

4.6 BASIC DATA ON INFRASTRUCTURES

Information on road network and bridge network data was collected as data on infrastructures. This data is provided by the DPWH. Road network data contains national road networks representing major roads (scale unknown), while bridge network data contains national bridge locations.

A sample of this data is shown below.

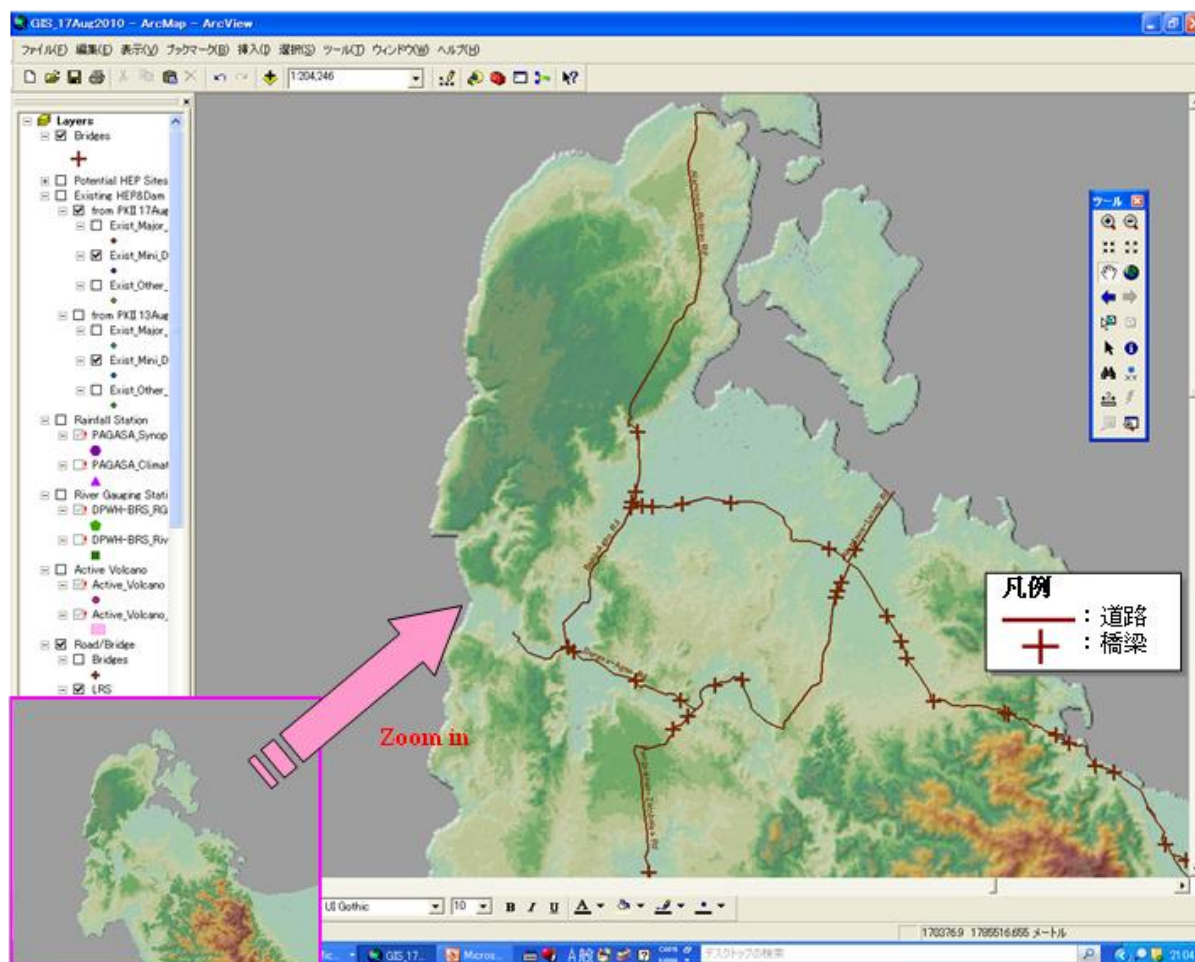


Fig. 4.6-1 Sample of Road and Bridge Network

4.7 BASIC HYDROLOGICAL DATA

4.7.1 Hydro-meteorological Data

Observation of rainfall and river discharge has been continued by the PAGASA (Philippine Atmospheric, Geophysical and Astronomical Services Administration, DOST) of DOST (Department of Science and Technology), and BRS (Bureau of Research and Standards, DPWH) of DPWH in spite of the fact that many gauging stations have been abandoned. On the other hand, observation by the NIA and NPC was abandoned before 2000, to save budget and manpower. The observation records of rainfall (daily precipitation and 2-day precipitation) for the 40 years from 1961 to 2000 at 54 gauging stations in the Philippines observed by the PAGASA, which has been investigated for the Project for Enhancement of Capabilities in Flood Control and Sabo Engineering of the DPWH implemented by JICA for 5 years since 2000 in DPWH, are being collected. In addition to these 54 stations, the PAGASA has observation records for another 122 stations.

(1) Location of Rainfall Gauging Stations

The locations of rainfall gauging stations observed by the PAGASA are shown in Fig. 4.7-1, and the status of rainfall data is shown in the below tables.

Table 4.7-1 Status of Rainfall Data (1/3)

Daily Rainfall					: Data existing						
No.	ID	Station_Name	category	Years of Record (start)	Years of Record (end)	1950	1960	1970	1980	1990	2000
1	851	General Santos South Cotobato	Synoptic	1-Jan-61	31-Dec-00						
2	132	Itbayat Batanes	Synoptic	1-Jan-91	31-Dec-00						
3	135	Basco Batanes	Synoptic	1-Jan-61	31-Dec-00						
4	222	Vigan Ilocos Sur	Synoptic	1-Jan-61	31-Dec-00						
5	223	Laoag Ilocos Norte	Synoptic	1-Jan-61	31-Dec-00						
6	232	Aparri Cagayan	Synoptic	1-Jan-61	31-Dec-00						
7	233	Tuguegarao Cagayan	Synoptic	1-Jan-61	31-Dec-00						
8	324	Iba Zambales	Synoptic	1-Jan-61	31-Dec-00						
9	325	Dagupan City Pangasinan	Synoptic	1-Jan-61	31-Dec-00						
10	328	Baguio City Benguet	Synoptic	1-Jan-61	31-Dec-00						
11	329	CLSU Munoz Nueva Ecija	Synoptic	1-Jan-91	31-Dec-00						
12	330	Cabanatuan Nueva Ecija	Synoptic	1-Jan-61	31-Dec-00						
13	333	Baler Quezon	Synoptic	1-Jan-61	31-Dec-00						
14	336	Casiguran Quezon	Synoptic	1-Jan-61	31-Dec-00						
15	425	Port Area Manila	Synoptic	1-Jan-61	31-Dec-00						
16	427	Tayabas Quezon	Synoptic	1-Jan-71	31-Dec-00						
17	428	Sangley Point Cavite	Synoptic	1-Jan-73	31-Dec-00						
18	429	NAlA(MIA) Pasay City	Synoptic	1-Jan-61	31-Dec-00						
19	430	Science Garden Quezon City	Synoptic	1-Jan-61	31-Dec-00						
20	431	Calapan Oriental Mindoro	Synoptic	1-Jan-61	31-Dec-00						
21	432	Ambulong Batangas	Synoptic	1-Jan-61	31-Dec-00						
22	434	Infanta Quezon	Synoptic	1-Jan-61	31-Dec-00						
23	435	Alabat Quezon	Synoptic	1-Jan-61	31-Dec-00						
24	440	Daet Camarines Norte	Synoptic	1-Jan-61	31-Dec-00						
25	444	Legaspi City Albay	Synoptic	1-Jan-61	31-Dec-00						
26	446	Virac Radar Catanduanes	Synoptic	1-Jan-68	31-Dec-00						
27	447	Virac Synop Catanduanes	Synoptic	1-Jan-61	31-Dec-00						
28	526	Coron Palawan	Synoptic	1-Jan-61	31-Dec-00						
29	531	San Jose Occidental Mindoro	Synoptic	1-Jan-81	31-Dec-00						
30	536	Romblon Romblon	Synoptic	1-Jan-61	31-Dec-00						
31	538	Roxas City Aklan	Synoptic	1-Jan-61	31-Dec-00						
32	543	Masbate Masbate	Synoptic	1-Jan-91	31-Dec-00						
33	546	Catarman Northern Samar	Synoptic	1-Jan-61	31-Dec-00						
34	548	Catbalogan Western Samar	Synoptic	1-Jan-61	31-Dec-00						
35	550	Tacloban City Leyte	Synoptic	1-Jan-61	31-Dec-00						
36	558	Guuan Eastern Samar	Synoptic	1-Jan-73	31-Dec-00						
37	602	Pagasa Island Palawan	Synoptic	1-Jan-74	31-Dec-00						
38	618	Puerto Prinsesa Palawan	Synoptic	1-Jan-61	31-Dec-00						
39	630	Cuyo Palawan	Synoptic	1-Jan-61	31-Dec-00						
40	637	Iloilo City Iloilo	Synoptic	1-Jan-61	31-Dec-00						
41	642	Dumaguete City Negros Oriental	Synoptic	1-Jan-61	31-Dec-00						
42	644	Tagbilaran Bohol	Synoptic	1-Jan-61	31-Dec-00						
43	646	Mactan International Airport Cebu	Synoptic	1-Jan-72	31-Dec-00						
44	648	Maasin Southern Leyte	Synoptic	1-Jan-71	31-Dec-00						
45	653	Surigao Surigao del Norte	Synoptic	1-Jan-61	31-Dec-00						
46	741	Dipolog Zamboanga del Norte	Synoptic	1-Jan-61	31-Dec-00						
47	746	Cotobato City Maguindanao	Synoptic	1-Jan-91	31-Dec-00						
48	747	Lumbia Airport Misamis Oriental	Synoptic	1-Jan-77	31-Dec-00						
49	748	Cagayan de Oro Misamis Oriental	Synoptic	1-Jan-61	31-Dec-00						
50	751	Malaybalay Bukidnon	Synoptic	1-Jan-61	31-Dec-00						
51	752	Butuan City Agusan del Norte	Synoptic	1-Jan-81	31-Dec-00						
52	753	Davao City Davao Del Sur	Synoptic	1-Jan-61	31-Dec-00						
53	755	Hinatuan Surigao Del Sur	Synoptic	1-Jan-61	31-Dec-00						
54	836	Zamboanga City Zamboanga Del Sur	Synoptic	1-Jan-61	31-Dec-00						
55	537	San Roque Bacon Sorsogon	Climatic	1-Jan-72	31-Dec-00						
56	538	Sorsogon Sorsogon	Climatic	1-Jan-73	31-Dec-94						
57	603	Barbaza Antique	Climatic	1-Jan-56	31-Dec-00						
58	607	Barotoc Viejo Iloilo	Climatic	1-Jan-71	31-Dec-99						
59	608	Cabatuan Iloilo	Climatic	1-Jan-71	31-Dec-00						
60	610	Miagao Iloilo	Climatic	1-Jan-71	31-Dec-00						
61	611	A.Bonifacio Silay Negros Occidental	Climatic	1-Jan-72	31-Dec-00						
62	615	San Carlos City Negros Occidental	Climatic	1-Jan-71	31-Dec-00						
63	616	Silay Hawaian Central Negros Occidental	Climatic	1-Jan-66	31-Dec-00						
64	617	Sipalay Negros Occidental	Climatic	1-Jan-71	31-Dec-97						
65	618	Victorias Negros Occidental	Climatic	1-Jan-66	31-Dec-97						
66	701	Central Carmen Bohol	Climatic	1-Jan-75	31-Dec-00						
67	702	Dagohoy Bohol	Climatic	1-Jan-63	31-Dec-00						
68	703	Guindulman Bohol	Climatic	1-Jan-75	31-Dec-00						
69	704	Las Salinas Loay Bohol	Climatic	1-Jan-75	31-Dec-95						
70	705	Bes Ubay Bohol	Climatic	1-Jan-78	31-Dec-00						

Source: "The Project for Enhancement of Capabilities in Flood Control and Sabo Engineering of the DPWH", JICA, 2003

Table 4.7-1 Status of Rainfall Data (2/3)

Daily Rainfall		: Data existing									
No.	ID	Station_Name	category	Years of Record (start)	Years of Record (end)	1950	1960	1970	1980	1990	2000
71	706	Pob.Bilar Bohol	Climatic	1-Jan-75	31-Dec-00						
72	707	Pob.Ilaud Inabanga Bohol	Climatic	1-Jan-75	31-Dec-00						
73	708	Pob.Loan Bohol	Climatic	1-Jan-75	31-Dec-00						
74	710	Pob.Trinidad Bohol	Climatic	1-Jan-75	31-Dec-00						
75	711	Pob.Ubay Bohol	Climatic	1-Jan-75	31-Dec-00						
76	712	Pres.Carlos P. Garcia Pitogo Bohol	Climatic	1-Jan-75	31-Dec-00						
77	713	Tinangan Tubigon Bohol	Climatic	1-Jan-66	31-Dec-00						
78	714	Bogo Medellin Milling Co. Cebu	Climatic	1-Jan-66	31-Dec-00						
79	715	Cebu S.Agro.IND.Sch. Argao	Climatic	1-Jan-78	31-Dec-00						
80	716	Kal Anan Tabogon Cebu	Climatic	1-Jan-80	31-Dec-00						
81	717	Mantalongon Dalaguete Cebu	Climatic	1-Jan-66	31-Dec-00						
82	718	Taytay Badian Cebu	Climatic	1-Jan-80	31-Dec-00						
83	720	Nonas Bayawan Negros Oriental	Climatic	1-Jan-67	31-Dec-00						
84	721	Siaton Negros Oriental	Climatic	1-Jan-67	31-Dec-00						
85	802	Barangay Olot Tolosa Leyte	Climatic	1-Jan-84	31-Dec-00						
86	803	Baybay Leyte	Climatic	1-Jan-70	31-Dec-94						
87	805	Bnac Biliran Leyte	Climatic	1-Jan-77	31-Dec-00						
88	806	Casilda Merida Leyte	Climatic	1-Jan-71	31-Dec-00						
89	807	Inopacan Leyte	Climatic	1-Jan-80	31-Dec-00						
90	809	Pob. Dagami Leyte	Climatic	1-Jan-77	31-Dec-00						
91	810	Pob. Pastrana Leyte	Climatic	1-Jan-77	31-Dec-00						
92	811	Pob. Sta Fe Leyte	Climatic	1-Jan-77	31-Dec-99						
93	812	Pob. Tolosa Leyte	Climatic	1-Jan-70	31-Dec-00						
94	813	Allen Northern Samar	Climatic	1-Jan-71	31-Dec-98						
95	815	Anahawan Southern Leyte	Climatic	1-Jan-84	31-Dec-98						
96	816	Otikon Libagon Southern Leyte	Climatic	1-Jan-70	31-Dec-00						
97	817	Pob. Bontoc Southern Leyte	Climatic	1-Jan-81	31-Dec-98						
98	904	Lupa Pula Cagayan De Tawi Tawi	Climatic	1-Jan-83	31-Dec-00						
99	905	Dapitan City Zamboanga Del Norte	Climatic	1-Jan-66	31-Dec-00						
100	906	Sindangan Zamboanga Del Norte	Climatic	1-Jan-78	31-Dec-00						
101	1008	Kisolon Sumilao Bukidnon	Climatic	1-Jan-80	31-Dec-00						
102	1016	Bonifacio Central Sch Misamis Occ	Climatic	1-Jan-72	31-Dec-00						
103	1018	Alubijid Misamis Oriental	Climatic	1-Jan-80	31-Dec-00						
104	1020	Sison Surigao Del Norte	Climatic	1-Jan-81	31-Dec-00						
105	1021	Snat Magpayong Mainit Surigao Del Norte	Climatic	1-Jan-81	31-Dec-00						
106	1106	Cantilan Surigao Del Sur	Climatic	1-Jan-66	31-Dec-96						
107	1201	Baroy Lanao Del Norte	Climatic	1-Jan-72	31-Dec-96						
108	1202	Kapatagan Lanao Del Norte	Climatic	1-Jan-71	31-Dec-00						
109	1204	Parang Maguindanao	Climatic	1-Jan-72	31-Dec-00						
110	1205	Carmen Tacurong Sultan Kudarat	Climatic	1-Jan-60	31-Dec-00						
111	1301	Bagumbayan Taguig MM	Climatic	1-Jan-75	31-Dec-00						
112	1304	NPP Research Bu.of Prison Muntinlupa	Climatic	1-Jan-71	31-Dec-97						
113	1305	Pasig Elem. Sch. Pasig MM	Climatic	1-Jan-75	31-Dec-00						
114	1306	Tipas Taguig MM	Climatic	1-Jan-75	31-Dec-96						
115	210	aneng Tabuk Kalinga Apayao	Climatic	1-Jan-68	31-Dec-00						
116	Mil_	Cosli Bangued Abra	Climatic	1-Jan-00	31-Dec-00						
117	101	Bangued Abra	Climatic	1-Jan-74	31-Dec-00						
118	102	Cosli Bangued Abra	Climatic	1-Jan-80	31-Dec-00						
119	108	Balatoc Mines Ilogon Benguet	Climatic	1-Jan-61	31-Dec-00						
120	111	VSS Gaang Port Curimao Ilocos Norte	Climatic	1-Jan-71	31-Dec-00						
121	112	San Roque Santiago Ilocos Sur	Climatic	1-Jan-71	31-Dec-00						
122	113	Sinaut Ilocos Sur	Climatic	1-Jan-69	31-Dec-00						
123	116	Masalep Tubao La Union	Climatic	1-Jan-66	31-Dec-00						
124	117	Balungao Pangasinan	Climatic	1-Jan-71	31-Dec-00						
125	118	Barrio Binalonan Pangasinan	Climatic	1-Jan-72	31-Dec-00						
126	119	Mabini Pangasinan	Climatic	1-Jan-68	31-Dec-99						
127	201	Aggunetan Lasam GatTaran Cagayan	Climatic	1-Jan-68	31-Dec-99						
128	202	Cagumitan Tuao Cagayan	Climatic	1-Jan-67	31-Dec-00						
129	205	Lallo Cagayan	Climatic	1-Jan-72	31-Dec-99						
130	208	Cullalabo Burgos Isabela	Climatic	1-Jan-83	31-Dec-00						
131	301	Morong Bataan	Climatic	1-Jan-87	31-Dec-00						
132	302	Borol Balagtas Bulacan	Climatic	1-Jan-71	31-Dec-00						
133	303	Catmon Malolos Bulacan	Climatic	1-Jan-69	31-Dec-00						
134	304	Makinabang Baliwag Bulacan	Climatic	1-Jan-69	31-Dec-00						
135	308	Polo Valenzuela Bulacan	Climatic	1-Jan-74	31-Dec-00						
136	310	Sibul Spring San Miguel Bulacan	Climatic	1-Jan-88	31-Dec-00						
137	311	San Isidro Nueva Ecija	Climatic	1-Jan-73	31-Dec-94						
138	312	Baimagalang Pampanga	Climatic	1-Jan-77	31-Dec-00						
139	314	Masantol Pampanga	Climatic	1-Jan-84	31-Dec-00						
140	317	Bolawon Sta Cruz Zambales	Climatic	1-Jan-75	31-Dec-96						

Source: "The Project for Enhancement of Capabilities in Flood Control and Sabo Engineering of the DPWH", JICA, 2003

Table 4.7-1 Status of Rainfall Data (3/3)

Daily Rainfall ☐ : Data existing

No.	ID	Station_Name	category	Years of Record (start)	Years of Record (end)	1950	1960	1970	1980	1990	2000
141	318	Palawig Zambales	Climatic	1-Jan-75	31-Dec-00						
142	320	Sta Rita Elem Sch. Cabangan Zambales	Climatic	1-Jan-75	31-Dec-95						
143	321	Sta Rita Masinloc Zambales	Climatic	1-Jan-75	31-Dec-00						
144	322	Western Luzon Agri College(Former ZNAS)	Climatic	1-Jan-75	31-Dec-00						
145	401	Gulod Laurel Batangas	Climatic	1-Jan-73	31-Dec-00						
146	403	Lobo Batangas	Climatic	1-Jan-69	31-Dec-99						
147	404	Mabini Batangas	Climatic	1-Jan-69	31-Dec-99						
148	405	Wawa Nasugbu Batangas	Climatic	1-Jan-72	31-Dec-00						
149	406	Barrio Maitim Amadeo Cavite	Climatic	1-Jan-85	31-Dec-00						
150	407	Mabolo Elem Sch. Bacoor Cavite	Climatic	1-Jan-75	31-Dec-99						
151	409	Sta Cruz Laguna	Climatic	1-Jan-56	31-Dec-00						
152	412	Tiik Lubang Occidental Mindoro	Climatic	1-Jan-66	31-Dec-98						
153	413	Brookes Point Palawan	Climatic	1-Jan-66	31-Dec-00						
154	415	Boso-Boso Antipolo Rizal	Climatic	1-Jan-72	31-Dec-00						
155	417	Sitio Tabak Montalban Rizal	Climatic	1-Jan-76	31-Dec-96						
156	501	BPI Exp.Stn.Buang Cross Tabaco Albay	Climatic	1-Jan-81	31-Dec-95						
157	503	Centro Rapu-Rapu Albay	Climatic	1-Jan-72	31-Dec-00						
158	505	Joroan Tiwi Albay	Climatic	1-Jan-67	31-Dec-00						
159	506	Malama Ligao Albay	Climatic	1-Jan-71	31-Dec-00						
160	507	Naglabong Tiwi Albay	Climatic	1-Jan-71	31-Dec-00						
161	508	Pantao Libon Albay	Climatic	1-Jan-71	31-Dec-00						
162	512	SanRamon Tabaco Albay	Climatic	1-Jan-71	31-Dec-97						
163	513	Sto Domingo Albay	Climatic	1-Jan-67	31-Dec-00						
164	514	Villa Hermosa Rapu Rapu Albay	Climatic	1-Jan-71	31-Dec-00						
165	515	San Lorenzo Ruiz Cam.Norte	Climatic	1-Jan-75	31-Dec-00						
166	517	Paracake Cam.Norte	Climatic	1-Jan-74	31-Dec-94						
167	521	Caramoan Cam.Sur	Climatic	1-Jan-72	31-Dec-00						
168	522	Mabalodbalod Tigaon Cam.Sur	Climatic	1-Jan-77	31-Dec-00						
169	523	Pob Pasacao CamarinesSur	Climatic	1-Jan-69	31-Dec-97						
170	525	Sta Cruz San Nicholas Baao Cam.Sur	Climatic	1-Jan-69	31-Dec-00						
171	527	Milagros Masbate	Climatic	1-Jan-83	31-Dec-00						
172	530	Bulusan Sorsogon	Climatic	1-Jan-72	31-Dec-98						
173	531	Donsol Sorsogon	Climatic	1-Jan-72	31-Dec-00						
174	533	Juban Sorsogon	Climatic	1-Jan-66	31-Dec-00						
175	534	Magallanes Sorsogon	Climatic	1-Jan-72	31-Dec-00						
176	536	Prieto Diaz Sorsogon	Climatic	1-Jan-72	31-Dec-00						

Source: "The Project for Enhancement of Capabilities in Flood Control and Sabo Engineering of the DPWH", JICA, 2003

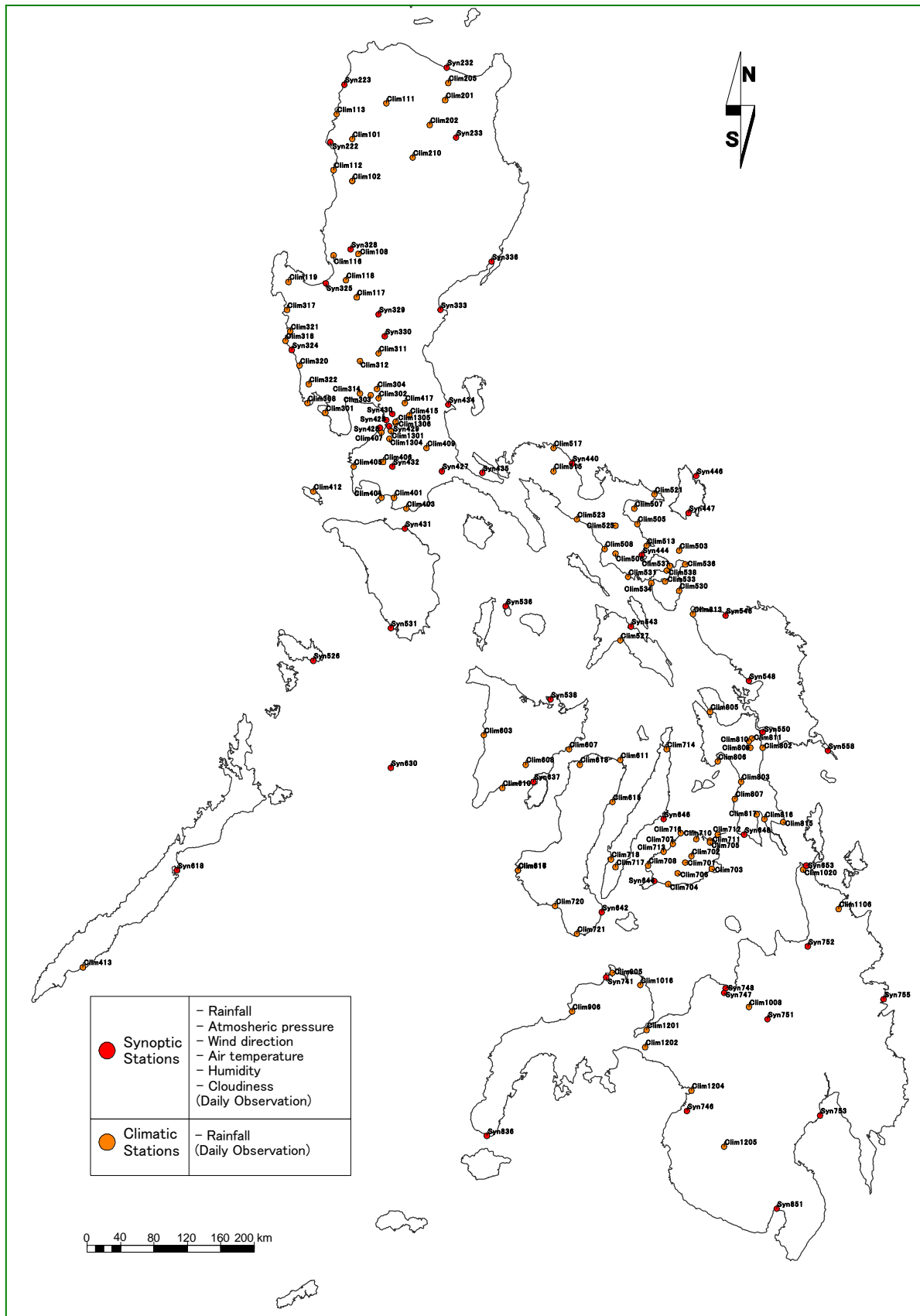


Fig. 4.7-1 Rainfall Gauging Stations

(2) Annual Rainfall Distribution

The annual rainfall distribution of the Philippines is shown below.

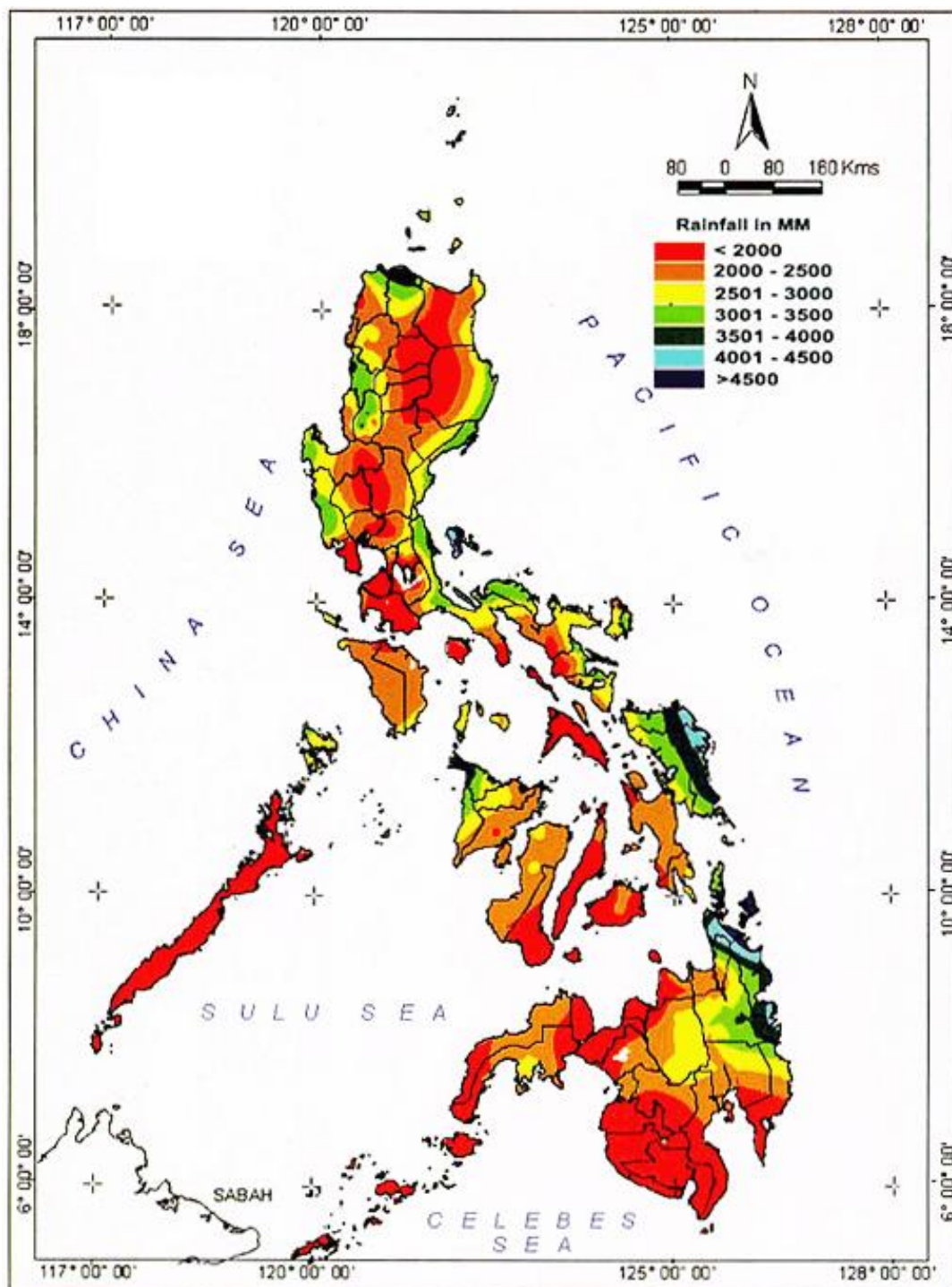


Fig. 4.7-2 Annual Rainfall Distribution

Analyzed based on normal values (1971-2000). The plotted and analyzed rainfall data was taken from 50 synoptic, 146 climate and 27 agromet stations.

Source: « Climate Statistics, » PAGASA

4.7.2 River System Maps

(1) River Profiles

River profiles for target areas are drawn from 1/50,000 topographic maps. Existing and under-construction hydropower plants with clear location information of dams/weirs and powerhouses and potential sites identified in this study are displayed in the river profiles.

These river profiles will be displayed in the database system. For details, refer to Chapter 7.

Figure 4.7-3 shows a sample river profile, and Table 4.7-2 shows a list of target river systems.

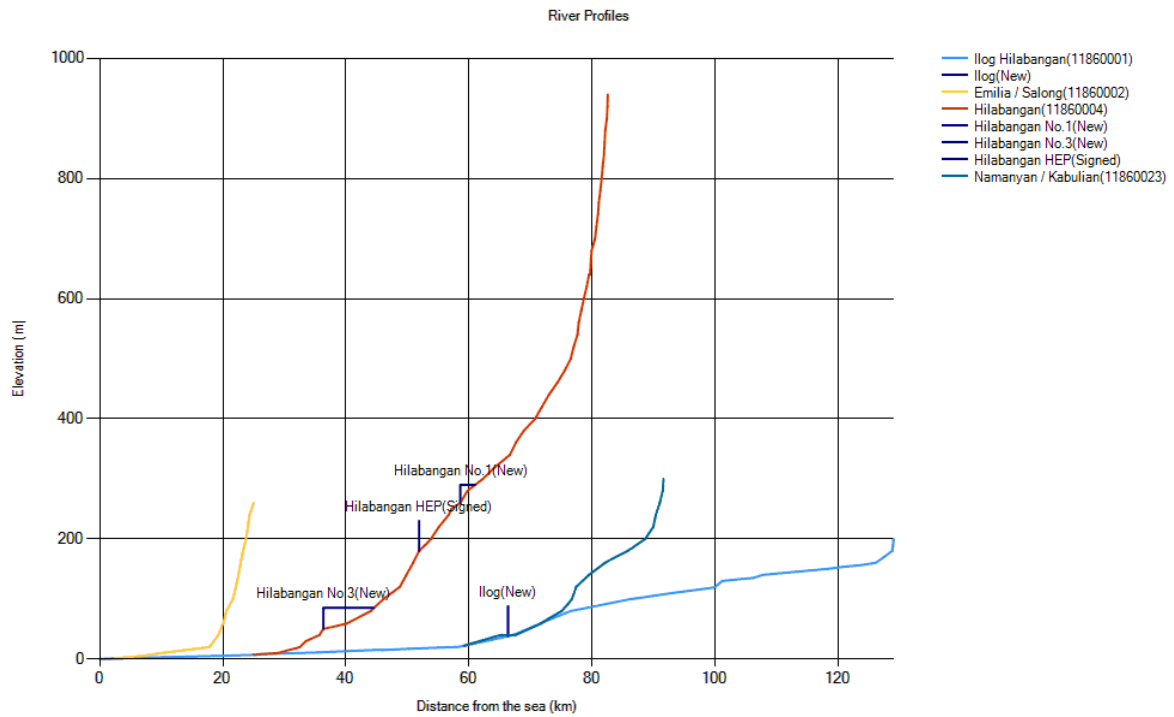


Fig. 4.7-3 River Profiles (Sample)

Table 4.7-2 River Systems List for This Study (1/2)

No.	River System Name	WRR	Category	Island	Region	No.	River System Name	WRR	Category	Island	Region
1	Bulu	1	principal	Luzon	Region-01	84	Iwahig-Brookes	4	principal	Palawan	Region-04B
2	Banban	1	principal	Luzon	Region-01	85	Okayan	4	principal	Palawan	Region-04B
3	Bacarra-Vintar	1	principal	Luzon	Region-01	86	Canipan	4	principal	Palawan	Region-04B
4	Laoag	1	principal	Luzon	Region-01	87	Busuanga	4	principal	Palawan	Region-04B
5	Quiaoit	1	principal	Luzon	Region-01	88	Lanang	5	principal	Masbate	Region-05
6	Abra	1	major	Luzon	CAR, Region-01	89	Napayawan	5	principal	Masbate	Region-05
7	Sta. Maria	1	principal	Luzon	Region-01	90	Mandaon	5	principal	Masbate	Region-05
8	Buaya	1	principal	Luzon	Region-01	91	Asid	5	principal	Masbate	Region-05
9	Amburayan	1	principal	Luzon	Region-01	92	Malbug	5	principal	Masbate	Region-05
10	Baroro	1	principal	Luzon	Region-01	93	Guiom	5	principal	Masbate	Region-05
11	Bauang	1	principal	Luzon	Region-01	94	Nainday	5	principal	Masbate	Region-05
12	Aringay	1	principal	Luzon	Region-01	95	Daraga	5	principal	Masbate	Region-05
13	Caqayan	2	major	Luzon	Region-02, CAR	96	Aguada	5	principal	Masbate	Region-05
14	Linao	2	principal	Luzon	Region-02	97	Baleno	5	principal	Masbate	Region-05
15	Abulug	2	major	Luzon	CAR	98	Ibajay	6	principal	Panay	Region-06
16	Pamplona	2	principal	Luzon	CAR	99	Aklan	6	principal	Panay	Region-06
17	Cabicingan	2	principal	Luzon	Region-02	100	Jalo	6	principal	Panay	Region-06
18	Aunugay	2	principal	Luzon	Region-02	101	Panay	6	major	Panay	Region-06
19	Baua	2	principal	Luzon	Region-02	102	Alingon	6	principal	Panay	Region-06
20	Palawiq	2	principal	Luzon	Region-02	103	Balanti-An	6	principal	Panay	Region-06
21	Taboan	2	principal	Luzon	Region-02	104	Pinantan	6	principal	Panay	Region-06
22	Dikatayan	2	principal	Luzon	Region-02	105	Barotac	6	principal	Panay	Region-06
23	Divilican	2	principal	Luzon	Region-02	106	Alacaygan	6	principal	Panay	Region-06
24	Palanan-Pinacanauan	2	principal	Luzon	Region-02	107	Jalaud	6	major	Panay	Region-06
25	Casiguran	2	principal	Luzon	Region-03	108	Jaro	6	principal	Panay	Region-06
26	Agro	3	major	Luzon	Region-01, 02, CAR	109	Sibalom	6	principal	Panay	Region-06
27	Balincaguin	3	principal	Luzon	Region-01	110	Guimbal	6	principal	Panay	Region-06
28	Alaminos	3	principal	Luzon	Region-01	111	Sibalom-West	6	principal	Panay	Region-06
29	Dagupan	3	principal	Luzon	Region-01	112	Ipayo	6	principal	Panay	Region-06
30	Patalan	3	principal	Luzon	Region-01	113	Cangaranan	6	principal	Panay	Region-06
31	Abra de Ilog	4	principal	Mindoro	Region-04B	114	Paliwan	6	principal	Panay	Region-06
32	Malaylay	4	principal	Mindoro	Region-04B	115	Tibiao	6	principal	Panay	Region-06
33	Pulang Tubig	4	principal	Mindoro	Region-04B	116	Cairauan	6	principal	Panay	Region-06
34	Mag Asawang Tubig	4	principal	Mindoro	Region-04B	117	Dalanas	6	principal	Panay	Region-06
35	Butas	4	principal	Mindoro	Region-04B	118	Malogo	6	principal	Negros	Region-06
36	Pula	4	principal	Mindoro	Region-04B	119	Sicaba	6	principal	Negros	Region-06
37	Balete	4	principal	Mindoro	Region-04B	120	Grande	6	principal	Negros	Region-06
38	Agsalin	4	principal	Mindoro	Region-04B	121	Himoggaan	6	principal	Negros	Region-06
39	Bansud	4	principal	Mindoro	Region-04B	122	Danao	6	principal	Negros	Region-06
40	Sumagui	4	principal	Mindoro	Region-04B	123	Sipalay	6	principal	Negros	Region-06
41	Bongabong	4	principal	Mindoro	Region-04B	124	Ilog-Hilabangan	6	major	Negros	Region-06, 07
42	Baroc	4	principal	Mindoro	Region-04B	125	Binalbagan	6	principal	Negros	Region-06, 07
43	Bulalacao	4	principal	Mindoro	Region-04B	126	Bago	6	principal	Negros	Region-06
44	Cagaray	4	principal	Mindoro	Region-04B	127	Imbang	6	principal	Negros	Region-06
45	Labangan	4	principal	Mindoro	Region-04B	128	Libertad	7	principal	Negros	Region-07
46	Magbando	4	principal	Mindoro	Region-04B	129	Tanjay	7	principal	Negros	Region-07
47	Lumintao	4	principal	Mindoro	Region-04B	130	Canauay	7	principal	Negros	Region-07
48	Anahawin	4	principal	Mindoro	Region-04B	131	Siaton	7	principal	Negros	Region-07
49	Mongpong	4	principal	Mindoro	Region-04B	132	Cautitan	7	principal	Negros	Region-07
50	Ibod	4	principal	Mindoro	Region-04B	133	Sicopong	7	principal	Negros	Region-07
51	Amnay	4	principal	Mindoro	Region-04B	134	Bayawan	7	principal	Negros	Region-06, 07
52	Pola	4	principal	Mindoro	Region-04B	135	Pangatban	7	principal	Negros	Region-06, 07
53	Pagbahian	4	principal	Mindoro	Region-04B	136	Tyabanan	7	principal	Negros	Region-06
54	Mamburao	4	principal	Mindoro	Region-04B	137	Inabanga	7	principal	Bohol	Region-07
55	Taquim	4	principal	Marinduque	Region-04B	138	Ipil	7	principal	Bohol	Region-07
56	Boac	4	principal	Marinduque	Region-04B	139	Matulid	7	principal	Bohol	Region-07
57	Abongan	4	principal	Palawan	Region-04B	140	Loboc	7	principal	Bohol	Region-07
58	Ilian	4	principal	Palawan	Region-04B	141	Abatan	7	principal	Bohol	Region-07
59	Baracbacan	4	principal	Palawan	Region-04B	142	Catarman	8	principal	Samar	Region-08
60	Rizal	4	principal	Palawan	Region-04B	143	Bugko	8	principal	Samar	Region-08
61	Caramay	4	principal	Palawan	Region-04B	144	Pambukhan	8	principal	Samar	Region-08
62	Langgogan	4	principal	Palawan	Region-04B	145	Catubig	8	principal	Samar	Region-08
63	Babuyan	4	principal	Palawan	Region-04B	146	Palapag	8	principal	Samar	Region-08
64	Bacungan	4	principal	Palawan	Region-04B	147	Oras	8	principal	Samar	Region-08
65	Iwahig-Penal	4	principal	Palawan	Region-04B	148	Dolores	8	principal	Samar	Region-08
66	Inaquan	4	principal	Palawan	Region-04B	149	Ulot	8	principal	Samar	Region-08
67	Aborian	4	principal	Palawan	Region-04B	150	Taft	8	principal	Samar	Region-08
68	Malasgao	4	principal	Palawan	Region-04B	151	Gamay	8	principal	Samar	Region-08
69	Apurauan	4	principal	Palawan	Region-04B	152	Sulat	8	principal	Samar	Region-08
70	Baton-baton	4	principal	Palawan	Region-04B	153	Borongan	8	principal	Samar	Region-08
71	Aramawayan	4	principal	Palawan	Region-04B	154	Suribao	8	principal	Samar	Region-08
72	Iwahig	4	principal	Palawan	Region-04B	155	Llorente	8	principal	Samar	Region-08
73	Panitian	4	principal	Palawan	Region-04B	156	Balangiga	8	principal	Samar	Region-08
74	Pulot	4	principal	Palawan	Region-04B	157	Basey	8	principal	Samar	Region-08
75	Lamakan	4	principal	Palawan	Region-04B	158	Silaga	8	principal	Samar	Region-08
76	Kinkugan	4	principal	Palawan	Region-04B	159	Mano	8	principal	Samar	Region-08
77	Eraan	4	principal	Palawan	Region-04B	160	Jibatan	8	principal	Samar	Region-08
78	Tiga-Plan	4	principal	Palawan	Region-04B	161	Gandara	8	principal	Samar	Region-08
79	Malabangan	4	principal	Palawan	Region-04B	162	Calbiga	8	principal	Samar	Region-08
80	Ilog-Palawan	4	principal	Palawan	Region-04B						
81	Bansang	4	principal	Palawan	Region-04B						
82	Conduanga	4	principal	Palawan	Region-04B						
83	Culasian	4	principal	Palawan	Region-04B						

WRR : Water Resource Region
major : major river basins with catchments of more than 1,400 km²
principal : principal river basins with catchments of more than 40 km²
others : other rivers

Table 4.7-2 River Systems List for This Study (2/2)

No.	River System Name	WRR	Category	Island	Region	No.	River System Name	WRR	Category	Island	Region
163	Ilang	2	others	Luzon	Region-02	194	Banadero	5	others	Masbate	Region-05
164	Ilang	2	others	Luzon	Region-02	195	Bulanao	6	others	Panay	Region-06
165	Lobod	2	others	Luzon	Region-02	196	San Roque	6	others	Panay	Region-06
166	Lobod	2	others	Luzon	Region-02	197	Ipayo	6	others	Panay	Region-06
167	Dilacnadanom	2	others	Luzon	Region-02	198	Bacalan	6	others	Panay	Region-06
168	Dilacnadanom	2	others	Luzon	Region-02	199	Panganta	6	others	Panay	Region-06
169	Dimatano	2	others	Luzon	Region-02	200	Bacong	6	others	Panay	Region-06
170	Dimatano	2	others	Luzon	Region-02	201	Tiolas	6	others	Panay	Region-06
171	Dinapigue	2	others	Luzon	Region-02	202	Swaragan	6	others	Panay	Region-06
172	Dinapigue	2	others	Luzon	Region-02	203	Suay	6	others	Negros	Region-06
173	Dilalongan	2	others	Luzon	Region-03	204	Guihoingan	7	others	Negros	Region-07
174	Dilalongan	2	others	Luzon	Region-03	205	San Jose	7	others	Negros	Region-07
175	Salagan	4	others	Mindoro	Region-04B	206	Talaptap	7	others	Negros	Region-07
176	Bungayan	4	others	Marinduque	Region-04B	207	Kandabong	7	others	Negros	Region-07
177	Dawis	4	others	Marinduque	Region-04B	208	Dumaguete	7	others	Negros	Region-07
178	Caigangan	4	others	Marinduque	Region-04B	209	Bangcolotan	7	others	Negros	Region-07
179	Sabang	4	others	Marinduque	Region-04B	210	Manaba	7	others	Bohol	Region-07
180	Cabuyo	4	others	Marinduque	Region-04B	211	Alihauan	7	others	Bohol	Region-07
181	Pagpagoja	4	others	Ronblon	Region-04B	212	Palanit	8	others	Samar	Region-08
182	Libertad	4	others	Ronblon	Region-04B	213	Caglanipan	8	others	Samar	Region-08
183	Bagon	4	others	Ronblon	Region-04B	214	Malaga	8	others	Samar	Region-08
184	Carolina	4	others	Ronblon	Region-04B	215	Malauog	8	others	Samar	Region-08
185	Agpanabat	4	others	Ronblon	Region-04B	216	Legaspi	8	others	Samar	Region-08
186	Sablayan	4	others	Ronblon	Region-04B	217	Canoving	8	others	Samar	Region-08
187	Pato-O	4	others	Ronblon	Region-04B	218	Cambajao	4	others	Ronblon	Region-04B
188	Punog	4	others	Ronblon	Region-04B						
189	Olango	4	others	Ronblon	Region-04B						
190	Binaya-An	4	others	Ronblon	Region-04B						
191	Catingas	4	others	Ronblon	Region-04B						
192	Canloay	4	others	Ronblon	Region-04B						
193	Lumbang	4	others	Ronblon	Region-04B						

WRR: Water Resource Region
major: major river basins with catchments of more than 1,400 km²
principal: principal river basins with catchments of more than 40 km²
others: other rivers

(2) River System Maps

River system maps that display river basins, rivers, existing hydropower plants, and potential sites are delineated.

There are river systems GIS data that covers 1,261 river systems across the whole country, including 388 river systems (421 principal rivers) and other river basins covering flood prone areas. This data was developed in the JICA “Study on the Nationwide Flood Risk Assessment and Flood Mitigation Plan for Selected Areas in the Republic of the Philippines” (2008), and stored by the DPWH. However, the accuracy of this data is not adequate enough for executing the map study in this project, because this data was developed based on topographic maps of a 1/250,000 scale. Therefore, river system GIS data is newly developed in this study based on topographic maps of a 1/50,000 scale. A list of river systems is shown in Table 4.7-2, and river system maps are shown below (Figs. 4.7.4 (1) to (10)). The list of potential sites identified in this study is shown in Table 4.7-3 (1) to (10). Details about identifying new potential sites in this study are given in Chapter 5.

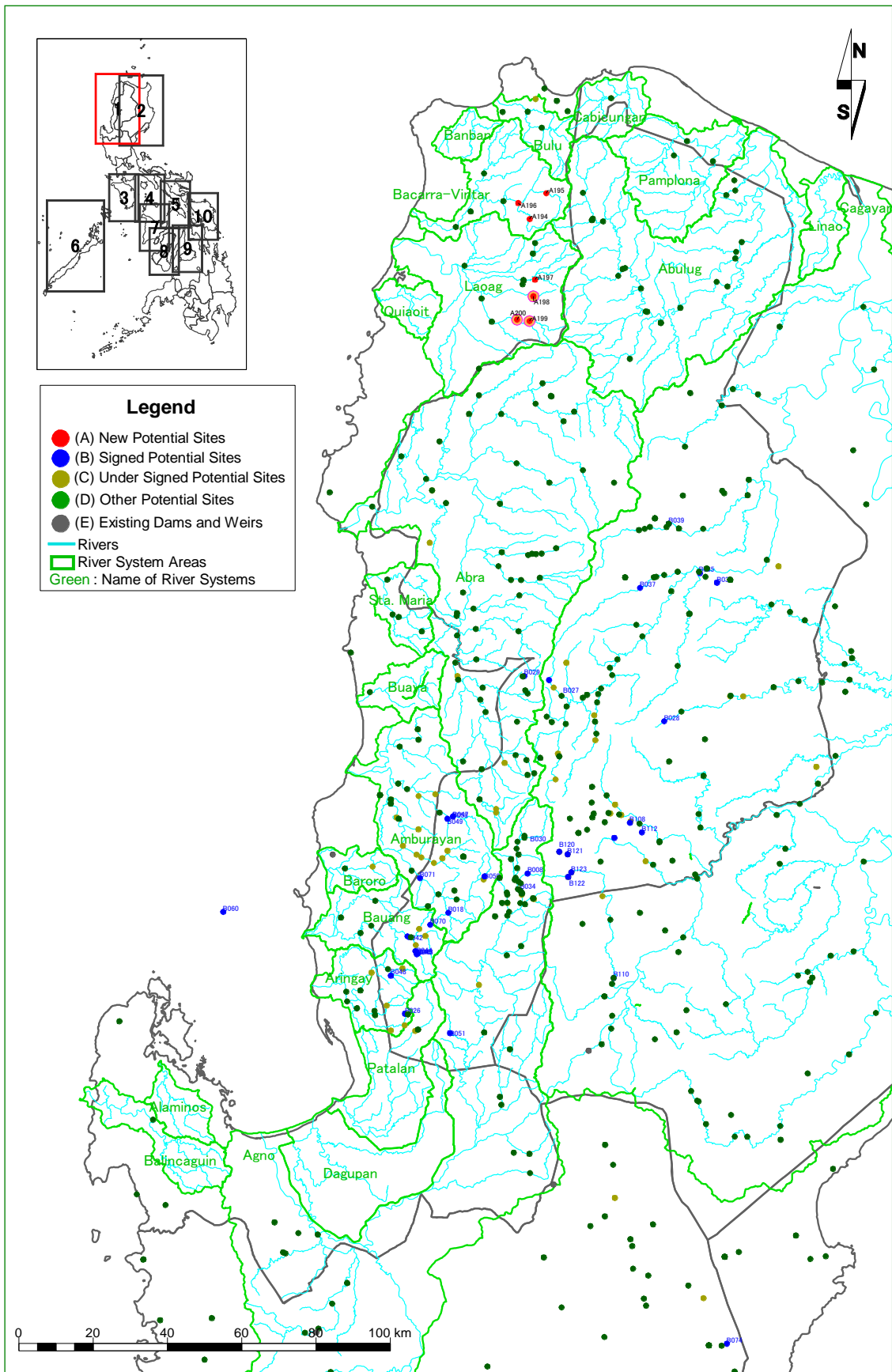


Fig. 4.7-4(1) River System Map (1/10)

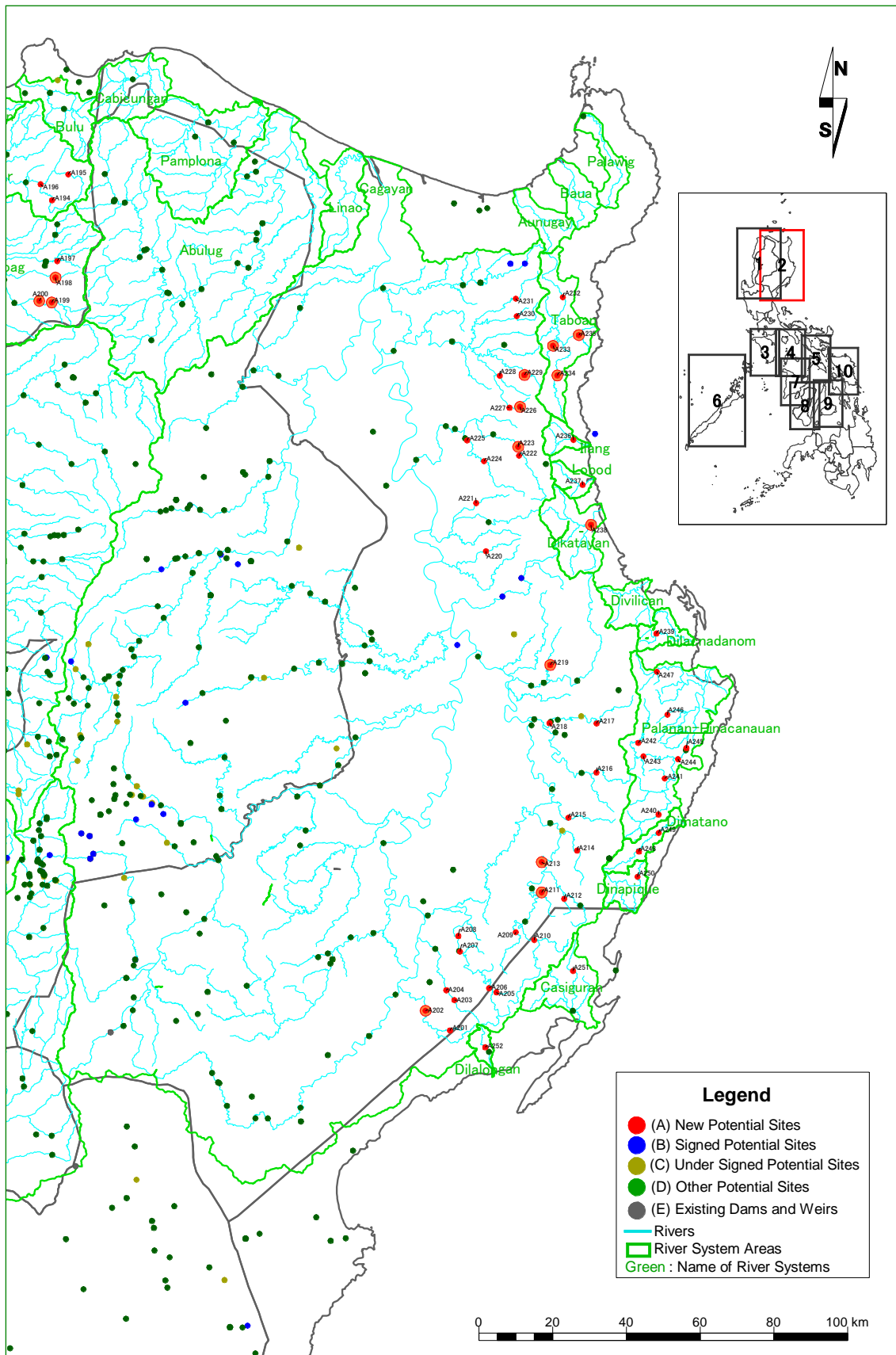


Fig. 4.7-4(2) River System Map (2/10)

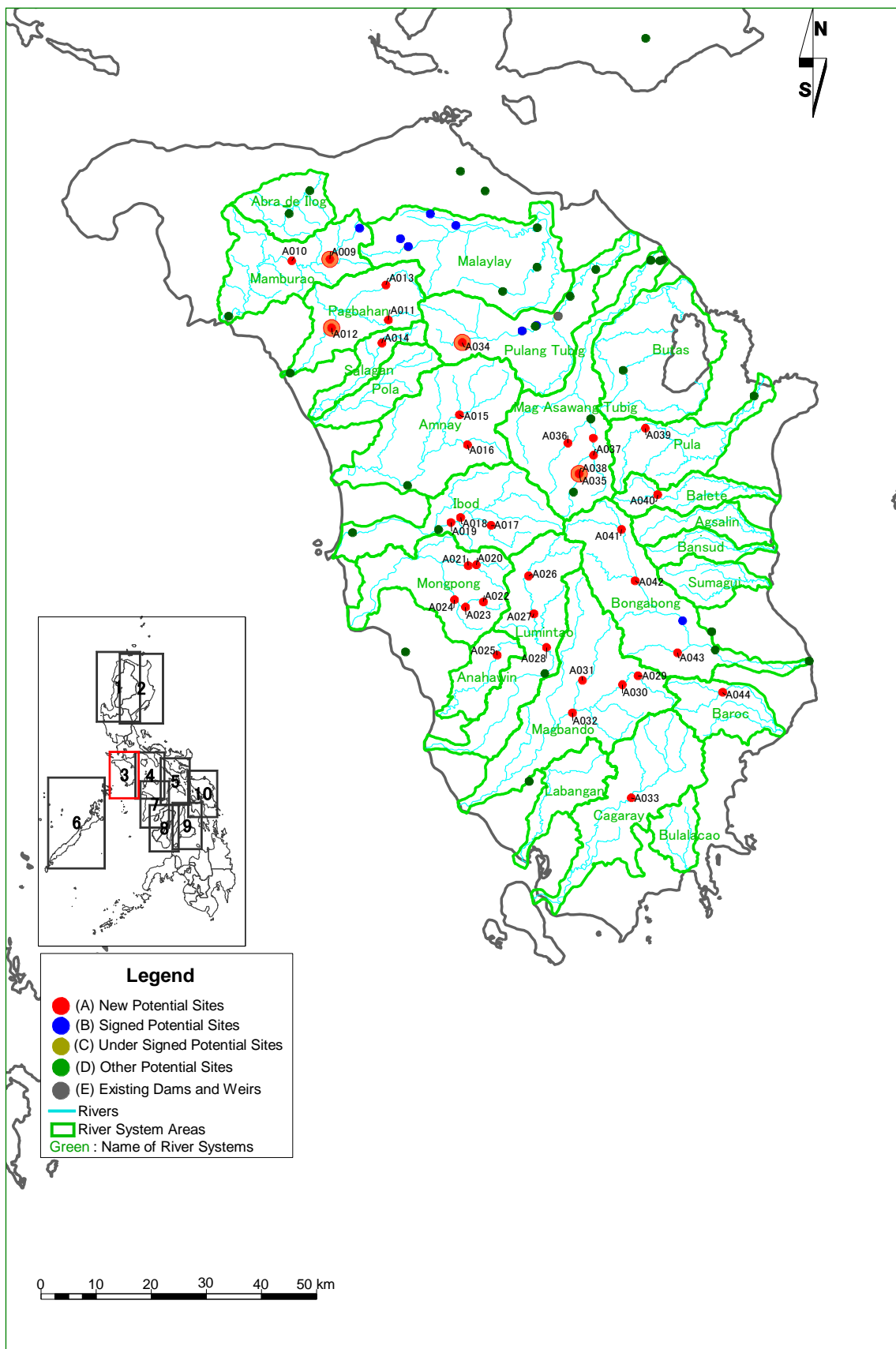


Fig. 4.7-4(3) River System Map (3/10)

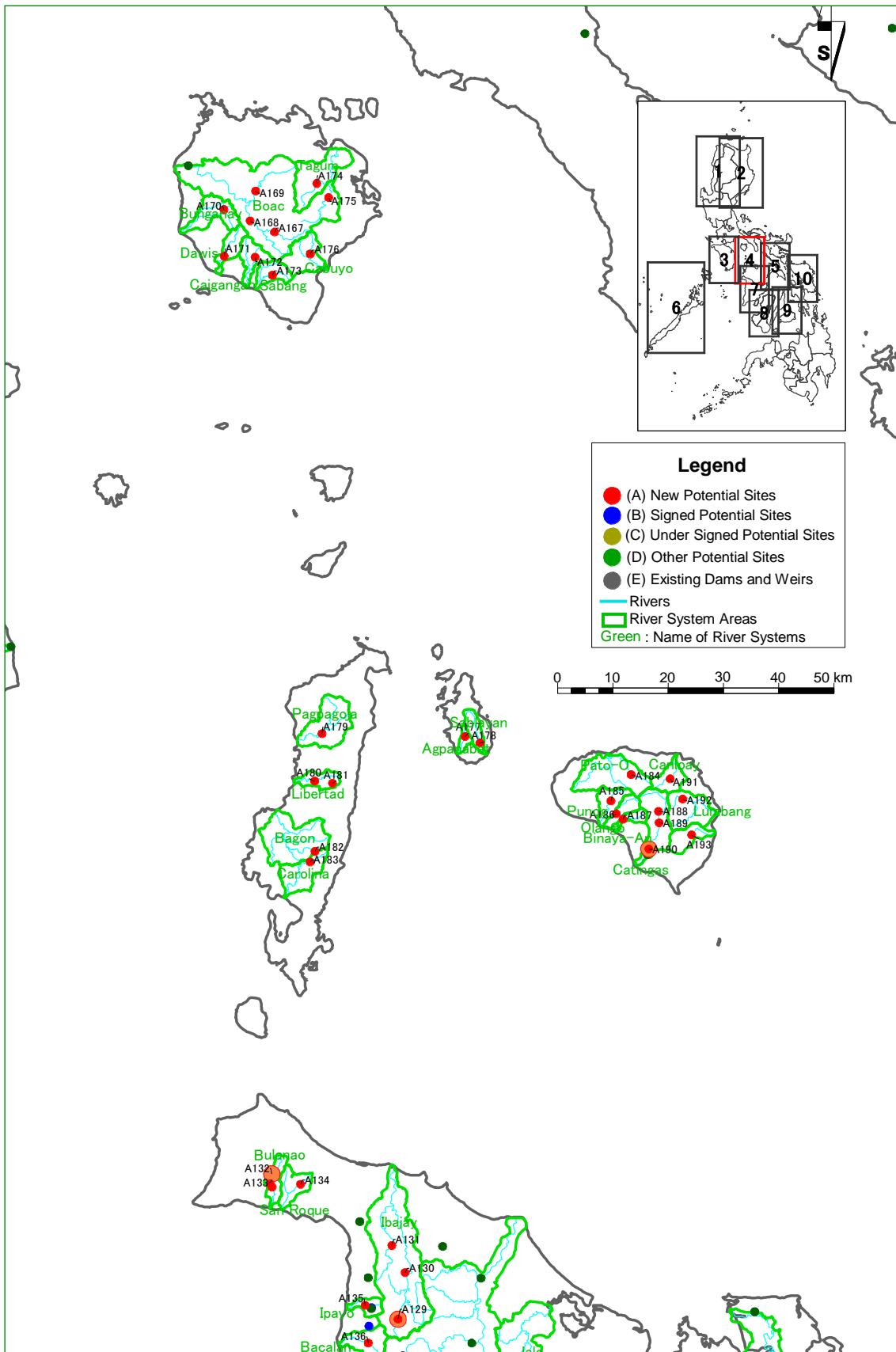


Fig. 4.7-4(4) River System Map (4/10)

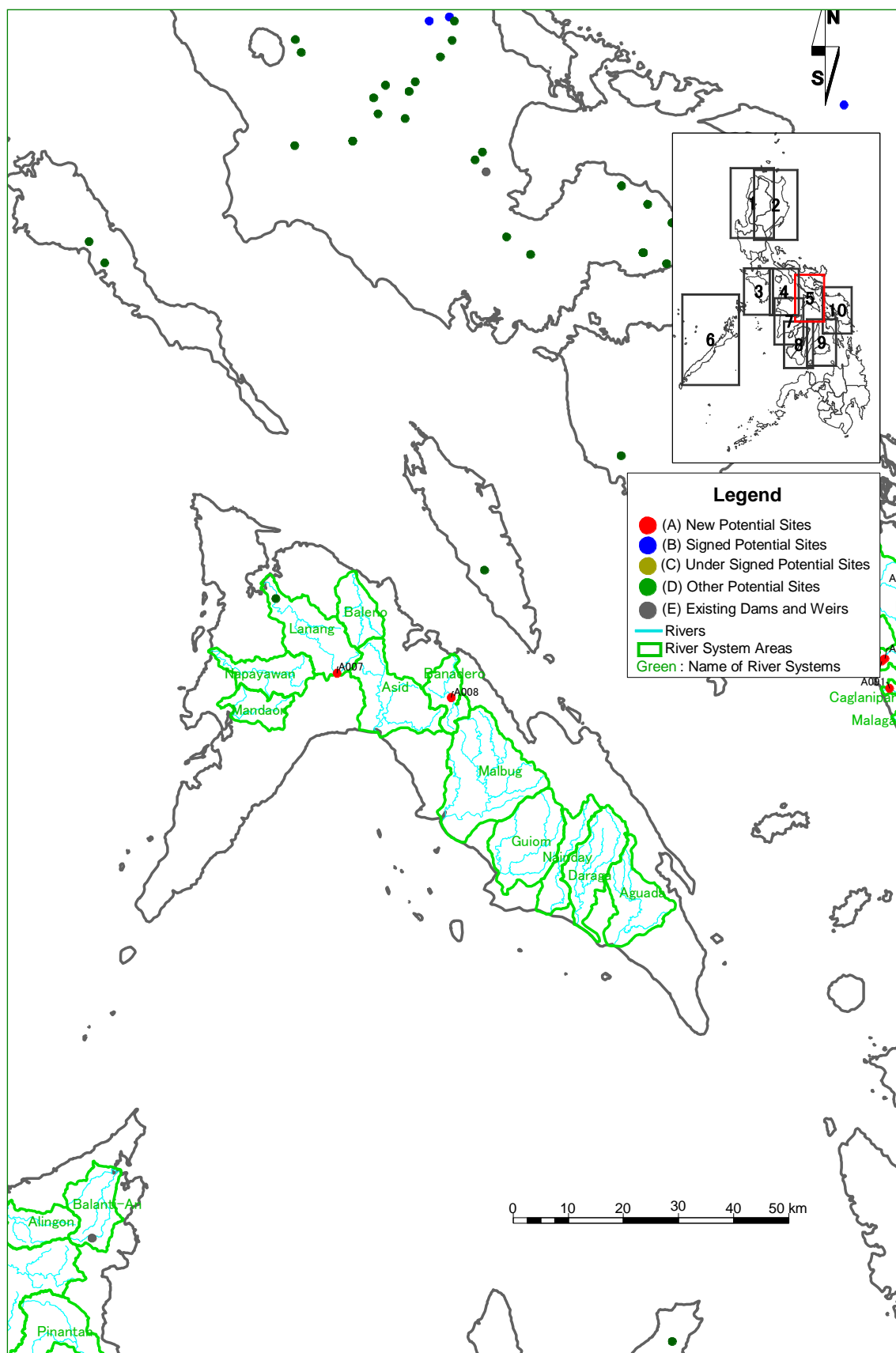


Fig. 4.7-4(5) River System Map (5/10)

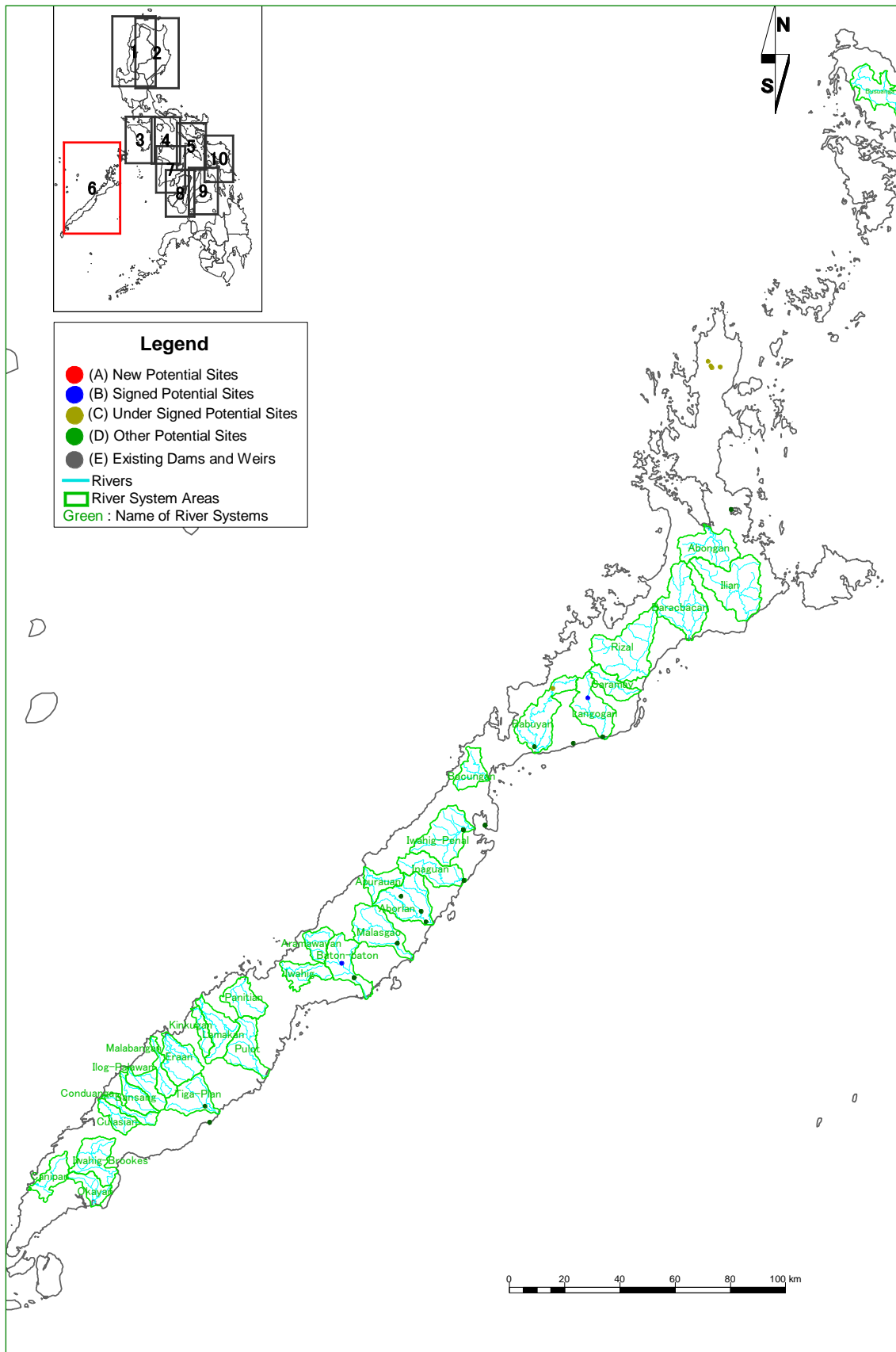


Fig. 4.7-4(6) River System Map (6/10)

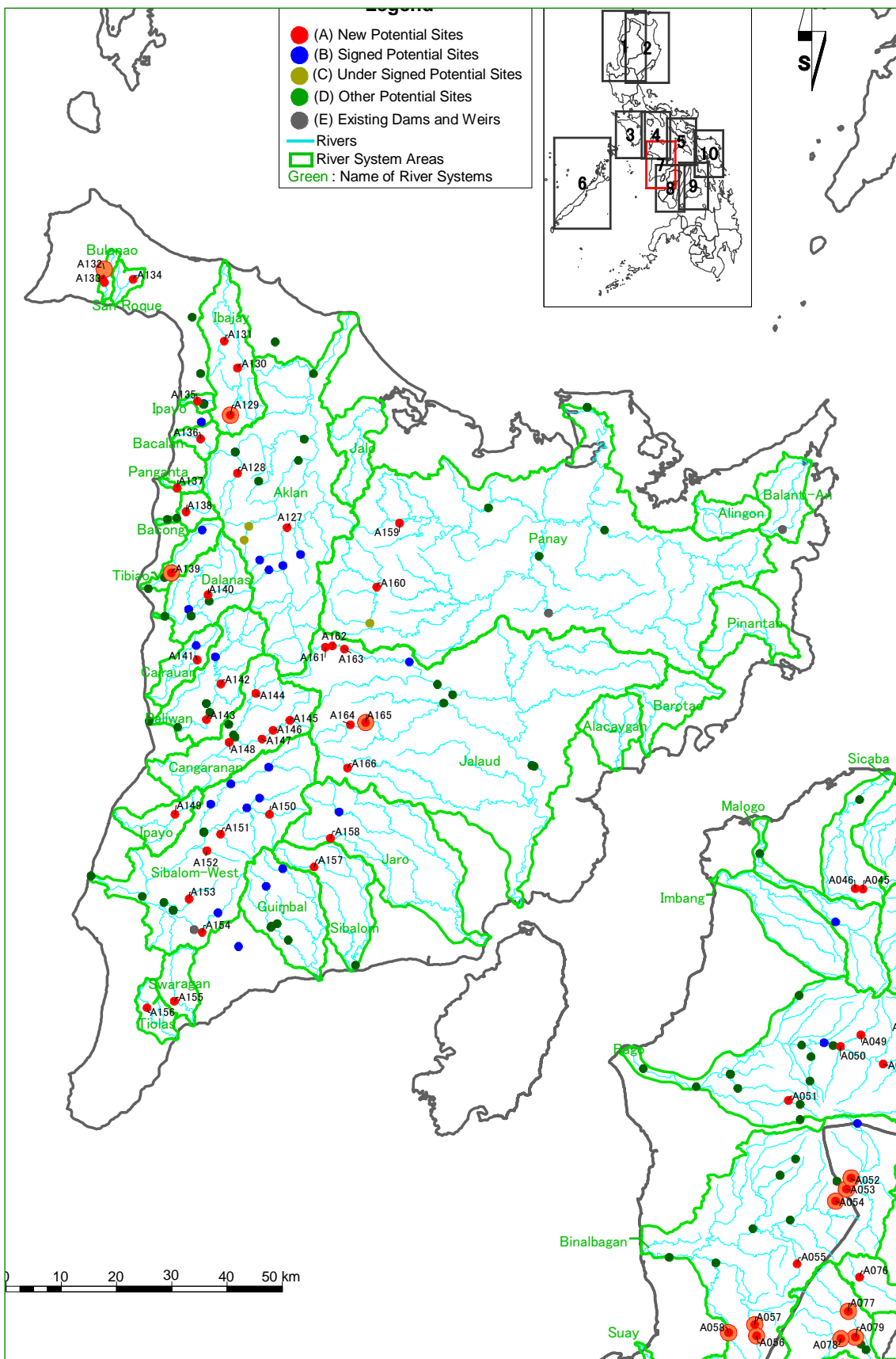


Fig. 4.7-4(7) River System Map (7/10)

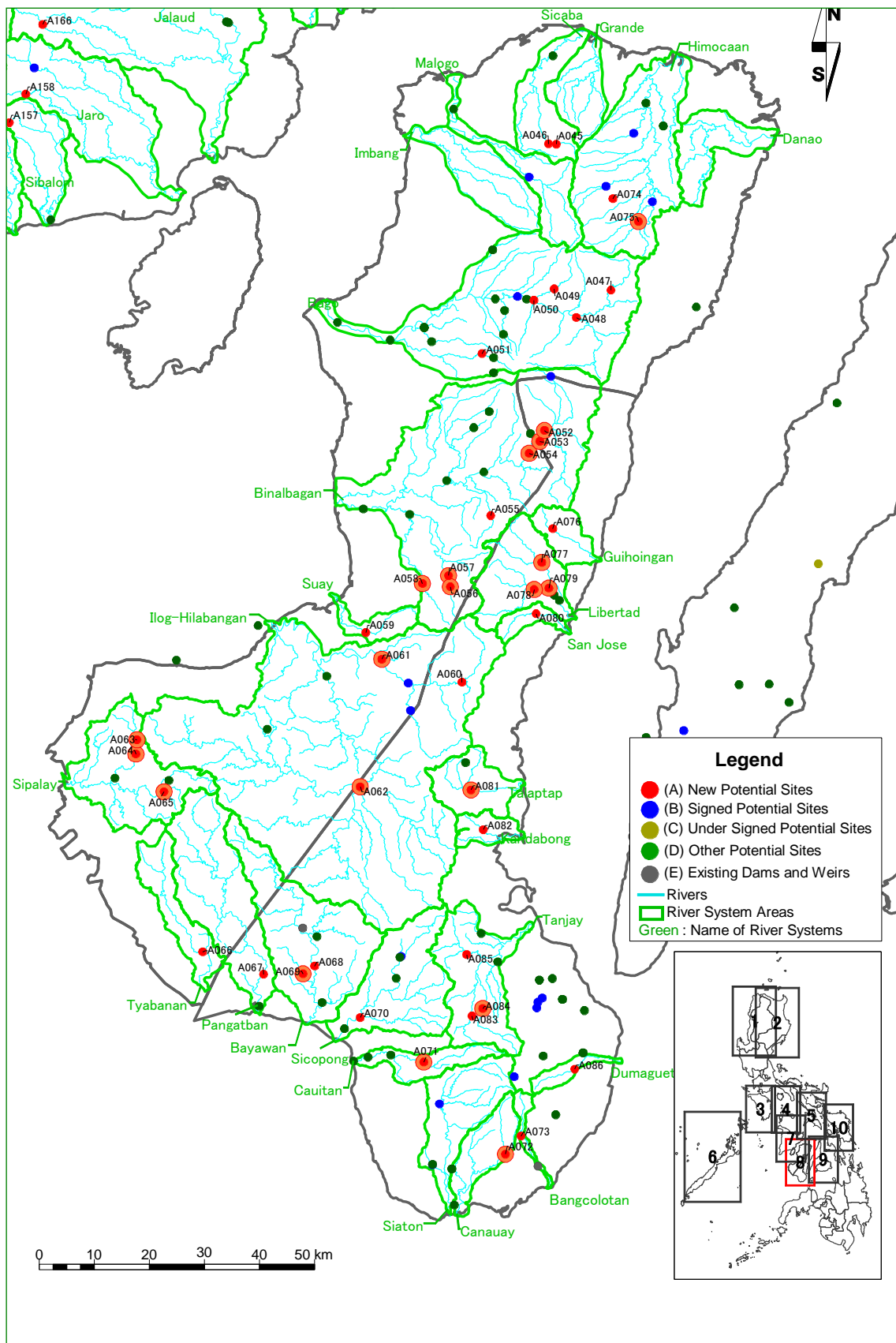


Fig. 4.7-4(8) River System Map (8/10)

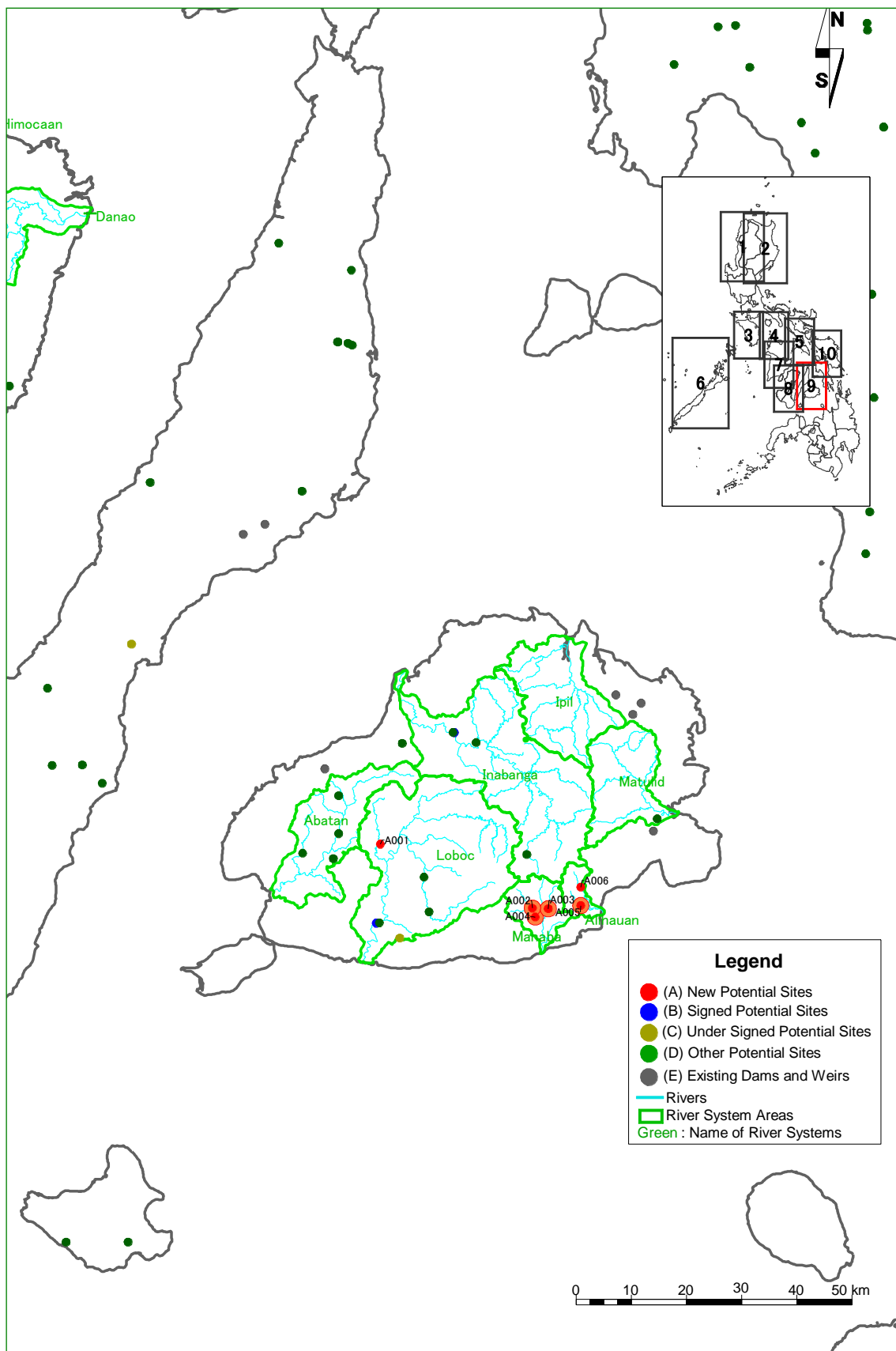


Fig. 4.7-4(9) River System Map (9/10)

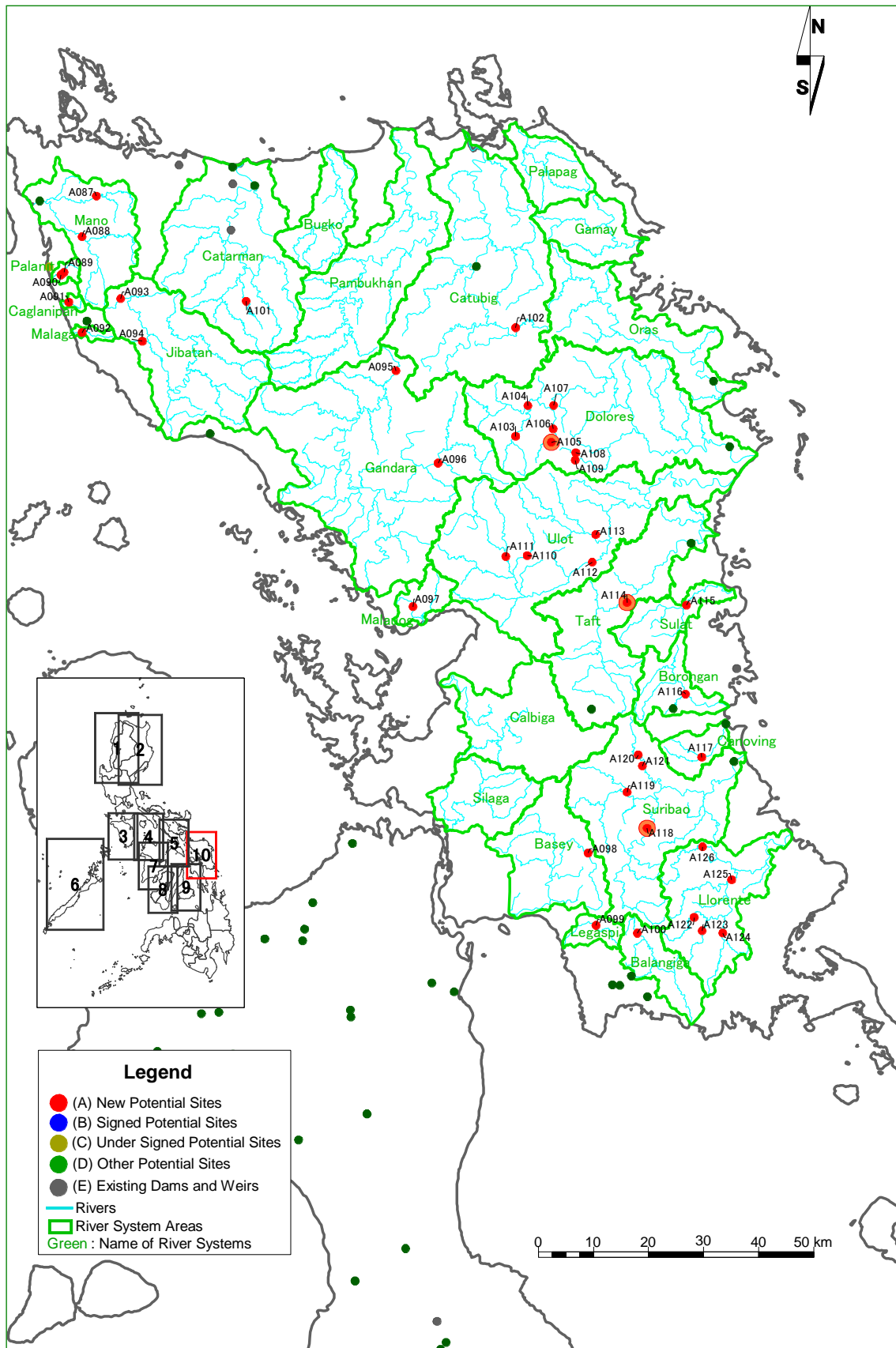


Fig. 4.7-4(10) River System Map (10/10)