

Typhoon Kong-Rey Disaster Response Report – 4th Report

Central Emergency Operation Center
Data as of 29.08.2013 21:00

I. Typhoon Summary (Source: Central Weather Bureau)

The Central Weather Bureau issued the sea warning for mild Typhoon Kong-Rey at 11:30 on August 27, 2013, followed by the sea and land warning at 11:30 on August 28. The typhoon warning was lifted at 20:30 on August 29. At 20:00 on August 29 the typhoon center was located 27.0 degrees north latitude and 122.5 degrees east longitude, placing it out at sea 240 km north-northeast of Taipei. The Force 7 storm radius is 100 km and the typhoon is moving in the north-northeast then northeast direction at 28 km/h with 22 rotations per hour. The latest weather data showed that Typhoon Kong-Rey's storm circle has shrunk slightly over the past three hours. The center is currently out at sea north-northeast of Taipei and continuing to move in the north-northeast then northeast direction. The coastal waters of northern Taipei are now clear of its storm circle, though there is significant rainfall in western Taiwan and heavy rainfall is continuing. The center of the typhoon is expected to continue declining in strength and the storm circle is showing signs of shrinking even further. Due to the effects of the typhoon and its outer circulation, southern and central Taiwan experienced torrential rain and extremely torrential rain today (8/29). Northern Taiwan experienced extremely heavy rain or torrential rain; Yilan, Taitung and the mountains of Hualien experienced heavy rain or extremely heavy rain, while Penghu and Hualien have a chance of experiencing heavy rain. Please watch out for landslides, falling rocks, debris flows and flash foods. Low-lying areas should take precautions against flooding. Strong wind and high waves remain in the waters around Taiwan so caution is advised.

II. Disaster Profile

Rainfall (Source: Central Weather Bureau)

(Data from 8/29 0:00 to 8/21 21:00)

Area	Rainfall (mm)
Dahanshan, Chunri Township, Pingtung County	711.0
Shanshang, Shanshang District, Tainan City	647.5
Hutoupi, Xinhua District, Tainan City	639.5
Zuozhen, Zuozhen District, Tainan City	629.5
Huwei, Huwei Township, Yunlin County	614.5

III. Typhoon Response

A. City-county emergency operation centers established (Source: National Fire Agency, Ministry of the Interior)

Type	Number of EOCs established	Location
County/City	10	Level 1: Tainan City, Kaohsiung City, Yunlin County, Chiayi County Level 2: New Taipei City, Miaoli County, Changhua County, Nantou County, Chiayi City, Pingtung County

B. Danger areas declared (Source: National Fire Agency, Ministry of the Interior)

County/City	Number of danger areas	Enforcement
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	Low-lying area	Mountain	Coast	River	Other	Warnings issued	Penalty notices issued
New Taipei City	0	1	14	11	11	1	0
Taichung City	0	5	6	17	0	0	0
Taoyuan County	0	1	4	0	0	0	0
Hsinchu County	0	2	2	3	0	0	0
Miaoli County	0	4	4	3	39	0	0
Nantou County	0	289	0	73	234	0	0
Yunlin County	0	13	13	0	0	0	0
Chiayi County	0	6	0	27	0	0	0
Pingtung County	0	8	1	15	0	0	0
Yilan County	0	143	5	35	13	0	0
Hualien County	0	25	18	69	166	0	0
Taitung County	16	16	78	165	0	0	0
Chiayi City	0	0	0	2	1	0	0
Total	16	513	145	420	464	1	0

C. Distribution of debris flow danger areas (Source: Soil and Water Conservation Bureau, Council of Agriculture)

County/City	Debris Flow Danger Areas							
	Yellow Alert			Red Alert			Total	
	Potential debris flow rivers	Township	Village	Potential debris flow rivers	Township	Village	Potential debris flow rivers	Remarks
Taichung City	82	3	20	0	0	0	82	
Tainan City	12	2	5	35	5	11	47	
Kaohsiung City	29	4	11	74	8	29	103	
Nantou County	150	6	49	0	0	0	150	
Yunlin County	0	0	0	12	1	4	12	
Chiayi County	80	6	35	0	0	0	80	
Pingtung County	3	2	3	28	4	15	31	
Total	356	23	123	149	18	59	505	

Note: Response to alert:

1. Yellow Alert (predicted rainfall higher than debris flow warning threshold): Local governments should advise residents to evacuate.
2. Red Alert (actual rainfall has reached debris flow warning threshold): Local government may issue mandatory evacuation orders based on local rainfall and actual conditions.

D. Mountain climber contact (Source: National Police Agency, Ministry of the Interior)

Table created: 20:00, 29/08/2013

Mountain Climbing Applications		Persuaded to not enter mountain areas		Climbers contacted								Climbers out of contact	
				Already left the mountains		Safe accommodation in the mountains		Shelter in place		Leaving the mountains			
Case	Persons	Case	Persons	Case	Persons	Case	Persons	Case	Persons	Case	Persons	Case	Persons
946	5003	605	3105	351	1914	3	66	0	0	0	0	0	0

(Note: Climbers out of contact refers to climbers that have not contacted rangers, family members or the police for more than 48 hours after entering the mountain areas. This table was compiled by the MOI National Police Agency and the MOI Construction and Planning Agency)

E. Accommodation of fishermen from Mainland China (Source: Council of Agriculture, Executive Yuan)

Time	Accommodated on boats	Accommodated on shore	Total
2013/08/29 20:27	1116	532	1648

F. Suspension of school of and work (Source: Directorate-General of Personnel Administration, Executive Yuan)

On August 29, Tainan City, Kaohsiung City and Pingtung County suspended school in the afternoon; Chunri Township, Shizi Township and Mudan Township suspended work and school in the afternoon; Chiayi County, Chiayi City, Yunlin County, Yilan County, Hualien County and Taitung County's Lanyu Township suspended all work and school; Lyudao Township suspended work and school in the afternoon. All work and school continued as normal in other counties and cities.

IV. Evacuation and Emergency Shelters

A. Number of people evacuated (Source: Department of Civil Affairs, Ministry of the Interior)

Municipalities	Estimated number of evacuees	Actual number of additional evacuees	Cumulative number of evacuees
Yilan County	84	84	84
Yunlin County	441	441	441
Chiayi County	436	436	436
Hualien County	25	25	25
Chiayi City	6	6	6
Tainan City	215	215	215
Kaohsiung City	1420	1420	1420
Total	2627	2627	2627

B. Shelters

Emergency shelters (Source: Ministry of Health and Welfare)

Up to 51 shelters were opened, housing a cumulative total of 772 people. There are currently 51 shelters in operation holding 546 people.

County/City	Township/City	Emergency Shelter		Setup	Closed	Current number of evacuees			Cumulative total of evacuees			Remaining food supplies		Hot food provided on a continuous basis via open contract or non-government organization	Remarks
		Subtotal	Name			Total	Male	Female	Total	Male	Female	Persons	Days		
Tainan City	Nanhua District	3	Nanhua District office	2013/08/29 08:03		1	1	0	1	1	0	0	0	No	
	Guiren District		Wuja Education and	2013/08/29 05:49		29	9	20	29	9	20	0	0		0

			Nursing Institute (old site)													
	Guanmiao District		Guanmiao District Office	2013/08/29 08:04		6	2	4	6	2	4	0	0	No	0	
Kaohsiung City	Daliao District	4	Dafa Public Market 3F	2013/08/29 11:20		5	2	3	5	2	3	0	0	No		
	Yanchao District		Gangshan Veterans' Home	2013/08/28 21:32		26	10	16	26	10	16	0	0	0	No	0
	Tianliao District		Xide Village and Sanhe Village Activity Centers	2013/08/28 22:52		50	20	30	50	20	30	0	0	0	No	0
	Taoyuan District		Qinhe Village Emergency Shelter	2013/08/29 10:05		108	50	58	108	50	58	0	0	0	No	0
Yunlin County	Douliu City	5	Hall of Reverent Cultivation	2013/08/29 09:24		2	1	1	2	1	1	0	0	0	No	
	Dounan Township		Lunzi Activity Center	2013/08/29 06:15		7	4	3	7	4	3	0	0	0	No	0
	Dounan Township		Quanyou Nursing Home	2013/08/29 11:02		42	18	24	42	18	24	0	0	0	No	0
	Huwei Township		Zhongshan Hall	2013/08/29 09:46		3	2	1	3	2	1	0	0	0	0	0
	Dapi Township		Sanshan Guowang Temple	2013/08/29 09:23		2	1	1	2	1	1	0	0	0	0	0
Chiayi County	Minxiong Township	3	Donghu Activity Center	2013/08/29 11:50		50	21	29	50	21	29	0	0	0	0	
	Shuishang Township		Zhonghe Village Office	2013/08/29 09:56		1	1	0	1	1	0	0	0	0	0	
	Zhongpu Township		Yunshui Elementary School	2013/08/29 11:52		4	2	2	4	2	2	0	0	0	0	
Yilan County	Nan'ao Township	2	Ao'hua Elementary School	2013/08/28 22:15	2013/08/29 10:00	0	0	0	7	7	0	0	0	No		
	Nan'ao Township		Nan'ao Town Office 2F	2013/08/28 22:15	2013/08/29 10:00	0	0	0	26	12	14	0	0	0	No	0
Hualien County	Zhuoxi Township	1	Zhuole Activity Center	2013/08/28 22:14		1	0	1	1	0	1	0	0	No		
Chiayi City	East District	3	East District Office	2013/08/29 09:54		3	1	2	3	1	2	0	0	0	0	
	East District		Laoteng Activity Center	2013/08/29 09:13		3	1	2	3	1	2	0	0	0	0	
	West District		West District Office	2013/08/29 08:10		0	0	0	0	0	0	0	0	0	No	0

V. Disaster statistics

A. Deaths and injuries (Source: National Fire Agency, Ministry of the Interior)

No injuries or deaths have been reported so far.

Notes:

- (1) The fishing rat "Xing Yu No.2" out of Su'ao accidentally capsized at 20:00 on August 27 2 miles outside the Lanyang River mouth. Two crew members fell overboard and one (Jiang O-xiang) remains missing. Yilan County EOC stated

that the waters where the fishing raft capsized was not in the typhoon warning area so **was not listed under typhoon casualties by Yilan County.**

- (2) At 10:00 on August 29, a motorcyclist (identity still to be determined) fell into a large open sewer (approx. 1.5 m deep, 2.5 m wide) after a traffic accident near the Xingao Substation in Yanpu Township, Pingtung County. The motorcyclist was washed away and a search operation has been launched. This has not yet been listed under typhoon casualties by Pingtung County.
- (3) On August 29 in Huwei Township, Yunlin County, a man (approx. 70 years-old, identity still to be determined) was found lying in Lenei park on the agricultural road to Juetou Village. At 10:30 the Huwei Branch took the man to St. Joseph's Hospital for treatment. Yunlin County EOC stated that the man's cause of injury is not yet know so it has not been listed under typhoon casualties as yet.
- (4) At 06:29 on August 29, a motorcyclist (Shi O-jin) was injured after a crash at No. 146-48 Jianmin Village, Houpi District, and taken to the Chimei Hospital at Liuying for treatment. After further review, the Tainan City Government concluded that the case was a normal traffic accident and will not be listed by Tainan City Government under its typhoon casualties.
- (5) The media reported that a member of the general public in was killed by electrocution in Yulin County. The Yunlin County Fire Department stated that a woman (Yan O-jiao, 50) was injured after falling at a private residence on Zhongzheng Rd. in Dapi Township at 17:03, 8/29. Electrical wiring was found at the site. The woman was taken to the National Taiwan University Hospital's Yunlin branch for treatment but failed to recover. This was not listed under typhoon casualties by Yunlin County as it was determined to have not been caused by the typhoon.

B. Lifeline damage (Source: Ministry of Economic Affairs, National Communications Commission)

Unit	Item	Scale of impact	Emergency repairs completed (Households, Sites)	Awaiting repairs (Households, Sites)	Remarks
Ministry of Economic Affairs	Water supply	0	0	0	
	Electricity	53885	52845	1040	Areas affected by power outage: Yunlin Township (Huwei' Township), Chiayi County (Minxiong Township) and Tainan City (Xinhua District, Jiangjun District, Guanmiao District).
	Gas	0	0	0	
National Communications Commission	Telecommunications (Fixed line)	2956	410	2546	Telephone service outage in Taichung City (772 households), Tainan City (348 households), Nantou County (337 households), Changhua County (242 households), Yunlin County (306 households) and Chiayi County (541 households)
	Telecommunications (Cell station)	52	23	29	Taichung (2 sites), Tainan (1 site), Kaohsiung (4 sites), Changhua (1 site), Yunlin (5 sites), Chiayi (10 sites), Pingtung (5 sites), Taitung (1 site)

C. Transportation

- (1) Transportation damage and repairs (Source: Ministry of Transportation and Communications)

Item	Disaster affected	Repaired (sites)	Not repaired	Remarks
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	sites (sites)		(sites)	
Provincial Highway	9	0	9	<ol style="list-style-type: none"> 1. Provincial Highway 1 (253K+000~262K+000): Road flooded, traffic controls in effect. 2. Provincial Highway 3 (124K+500): Water build-up on road. 3. Provincial Highway 3 (264K+500~264K+500): Traffic cut by debris flow. 4. Provincial Highway 3 (312K+800~312K+896): Approximately 40m of the roadside slope has collapsed, blocking the road. Now closed to all pedestrian and vehicle traffic. 5. Provincial Highway 18 (007K+000): Road rendered impassable by flooding. 6. Provincial Highway 19A (033K+000~035K+000): Road flooded, traffic cones placed to warn road users. 7. Provincial Highway 20 Bridge (023K+527 ~ 023K+700): Water build-up after water level rose above the bridge surface. Closed to all pedestrian and vehicle traffic. 8. Provincial Highway 28 (015K+267~015K+567): Road flooded, traffic controls in effect and closed to all pedestrian and vehicle traffic. 9. Provincial Highway 82 (025K+900~032K+500): Road flooded, traffic controls in effect to divert traffic.
(Self) Adopted County Roads	11	0	11	<ol style="list-style-type: none"> 1. County Road 159A (033K+150~033K+150): Roadside slope has collapsed, road closed. 2. County Road 159A (041K+500): Roadside slope has collapsed leaving approximately 100 m³ of debris. Road blocked. 3. County Road 162A (016K+950): Roadside slope collapsed leaving approximately 150 m³ of debris. 4. County Road 162A (028K+500~028K+500): Roadside slope collapsed leaving approximately 100 m³ of debris. Traffic blocked in both directions. 5. County Road 169 (002K+400): Roadside slope collapsed leaving 200 m³ of debris. Traffic blocked in both directions. 6. County Road 169 (027K+800): Roadside slope collapsed. Road currently closed to traffic in both directions. 7. County Road 169 (031K+000): Roadside slope collapsed. Road currently closed to traffic in both directions. 8. County Road 169 (043K+400): Roadside slope collapsed leaving approximately 500 m³ of debris. 9. County Road 172 (041K+000~042K+000): Roadside slope collapsed. Road currently closed to traffic in both directions. 10. County Road 174 (048K+300~048K+350): Road cut by debris flow. Road closed to all pedestrian and vehicle traffic. 11. County Road 178 (022K+100~022K+300): Road rendered impassable by flooding. Traffic cones placed

				at either end of the flooded section to warn road users. Traffic control personnel also stationed at scene.
Township Road	1	0	1	1. Township Road Yilan 51 in Datong Township (12K+000 ~ 16K+500): Preventive closure at 8AM, 8/28.
Total	21	0	21	

(2) Suspension of railway services (Source: Ministry of Transportation and Communications)

No.	Date and Time	Line	Service	Reason	Remarks	Reported Time
1	08/29 11:30	Branch Line (Jiji Line)	All services suspended	Track cut		08/29 12:11
2	08/29 11:30	Zhunan-Changhua (Coast Line)	Express trains rerouted through Mountain Line	Track cut	Services resumed at 14:10.	08/29 14:20
3	08/29 09:00	Western Line	Express trains between Changhua-Kaohsiung	Obstruction in both directions between Linnei-Linfengying	Western Line services to Chiayi Station resumed as of 16:53. The Wencuoopuo Bridge along the Xinying-Linfengying section is not yet passable as the water level is at the danger threshold. Services have been progressively restored on all other sections.	08/29 17:50
4	08/29 06:00	Alishan Forest Railway	All services suspended	Alishan Forest Recreation Area closed due to typhoon		08/29 10:21

(3) Flight cancellations (Source: Ministry of Transportation and Communications)

A total 94 flights were cancelled or delayed due to Typhoon Kong-Rey. (See attachment 1 for details)

(4) Regional flooding (Source: Ministry of Economic Affairs) (See attachment 2 for details)

D. Water resource facility damage and emergency repairs (Source: Ministry of Economic Affairs)

Facility type	Damaged	Emergency repairs completed	Emergency repairs underway	Remarks
River Levee	1	0	1	8/29 17:52: Lucao Township, Chiayi County - Mr. Shi (052304403), Fifth River Management Office - River Levee: Bazhang River Zhongliao Levee's (0+700) cross-levee road and levee body interface Water penetrated Bazhang River Zhongliao Levee's (0+700) cross-levee road and levee body interface, causing soil to be washed away from the levee body. The contractor responsible for the levee opening has been asked to fill the gap to prevent levee erosion. Emergency repairs now underway.
Other	7	0	7	8/29 17:49 - Dapi Township, Yunlin County - Mr. Shih (052304403), Fifth River Management Office: Drain overflow at Xing'an Drain. Overflow of Xing'an Drain: Continuing to monitor the situation 8/29 17:54: Douliu City, Yunlin County - Mr. Shi (052304403), Fifth River Management Office: Overflow of river embankment upstream of Pitou Bridge on Shiliuban River. The embankment upstream of Pitou Bridge on Shiliuban River has overflowed, leading to flooding of the Ercheng Community. Continuing

				<p>to monitor the situation.</p> <p>8/29 17:56 - Taibao City, Chiayi County - Mr. Shih (052304403), Fifth River Management Office: Drain overflow at Pimajiao Drain. The Pimajiao Drain overflowed in the morning but shows signs of receding. Continuing to monitor the situation.</p> <p>8/29 17:58 - Dalin Township, Chiayi County - Mr. Shih (052304403), Fifth River Management Office: River levee overflow on Shigui River. River waters have risen above Shanzhu Bridge on Shigui River. Traffic controls strengthened.</p> <p>8/29 18:01 - Tianliao District, Kaohsiung City - Mr. Hu (066279030) Sixth River Management Office: Embankment overflow on Erren River. Jump in the water level of Erren River has flooded farms on both sides of the river up- and down-stream of Zhongde Bridge. Road closures are currently in effect; 1. Have notified the village chiefs and district heads to make the necessary reports; 2. Contacted the Directorate-General of Highways (construction unit) to handle the situation.</p> <p>8/29 18:03 - Rende District, Tainan City - Mr. Hu (066279030) Sixth River Management Office: River levee overflow between Jitan Bridge and Wandai Bridge on Sanye River Drain (Taiyi Industrial Area) Flood waters have overflowed the river levee between Jitan Bridge and Wandai Bridge on Sanye River Drain (Taiyi Industrial Area). 1. Personnel dispatched to make on-site inspection; 2. Liaised with the city government on the necessary measures to take; also notified the village chiefs and other relevant personnel to take safety precautions.</p> <p>8/29 19:38 - Minxiong Township, Chiayi County - Mr. Zhong (0422585800), Water Resources Agency (Chia-Nan Irrigation Association): Neipuzi Reservoir Due to heavy rainfall as well as surface runoff, inadequate drainage on the right access road to the sloping channel of the reservoir's spillway means waters have spilled over to the left bank. This has led to erosion and undercutting of the right bank and toe-of-dam downstream of the reservoir (between 52 ~ 54 m in height). On-site inspection was conducted in the afternoon by the management unit after the waters receded. Initial assessment found no safety concerns and the area has been temporarily covered by canvas. Have arranged for the Hydraulic Structure Inspection and Safety Evaluation Team to conduct an on-site inspection on the morning of 8/29.</p>
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E. Disaster damage to agricultural, forestry, livestock products and facilities (Source: Council of Agriculture)

County/City	Total	Loss of agricultural, forestry, fishery and livestock products (Unit: NT\$1000)					Loss of agricultural, forestry, fishery and livestock facilities (Unit: NT\$1000)			
		Subtotal	Agricultural products	Livestock	Fishery products	Forestry products	Subtotal	Farms and agricultural facilities	Livestock facilities	Fishermen's fishery facilities
Taipei City	22.8	22.8	22.8	0	0	0	0	0	0	0
Kaohsiung City	2862.49	2862.49	2862.49	0	0	0	0	0	0	0
Yilan County	206.3	206.3	206.3	0	0	0	0	0	0	0
Hsinchu County	856.53	856.53	856.53	0	0	0	0	0	0	0
Taichung City	997.48	197.48	197.48	0	0	0	800	800	0	0
Changhua County	8804.21	8804.21	8804.21	0	0	0	0	0	0	0
Nantou County	9624.49	1760.49	1760.49	0	0	0	7864	7864	0	0
Yunlin County	34577.73	34577.73	34062.73	494	0	21	0	0	0	0
Chiayi County	66290.46	66040.46	40456.96	25583.5	0	0	250	250	0	0
Chiayi City	469.83	469.83	469.83	0	0	0	0	0	0	0
Tainan City	7789.08	7664.08	6884.93	779.15	0	0	125	125	0	0
Pingtung County	1840.87	1840.87	1833.27	7.6	0	0	0	0	0	0
Hinchu Forest	184	184	0	0	0	184	0	0	0	0

District Office										
Experimental Forest of National Taiwan University	45	45	0	0	0	45	0	0	0	0
Total	134571.27	125532.27	98418.02	26864.25	0	250	9039	9039	0	0

VI. Support for City-County Emergency Operations

A. Emergency rescue manpower, equipment and operations (Source: Ministry of National Defense, MOI National Fire Agency, MOI National Airborne Service Corps, MOI National Police Agency, Coast Guard Administration)

Personnel, Equipment and Operations	Armed Forces	Firefighter (including Volunteer Firefighters)	Police (incl. Volunteer Police and Civil Defense)	Air Crew	Coast Guard	Total
Personnel Dispatched (persons)	3913	2048	7758	0	47	13766
Vehicles (missions)	239		3611	0	11	3866
Vessels (incl. rubber boats) (vessels)	10	43	0	0	3	56

Note: Table data represents cumulative total

B. Emergency response readiness (Source: Ministry of National Defense)

The first emergency response force of 3200 people can be deployed with 10 minutes' notice.

The second emergency response force of 4800 people can be deployed with 3 hours' notice.

Area	3rd Combat Zone (North)	5th Combat Zone (Central)	4th Combat Zone (South)	2nd Combat Zone (East)
1st Emergency Response Force	800 people	800 people	800 people	800 people
Location				
Subtotal	3200 people			
2nd Emergency Response Force	1200 people	1200 people	1200 people	1200 people
Location				
Subtotal	4800 people			