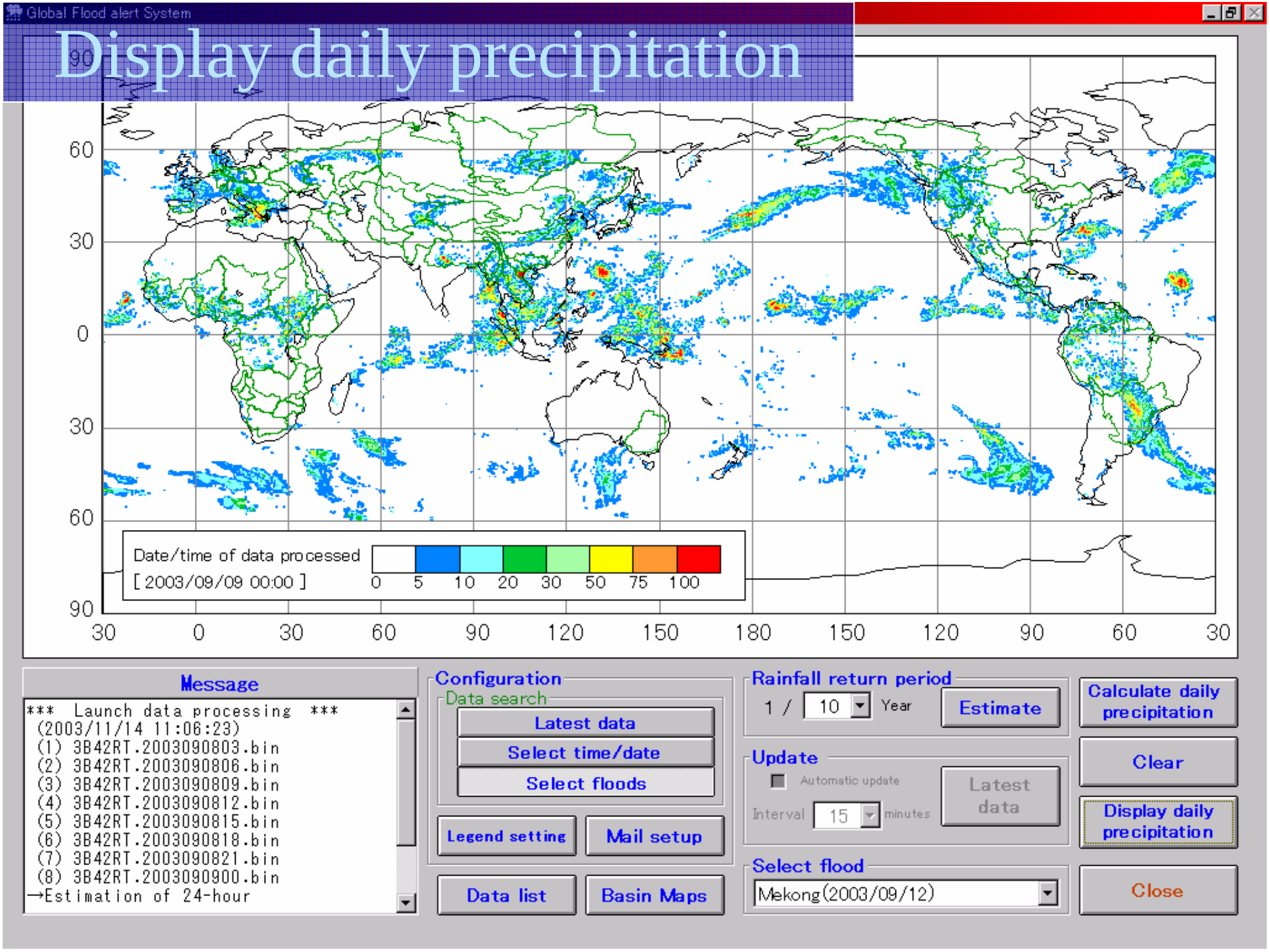
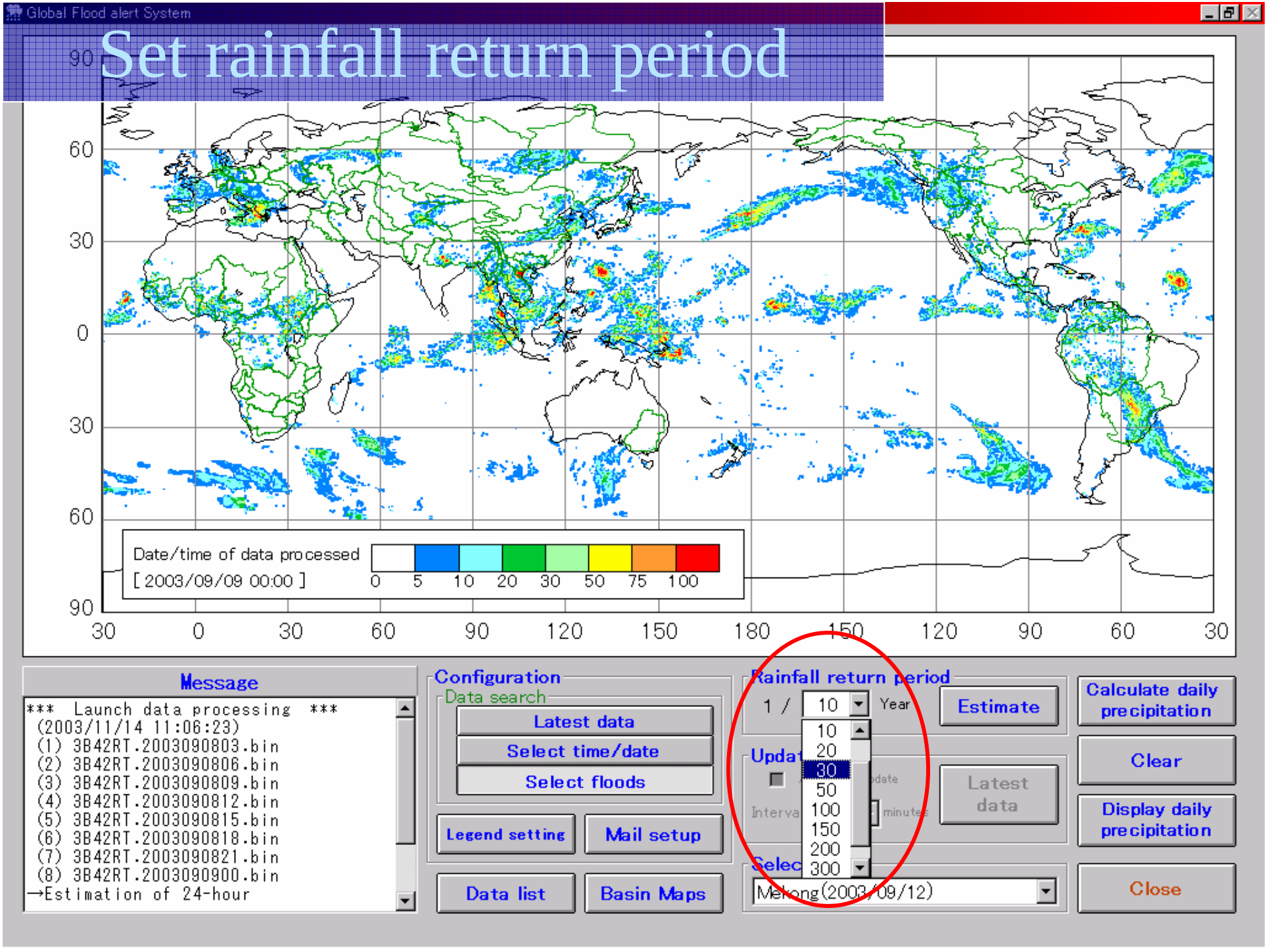
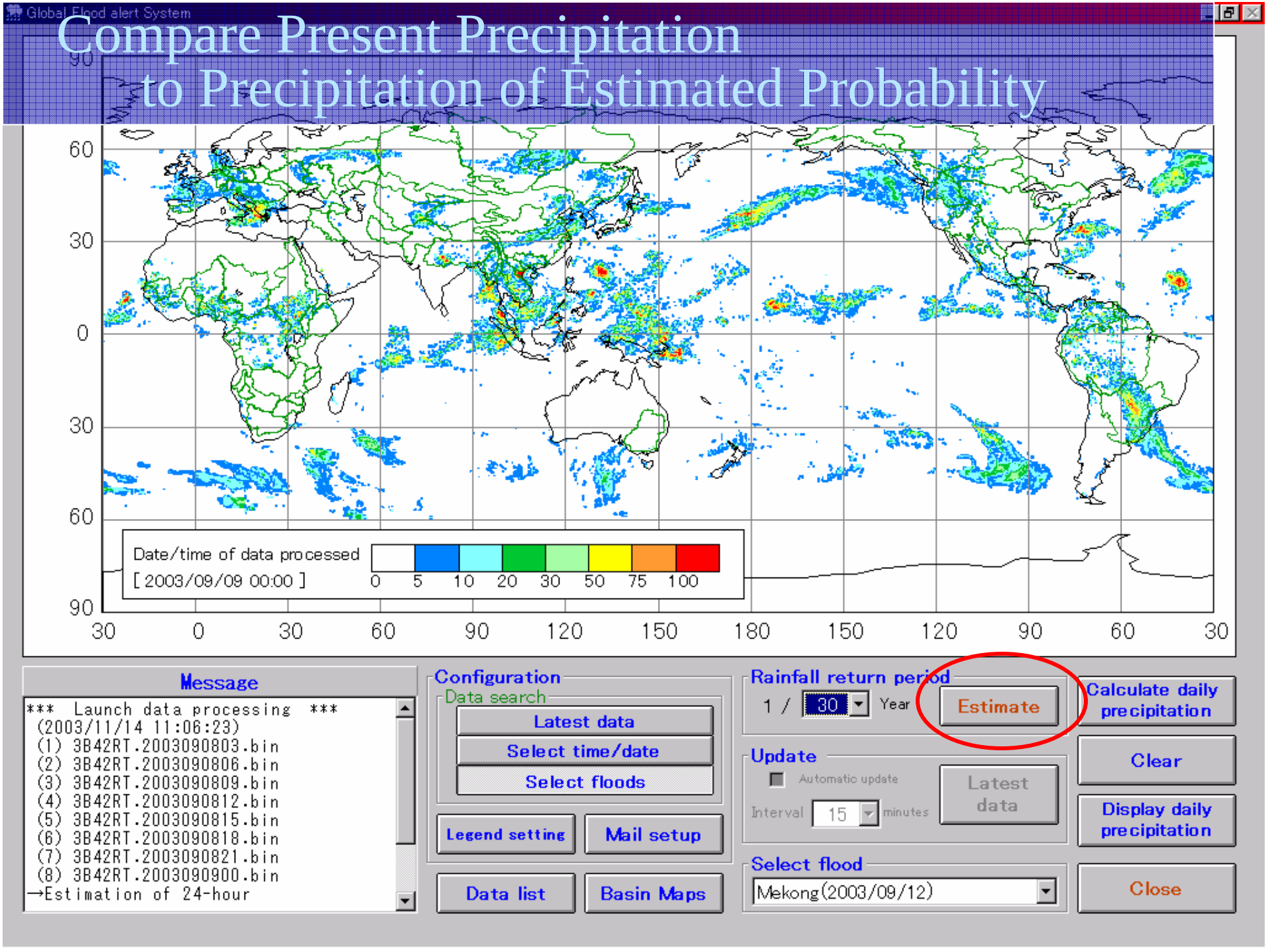


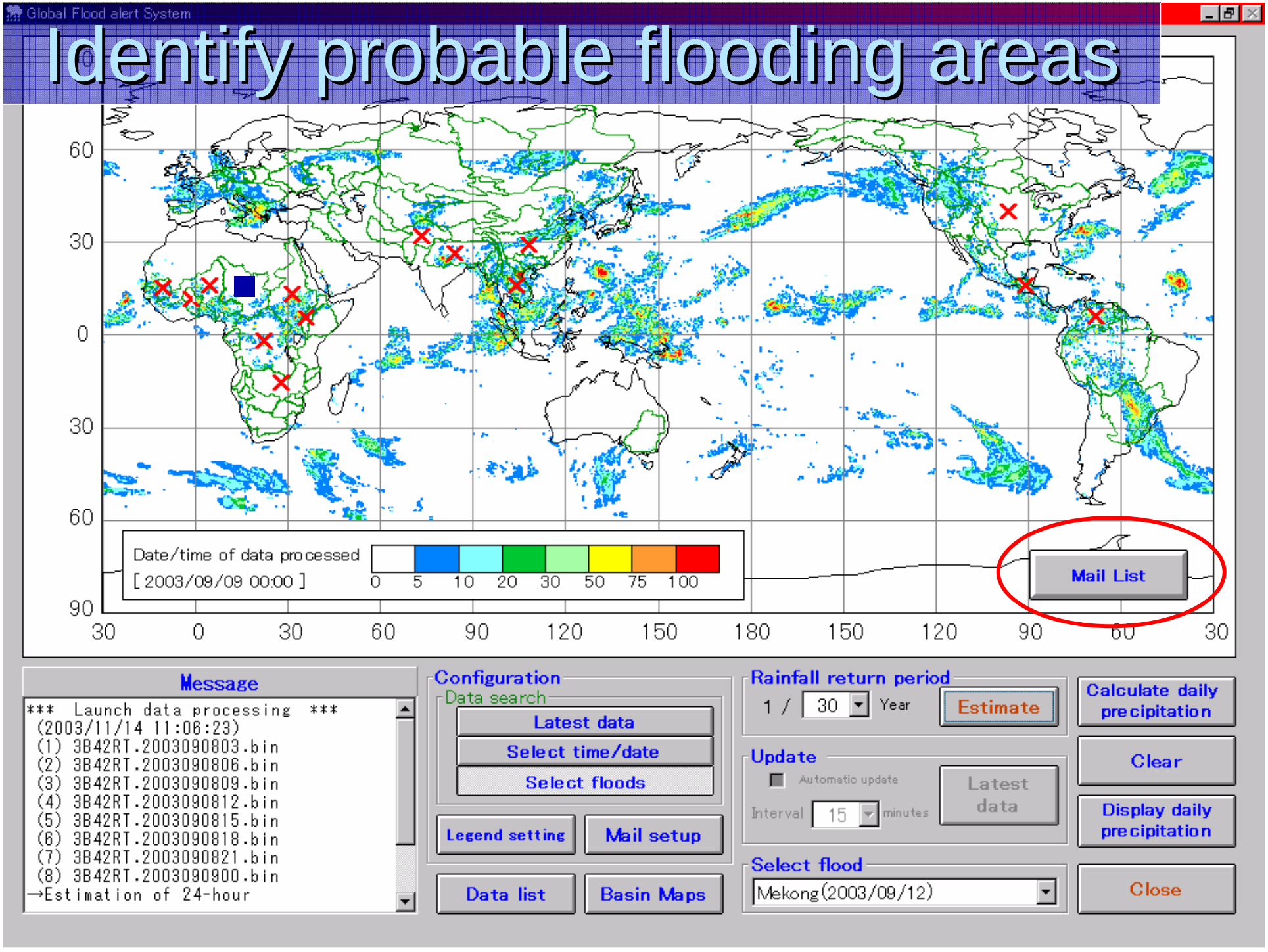
Set rainfall return period



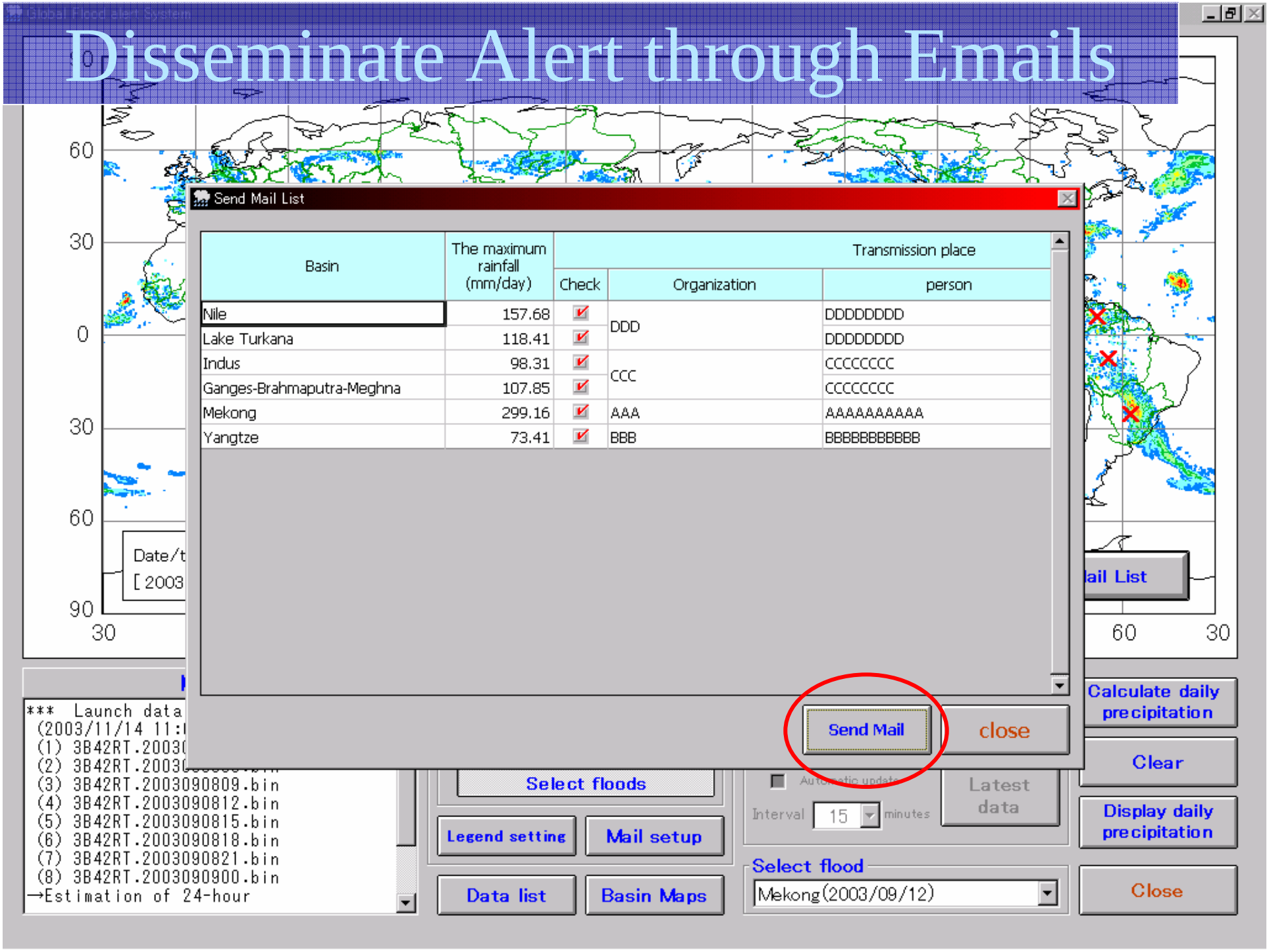
Compare Present Precipitation to Precipitation of Estimated Probability

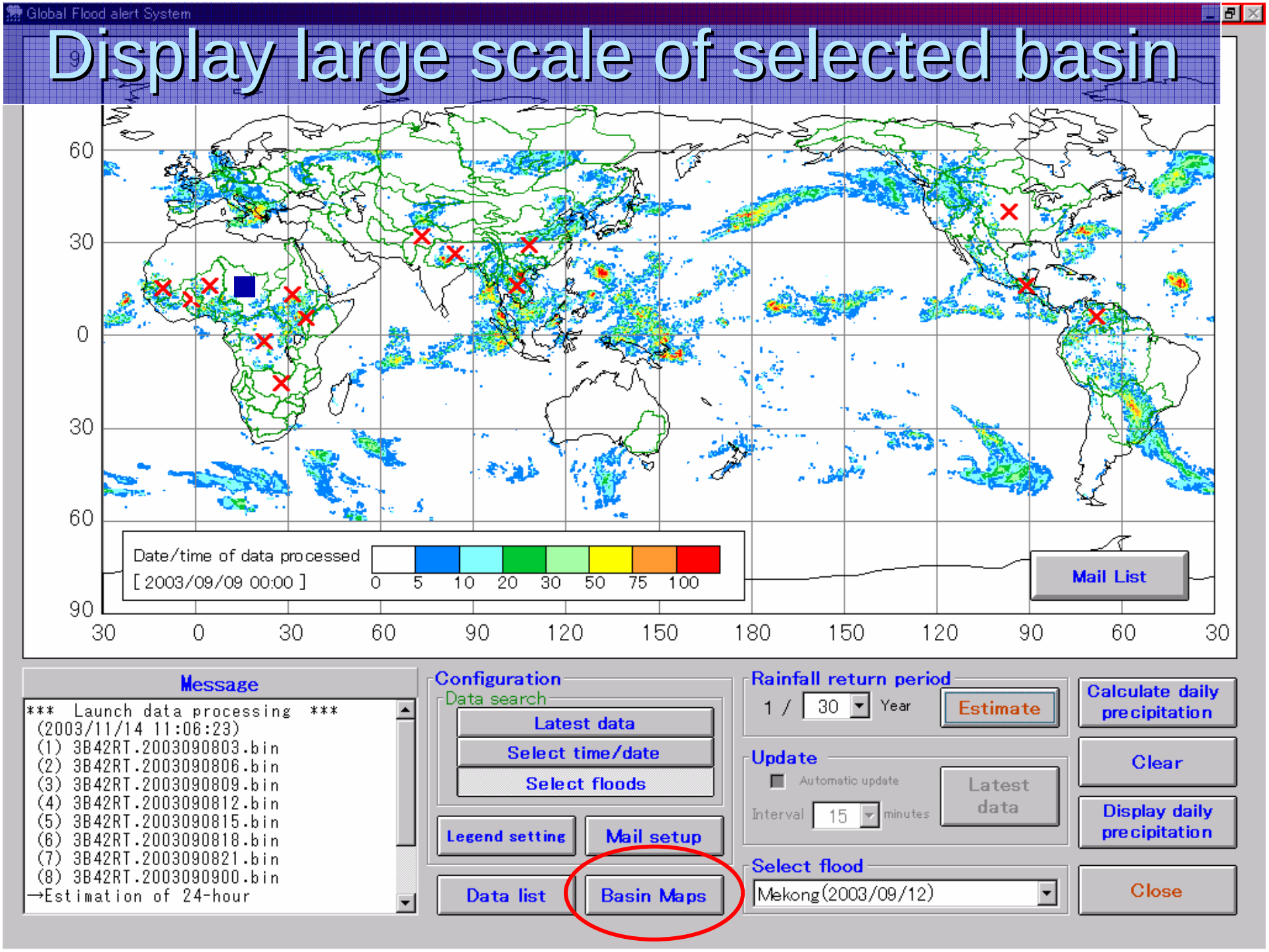


Identify probable flooding areas

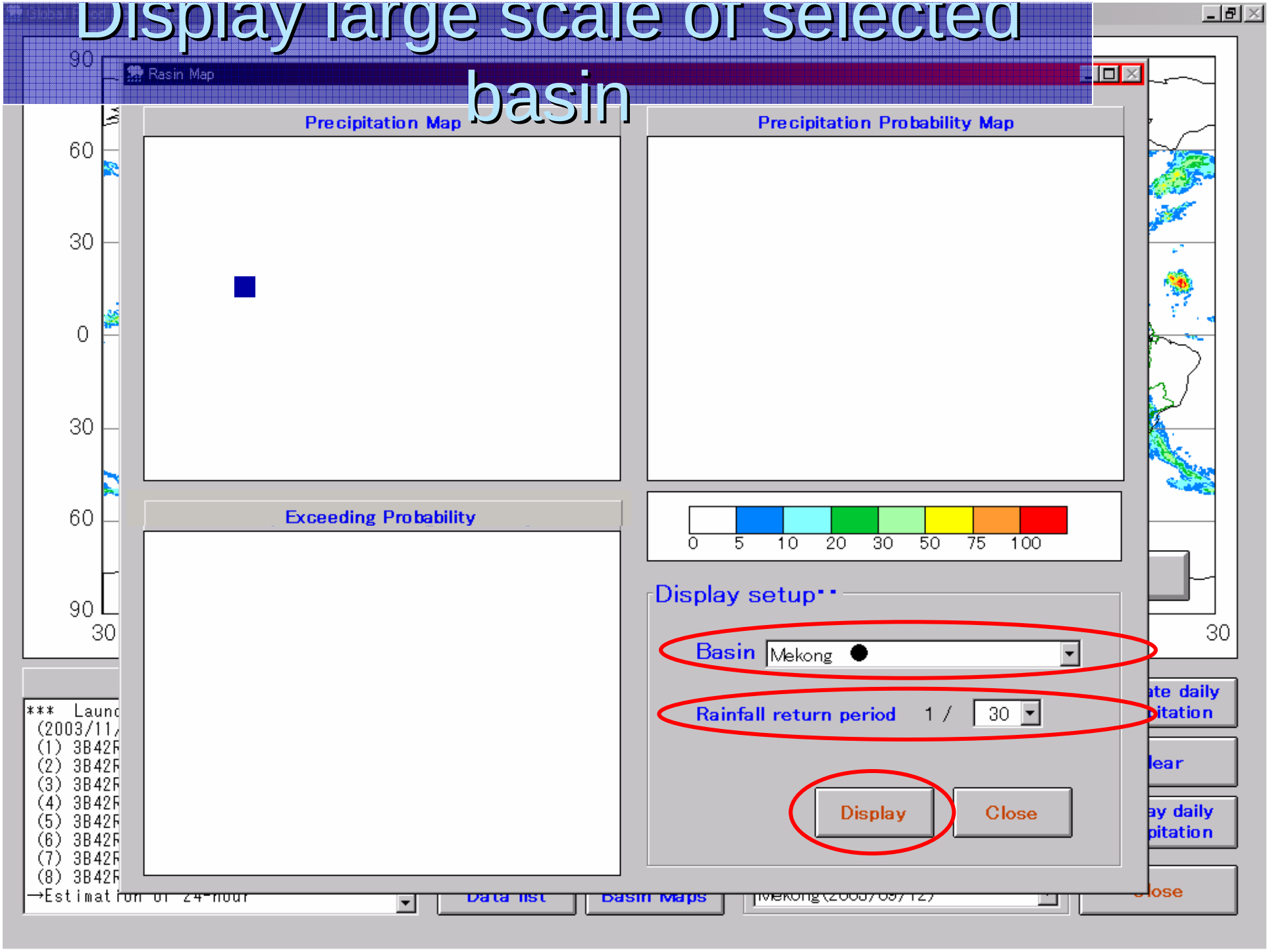


Disseminate Alert through Emails

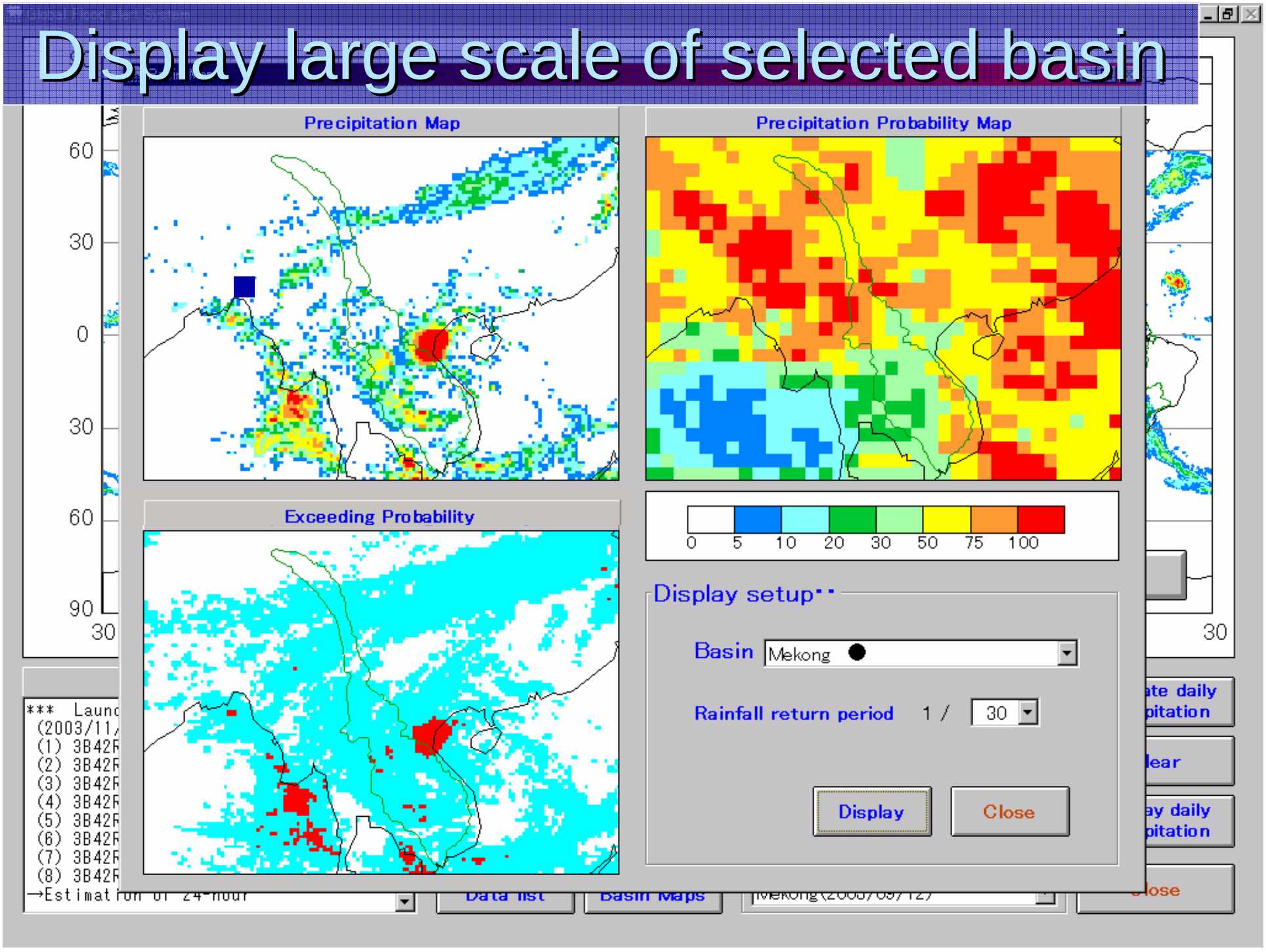



Global Flood alert System
Display large scale of selected basin
60
30
0
30
60
90
30 0 30 60 90 120 150 180 150 120 90 60 30
Date/time of data processed
[2003/09/09 00:00]
0 5 10 20 30 50 75 100
Mail List
Message
*** Launch data processing ***
(2003/11/14 11:06:23)
(1) 3B42RT.2003090803.bin
(2) 3B42RT.2003090806.bin
(3) 3B42RT.2003090809.bin
(4) 3B42RT.2003090812.bin
(5) 3B42RT.2003090815.bin
(6) 3B42RT.2003090818.bin
(7) 3B42RT.2003090821.bin
(8) 3B42RT.2003090900.bin
→Estimation of 24-hour
Configuration
Data search
Latest data
Select time/date
Select floods
Legend setting
Mail setup
Data list
Basin Maps
Rainfall return period
1 / 30 Year
Estimate
Update
Automatic update
Interval 15 minutes
Latest data
Select flood
Mekong(2003/09/12)
Calculate daily precipitation
Clear
Display daily precipitation
Close

Display large scale of selected basin



Display large scale of selected basin



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International Flood Network

Thank you

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