Mekong River Commission

Regional Flood Management and Mitigation Centre

Weekly Flood Situation Report for the Mekong River Basin

Prepared on: 03/10/2011, covering the week from the 26th September to the 02nd October, 2011

Weather Patterns, General Behaviour of the Mekong River and Flood Situation

General weather patterns

During the week of the 26th September to the 02nd October 2011, six weather bulletins were issued by the Department of Meteorology (DOM) of Cambodia. The weather charts of the 26th September and the 02nd October bulletins are presented in the figures below:

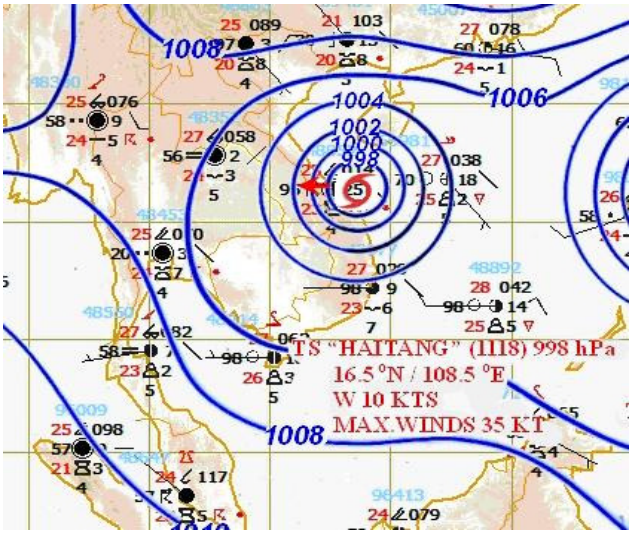


Figure 1: Weather map for 26th September 2011

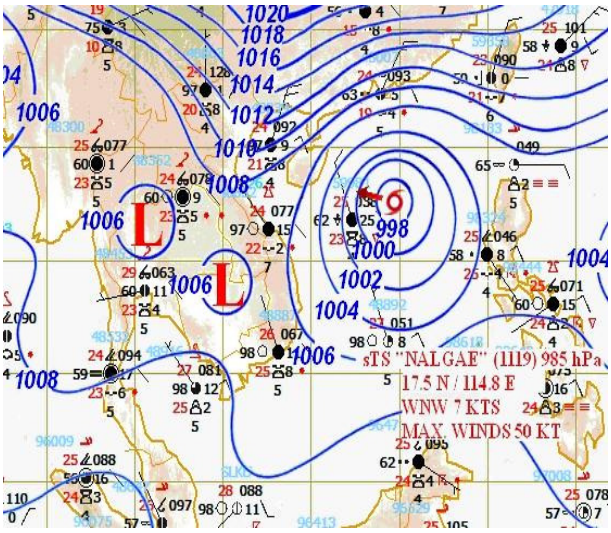


Figure 2: Weather map for 02nd October 2011

Strong to moderate South-West (SW) Monsoon

Strong SW monsoon prevailed over Andaman Sea, the Gulf of Thailand, Thailand and Cambodia the beginning to the mid of the week and became weakening in the rest of the week (Figure 1 and 2).

Inter Tropical Convergence Zone (ITCZ)

No ITCZ was observed during last week.

Tropical depressions (TD), tropical storms (TS) or typhoons (TY)

A Tropical Storm named "HAITANG" (1118), which was formed on 25 September in the East Sea of Viet Nam, landed over Quang Ngai, Da Nang provinces in the Central of Viet Nam on 26 September. On 27 September afternoon, it downgraded in to a Tropical Depression and disappeared in the Thailand territory after moving deep in to the mainland (Figure 1).

Starting from 24 September, Typhoon "NESAT" (1117) caused extensive damage when landing over Liuzon Island of the Philippine on 27 September, 2011. After travelling through South China Sea, the TY hit to the Hainan Island, China and kept moving West-Northwest ward and finally made landfall in the North of Viet Nam on 30 September, 2011. It downgraded in to low pressure and disappeared when moving deep into mainland. Figure 3 presents the track of TY NESAT when it travelled through South China Sea and Hainan Island before landing over Viet Nam coastline.

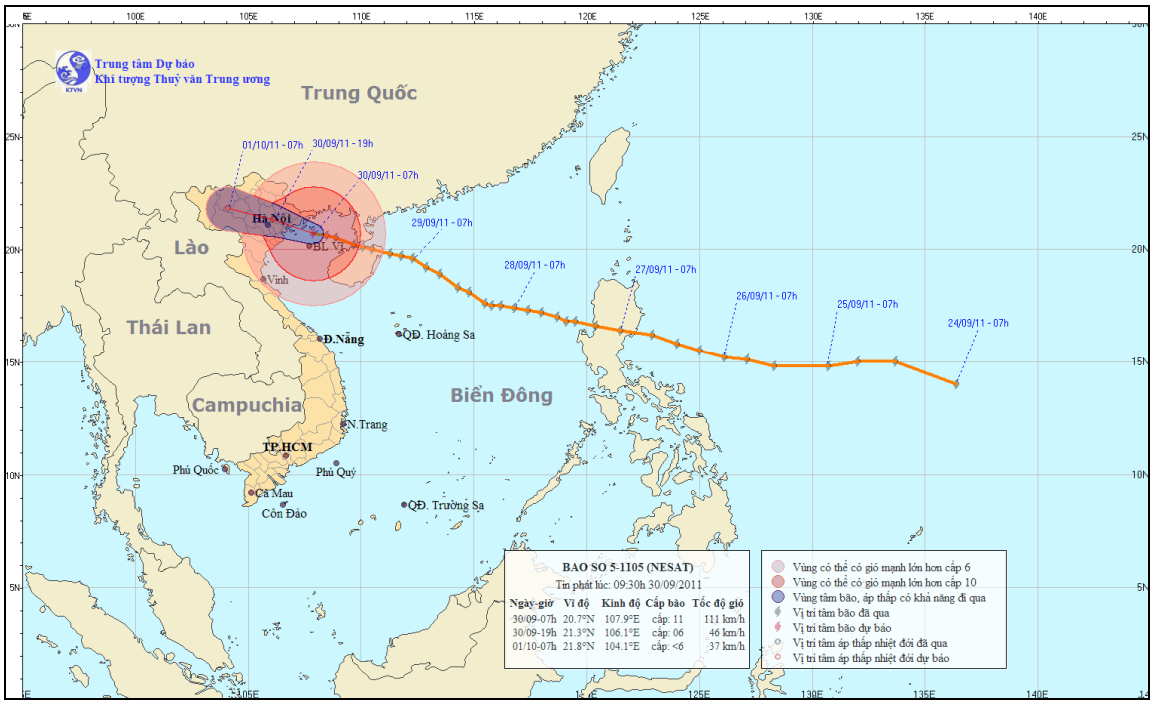


Figure 3: Storm track of TY NESAT

(Source: National Centre for Hydro-Meteorological Forecasting, Viet Nam)

Another Typhoon named "NALGAE" (1119), which was formed in the East of Philippine on 28 September, made landfall Liuzon Island of the Philippine on 01 October (Figure 4) and continued travelling through the South China Sea. On 02 October, it downgraded in to severe Tropical Strom (sTS) and kept moving West northwest ward with speed of 13km/h (Figure 2).

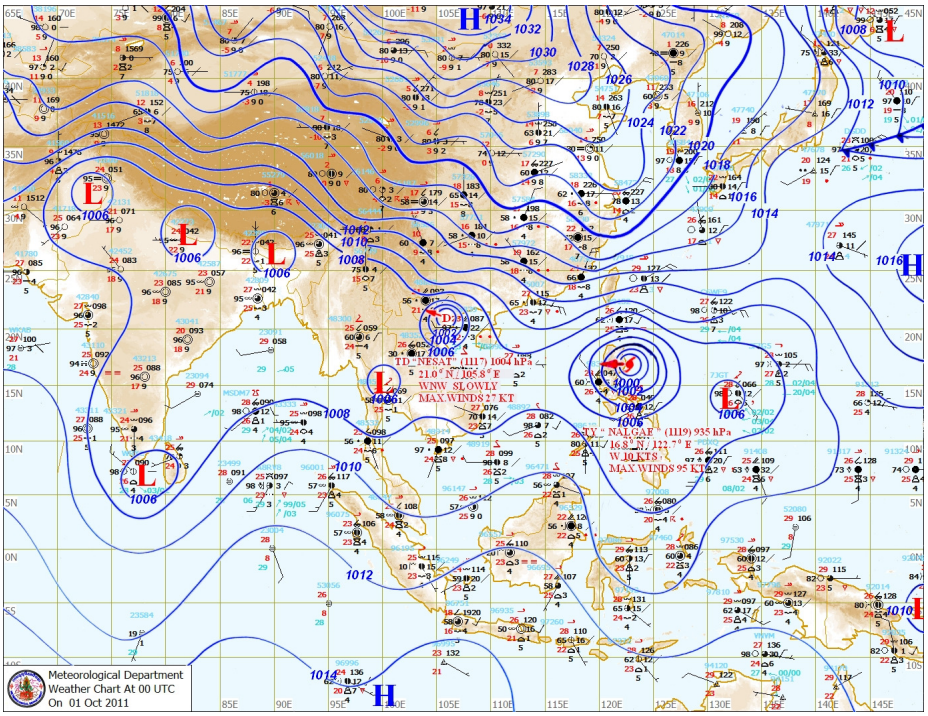


Figure 4: Weather map of TY NALGAE, when landing over Liuzon Island

(Source: Thailand Meteorological Department)

Other weather phenomena that affect the discharge

No other weather phenomena affecting the discharge were observed.

Over weather situation

As the result of strong SW monsoon activity during the first half of the week, appearances of TS HAITANG, TY NESAT and NALGAE and low pressure trough laid across Thailand, Lao PDR, Cambodia and Viet Nam at the height 1.5 km (850 hPa), heavy rain occurred in the North, Northeast of Viet Nam, Lao PDR and Thailand. Figure 5 illustrates rainfall amount distribution over the LMB, covering last week. During last week, heavy rain occurred in the middle part of LMB from Vientiane/Nong Khai to Pakse, especially some areas in the tributaries. The high amounts of rainfall covering last week were recorded at Vientiane (156.9mm); at Nong Khai (193.6mm); at Saravanne (165.6mm); at Ban Phone Si (148.6mm); at Muong Mai (182.5 mm); at Ban Tha Kok Daeng (513.5mm).

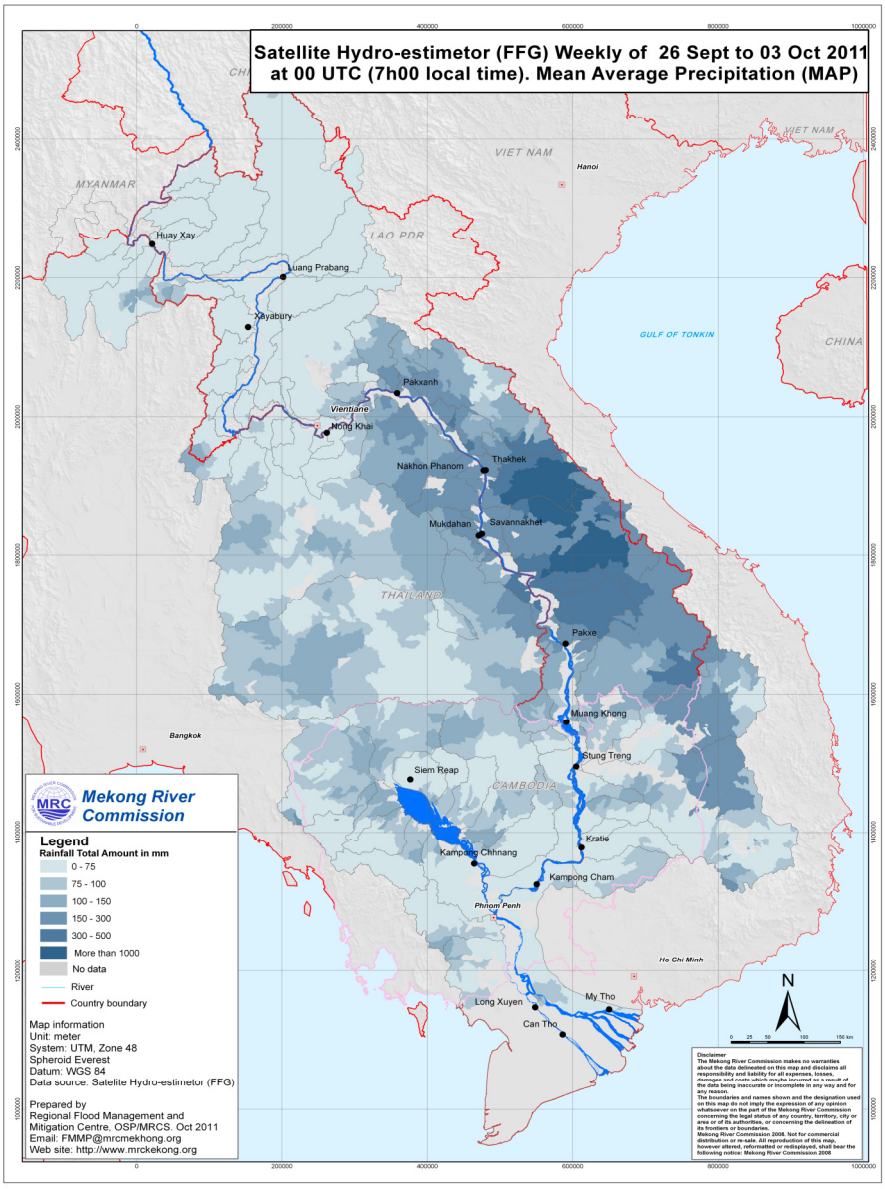


Figure 5: Rainfall distribution over the LMB, covering the week 26 September – 02 October, 2011

General behaviour of the Mekong River

There is an inconsistency of water level along the mainstream of Mekong river during the reporting period. Water levels at stations in the upper part showed a falling trend, while water levels at stations in

the middle part were rising at the end of the week as result of TY and TS affects mentioned above. Water levels at lower part stations were decreasing during last week.

Regarding to two stations in downstream at Tan Chau and Chau Doc, water levels at those two stations were fluctuated by tidal with increasing trend in the first half of the week and then more-or-less stable till the end of the week.

All stations along Mekong river mainstream were recording levels that are above the long-term average for this time of the year.

For stations from Chiang Saen to Vientiane/ Nong Khai

Water level showed a decreasing trend during the monitoring period and these stations were recording levels that are somewhat over the long-term average for this time of the year.

For stations Paksane to Pakse

Water levels decreased during the beginning to the mid of the week and were rising toward the end of the week. These stations were recording levels that are above the long-term average for this time of the year.

Water levels at stations on the left bank tributaries of Lao PDR such as at Ban Phone Si of Nam Ca Dinh river, at Mahaxai of Se Bang Fai rose up quickly in last week (Figure 6).

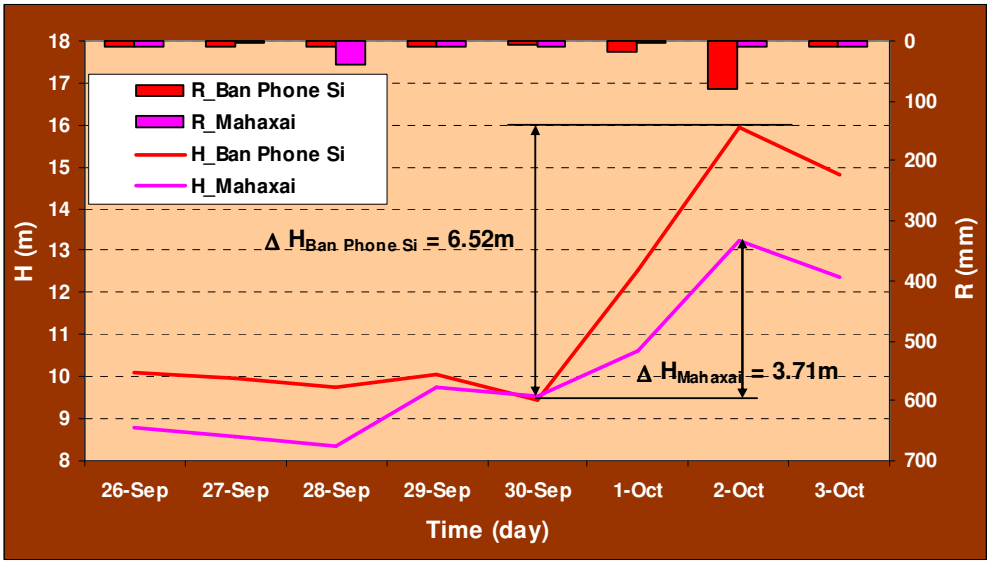


Figure 6: Rapidly increasing of water levels at stations on tributaries: Nam Ca Dinh river at Ban Phone Si, Se Bang Fai river at Mahaxai

For stations Strung Treng to Kompong Cham

Water levels were falling in last week. These stations were recording levels are above the long-term average for this time of the year.

For stations from Phnom Penh Port/ Phnom Penh Bassac to Prek Dam

Water levels at these stations were more-or-less during reporting period and above the long-term average for this time of the year.

Tan Chau and Chau Doc

Water levels slightly increased in the beginning of the week and then were more-or-less stable during the rest or the week. Both stations were recording levels that are above the long-term average for this time of the year and significantly affected by tidal.

Note: for areas between forecast stations, please refer to the nearest forecast station.

Flood Situation

- Flood stage or alarm stage:
  - The Mekong has reached flood stage at Prek Dam, Tan Chau and Chau Doc monitoring stations.
  - The Mekong has reached alarm situation at Phnom Penh Bassac, Phom Penh Port and Koh Khel monitoring stations.

For more details see the following annex:

- tables and graphs for water level and rainfall for the last week in Annex A
- a graph for accuracy in Annex B
- a table of forecast achievement in Annex B
- tables and graphs for performance in Annex B
- the water level graphs showing the observed water level for the season in Annex C

Annex A: Graphs and Tables

Table A1: observed water levels

unit in m

2011	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
26/09	537.23	5.90	12.84	12.37	10.06	11.40	13.14	11.30	12.38	11.34	10.15	14.07	**11.65**	10.66	**22.59**	**15.99**	**10.76**	**9.80**	**7.83**	**7.92**	**9.83**	**4.62**	**3.94**
27/09	535.73	6.26	12.52	12.15	9.82	11.16	12.91	11.07	12.25	11.05	9.87	13.79	**11.42**	10.49	**22.35**	**15.90**	**10.81**	**9.94**	**7.86**	**8.02**	**9.92**	**4.70**	**4.03**
28/09	537.17	6.04	12.56	12.03	9.67	11.00	12.73	10.82	11.90	10.76	9.58	13.52	**11.27**	10.04	**21.98**	**15.79**	**10.85**	**9.97**	**7.89**	**8.06**	**9.95**	**4.75**	**4.11**
29/09	537.19	5.35	12.58	12.20	9.66	10.95	12.67	10.68	11.76	10.58	9.39	13.43	**11.14**	9.71	**21.55**	**15.58**	**10.83**	**9.95**	**7.89**	**8.06**	**9.98**	**4.76**	**4.13**
30/09	537.30	5.68	12.02	12.08	9.72	10.99	12.51	10.54	11.65	10.47	9.25	13.27	**11.00**	9.59	**21.22**	**15.38**	**10.80**	**9.92**	**7.89**	**8.04**	**9.98**	**4.76**	**4.15**
01/10	536.27	5.76	11.56	11.63	9.43	10.76	12.56	10.51	11.41	10.25	9.08	12.95	**10.75**	9.50	**21.01**	**15.22**	**10.76**	**9.87**	**7.89**	**8.00**	**9.98**	**4.76**	**4.16**
02/10	535.88	5.54	11.65	11.23	9.00	10.39	12.96	11.02	12.13	10.60	9.42	12.85	**10.53**	9.30	**20.79**	**15.09**	**10.76**	**9.87**	**7.88**	**7.98**	**10.02**	**4.75**	**4.18**
03/10	535.71	4.81	11.50	11.44	8.95	10.28	13.12	11.44	12.53	11.13	9.90	13.34	**10.97**	9.29	**20.55**	**14.96**	**10.75**	**9.88**	**7.87**	**7.95**	**10.02**	**4.74**	**4.18**
Flood level		11.80	18.00	17.40	12.50	12.20	14.50	12.70	14.00	12.60	13.00	16.20	12.00	12.00	23.00	16.20	12.00	11.00	7.90	8.00	10.00	4.20	3.50

Table A2: observed rainfall

Unit in mm

2011	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
26/09	0.0	nr	nr	nr	nr	nr	nr	nr	nr	0.5	1.6	nr	1.0	nr	nr	nr	nr	-	nr	nr	nr	nr	
27/09	0.0	34.3	nr	26.8	3.7	1.9	nr	0.6	0.9	6.8	9.4	1.6	5.5	nr	17.6	5.6	3.0	-	2.5	0.0	nr	27.1	nr
28/09	0.0	0.2	nr	20.5	34.0	12.2	6.7	11.3	11.1	4.6	5.5	4.6	5.4	4.5	2.4	20.8	18.6	-	24.5	32.4	21.0	4.0	
29/09	0.0	25.0	nr	7.0	6.0	9.1	nr	nr	nr	nr	nr	4.1	nr	10.0	nr	9.4	11.6	-	nr	nr	nr	0.0	1.0
30/09	0.0	nr	nr	nr	nr	1.4	nr	nr	nr	nr	nr	0.6	nr	nr	4.0	nr	nr	-	0.1	nr	nr	0.3	
01/10	0.0	0.5	20.0	nr	1.5	1.0	20.3	32.0	30.3	nr	nr	nr	13.0	5.8	nr	nr	nr	-	6.5	nr	nr	nr	
02/10	0.0	nr	nr	9.0	31.0	58.2	22.1	17.0	13.4	10.0	nr	14.4	0.5	nr	nr	1.0	nr	-	nr	2.8	7.3	nr	
03/10	0.0	nr	nr	55.8	62.7	100.8	3.0	0.3	nr	0.5	4.7	nr	nr	7.5	nr	nr	19.2	-	11.0	nr	nr	nr	

Figure A1: Water level and rainfall for Jinghong, Chiang Saen, and Luang Prabang

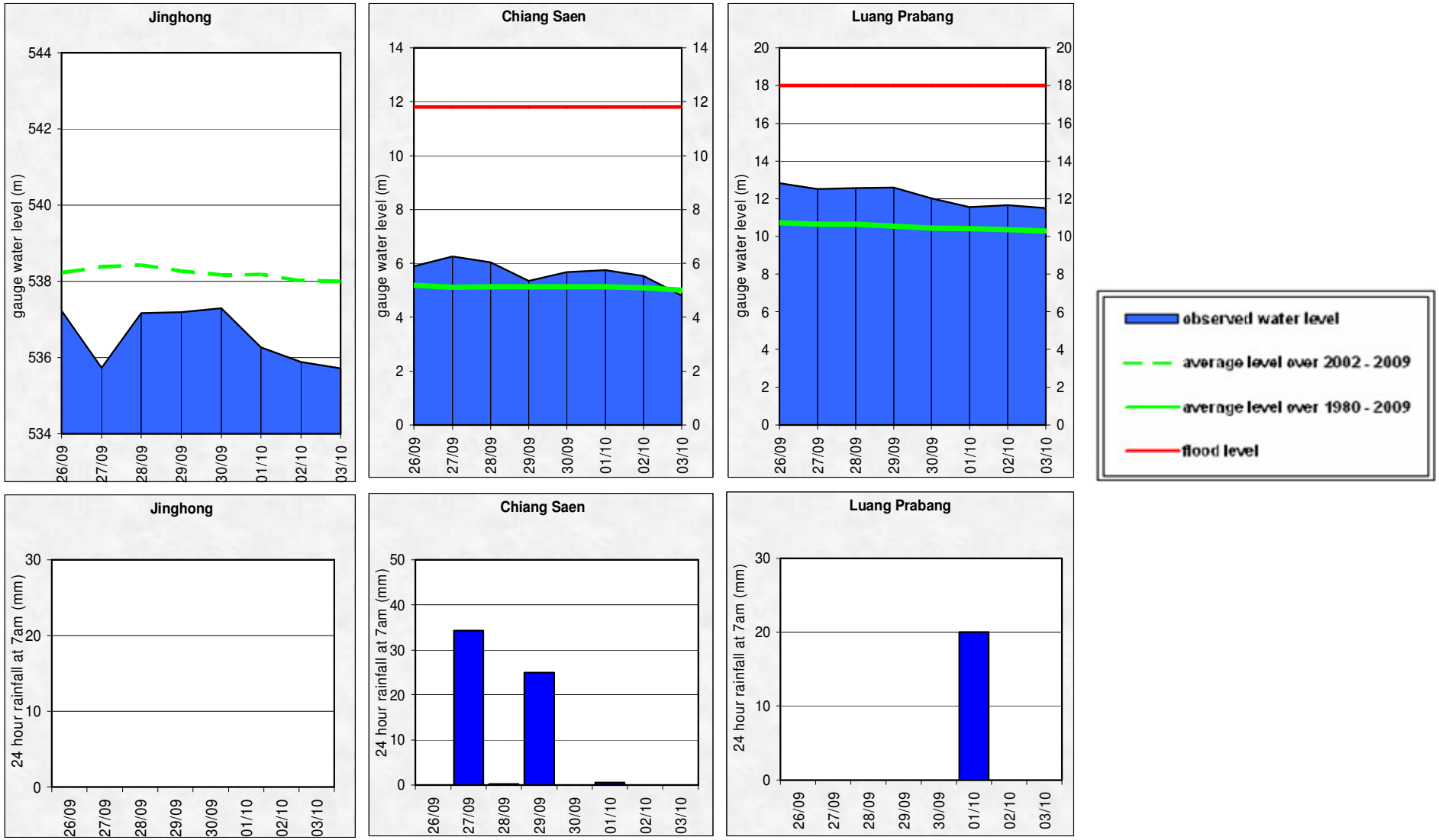


Figure A2: Water level and rainfall for Chiang Khan, Vientiane, Nongkhai, and Paksane

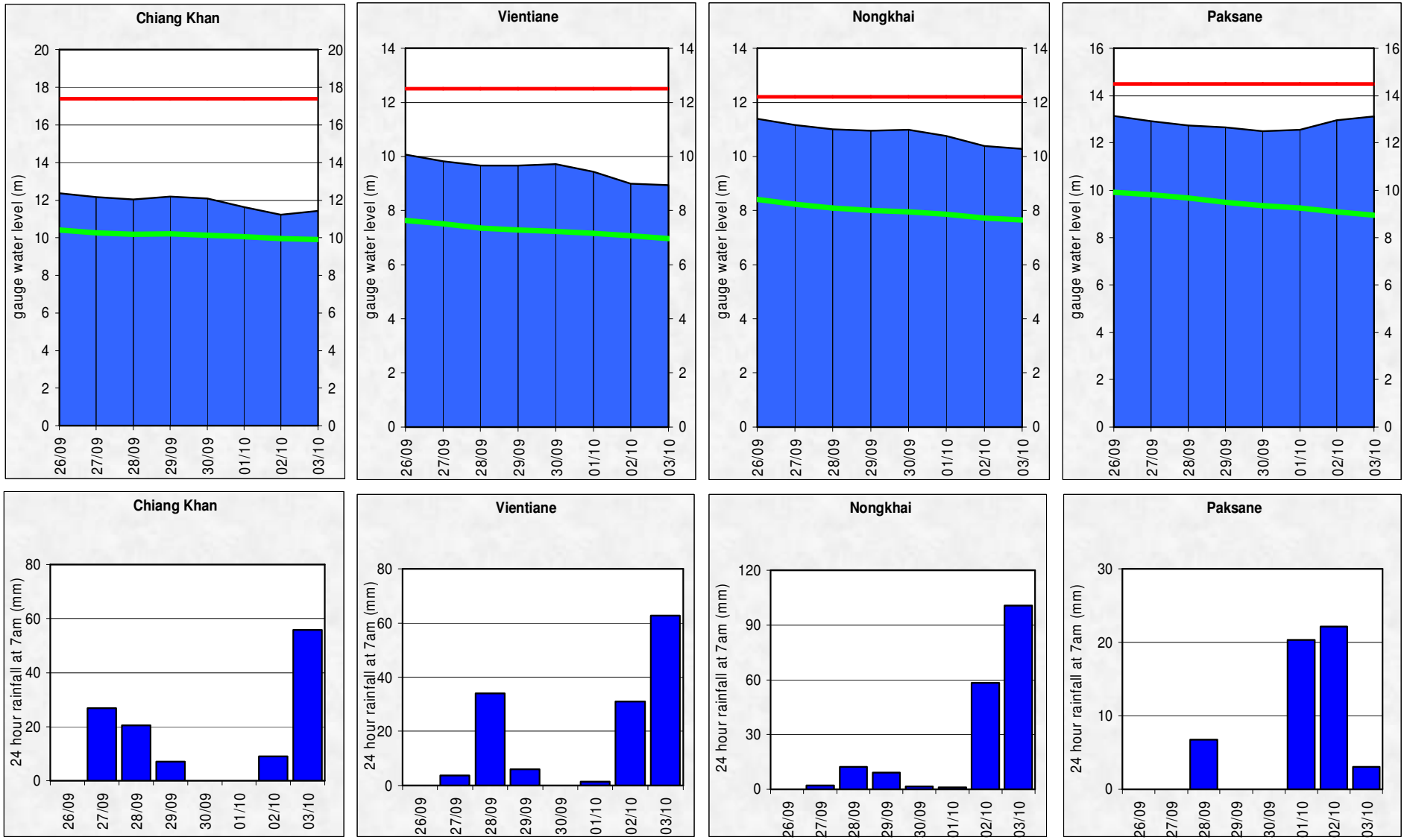


Figure A3: Water level and rainfall for Nakhon Phanom, Thakhek, Mukdahan and Savannakhet

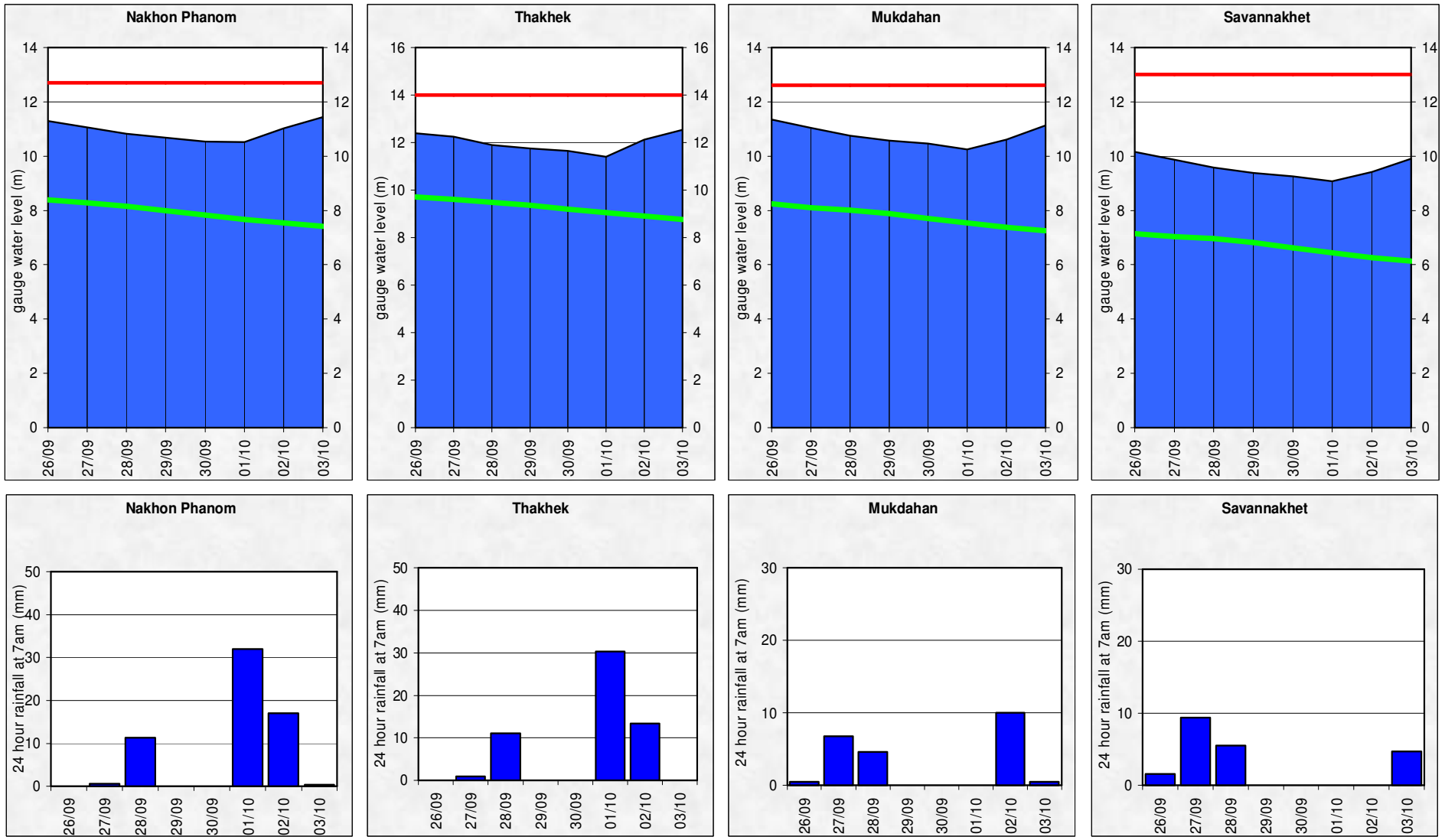


Figure A4: Water level and rainfall for Khong Chiam, Pakse, Stung Treng, and Kratie

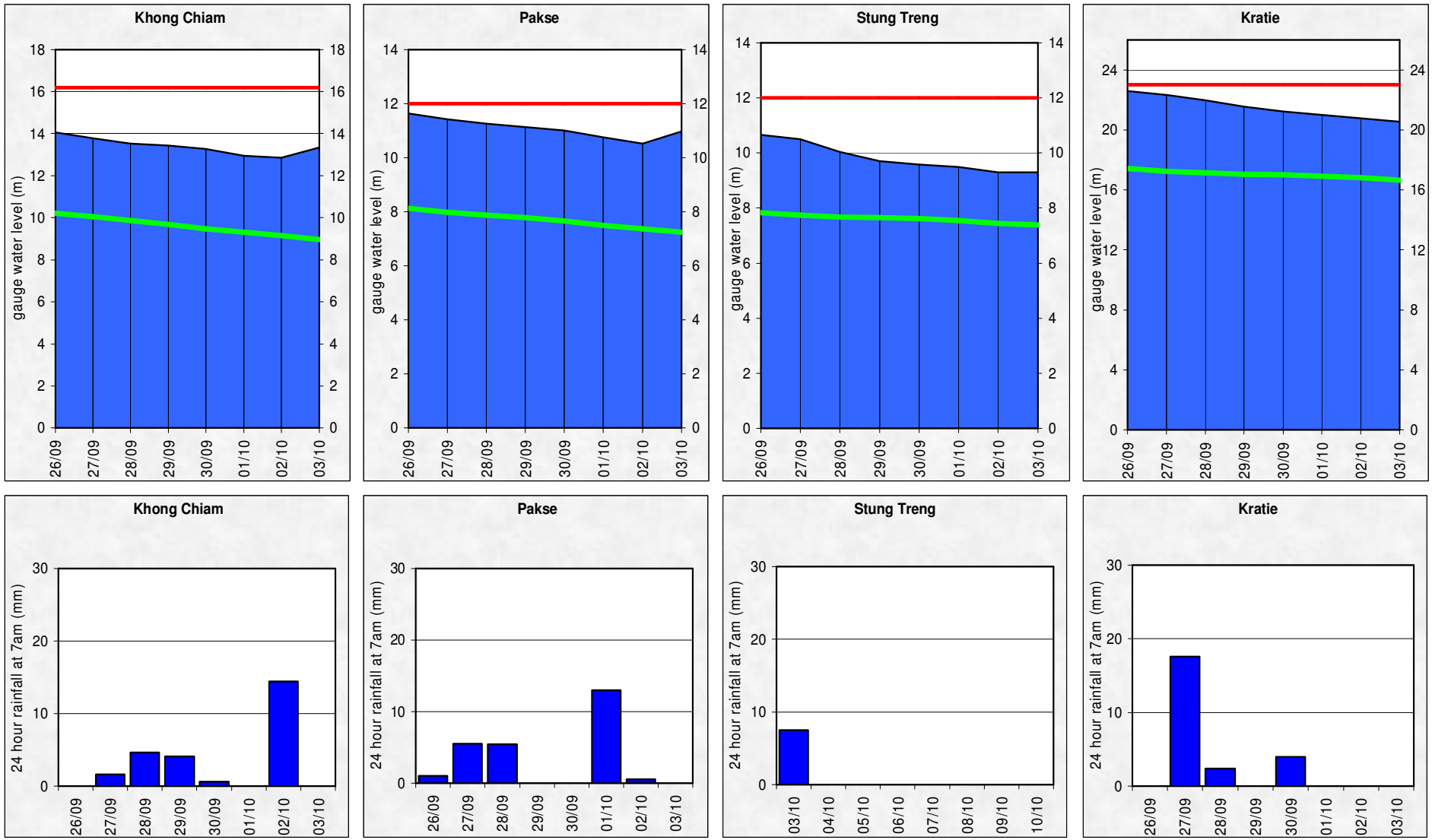


Figure A5: Water level and rainfall for Kompong Cham, Phnom Penh (Bassac and Port), and Koh Khel

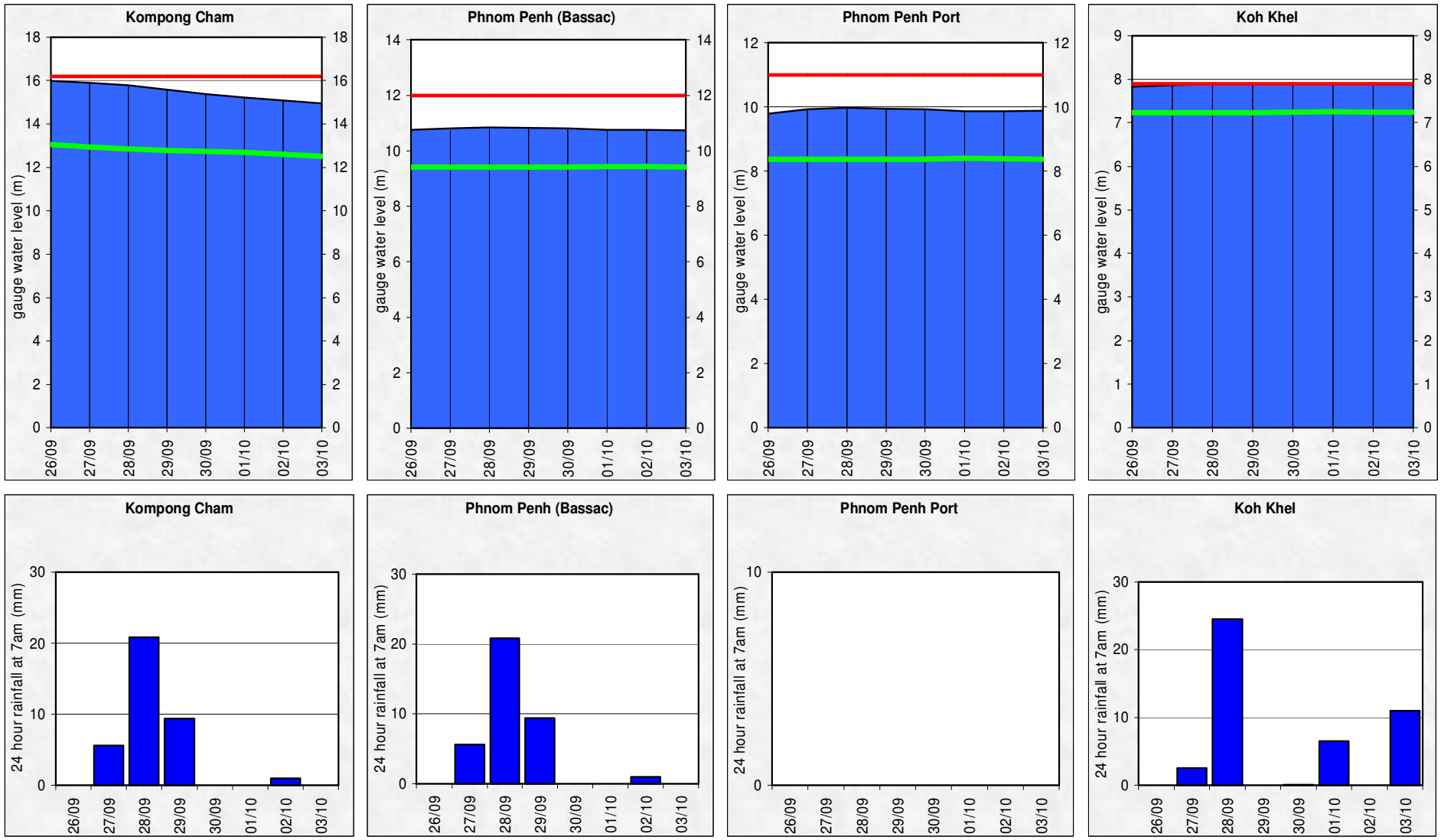
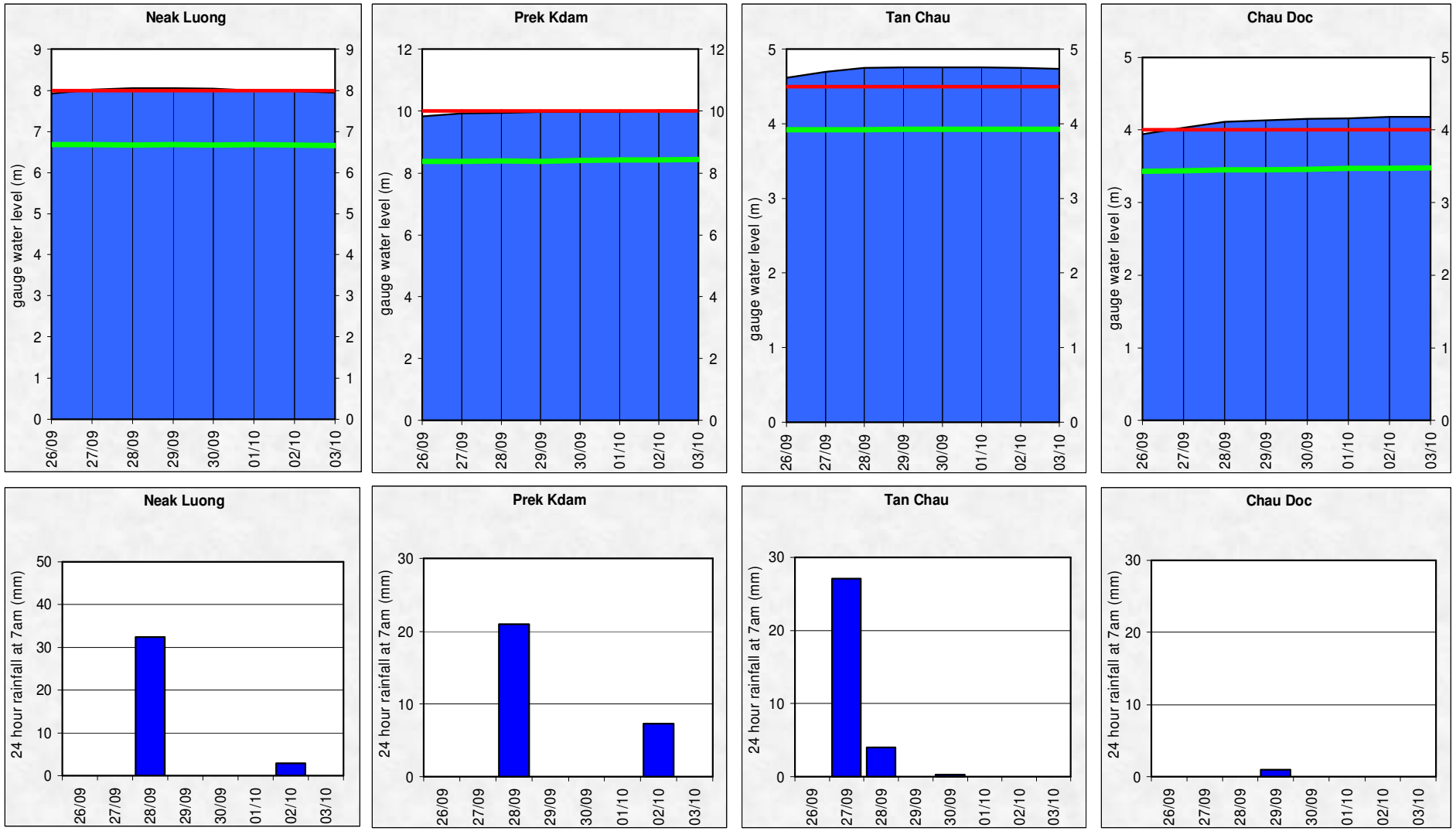


Figure A6: Water level and rainfall for Neak Luong, Prek Kdam, Tan Chau and Chau Doc



Annex B: Accuracy and performance

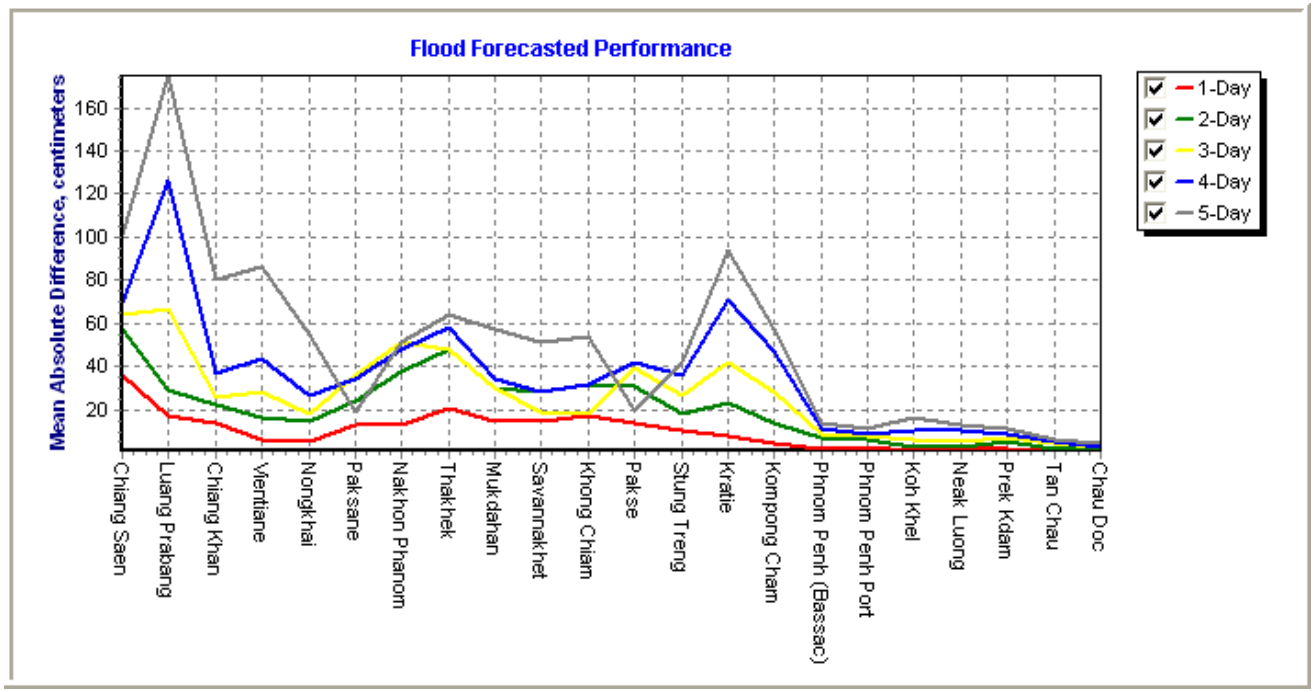
Accuracy

"Accuracy" describes the accuracy of the adjusted and published forecast, based on the results of the MRC Mekong Flood Forecasting System, which are then adjusted by the Flood Forecaster in Charge taking into consideration known biases in input data and his/her knowledge of the response of the model system and the hydrology of the Mekong River Basin. The information is presented as a graph below, showing the average flood forecasting accuracy along the Mekong mainstream.

In general, the overall accuracy is good for 1-day and 3-day forecast lead time at most stations; however accuracies at stations Luang Prabang and Kratie for 4-day to 5-day forecast were less than expected.

The above differences due to 2 main factors: (1) internal model functionality in forecasting for middle reach of the LMB in taking into account flow contribution from tributaries, for which the parameter adjustment in the model is not possible; (2) the adjustment by flood forecaster-in-charge at those stations.

Figure B1: Average flood forecast accuracy along the Mekong mainstream



Forecast Achievement

The forecast achievement indicates the % of days that the forecast at a particular station for a lead-time is successful against a respective benchmark (Table B2).

Table B1: Achievement of daily forecast against benchmarks unit in %

	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc	*Average*
1-day	28.6	85.7	85.7	85.7	100.0	42.9	57.1	42.9	57.1	57.1	28.6	42.9	57.1	71.4	85.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	***74.0***
2-day	50.0	66.7	100.0	66.7	100.0	66.7	50.0	33.3	66.7	66.7	50.0	50.0	66.7	50.0	83.3	100.0	83.3	100.0	100.0	100.0	100.0	100.0	***75.0***
3-day	40.0	60.0	100.0	40.0	80.0	40.0	40.0	60.0	60.0	60.0	80.0	40.0	40.0	40.0	20.0	60.0	100.0	80.0	100.0	60.0	100.0	100.0	***63.6***
4-day	75.0	25.0	50.0	50.0	100.0	75.0	50.0	75.0	75.0	75.0	100.0	50.0	100.0	0.0	75.0	50.0	100.0	50.0	100.0	100.0	100.0	100.0	***71.6***
5-day	66.7	0.0	33.3	0.0	66.7	66.7	66.7	33.3	33.3	66.7	33.3	100.0	66.7	0.0	33.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	***62.1***

Table B2: Benchmarks of success (Indicator of accuracy in mean absolute error) Unit in cm

	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
1-day	25	25	25	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
2-day	50	50	50	25	25	25	25	25	25	25	25	25	25	25	25	10	10	10	10	10	10	10
3-day	50	50	50	25	25	25	25	25	25	25	25	25	25	25	25	10	10	10	10	10	10	10
4-day	75	75	50	50	50	50	50	50	50	50	50	50	50	50	50	10	25	10	25	25	10	10
5-day	75	75	50	50	50	50	50	50	50	50	50	50	50	50	50	25	25	25	25	25	25	25

Note: *An indication of the accuracy given in the Table B2 is based on the performance of the forecast made in 2008 from the new flood forecasting system and the configuration for the 2009 flood season and is published on the website of MRC (http://ffw.mrcmekong.org/accuracy.htm).*

A new set of performance indicators that is established by combining international standards and the specific circumstances in the Mekong River Basin is applied officially for the flood season of 2011 onward.

Performance

Performance is assessed by evaluating a number of performance indicators, see table and graphs below:

Table B3: Overview of performance indicators for the past 5 days including the current report date

	Flood Forecast: time sent				Arrival time of input data (average)							Missing data (number)						
2011	FF completed and sent (time)	stations without forecast	FF2 completed and sent (time)	Weather information available (number)	NOAA data	China	Cambodia - DHRW	Cambodia - DOM	Lao PDR - DMH	Thailand - DWR	Viet Nam - NCHMF	NOAA data	China	Cambodia - DHRW	Cambodia - DOM	Lao PDR - DMH	Thailand - DWR	Viet Nam - NCHMF
week	*10:35*	*0*	*-*	*6*	*08:06*	*08:09*	*07:34*	*-*	*09:20*	*07:31*	*07:03*	*0*	*0*	*15*	*272*	*102*	*7*	*0*
month	*10:34*	*0*	*-*	*16*	*08:08*	*08:14*	*07:26*	*06:35*	*09:15*	*07:36*	*06:59*	*0*	*0*	*35*	*405*	*519*	*11*	*102*
season	*10:30*	*1*	*-*	*75*	*08:10*	*08:19*	*07:31*	*06:08*	*09:06*	*07:45*	*07:08*	*1*	*16*	*72*	*1248*	*2183*	*33*	*658*

Week is the week for which this report is made; *Month* is actually the last 30 days (or less if the flood season has just begun); *Season* is the current flood season up to the date of this report.

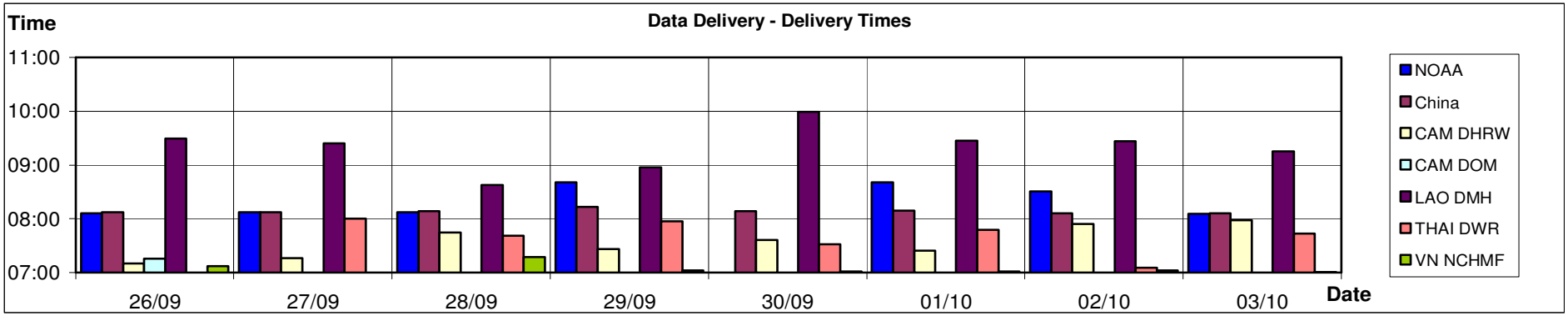


Figure B2: Data delivery times for the past 8 days including the current report date

Figure B3: Missing data for the past 8 days including the current report date

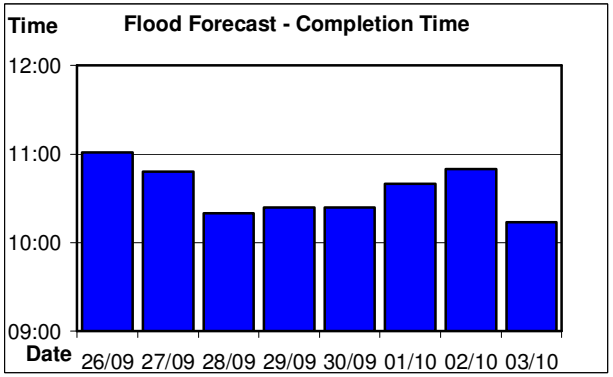


Figure B4: Flood forecast completion time

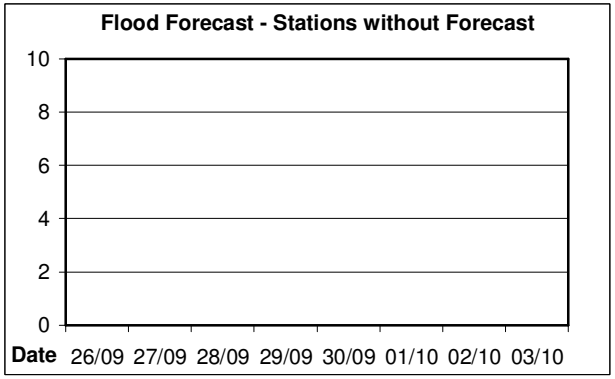


Figure B5: Flood forecast stations without forecast

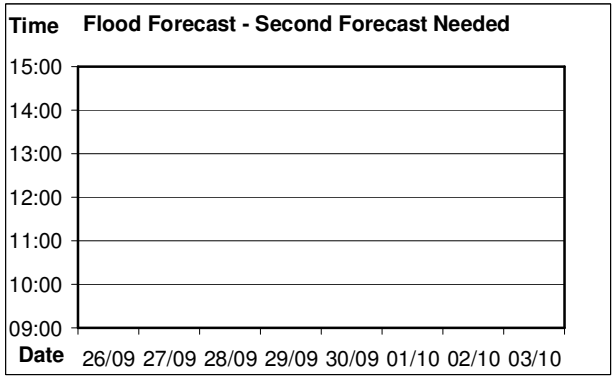


Figure B6: Second forecast needed

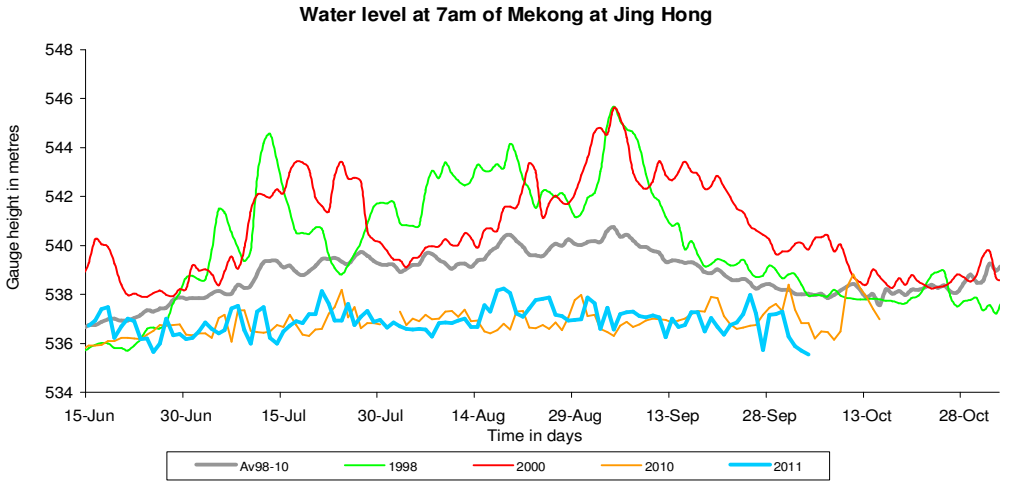
During last week, performance indicators of bulletin delivery (Table B3 and Figure B4) shows that the flood bulletins were disseminated timely to the registered national Line Agencies, MRC website, and other interested users about 10h30 AM which is a prescribed time in the Operational Manual. Some days was later than prescribed time due to the late transfer and complete of data from LA's (Figure B2 shows data delivery time that is over 9h AM) as a result less time was available for adjusting the forecast results..

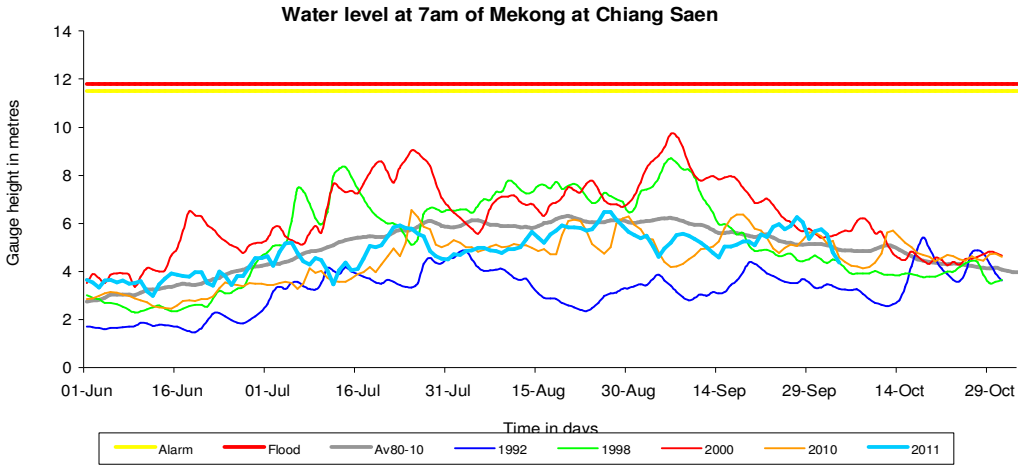
Annex C: Season Water Level Graphs

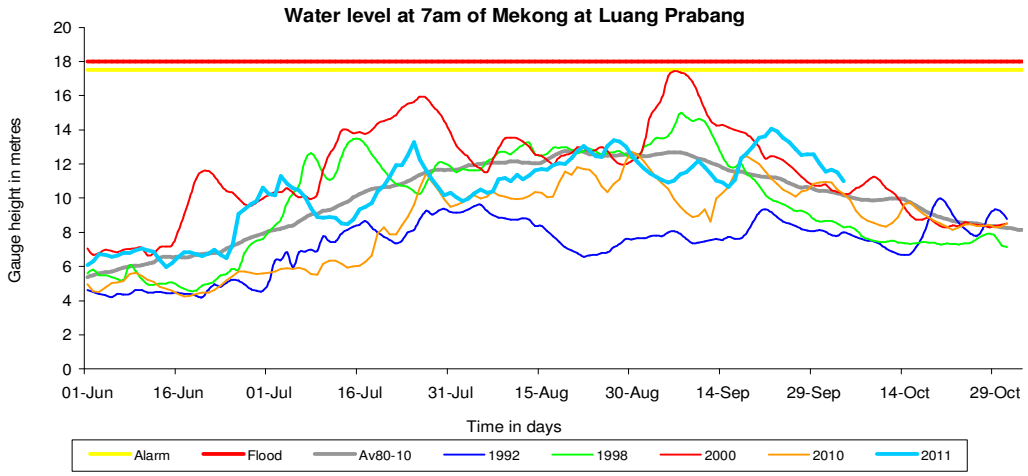
This Annex has the water level graphs of the report date. These graphs are distributed daily by email together with the Flood Bulletins.

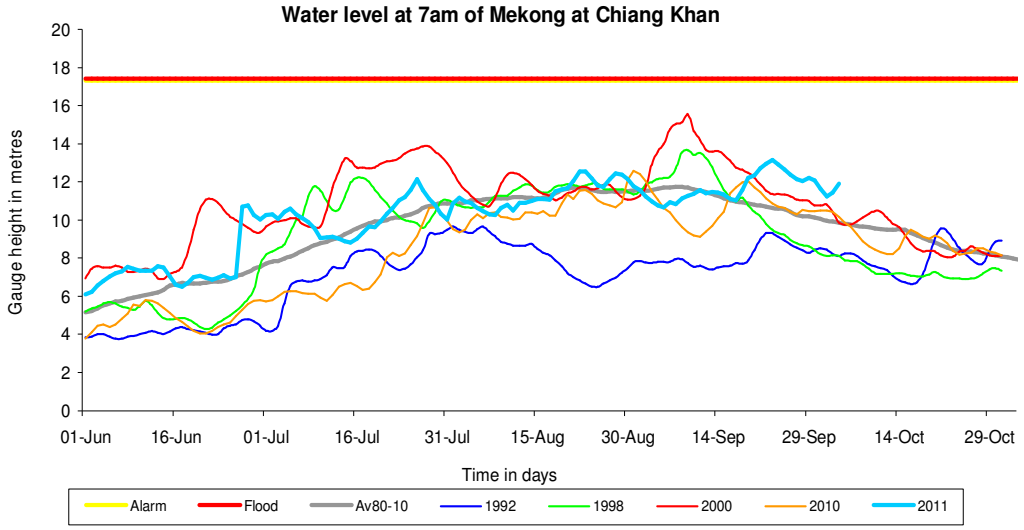
HYDROGRAPHS OF THE MEKONG AT MAINSTREAM STATIONS

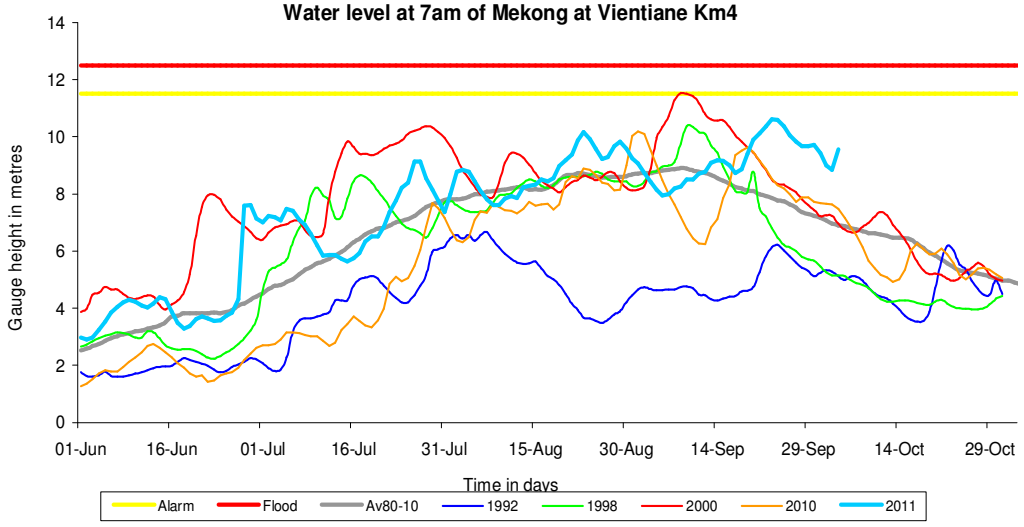
IN FLOOD SEASON FROM 1 JUNE TO 31 OCTOBER

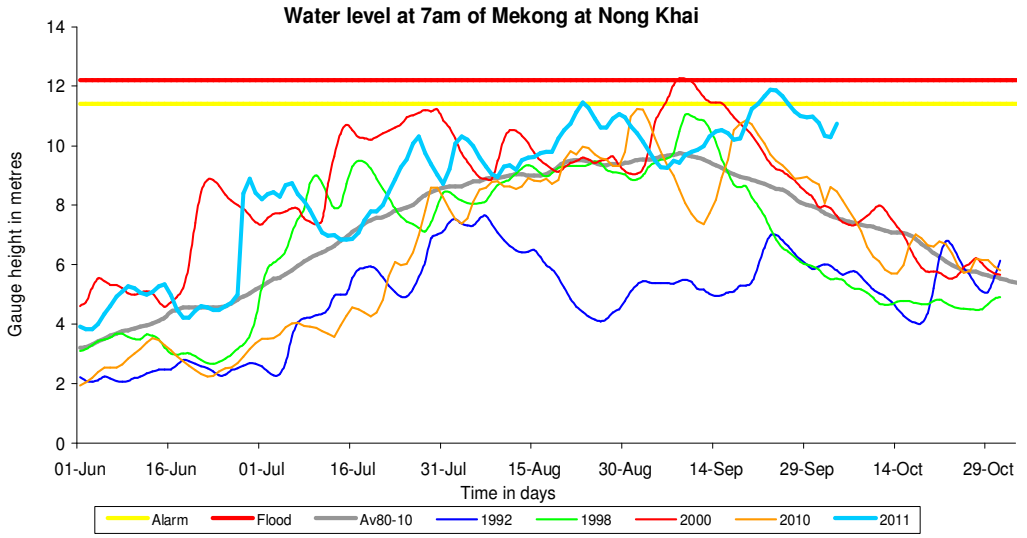


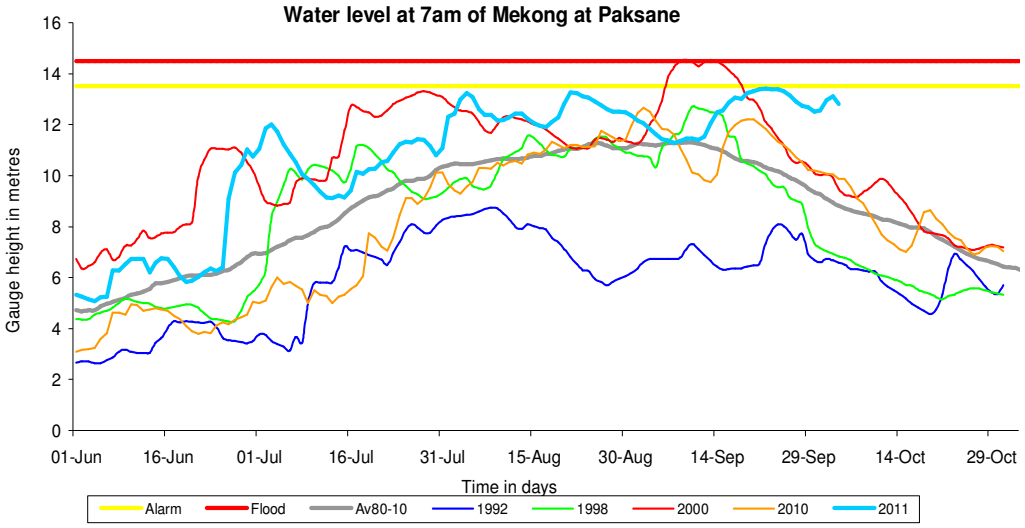


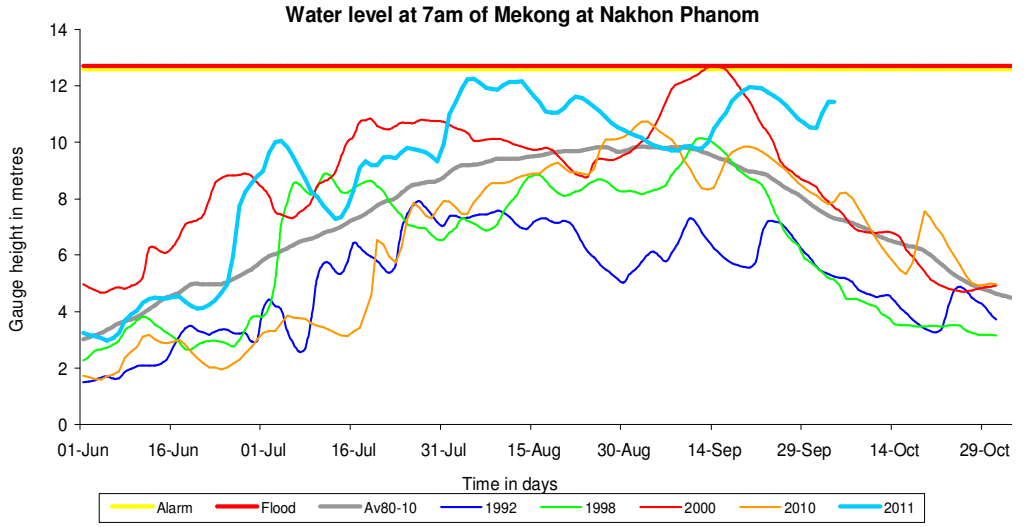


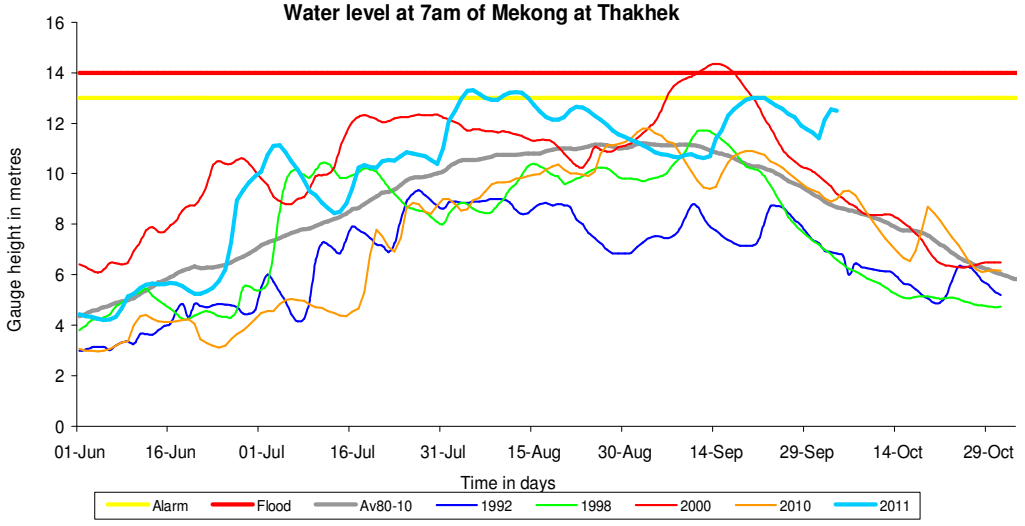

Water level at 7am of Mekong at Chiang Khan
Gauge height in metres
20
18
16
14
12
10
8
6
4
2
0
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

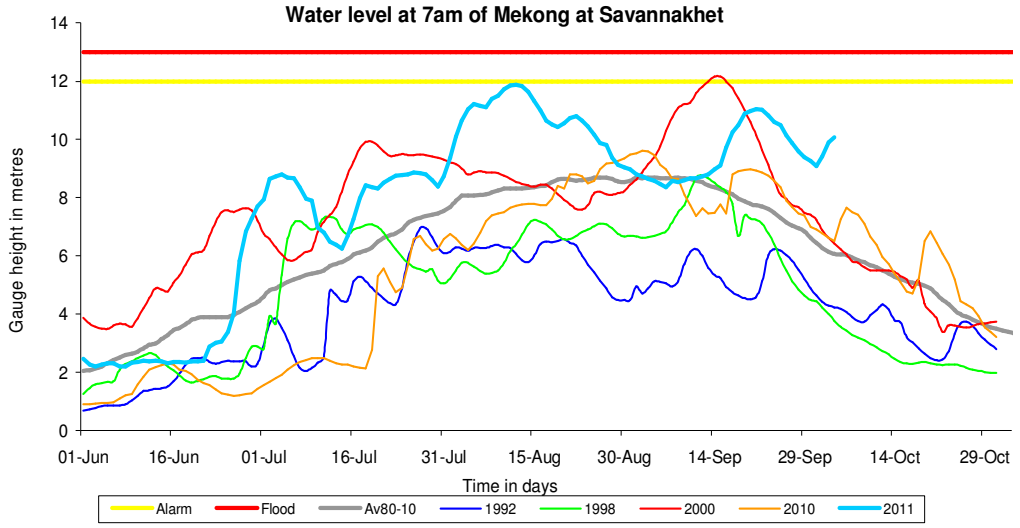

Water level at 7am of Mekong at Vientiane Km4
Gauge height in metres
14
12
10
8
6
4
2
0
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

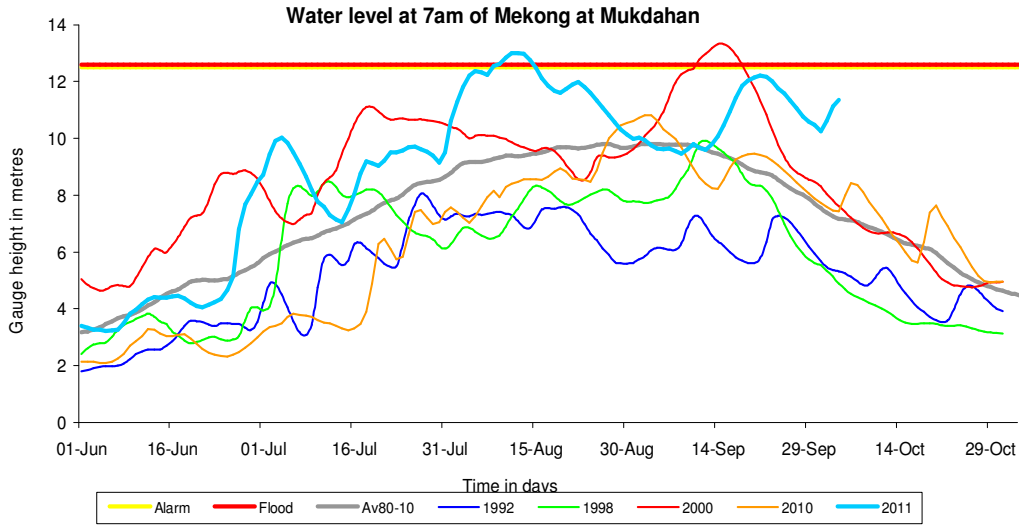

Water level at 7am of Mekong at Nong Khai
Gauge height in metres
14
12
10
8
6
4
2
0
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

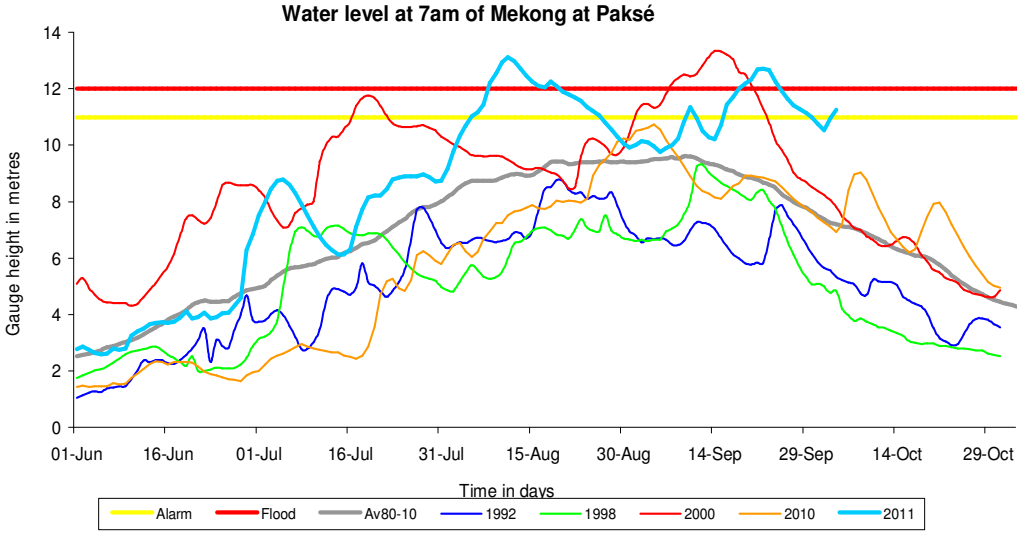

Water level at 7am of Mekong at Paksane
Gauge height in metres
0
2
4
6
8
10
12
14
16
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

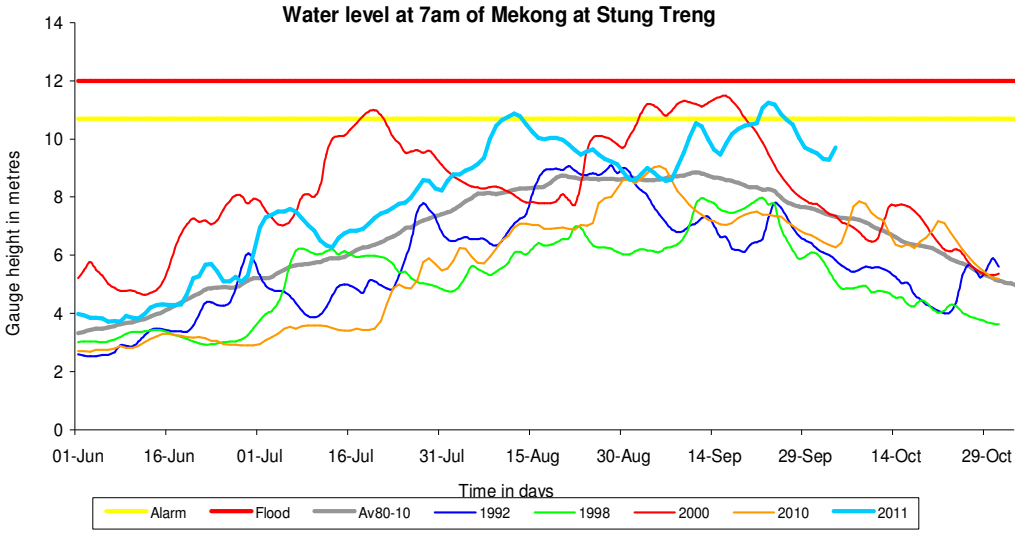

Water level at 7am of Mekong at Nakhon Phanom
Gauge height in metres
0
2
4
6
8
10
12
14
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

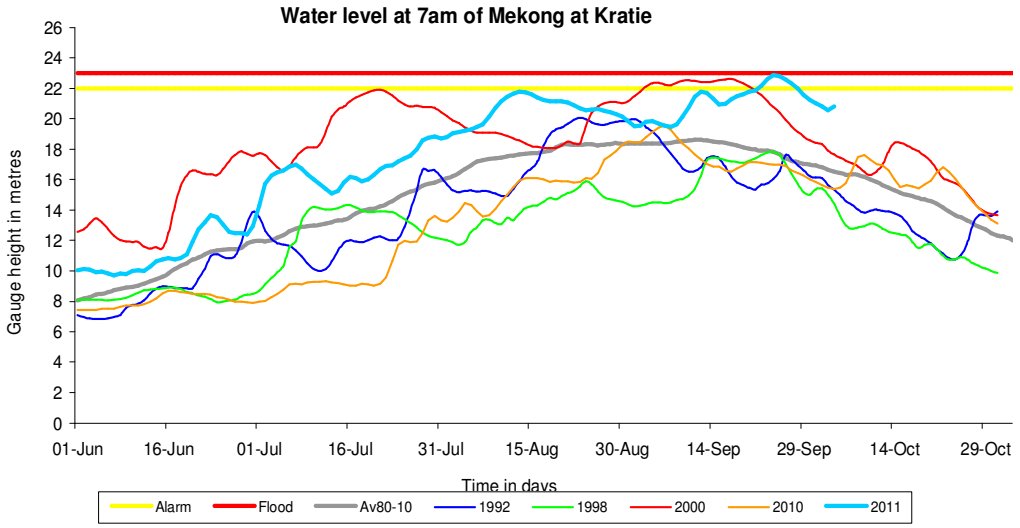

Water level at 7am of Mekong at Thakhek
Gauge height in metres
0
2
4
6
8
10
12
14
16
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

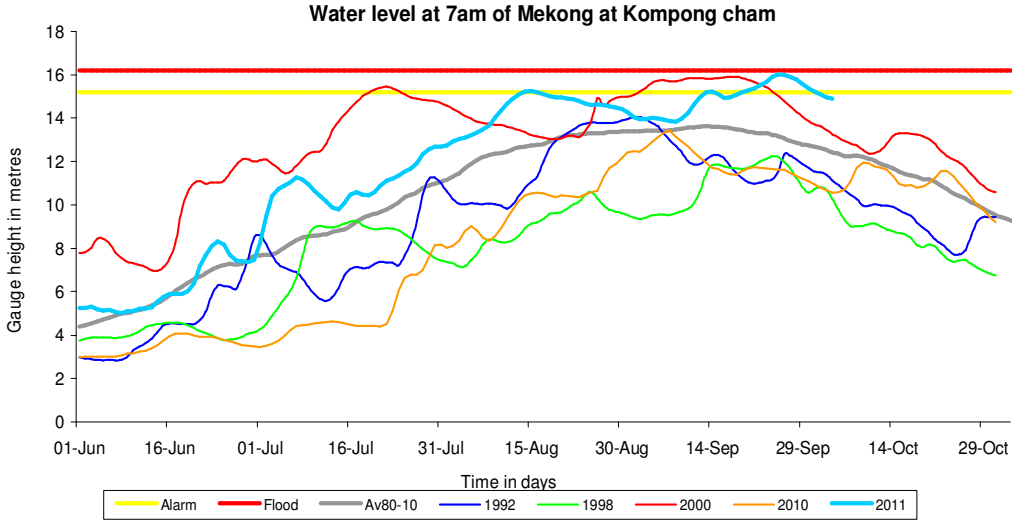

Water level at 7am of Mekong at Savannakhet
Gauge height in metres
0
2
4
6
8
10
12
14
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

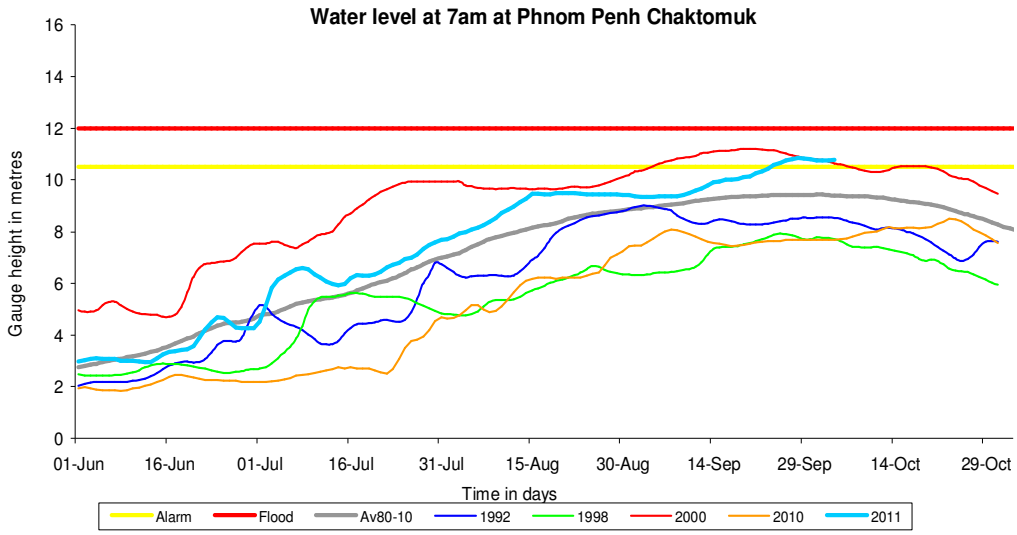

Water level at 7am of Mekong at Mukdahan
Gauge height in metres
0
2
4
6
8
10
12
14
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

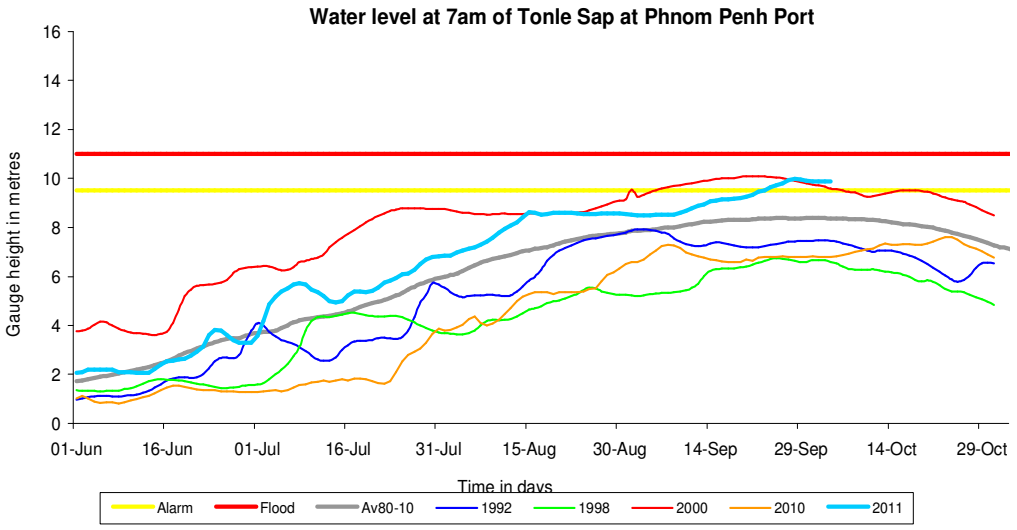

Water level at 7am of Mekong at Paksé
Gauge height in metres
0
2
4
6
8
10
12
14
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

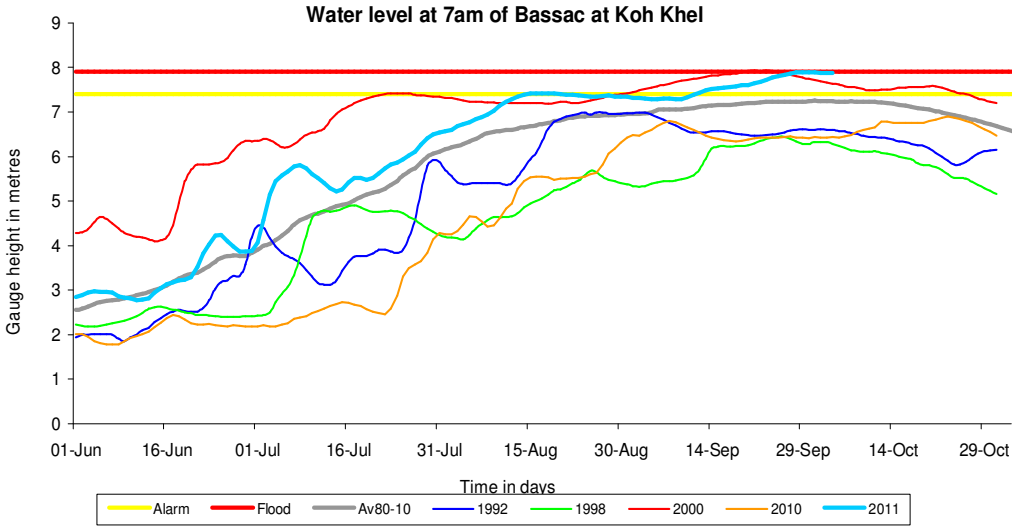

Water level at 7am of Mekong at Stung Treng
Gauge height in metres
0
2
4
6
8
10
12
14
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

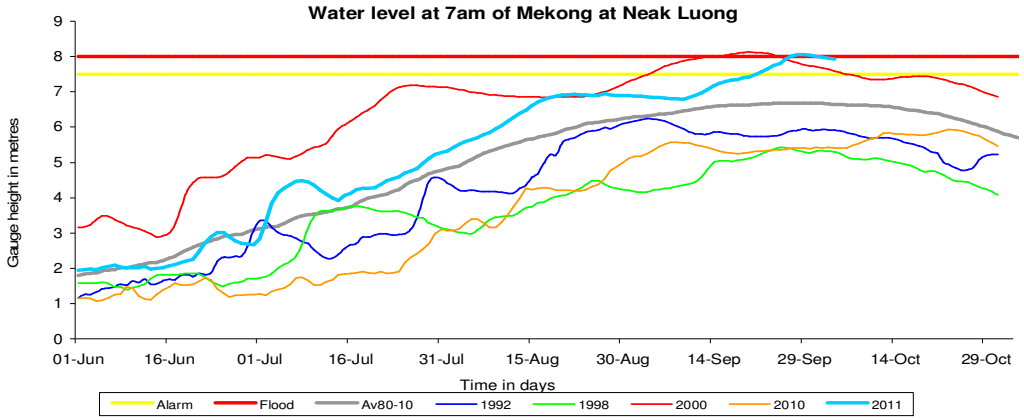

Water level at 7am of Mekong at Kratie
Gauge height in metres
0
2
4
6
8
10
12
14
16
18
20
22
24
26
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

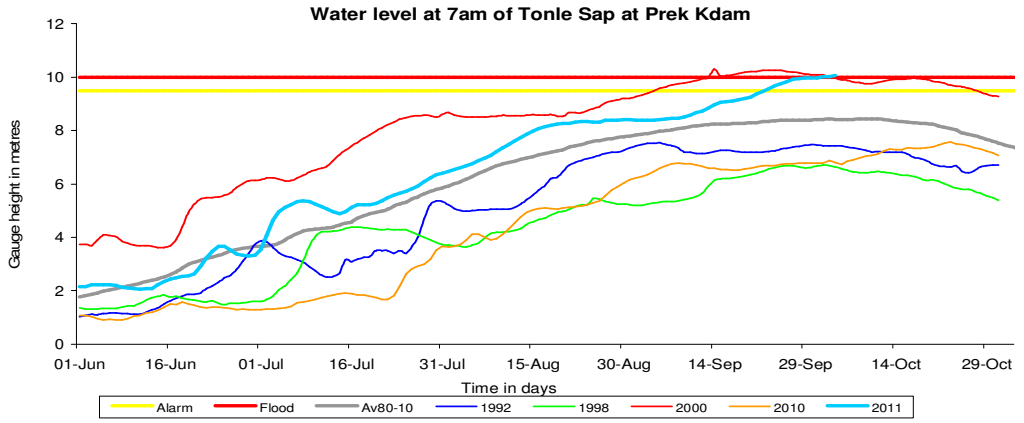

Water level at 7am of Mekong at Kompong cham
Gauge height in metres
0
2
4
6
8
10
12
14
16
18
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

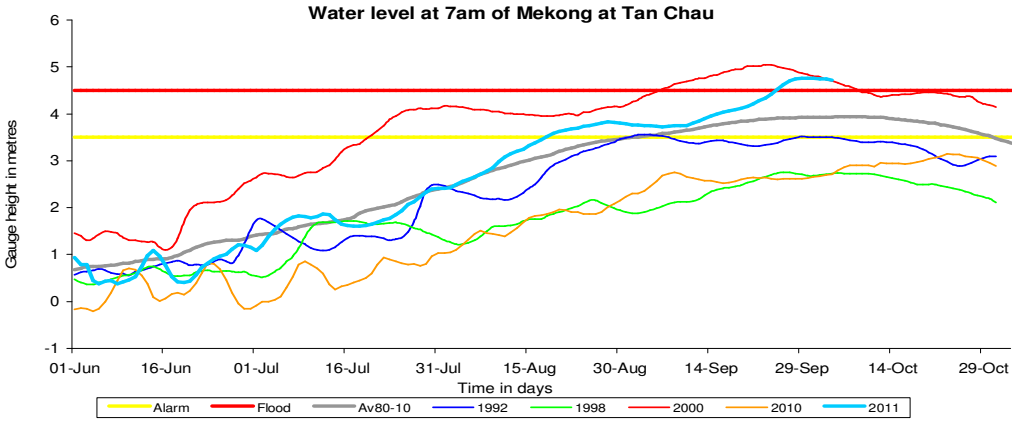

Water level at 7am at Phnom Penh Chaktomuk
Gauge height in metres
0
2
4
6
8
10
12
14
16
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011

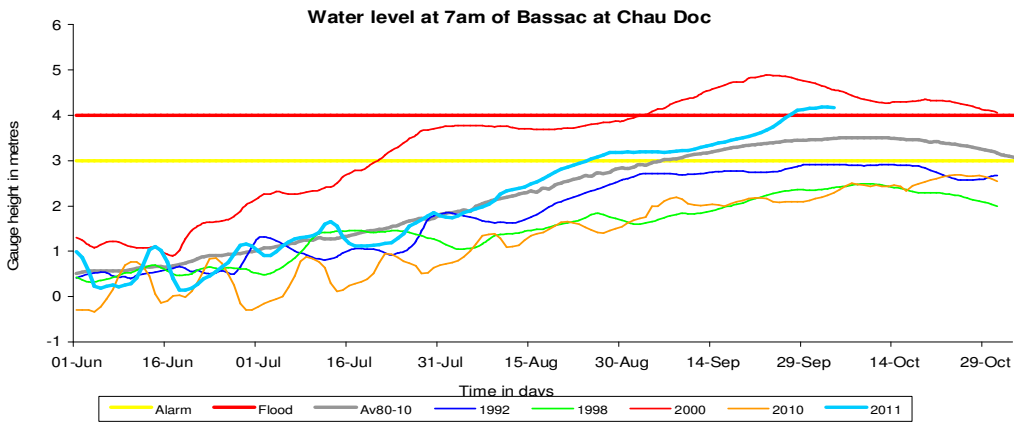

Water level at 7am of Tonle Sap at Phnom Penh Port
Gauge height in metres
0
2
4
6
8
10
12
14
16
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011


Water level at 7am of Bassac at Koh Khel
Gauge height in metres
0
1
2
3
4
5
6
7
8
9
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011


Water level at 7am of Mekong at Neak Luong
Gauge height in metres
0
1
2
3
4
5
6
7
8
9
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011


Water level at 7am of Tonle Sap at Prek Kdam
Gauge height in metres
0
2
4
6
8
10
12
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011


Water level at 7am of Mekong at Tan Chau
Gauge height in metres
-1
0
1
2
3
4
5
6
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011


Water level at 7am of Bassac at Chau Doc
Gauge height in metres
-1
0
1
2
3
4
5
6
01-Jun
16-Jun
01-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Time in days
Alarm
Flood
Av80-10
1992
1998
2000
2010
2011