



CAMBODIA

# Asia Flood Network

## A Flood Mitigation and Preparedness Program in Asia

*Tonle Sap*

*Mekong River*

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Office of U.S. Foreign Disaster Assistance



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# US Agency for International Development (USAID)

- support long-term and equitable economic growth implementing:
  - economic growth, agricultural and trade;
  - global health; and,
  - democracy, conflict prevention and humanitarian assistance
- provide assistance in four regions of the world:
  - Sub-Saharan Africa,
  - Asia and the Near East,
  - Latin America and the Caribbean, and
  - Europe and Eurasia



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# Office of U.S. Foreign Disaster Assistance OFDA

## Mandate

Save lives, alleviate human suffering,  
and reduce the economic impact of  
disasters



*Tonle Sap*



*Mekong River*



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# What OFDA does?

- Coordinate and facilitate U.S. Government disaster assistance overseas
- Responds to natural disasters
- Provides assistance when lives threatened by human-caused catastrophes
- Supports mitigation activities to reduce the impact of recurrent natural disasters



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# Disasters

## Hazards, Vulnerability and Impacts

### Hydrometeorological Hazards

Flood  
Drought  
Cyclone/Storm  
Wild Fires  
Extreme temperatures  
Avalanches  
Tsunami

Social  
Vulnerability

Economic  
Vulnerability

### Geological hazards

Earthquake  
Volcano  
Landslides

### Biological Hazards

Epidemics  
Pandemics

Live  
Health  
Livelihood  
Food Security/ Agriculture  
Water/Sanitation  
Infestation  
Habitat  
Environmental degradation

Physical  
Vulnerability

Environmental  
Vulnerability

### Human caused hazards



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A satellite-style map of Cambodia and the surrounding region, showing the Mekong River and its tributaries. The word 'CAMBODIA' is written in yellow across the center of the map. The Mekong River is labeled in yellow on the right side. In the top left corner, there is a small circular logo for the Department of Commerce.

# OFDA Hydrometeorological mitigation activities

- Flood Mitigation
  - Asia Flood Network
  - Greater Horn of Africa Flood Mitigation
  - Flood Early Warning System, Vietnam
  - Coastal Storm Early Warning System, Vietnam
  - Transboundary River Forums in South Asia
  - Mekong River Commission Flood Referencing
- Climate Variability and Drought Mitigation
  - WMO and Drought Monitoring Centers in Nairobi and Harare
  - RANET: Dissemination of climate/weather information to vulnerable people
  - Extreme Climate Events Program (Philippines and Indonesia)
  - Climate Forecasting Application, Bangladesh
- RANET: Dissemination of climate/weather and other related information to people in remote areas



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# End-to-End Flood Mitigation and Preparedness

Lead time

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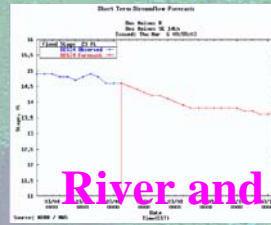
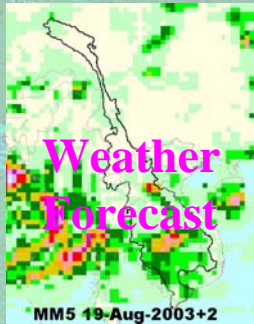


Data

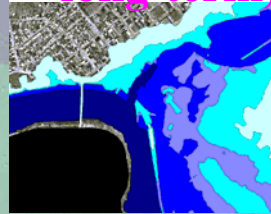
Transmission  
Analysis  
Quality control



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River and  
Flood  
Forecast  
(short- and  
long-term)



Notify



Coordinate  
Local level



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# Asia Flood Network

- Reduce the vulnerability of population to flood hazard in Asia
  - Identify and fill the gaps in flood/river forecasting and early warning
  - Strengthen regional and national institutions hydrometeorological forecasting and early warning
- Jointly implemented by OFDA, NOAA, USGS and others
- Initial activities in the Mekong River Basin
- Potential implementation in Ganges-Brahmaputra-Meghna River Basin and others in the region



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# RANET

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- International cooperation to make
  - climate/weather information accessible to rural population
  - Health, education, agricultural, HIV/AIDs, and other information
- 16 African countries and Asia/Pacific
- Partners World Space Corp. and First Voice International Commercial
- Substantial support on project-by-project basis from European met services, NGOs, and IOs



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# Consultative Meetings (2004)

- Flood Forecasting Technology
  - Evaluation of the accuracy of MRC forecasts
  - Consensus forecast along Mekong
- Training and capacity building
  - Use of satellite precipitation estimation/forecasts in flood/river forecasting
  - Flash flood guidance and warnings
  - Tributary forecast
- Technical assistance
  - Evaluation implementation of US technology in Mekong
  - Framework for modernization of flood forecasting and warning
  - Hydromet data collection, monitoring, analysis and management
- Dissemination of data, information and warnings
  - Disseminate warnings/information to population in remote areas
- Drought monitoring



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# AFN Activities in 2005

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- MRC
  - Satellite Rainfall Estimation (April)
  - Flash-Flood Warnings (May)
  - RANET (May)
- ICIMOD
  - Satellite Precipitation Estimation (July)
  - Flash-Flood Warnings

Mekong River



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