

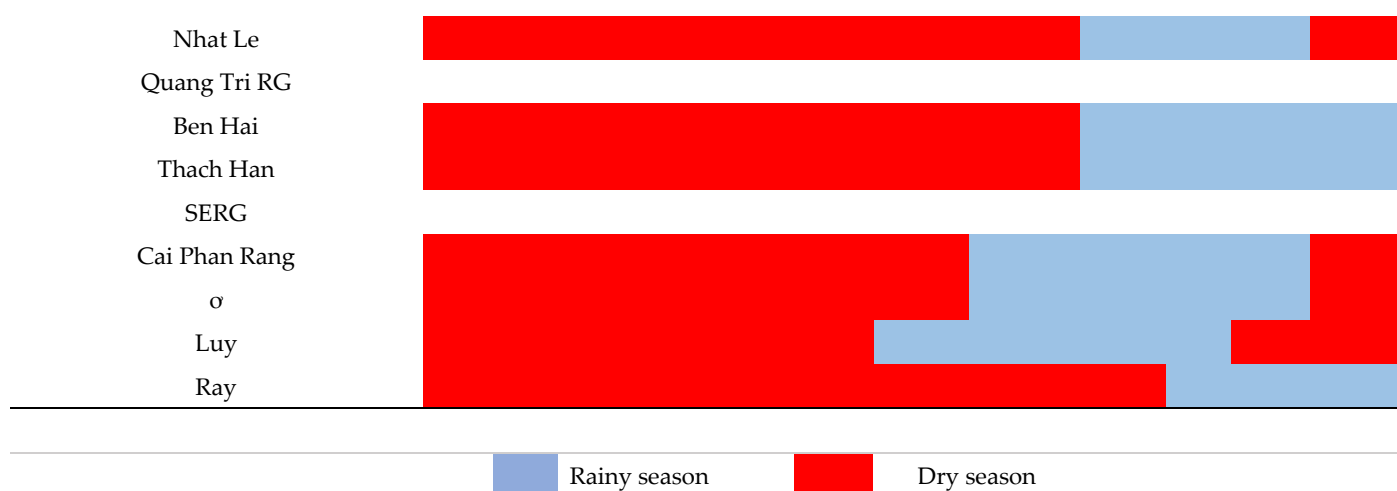
Table S1. Total average annual rainfall in the basins in the period 1980–2020.

Basin/River Basin Group	Basin Area (km ²)	Rainfall (mm)		
		Average	Rainy Season	Dry Season
Bang Giang - Ky Cung	10,847	1,650	1,353	297
Red - Thai Binh	88,860/169,000 *	1,650	1,341	309
Ma	17,653/28,400 *	1,620	1,134	486
Ca	17,900/27,200 *	1,703	1,141	588
Huong	3,066	2,600	1,950	650
Vu Gia - Thu Bon	10,035	2,700	2,214	486
Tra Khuc	3,337	2,642	1,945	696
Kon - Ha Thanh	3,809	2,111	1,554	556
Ba	13,417	1,674	1,468	206
Se San	11,510	1,789	1,490	298
Srepok	18,230	1,823	1,519	304
Dong Nai	36,530/44,100 *	2,100	1,575	525
Cuu Long (Vietnam Mekong)	39,945/795,000 *	1,870	1,558	312
Cai Ninh Hoa	916	1,508	1,234	274
River basin group in Nha Trang	1,732	2,387	2,194	193
River basin group in Quang Ninh	1,957	1,897	1,509	388
River basin group in Quang Binh	7,188	2,334	1,889	445
River basin group in Quang Tri	3,583	2,353	1,982	371
River basin group in Southeast	6,402	1,310	1,183	127

Note: * First and second numbers represent the basin area inside Vietnam and whole basin area, respectively. Data source: DWRM, 2022. Report on National Master Plan for Water Resources in the Period 2022-2030 with a Vision to 2050. Archives of Ministry of Natural Resources and Environment (in Vietnamese)

Table S2. Seasonal months in the river basin in the period 1980–2020.

River Basin	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Bang Giang - Ky Cung												
Red - Thai Binh												
Ma												
Ca												
Huong												
Vu Gia - Thu Bon												
Tra Khuc												
Kone												
Ba												
Se San												
Srepok												
Dong Nai												
Cuu Long (Vietnam Mekong)												
Cai - Ninh Hoa												
Cai - Nha Trang												
Quang Ninh RG												
Quang Binh RG												
Gianh												



Data source: Data source: DWRM, 2022. Report on National Master Plan for Water Resources in the Period 2022-2030 with a Vision to 2050. Archives of Ministry of Natural Resources and Environment (in Vietnamese).

Table S3. Total average annual discharge in the basins in the period 1980–2020.

Basin/River Basin Group	Basin Area		Total Average Annual Discharge				Total (Mil. m³)
	Inside Vietnam		Whole Basin (Km²)	Originating From Inside Vietnam		Originating From Outside Vietnam (Mil. m³)	
	(km²)	(%)		(Mil. m³)	(%)		
Bang Giang - Ky Cung	10,847	100		8,610			8,610
Red - Thai Binh	88,860	53	169,000	100,027	67	48,300	148,327
Ma	17,653	62	28,400	13,462	68	6,260	19,722
Ca	17,900	66	27,200	19,749	83	4,110	23,859
Huong	3,066	100		8,212			8,212
Vu Gia - Thu Bon	10,035	100		19,347			19,347
Tra Khuc	3,337	100		8,371			8,371
Kon - Ha Thanh	3,809	100		4,742			4,742
Ba	13,417	100		12,045			12,045
Se San	11,510	60	19,031	12,836			12,836
Srepok	18,230	59	30,841	18,396			18,396
Dong Nai	36,530	83	44,100	38,055	95	1,925	39,980
Cuu Long (Vietnam Mekong)	39,945	5	795,000	30,304	6	443,840	474,144
Cai Ninh Hoa	916	100		0,766			0,766
River basin group in Nha Trang	1,732	100		3,192			3,192
River basin group in Quang Ninh	1,957	100		2,762			2,762
River basin group in Quang Binh	7,160	100		10,109			10,109
River basin group in Quang Tri	3,650	100		4,667			4,667
River basin group in Southeast	6,402	100		3,307			3,307
River basin group in Central coast	17,029	100		20,964			20,964
Total				339,157		504,435	843,592

Data source: DWRM, 2022. Report on National Master Plan for Water Resources in the Period 2022-2030 with a Vision to 2050 (Draft version). Archives of Ministry of Natural Resources and Environment (in Vietnamese).

Table S4. Total average annual discharge in rainy and dry seasons in the basins in the period 1980–2020.

River Basin/River Basin Group	In Rainy Season	In Dry Season	Total Smallest Discharge In 3 Months	Smallest Discharge in A Month
	W _r (Mil. m ³)	W _d (Mil. m ³)	W ³ _{ms} (Mil. m ³)	W _{ms} (Mil. m ³)
Bang Giang - Ky Cung	6,397	2,213	412	99
Red - Thai Binh	111,586	36,741	8,997	2,775
Ma	14,483	5,239	1,471	469
Ca	15,785	8,074	2,589	812
Huong	6,034	2,178	661	159
Thu Bon -Vu Gia	12,051	7,297	1,554	399
Tra Khuc	6,106	2,265	570	152
Kone	3,360	1,382	243	65
Ba	7,562	4,483	1,044	277
Se San	9,246	3,590	842	254
Srepok	14,222	4,175	747	198
Dong Nai	31,242	8,738	1,741	465
Cuu Long (Vietnam Mekong)	336,927	137,218	31,688	9,285
Cai Ninh Hoa	615	152	35	9
River basin group in Nha Trang	1,988	1,204	367	105
River basin group in Quang Ninh	1,925	838	165	47
River basin group in Quang Binh	7,505	2,604	495	156
River basin group in Quang Tri	3,583	1,085	268	73
River basin group in Southeast	2,287	1,020	204	55
River basin group in Central coast	13,746	7,218	1,375	381

Data source: DWRM, 2022. Report on National Master Plan for Water Resources in the Period 2022–2030 with. Archives of Ministry of Natural Resources and Environment (in Vietnamese).

Table S5. Current groundwater potential and exploitable groundwater potential in river basins.

River Basin	Groundwater Potential (Mil. m ³ /year)			Exploitable Groundwater Potential (Mil. m ³ /year)
	Fresh Water	Salt Water	Total	
Bang Giang - Ky Cung	1,154	-	1,154	346
Red - Thai Binh	19,070	3,045	22,115	6,516
Ma	5,316	265	5,581	1,670
Ca	5,093	479	5,572	1,532
Huong	1,044	116	1,160	313
Thu Bon - Vu Gia	1,657	90	1,748	494
Tra Khuc	596	63	659	174
Kone	444	34	478	138
Ba	2,008	33	2,041	747
Se San	1,327	-	1,327	393
Srepok	3,481	-	3,481	1,370
Dong Nai	9,278	2,406	11,685	3,024
Cuu Long (Vietnam Mekong river)	10,346	15,525	25,872	3,104
Cai - Ninh Hoa	79	12	91	24
Cai - Nha Trang	248	34	282	78
River basin group in Quang Ninh	891	-	891	267
River basin group in Quang Binh	2,071	8	2,079	621
River basin group in Quang Tri	848	-	848	255
River basin group in Southeast Vietnam	1,033	61	1,094	325
River basin group in Central coast	3,111	245	3,356	947
Total	69,098	22,418	91,515	22,338

Data source: Vu Thanh Tam et al., 2018. Project report "Compiling a map of groundwater resources at 1:200,000 scale for provinces nationwide". Archives of National Center for Water Resources Planning and Investigation (in Vietnamese).

Table S6. Total volume of surface water exploited and used in river basins in 2015 (mil. m³/year).

Basin	Agriculture	Industry	Domestic	Others	Total
Bang Giang - Ky Cung	241	101	19	88	450
Red - Thai Binh	16,415	1,111	672	1,910	20,108
Ma	1,686	106	119	144	2,055
Ca	2,539	30	175	51	2,795
Huong	310	32	37	11	390
Thu Bon - Vu Gia	484	49	23		557
Tra Khuc	799	23	25	156	1,004
Kone	1,837	9	106		1,951
Ba	1,071	20	31	2	1,124
Se San	489	11	15	1	516
Srepok	244	16	6		266
Dong Nai	8,617	4,880	336	2,055	15,888
Cuu Long (Vietnam Mekong)	16,275	170	340	3,490	20,275
River basin group in Quang Ninh	1,222	381	124		1,727
River basin group in Central coast	465	41	56	30	592
River basin group in Southeast	7,232	81	61	127	7,502
Total	59,926	7,061	2,146	8,066	77,199

Data source: DWRM, 2022. Report on National Master Plan for Water Resources in the Period 2022-2030 with Vision to 2050. Archives of Ministry of Natural Resources and Environment (in Vietnamese).