

Flood Management in Japan

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Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Response to Thailand Floods

MLIT is providing full support to Thailand for recovery and rebuilding from the flood damage, drawing on specialized knowledge.

1. Sending of experts

Japanese **experts** with experience responding to large-scale flood damage (**flooding, drainage measures, airports, railways**) were sent to Thailand.

2. Drainage of flood water

- At the request of the Thai government, 10 vehicles **mounted with high-performance** drainage pumps (each with the pumping capacity of 10 fire trucks), belonging to MLIT, were sent overseas for the first time as international disaster relief.
- The project was carried out by **a joint public-private drainage team** consisting of MLIT Regional Development Bureaus, Ministry of Foreign Affairs, JICA, and private companies. **Some 51 persons (a total of 880 man-days)** were engaged in the drainage work.
- The drainage work was initiated on Nov. 19 and completed in Thailand on Dec. 20 (**total of 32 days**).
- They succeeded in draining an area of **8.1 million m³ (enough water to fill 23,000 25m swimming pools or Tokyo Dome 7 times)** in the Rojana Industrial Park, Asian Institute of Technology, Plaibang residential area and other locations.

3. Sending of flood damage survey team

- Following on the success of water drainage work in Thailand, **a joint team of MLIT and the Japan Society of Civil Engineers** was sent to provide further aid in recovery and rebuilding from the disaster (7 days from Dec. 22 to 28).

4. Sharing Japan's experience

- **MLIT, the Meteorological Agency, Japan Water Agency, and the University of Tokyo** took part in the first Integrated Water Resources Management for Chao Phraya River Basin Seminar organized by JICA (Jan. 14, Bangkok).

5. Worldwide provision of disaster readiness packages

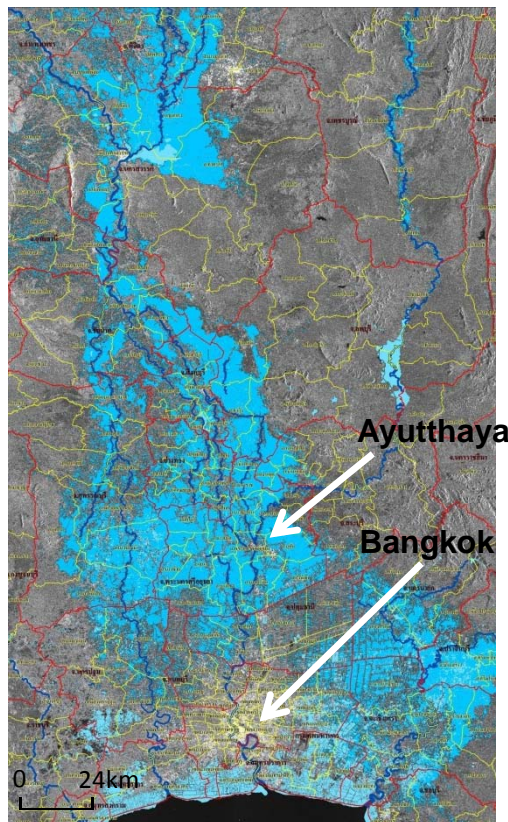
- In addition to the response to the flood damage in Thailand, provision of **a comprehensive disaster prevention system** including disaster prevention information, warning and evacuation systems, infrastructure, land use restrictions, and institutions and organizational structures, along with a **"disaster management package" involving collaboration among the related agencies, organizations, industry, and academia** toward proper administration of the system, is under study.

Drainage Pump Vehicle Arrival Ceremony in Thailand (Nov. 18)

- As part of its drainage assistance to the flood-affected Thailand, MLIT sent its 10 high-capacity, high-mobility drainage pump vehicles to Thailand (first overseas dispatch).
- Each of the drainage pump vehicles has a drainage capacity of 30 m³/min and is capable of draining a 25-meter swimming pool in about 10 minutes. These pump vehicles were also used for drainage in the tsunami-affected areas following the Higashi Nihon Earthquake.
- The pump vehicles left Yokohama Port on November 5 and arrived at Thailand on November 18. At the heart of Bangkok, a drainage pump vehicle arrival ceremony was held in the presence of Deputy Prime Minister Yongyuth Wichaidit and other officials.

【 Satellite image of Thailand (Oct. 17) 】

(* Flooded areas shown in blue)



Source: GISTDA satellite image, <http://www.gistda.or.th>

【Arrival ceremony 】



Speech of Deputy Prime Minister Yongyuth Wichaidit



International emergency aid team expressing its determination

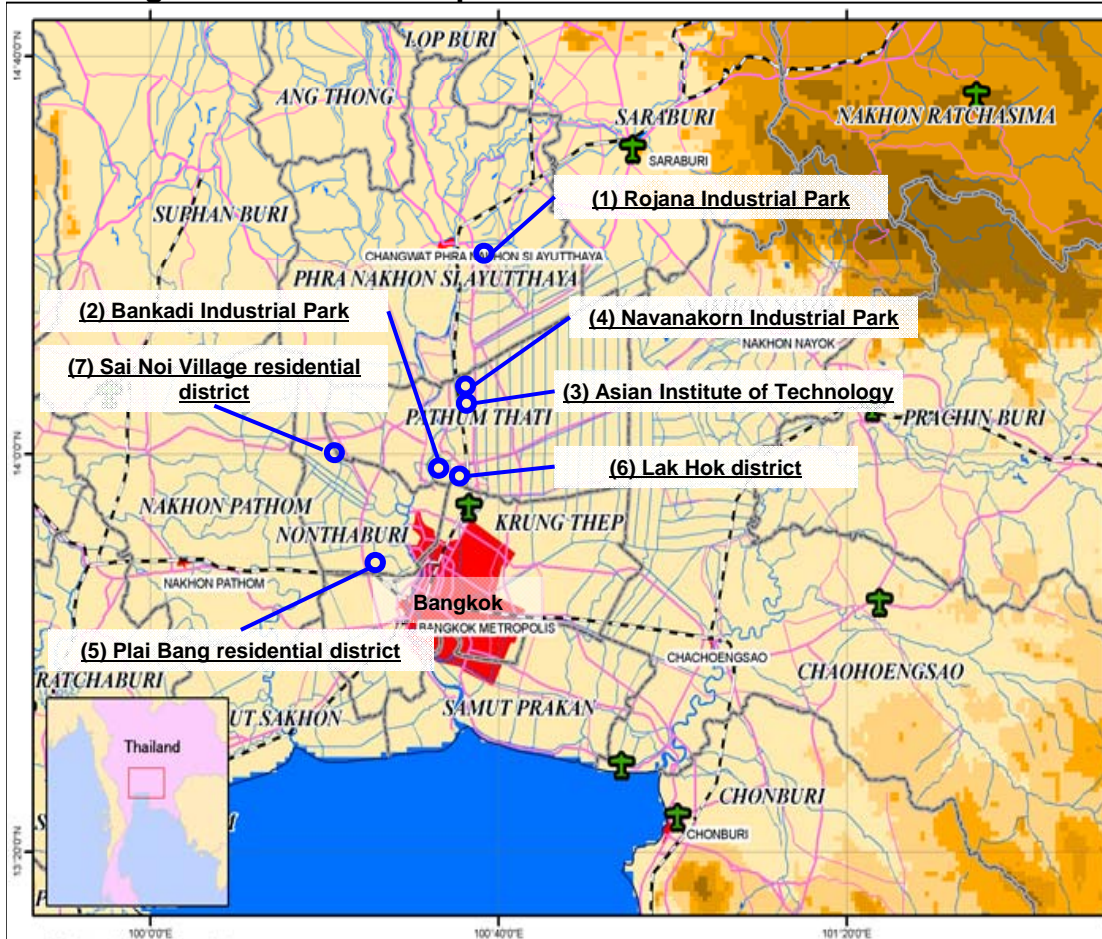
【Drainage pump vehicle 】



Activities of Drainage Pump Vehicle Team

- An international emergency aid team of experts (drainage pump vehicle team) consisting of 51 members of MLIT regional development bureaus, Ministry of Foreign Affairs, JICA and private-sector companies carried out drainage operation (880 person-days).
- Starting with the drainage operation at Rojana Industrial Park, the team drained a total of about 8.1 million cubic meters of water (approximately 7 times the volume of Tokyo Dome or 23,000 times the volume of a 25 m swimming pool).

【Drainage Area Location Map】



【Drainage Activities】

- (1) Rojana Industrial Park: Nov. 19 to Nov. 27 (9 days)
Estimated drainage volume: about 2,300,000 m³ (about 6,400 times the volume of a 25 m swimming pool)
- (2) Bankadi Industrial Park and surrounding residential district: Nov. 26 to Dec. 8 (13 days)
Estimated drainage volume: about 2,500,000 m³ (about 6,900 times the volume of a 25 m swimming pool)
- (3) Asian Institute of Technology: Nov. 29 to Dec. 8 (10 days)
Estimated drainage volume: about 400,000 m³ (about 1,100 times the volume of a 25 m swimming pool)
- (4) Navanakorn Industrial Park: Nov. 30 to Dec. 8 (9 days)
Estimated drainage volume: about 500,000 m³ (about 1,400 times the volume of a 25 m swimming pool)
- (5) Plai Bang residential district: Dec. 8 to Dec. 14 (7 days)
Estimated drainage volume: about 400,000 m³ (about 1,100 times the volume of a 25 m swimming pool)
- (6) Lak Hok district (Rangsit University and surrounding residential district): Dec. 9 to Dec. 17 (9 days)
Estimated drainage volume: about 300,000 m³ (about 800 times the volume of a 25 m swimming pool)
- (7) Sai Noi Village residential district: Dec. 14 to Dec. 20 (7 days)
Estimated drainage volume: about 1,700,000 m³ (about 4,700 times the volume of a 25 m swimming pool)

Activities of Drainage Pump Vehicle Team

- Prior to pumping operation, the drainage pump vehicle team held meetings with the Thai government and the local people concerned and conducted site investigations.
- The team provided technical guidance to Thai workers concerning the movement, setup and management of the drainage pump vehicles.

Meeting with Thai government and people concerned

【Japan–Thailand conference (at Ministry of Industry)】



【Meeting with local businesses】



Site investigation



Providing technical guidance to Thai workers



Activities of Drainage Pump Vehicle Team

- Drainage was difficult mainly because of debris, oil and other foreign matter contained in the flood water, but appropriate response actions and around-the-clock drainage activities **made it possible to complete drainage faster than expected by the local authorities.**

Drainage Operation

【Pumping】



【Night patrol】



Effect of Drainage

【Before (Nov. 23)】



【After (Nov. 26)】



【Before (Nov. 19)】



【After (Nov. 26)】



Completion Ceremony at Thailand's Ministry of Industry (Dec. 23)

- On December 23 (Fri), the drainage activity completion ceremony was held at the Ministry of Industry of Thailand.
- Industry Minister Wannarat Charnnukul expressed appreciation for the activities of the drainage pump vehicle team.

【Completion Ceremony】



From left to right: Mr. Yoneda, Chief Representative of JICA Thailand Office, Ambassador Kojima, Industry Minister and Mr. Pasu, Director General of the Department of Industrial Promotion



Speech by Yanagisawa head

