

DISASTER  
RELIEF

CASE REPORT  
Laos—Floods  
August 17—September 10, 1972

*Refer in addition of USVOLAG  
figure*

Agency for International Development  
Washington, D.C. 20523

USC - 327300  
USVOLAG - 5935  
Worldwide

Foreign Disaster Case Reports are publications of the Office of the Foreign Disaster Relief Coordinator, Agency for International Development. This office has responsibility for coordinating U.S. Government foreign disaster relief responses and for the further coordination of such activities with those of the U.S. private and international disaster relief communities.

#### ACKNOWLEDGEMENT

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## LAOS

### Floods

**14 people died, 15,000 were left temporarily homeless, and an estimated 100,000 were affected in Vientiane and neighboring provinces by the flooding of Mekong River.**

**Value of U.S. Assistance . . . . . \$327,300**

From August 17 to September 10, 1971, the Mekong, a "high rise" river, overflowed its banks flooding the area known as the Vientiane Plains in southern Laos. The river crested at 41 feet — just 7 inches lower than the severe flood of 1966.

By the end of the first week of August, rapidly rising waters in the upper Mekong at Ban Houei Sai and Luang Prabang, (225 and 160 miles, respectively, northeast of Vientiane), and unfavorable weather forecasts indicated the possibility of a flood.

Water level readings were taken three times daily. A radical rise in the river at Luang Prabang was observed on August 8. It was found that for every 6 centimeter rise here,

there was a one centimeter rise at Vientiane. A flood level at Luang Prabang of 59 feet was reached on August 15; a few days later it crested at 66.5 feet.

Since a sudden rise in the Mekong at Ban Houei Sai located about 120 miles northeast of Luang Prabang is reflected 76 hours later at Vientiane, 3 days lead time was available to prepare for possibly dangerous flooding in Vientiane and the surrounding area. The Royal Lao Government (RLG) and the United States Mission commenced flood preparations — exchanging weather and gauge readings with all river stations; stockpiling sand and filling bags; checking immunization supplies; surveying living quarters and improving dikes. The U.S. Mission Disaster Relief Staff was activated on a full flood alert and a 24-hour watch was established.

As the waters rose at Vientiane, efforts were made to reinforce and repair a previously damaged dike by adding dirt and sandbags. There was doubt, however, that the dike would hold. The tropical downpour on the night of August 19 turned it into a soft mass



*An aerial view of the flooding west of Vientiane.*



*Aircraft grounded because of flooded taxiway at Vientiane Airport.*

and on August 20 two breaks near the airfield were reported. Only 3 to 6 feet wide at first, overnight they expanded to 495 foot gaps. The river poured through the widening breaches.

Though low-lying areas rapidly filled, and the Vientiane airport was officially closed to international air traffic on August 20, attempts were made to keep a STOL strip operating near Air America's hangars. Rising waters frustrated these efforts, and all traffic control operations were moved to That Luang on the northeast side of the city where a makeshift air support center had been established. Later when it was discovered that 1600 feet of the Wattay airstrip at the Vientiane airport remained dry, it was employed as a STOL strip by aircraft up to the size of a Caribou for transporting relief supplies.

As roads flooded, their shoulders were marked by stakes to guide traffic. Utilization

of the roads under such conditions brought quick deterioration. Although water completely covered extensive stretches of road, it was never deep enough for practical boat operations.

Waters began to recede on August 24, dropping to 40 feet, but with continued heavy up-country rains, the river rose again reaching a level of 40.5 feet on September 2. This new surge of water following the previous overflow broadened the inundated area.

The total number of casualties was 14 dead. No injuries attributed directly to the flood were reported, although a woman and a child had to have amputations due to gangrene caused by snake bites received while fishing in flood waters. In general the people remained calm because there was little housing damage — only 6 homes were destroyed. Most homes withstood the flood because of the Laotian custom of building their homes on stilts.

Over 71,000 people in six districts of Vientiane Province and 30,000 in other areas along the Mekong lost rice and other crops. Approximately 16,000 hectares (40,000 acres) of rice paddies were inundated. The largest vegetable growing area in the Vientiane Plains, southeast of the city, was almost totally wiped out. On September 9, the flood emergency was declared over.

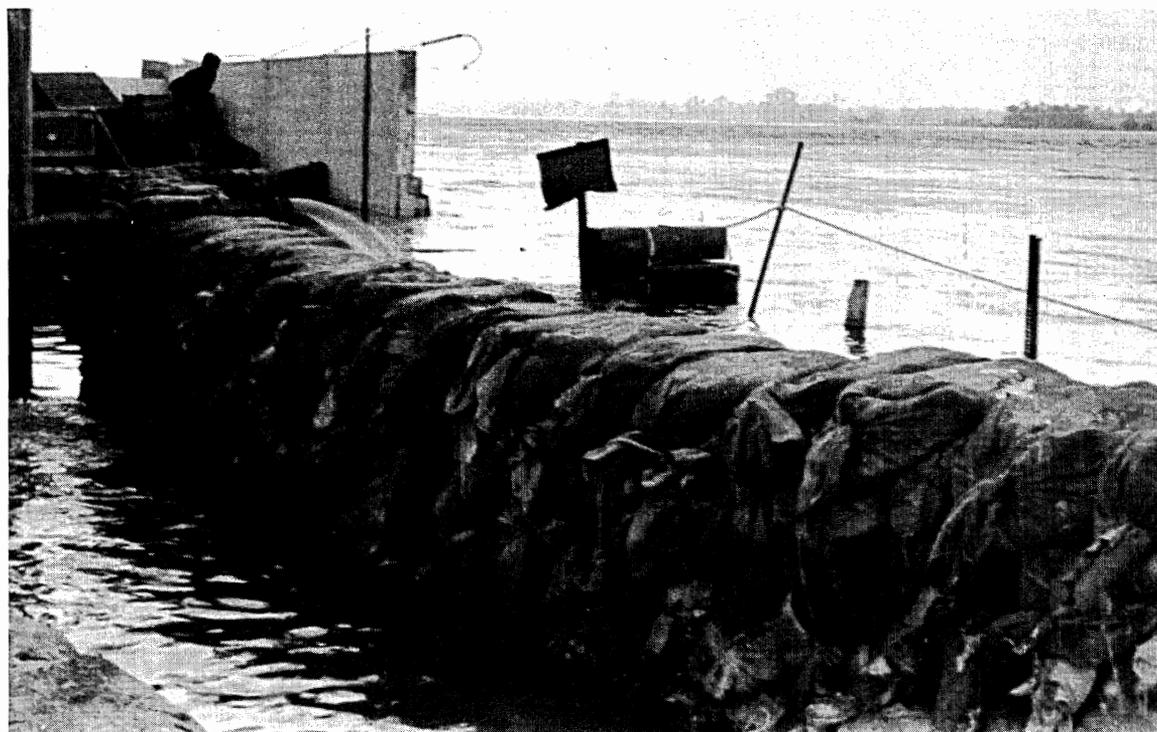
**ACTION TAKEN BY THE ROYAL LAO GOVERNMENT (RLG) AND LOCAL ORGANIZATIONS:**

Residents in heavily flooded areas were moved into schools and "jerry built" shelters south of the city. Rice was provided by the provincial governments to tide the flood victims over until more assistance could arrive from Bangkok. Food distribution was accomplished by boats and helicopters. The Laotian Second Army and the Royal Thai Air Force provided four Huey 34's, and the border

patrol police two Bell helicopters. The RLG Agriculture Service made plans and preparations to distribute vegetable seeds—corn, sorghum, peanuts, and soy beans—to farmers for planting paddy fields when the water subsided. Information on seed availability and distribution plans was broadcast over Lao National Radio.

Price stability was maintained in the markets because the RLG established price ceilings on basic foods such as rice and had the police monitor daily market operations. Since the markets themselves were not flooded, food and other supplies could be made available.

When senior Lao officials returned from Luang Prabang where they were attending the royal boat races on August 20, a Lao national holiday, a Flood Committee was organized, chaired by the Minister of the Interior. It provided senior direction and coordination of military and civilian resources.



*Sandbag walls built to hold back the rising Mekong River.*

The Ministry of Social Welfare provided 112,860 pounds of rice and 1,496 pounds of salt, valued at \$3,539, and the Laotian Red Cross donated 20 metric tons of rice valued at \$1,500.

**ASSISTANCE PROVIDED BY THE U.S. GOVERNMENT:**

Although the American Ambassador did not exercise his disaster relief authority to make use of the Contingency Fund for this emergency, the A.I.D. Mission in cooperation with the U.S. Military assisted as follows:

1. Provided necessary construction materials and helped in the attempt to repair and improve the dike hastily built to protect Vientiane during the flood threat of 1970.
2. Worked closely with the Lao Social Welfare Ministry and provided communication equipment and transport to assist in evacuation of local citizenry living in low areas. Mobilized motor boats for rescue work.
3. The Mission's Public Health Division worked with the Lao Ministry of Public Health in setting up ten strategically located immunization stations for the prevention of cholera, smallpox, and typhoid and made medical supplies available.
4. The Mission's Office of Refugee Affairs worked with the RLG Ministry of Social Welfare to extend normal refugee assistance to flood victims in Vientiane and the entire province. Several reception centers were established at elevated areas where water, fuel, food and other relief commodities were provided.
5. Set up 6 water filtration plants at strategic locations in cooperation with the RLG.
6. Provided culverts and actively participated in the repair and reconstruction of damaged roads. Assistance was also provided in

repairing and refurbishing damaged buildings and facilities.

Together with the RLG, expended 34,500 man-hours of work; used 34,000 sand bags; furnished \$5,600 in medicines and 33 pieces of heavy engineering equipment; and supported the Ministry of Social Welfare in caring for 10,051 flood victims, which included the inoculation of 22,564 persons for cholera and typhoid. In addition, U.S. Food for Peace flour was used by Catholic Relief Services to bake 14,468 loaves of bread.

Total Value of USG Assistance . . . \$327,300

**ASSISTANCE PROVIDED BY U.S. VOLUNTARY AGENCIES:**

**Catholic Relief Services**

CRS baked 14,468 loaves of bread from USG donated P.L. 480 flour.

**World Vision**

World Vision provided commodity support to the following organizations:

- Operation Brotherhood Hospital—750 cases of breakfast food valued at \$3,375; Dooley Foundation—medicines valued at \$1,500; Ministry of Social Welfare—5,301 jars of baby food, valued at \$1,060.
- Total value . . . . . ~~\$7,820~~ 5935

**ASSISTANCE PROVIDED BY OTHER NATIONS AND INTERNATIONAL ORGANIZATIONS:**

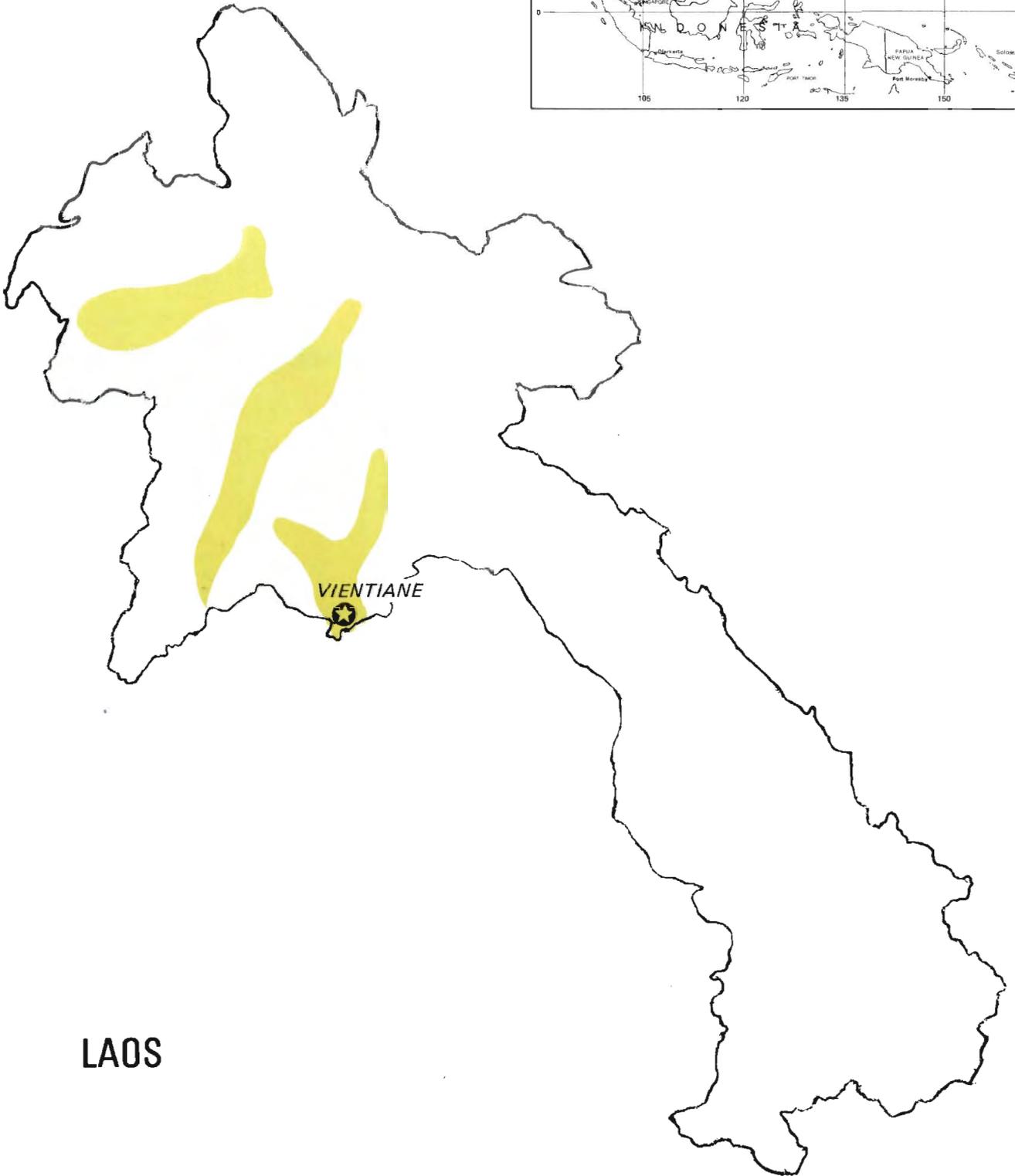
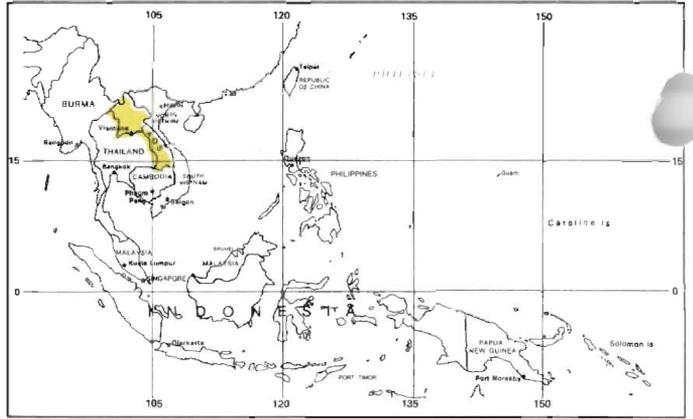
- Chinese Embassy (People's Republic). 1,000
- Chinese Embassy (Taiwan) . . . . . 5,000
- International Red Cross—180 bags rice (10 kilos each); 180 bags salt; 180 bags Podek (pickled fish); 180 bags chili peppers . . . . . \*
- \$6,000

\* Value not reported.

NOTE

$$\begin{array}{r} 3375 \\ 1500 \\ \hline 1060 \\ \hline 5935 \end{array}$$
$$\begin{array}{r} 7820 \\ 5935 \\ \hline 1885 \end{array}$$

reported figures for US malag  
do not add up. 4/29/72 A



LAOS