The history of MRC supported discharge measurements in the lower-Mekong Basin, and existing protocols for data analysis, transfer and sharing

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Outline

- Available measured discharge data at MRC
- Data acquisition procedure
- Current discharge data at MRC
- How do we store data?
- Hydrological yearbook
- Processes for data request

Available measured discharge data in MRC

	Station	Period
Cambodia	36	1960-2001
Lao PDR	36	1960-2005
Thailand	37	1960-2004

Lao PDR

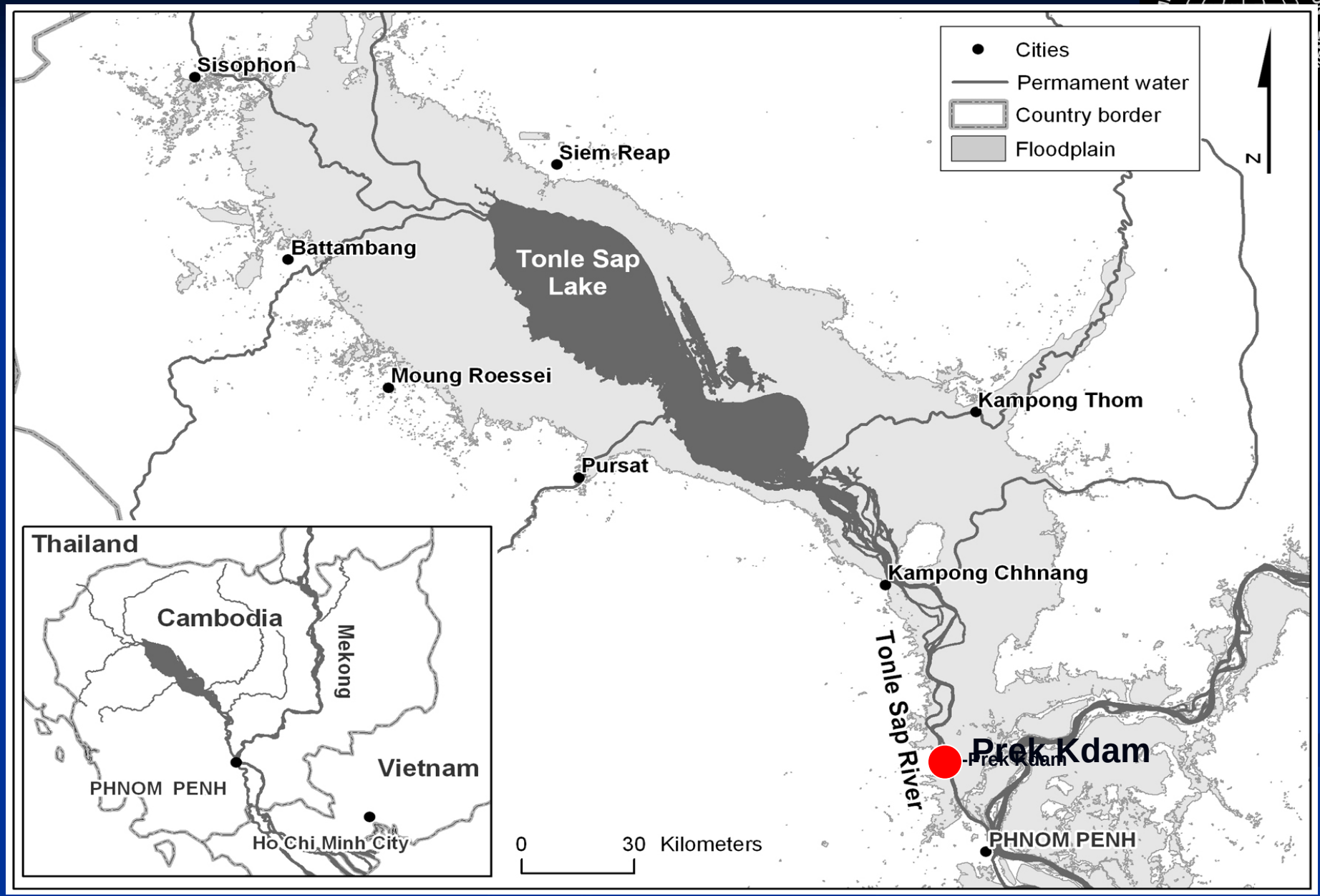
No.	Station		River name	Coordinates		Country	Discharge measurement data availability
	Code	Name		Latitude	Longitude		
1	011201	Luang Prabang	Mekong	19.8917	102.1367	Laos	60,61,67,68,71,72,86,87,90-92,95-02
2	011901	Vien Tiane	Mekong	17.9283	102.6200	Laos	60,61,67-71,73,87,91,94-04
3	013102	Thakhek	Mekong	17.3933	105.8067	Laos	94-04
4	013401	Savannakhet	Mekong	16.5617	105.7467	Laos	94-04
5	013901	Pakse	Mekong	15.1167	105.8000	Laos	60,61,67,71,73,86,87,90,91,97-02
6	100102	Muong Ngoy	Nam Ou	20.7017	102.7583	Laos	90-92,95-02
7	110101	Ban Sibounhom	Nam Suong	19.9700	102.2733	Laos	90,92,95-02
8	110201	Ban Kok Van	Nam Pa	19.9533	102.2983	Laos	90,92,95-02
9	120101	Ban Mixay (Ban Mout)	Nam Khan	19.7867	102.1767	Laos	95,96,98-02
10	120102	Ban Pak Bak (downstream)	Nam Khan	19.7433	102.2800	Laos	90-92,95-02
11	230101	Ban Pak Kanhoung	Nam Ngum	18.4183	102.5500	Laos	90-02,05
12	230103	Ban Pak Ngum	Nam Ngum	18.1450	103.1017	Laos	90,91
13	230110	Ban Na Luang	Nam Ngum	18.9133	102.7783	Laos	90-92,94,96-02,05
14	230201	Ban Hin Heup	Nam Lik	18.6600	102.3550	Laos	90-94,96-02,05
15	230205	Muong Kasi	Nam Lik	19.2320	102.2570	Laos	90-02,05
16	230501	Vang Vieng	Nam Song	18.9230	102.4500	Laos	90-02,05
17	240103	Tadleuk	Nam Leuk			Laos	91-93
18	250101	Muong Mai	Nam Nhiep	18.5050	103.6583	Laos	90-02,05
19	260101	Muong Borikhane	Nam Sane	18.5617	103.7367	Laos	90-02,05
20	270903	Ban Signo	Nam Theun	17.8450	105.0520	Laos	90-02,05
21	320101	Se Bang Fai	Se Bang Fai	17.0720	105.9850	Laos	96-98,00,02
22	320107	Mahaxai	Se Bang Fai	17.4133	105.2020	Laos	90-96,98-02,05
23	350101	Ban Keng Done	Se Bang Hieng	16.1850	105.3170	Laos	90-93,95-02
24	350105	Tchepon (Sop Nam)	Se Bang Hieng	16.6867	106.2183	Laos	90-99,01-02
25	350201	Muong Nong	Se La Nong	16.3700	106.5133	Laos	90-91,94,96-01
26	350301	Ban Muong Chan	SePon	16.6600	106.2920	Laos	90-92,94-02
27	350401	Highway Bridge	Se Thamouak	16.5770	105.9133	Laos	90-92,96-02
28	350501	Ban Phalane	Sexangxoy	16.6570	105.5680	Laos	90-92,94,96-02
29	350601	Kengkok	Se Champhone	16.4450	105.2030	Laos	89,96-02
30	350602	Dong Hen	Se Champhone	16.6980	105.2920	Laos	90-92,94,96,98,00-02
31	390102	Khong Sedone	Se Done	15.5750	105.8150	Laos	90-96,05
32	390103	Saravanne	Se Done	15.7100	106.4500	Laos	90-93,02,05
33	390105	Souvanna Khili	Se Done	15.3967	105.8250	Laos	90-02,05
34	390110	Ban Done Xe	Se Done	15.3317	105.8170	Laos	92
35	430106	Veun Khene	Sekong	14.8098	106.7778	Laos	90-92,94,98,99,05
36	430107	Khoueng Sekong	Se Kong	15.4334	106.7334	Laos	01-02,05

Thailand

No.	Station		River name	Coordinates		Country	Discharge measurement data availability
	Code	Name		Latitude	Longitude		
1	010501	Chiang Sean	Mekong	20.2734	100.0834	Thailand	60-62,68-75,94-04
2	011903	Chiang Khan	Mekong	17.8967	101.6684	Thailand	67-69,71-75,96-04
3	012001	Nong Khai	Mekong	17.8767	102.7200	Thailand	69-75,83-04
4	013101	Nakhon Phanom	Mekong	17.3984	104.8034	Thailand	60-65,67-75,94-04
5	013402	Mukdahan	Mekong	16.5400	104.7367	Thailand	60-75,83,87-04
6	013801	Khong Chiam	Mekong	15.3184	105.5000	Thailand	65-67,69,72-75,95-97,00-04
7	040101	Ban Pa Yang	Nam Mae Kham	20.2334	99.8067	Thailand	91,95
8	040201	Ban Huai Yano Mai	Nam Mae Chan	20.1117	99.7850	Thailand	91,95
9	050104	Chiang Rai	Nam Mae Kok	19.9184	99.8500	Thailand	91-92
10	050105	Ban Tha Ton	Nam Mae Kok	20.0600	99.3634	Thailand	91,95
11	050201	Ban Tha Mai Liam	Nam Mae Fang	20.0200	99.3584	Thailand	91,95
12	050301	Ban Tha Sai	Nam Mae Lao	19.8534	99.8434	Thailand	91,95
13	051001	Dam Site	Nam Mae Suai	19.7000	99.5200	Thailand	91,95
14	051101	Dam Site	Nam Mae Pun Luang	19.4334	99.4584	Thailand	91,95
15	070103	Thoeng	Nam Mae Ing	19.6867	100.1917	Thailand	91,95
16	140101	Ban Pak Huai	Nam Heung	17.7034	101.4150	Thailand	00-04
17	140201	Dan Sai	Nam Man	17.2850	101.1517	Thailand	91,95
18	140301	Dam Site	Nam San	17.4317	101.2700	Thailand	91,95
19	150101	Wang Saphung	Nam Loei	17.2984	101.7800	Thailand	91,95
20	150102	Ban Wang Sai	Nam Loei	17.0517	101.5200	Thailand	91,95
21	290102	Ban Tha Kok Daeng	Nam Songkhram	17.8617	103.7800	Thailand	91,95
22	310102	Nam Kae	Nam Kam	16.9550	104.5084	Thailand	91,95
23	310201	Ban Tham Hai Bridge	Nam Pung	17.0800	104.2567	Thailand	91,95
24	330103	Ban Na Kham Noi	Huai bang Sai	16.7184	104.6250	Thailand	91,95
25	370104	Yasothom	Nam chi	15.7817	104.1417	Thailand	91,95
26	370122	Ban Chot	Nam Chi	16.1000	102.5767	Thailand	91,95
27	370210	Ban Kae (Si Chomphu)	Nam Pong	16.8667	102.1850	Thailand	91,95
28	370805	Ban Tha Dua	Lam Choen	16.4934	102.1284	Thailand	91-92,95
29	371101	Ban Nong Kiang	Huai Rai	16.1334	101.6667	Thailand	91,95
30	371203	Ban Tad Ton	Huai Pa Thao	15.9417	102.0300	Thailand	91-92,95
31	371509	Ban Na Thom	Nam Yang	16.0584	104.0384	Thailand	91,95
32	380103	Ubon	Nam Mun	15.2217	104.8617	Thailand	91,95
33	380111	Pak Mun	Nam Mun	15.3084	105.4950	Thailand	91-92,95
34	380127	Kaeng Saphu Tai	Nam Mun	15.2400	105.2484	Thailand	91-92,95
35	380134	Rasi Salai	Nam Mun	15.3350	104.1617	Thailand	91,95
36	381206	Ban Huai Khayuong	Huai Khayuong	15.0050	104.6384	Thailand	91,95
37	381503	Ban Fang Phe	Lam Dom Yai	14.6900	105.1600	Thailand	91,95

Cambodia

No.	Station		River name	Coordinates		Country	Discharge measurement data availability
	Code	Name		Latitude	Longitude		
1	014501	Stung Treng	Mekong	13.5451	106.0166	Cambodia	64-66,91-93,99-00
2	014901	Kratie	Mekong	12.2398	105.9871	Cambodia	60-69
3	019801	Chroy Chang Var	Mekong	11.5800	105.9388	Cambodia	63-65,89-90,93,96-99,01-03
4	019802	Kompong Cham	Mekong	11.9093	105.3877	Cambodia	61,99-03
5	019806	Neak Luong	Mekong	11.2609	105.2843	Cambodia	98-99, 01-03
6	020101	Phnom Penh Port	Tonle Sap	11.5750	105.9228	Cambodia	2001-03
7	020102	Prek Kdam	Tonle Sap	11.8133	105.8051	Cambodia	92,93,96-99,01-02
8	033401	Bassac Chaktomouk	Bassac	11.5516	105.9330	Cambodia	61,63-65
9	033402	Koh Khel	Bassac	11.2396	105.0399	Cambodia	2002
10	430103	Chantangoy	Sekong	13.5641	106.0565	Cambodia	92-93,99-00
11	440101	Ban Kamphun	Sesan	13.5341	106.0564	Cambodia	92-93,99-00
12	440102	Voeun Sai	Sesan	13.9676	106.8141	Cambodia	00
13	440103	Andaung Meas	Sesan	14.0572	107.1070	Cambodia	00
14	450101	Lumphat	Sre Pork	13.5481	106.5285	Cambodia	00
15	520101	Mong Kolborey	Mongkol Borey	13.5037	103.0191	Cambodia	62-63,98-99,01
16	530101	Sisophon	Sisophon	13.6139	102.9981	Cambodia	62-63,98-99,01
17	540101	Kralanh	Stung Sreng	13.5436	103.5432	Cambodia	62-63,98-99,01
18	550101	Treng	Stung Sangker	12.8693	103.1390	Cambodia	61-62,00-01
19	550102	Battambang	Stung Sangker	13.0560	103.1986	Cambodia	62-63,98-99,01
20	560101	Bot Chhvear/Untac Bridge	Siem Reap	13.3443	103.9956	Cambodia	99,01
21	570101	Kompong Kdei	St. Chikreng	13.1267	105.3393	Cambodia	62-63,98-99,01
22	580101	Pursat	Stung Pursat	12.6627	105.0543	Cambodia	62-63
23	580104	Khum Viel	Stung Pursat	12.1794	103.7434	Cambodia	98-99,01
24	580110	Kbal hong(up)	Pursat	12.6806	105.0798	Cambodia	62-63
25	580201	Peam	Pursat	12.1500	103.7000	Cambodia	99-01
26	580301	Prey Klong(down)	Stung Pursat	12.1106	103.9136	Cambodia	94,01
27	580302	Prey Klong(up)	Stung Santre	12.5054	103.2144	Cambodia	98
28	581102	Svay Don Keo	Pursat	12.7703	102.8791	Cambodia	62-63
29	590101	Boribo	Stung Boribo	12.3476	105.3805	Cambodia	62-63,98-99,01
30	600101	Kompong Chen	Stung Staung	12.9375	105.5825	Cambodia	62-63,98-99,01
31	610101	Kg. Thom	Stung Sen	12.7075	105.8730	Cambodia	62-65,98-99,01
32	610102	Kompong Putrea	Stung Sen	13.2173	105.2635	Cambodia	01
33	620101	Kg. Thmar	Stung Chinit	12.5010	105.1309	Cambodia	98-99,01
34	640101	Anlong Touk	St. Prek Thnot	11.4355	105.4434	Cambodia	63-65
35	640102	Thnous Loung/Kg. Speu	St. Prek Thnot	11.4564	105.5100	Cambodia	94,00
36	640103	PeamKhley-dam site	St. Prek Thnot	11.4705	105.3690	Cambodia	94,96-00



Source : 2nd informal TG meeting

Measurements at Prek Kdam

Year	Tot. no of measurm.	Inflow meas.	Outflow meas.	Project	Method	Data extracted from:
1992	2	0	2			WUP-FIN datasheet
1993	19	0	19			HYMOS
1996	10	0	10			HYMOS
1997	7	0	7			HYMOS
1998	7	4	3			HYMOS
1999	5	1	4			HYMOS
2000	3	2	1	Chaktomouk project	ADCP	WUP-FIN database
2001	8	8	0		ADCP?	HYMOS
2002	12	3	9	WUP-JICA	ADCP	Report, Vol. 2
2003	2	0	2	WUP-JICA	ADCP	Report, Vol. 2
2005	6	6	0	WUP-FIN	ADCP	WUP-FIN database
2006	15	10	5	WUP-FIN	ADCP	WUP-FIN database
Sum	96	34	62			

Source : 2nd informal TG meeting

Field sheet for discharge measurement

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

(2)

Ministry of Communication Transport Post and Construction
Department of Communication
Inland Waterways Division

River/Station ...Mekong... Location Savannakhet Date 20.1.04 Total of sheets ..... Sheet Number : .....
Survey by : ..... Width : 1412 m Mean Depth : .....m Difference :..... m Time .....
Computed by : ..... Cross section area : 3550,60 m2 Method of measurement : 0.2 0.8 Number of vertical :.....18.....
Checked by : ..... Discharge : 2119,304 m^3 / sec. Mean gauge hight : .....0.32.....m

Description

Type of equipment :.....OSS-B1
Serial number :.....
Number of revolut./Signal...1/1
Sigerweight : ...6.8.....Kg
Stream temperature :.....

Water level in metres			
Time	Recorder paper	Automatic recorder	Staff gauge
9:00			0.32
12:00			0.32

No.	Name of Surveyor	Position	Type of Equip S/N	Kind of instrument		Mechanician
				Before use	After use	
1						
2						
3						
4						
5						

A.Caunter	
Electric signal	✓
Measured	
Listened	
B. Method depht Meas.	
Sling cable:	✓
Other method	
C. Final of work	
Very good	
Good	✓
Fair	

1.Climat characterist	
Fine&Clear	✓
Rain	
Hawyrain	
2. Storm	
No storm	✓
Midle storm	
Strong storm	
3.Staff gauge	
Very good	
Good	✓
Fair	
4.Water flow	
Turbulent	
Regulary	✓

9:00 H = 0,32 m

12:00 H = 0,32 m

MEKONG RIVER COMMISSION

Name of river..Mekong..Location..Savannakhet..Date01/20/04..Discharge measurement No.....m,Sheet No.....Current Meter Type:..OSS-B1..

No.....Propeller:Plastic/Metal,Pitch: 0,125 m,Diameter:.....mm,Table/formula,a=.....b=.....Impulse Counter:..1..1.....

No. Of Vert.	Angle	Dist. from initial point	Width of section	Depth of sound.	Vertical angle	Wet line correc.	Correc ted depth	Average depth in section	Area m2	Depth of obser-vation	Number of revo-lution	Time in seconds	Measu. veloc. at point	Mean meas. veloc. in vert.	Mean correc. veloc. in vert.	Correc. mean veloc. in sect	Discharge m3/s
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		0,00															
			34,00					1,60	54,40							0,271	14,769
		34,00		3,20			3,20			0,64	224	50	0,598	0,543			
			80,00					3,50	280,00	2,56	182	50	0,488			0,582	163,083
		114,00		3,80			3,80			0,76	278	50	0,740	0,622			
			80,00					4,00	320,00	3,04	188	50	0,504			0,674	215,837
		194,00		4,20			4,20			0,84	289	50	0,769	0,727			
			80,00					3,85	308,00	3,36	257	50	0,685			0,707	217,666
		274,00		3,50			3,50			0,70	277	50	0,738	0,686			
			80,00					3,50	280,00	2,80	238	50	0,635			0,594	166,213
		354,00		3,50			3,50			0,70	235	50	0,627	0,501			
			80,00					3,50	280,00	2,80	139	50	0,375			0,494	138,230
		434,00		3,50			3,50			0,70	234	50	0,625	0,486			
			80,00					3,10	248,00	2,80	129	50	0,348			0,523	129,770
		514,00		2,70			2,70			0,54	221	50	0,590	0,560			
			80,00					3,10	248,00	2,16	198	50	0,530			0,500	123,900
		594,00		3,50			3,50			0,70	203	50	0,543	0,439			
			80,00					2,90	232,00	2,80	124	50	0,335			0,452	104,923
		674,00		2,30			2,30			0,46	182	50	0,488	0,465			
			80,00					1,70	136,00	1,84	165	50	0,443			0,468	63,653
		754,00		1,10			1,10			0,22	165	50	0,443	0,471			
			80,00					1,05	84,00	0,88	186	50	0,498			0,534	44,838
		834,00		1,00			1,00			0,20	233	50	0,622	0,597			
			80,00					1,15	92,00	0,80	214	50	0,572			0,682	62,718
		914,00		1,30			1,30			0,26	317	50	0,843	0,767			
			80,00					1,45	116,00	1,04	259	50	0,690			0,762	88,385
		994,00						Total :								Total :	

MEKONG RIVER COMMISSION

Name of river.....Location.....Date.....Discharge measurement No.....m,Sheet No.....Current Meter Type:.....

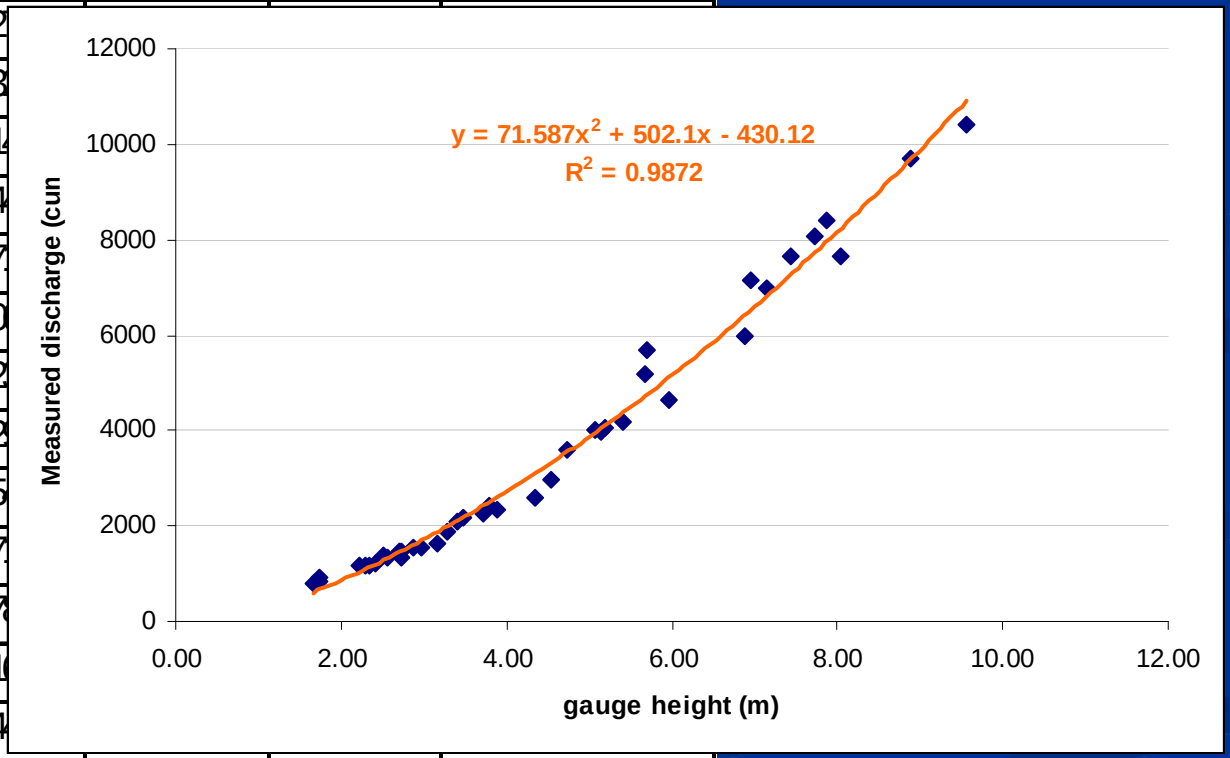
No.....Propeller:Plastic/Metal,Pitch:.....m,Diameter:.....mm,Table/formula,a=.....b=.....Impulse Counter:.....

No. Of Vert.	Angle	Dist. from initial point	Width of section	Depth of sound.	Vertical angle	Wet line correc.	Correc ted depth	Average depth in section	Area m2	Depth of obser-vation	Number of revo-lution	Time in seconds	Measu. veloc. at point	Mean meas. veloc. in vert.	Mean correc. veloc. in vert.	Correc. mean veloc. in sect	Discharge m3/s
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		994,00		1,60			1,60			0,32	265	50	0,706	0,757			
			80,00					1,85	148,00	1,28	304	50	0,809			0,738	109,264
		1074,00		2,10			2,10			0,42	279	50	0,743	0,719			
			80,00					2,25	180,00	1,68	261	50	0,696			0,730	131,468
		1154,00		2,40			2,40			0,48	289	50	0,769	0,742			
			80,00					2,40	192,00	1,92	268	50	0,714			0,726	139,349
		1234,00		2,40			2,40			0,48	270	50	0,719	0,710			
			80,00					2,25	180,00	1,92	263	50	0,701			0,644	115,846
		1314,00		2,10			2,10			0,42	218	50	0,582	0,577			
			80,00					1,95	156,00	1,68	214	50	0,572			0,546	85,219
		1394,00		1,80			1,80			0,36	219	50	0,585	0,515			
			18,00					0,90	16,20	1,44	166	50	0,446			0,258	4,175
		1412,00															
									3550,60								2119,304
								Total :								Total :	

Discharge Measurements Data 2000

Mekong River At Chiang Saen

No.	Date	Width (m)	Area (m2)	Mean Velocity (m/ sec)	Gage Height (m)	Measured Discharge Cumecs
1	6-Jan-2000	383.1	1129.41	1.042	2.30	1176.839
2	13-Jan-2000	383.1	1094.26	1.069	2.23	1169.409
3	7-Feb-2000	384.1	12			
4	17-Feb-2000	381.0	93			
5	2-Mar-2000	383.6	11			
6	16-Mar-2000	381.1	84			
7	5-Apr-2000	381.1	97			
8	20-Apr-2000	383.1	10			
9	4-May-2000	384.1	12			
10	11-May-2000	384.1	12			
11	18-May-2000	386.6	15			
12	25-May-2000	387.1	17			
13	8-Jun-2000	393.1	17			
14	15-Jun-2000	401.1	21			
15	22-Jun-2000	426.6	24			
16	29-Jun-2000	426.0	2323.63	1.742	5.20	4047.242
17	6-Jul-2000	426.1	2280.37	1.735	5.14	3956.142
18	13-Jul-2000	457.1	3232.02	2.374	7.44	7672.236



Rating curves at MRC

Appendix 2. Rating Equations and Flood Alarm Levels

Data in this appendix may be used to convert discharge to water level and vice versa. For example, the annual maximum discharges with a given recurrence interval tabulated in Appendix 1 can be converted to a maximum annual water level with the same annual risk of occurrence. This figure can then be compared with the flood alarm levels reported in A2.2, for example:

A 2.1 *Current rating equations for the hydrometric stations on the Mekong mainstream*

Mainstream Site	Coefficient			Gauge Zero m.msl	Equations	
	a	b	c		Q →→ H	H →→ Q
Chiang Saen	0.838	1.892	132.7	357.1	H = (Q/c)**(1./b)-a	Q = c*(H+a)**b
Luang Prabang	1.38	2.16	29.83	267.2	≈	≈
Chiang Khan	6.805	3.545	0.347	194.1	≈	≈
Vientiane	5.99	2.72	7.14	158.0	≈	≈
Nong Khai	6.29	3.02	2.53	153.6	≈	≈
Nakhon Phanom	1.526	1.533	562.0	131.0	≈	≈
Thakhek	1.09	1.83	273.8	129.6	≈	≈
Savannakhet	2.97	1.91	217.66	125.4	≈	≈
Mukdahan	1.7 3	1.81	271.0	124.2	≈	≈
Khong Chiam	0.67	1.51	527.3	89.0	≈	≈
Pakse	1.60	1.70	454.7	86.5	≈	≈
Stung Treng*	-0.94	1.49	1839.0	36.8	≈	≈
Kratie**	Rising Stage			-1.08	H = (Q**(1./2.1)+10.16) / 8.16	Q = (8.16*H-10.16) ** 2.1
	Falling Stage				H = (Q**(1/2.5) – 1.26) / 3.3	Q = (3.3*H +1.26) ** 2.5

* Old rating
** Mekong at Kratie (WUP-JICA, 2004), Draft Final Report, Main Report Volume-I, p.II-36

Source : Annual Mekong Flood Report 2006

Steps in data acquisition

- ToR on discharge measurement
- Send ToR to member countries
- Acceptance of ToR by member countries
- Data collection by member countries
- Data delivery to MRC

Current Discharge Data Acquisition

No.		Country
1	Chiang S	Thailand-Laos
2	Chiang K	Thailand-Laos
3	Nong Kh	Thailand-Laos
4	Nakhon	Thailand-Laos
5	Mukdaha	Thailand-Laos
6	Ban Dan	Thailand-Laos
7	Ban Pak	Thailand-Laos
8	Stung Tr	Cambodia
9	Kratie	Cambodia
10	Kompon	Cambodia
11	Neak Lu	Cambodia
12	Prek Kda	Cambodia
13	Bassac (	Cambodia
14	Koh Khe	Cambodia
15	Tan Cha	Viet Nam
16	My Thua	Viet Nam
17	Chau Do	Viet Nam
18	Can Tho	Viet Nam
19	Vam Nac	Viet Nam

Details on discharge measurement in Thailand, Lao PDR and Cambodia

- **4 times/month** in wet season (Jun.-Oct.) and **2 times/month** in dry season (Nov.-May.) : totally around 35-40 times/year
- Lao PDR – Thailand : joint-discharge measurement by ***current meter***
- Cambodia : discharge measurement by ***ADCP***

Discharge measurement in Viet Nam

Equipment used : both ADCP and Current Meter

- Frequency of measurement
  - Dry season : every hour by current meter (Tan Chau, Chau Doc and Vam Nao) and ADCP (all 5 stations)
  - Wet season : 40 times by current meter (Vam Nao, My Thuan and Can Tho) and ADCP (Tan Chau and Chau Doc)

How do we store data?

	Historical data	Operational data		
		Manual reading	AHNIP	HYCOS
Data sources	Validated data from countries	Gauge reading at 7 AM	Stations via national data terminal	Stations directly
Database Software	HYMOS	HYDMET (via ftp)	HYDMET	HYDMET
Type of database	Historical (daily)	Excel spreadsheet	Near real-time (transfer once per day)	Real-time (hourly)

Prepar earbook

MEKONG AT VIENTIANE (KM 4), LAO PDR (011901)

Station Description

Location:

Lat.17° 55.7' N, long.102° 37.2'E, in Customs compound at village of Wat Sop, 4 km downstream of Vientiane and about 1,580 km from the sea. All flow measurements made from boat at Ban Wat Sop, 2.5 km downstream of gauge.

SEBANGFAI AT MAHAXAI (320107), LAO PDR

SEDIMENT CONCENTRATION (P.P.M. BY WEIGHT), YEAR 2000

DAY	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
1							30	21	99			
2										29		
3								25				
4												
5						18		34				
6												
7							30	65	50	30		
8												
9								98				
10						19	64					
11								44				
12									72			
13							83	30	71			
14												
15						29		27				
16												
17								30				
18												
19								26	86			
20						43						
21								25				
22												
23												
24								34	112			
25						20	29					
26			4									
27												8
28										23		
29				8	16						9	
30												
31												

MEKONG AT PAKSE(013901), LAO PDR

SEDIMENT CONCENTRATION (P.P.M. BY WEIGHT), YEAR 2000

JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
							701				
		18									
									491		
						379					
								849			
			36								
										153	79
							539				
									265		
					612	939					
								713			
				473							

Processes for data request

- Official request to MRC
  - Purpose of data usage
  - Type of data, period and location
- Approval by MRC
  - Commercial
  - Non-commercial

Thank you for your attention