



Supplement of

River network and hydro-geomorphological parameters at 1/12° resolution for global hydrological and climate studies

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Figure S1. Regional scale river network at 0.5° resolution: Amazon basin (top-left), North America (top-right) and Europe (bottom).

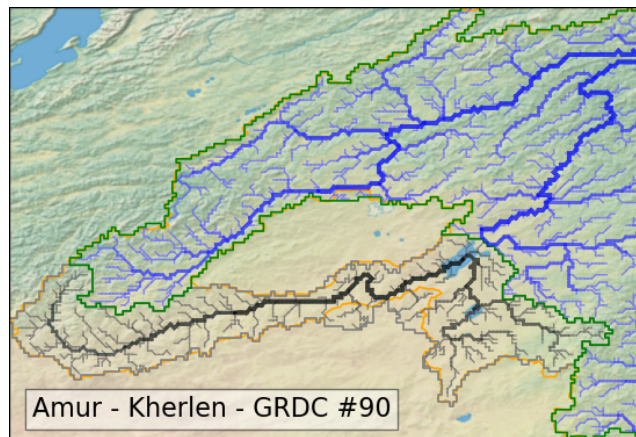


Figure S2. Amur-Argun-Kherlen River System. The Amur river network is drawn in blue, the Kherlen River in black, while their boundaries are in green and grey, respectively. The orange line represents the basin boundary of the Amur River basin from GRDC.

Table S1. Statistics of the 69 largest basins for the river network quality assessment.

Basin	Area (km2)				Relative difference			IoU	
	GRDC	DRT	HR	12D	HR	GRDC	DRT	wo arid reg.	
1 Amazon	5880855	5913080	5929681	5931511	0.00	0.01	0.00	0.01	0.01
2 Congo	3698918	3696437	3691919	3693032	0.00	0.00	0.00	0.01	0.01
3 Mississippi	3196605	3179334	2955748	2965960	0.00	0.07	0.07	0.09	0.09
4 Nile	3078088	2915281	3079988	3150284	0.02	0.02	0.08	0.08	0.02
5 Ob	2701041	2239644	2508209	2598234	0.04	0.04	0.15	0.15	0.10
6 Parana	2640486	2595406	2628027	2631615	0.00	0.00	0.01	0.02	0.01
7 Yenisei	2558237	2613393	2542920	2553220	0.00	0.00	0.02	0.08	0.10
8 Lena	2425551	2343520	2434031	2435953	0.00	0.00	0.04	0.06	0.09
9 Niger	2117889	2098209	2031307	2134261	0.05	0.01	0.02	0.05	0.01
10 Amur	2023520	1876973	1866164	1874131	0.00	0.08	0.00	0.14	0.08
11 Mackenzie	1752002	1757169	1770986	1771115	0.00	0.01	0.01	0.03	0.03
12 Yangtze	1745094	1734038	1730273	1741037	0.01	0.00	0.00	0.01	0.01
13 Volga	1408279	1407237	1402046	1403901	0.00	0.00	0.00	0.05	0.04
14 Zambezi	1388572	1376970	1375646	1377030	0.00	0.01	0.00	0.01	0.01
15 Indus	1139075	857866	837913	857258	0.02	0.28	0.00	0.04	0.02
16 Nelson	1099380	989803	1303008	1113210	0.16	0.01	0.12	0.12	0.05
17 Murray	1059508	778474	930648	987619	0.06	0.07	0.24	0.22	0.05
18 Saint-Lawrence	1055021	1050686	1056115	1055552	0.00	0.00	0.00	0.02	0.02
19 Tarim	1051731	772913	639862	969974	0.41	0.08	0.23	0.21	0.07
20 Ganges	1024463	945847	943867	951441	0.01	0.07	0.01	0.02	0.01
21 Yellow River	988063	772388	760471	808488	0.06	0.20	0.05	0.09	0.05
22 Orange	972388	575029	890794	973077	0.09	0.00	0.51	0.41	0.02
23 Orinoco	952173	938543	935992	939439	0.00	0.01	0.00	0.02	0.02
24 Tigris-Euphrates	832579	831102	773342	1205743	0.44	0.37	0.37	0.36	0.05
25 Yukon	829632	830985	830850	830843	0.00	0.00	0.00	0.02	0.03
26 Shebelle	805077	744059	743892	748771	0.01	0.07	0.01	0.02	0.03
27 Danube	793705	785575	793538	799839	0.01	0.01	0.02	0.02	0.03
28 Mekong	787257	775077	778644	781266	0.00	0.01	0.01	0.02	0.02
29 Tocantins	774718	771999	843975	844949	0.00	0.09	0.09	0.10	0.10
30 Columbia	668562	651420	650396	671197	0.03	0.00	0.03	0.04	0.01
31 Kolyma	652850	648358	648859	648596	0.00	0.01	0.00	0.03	0.02
32 Colorado	640464	336116	623335	659586	0.06	0.03	0.65	0.50	0.90
33 Sao Francisco	628629	635491	637718	636755	0.00	0.01	0.00	0.01	0.01
34 Brahmapoutre	518011	522443	518944	524669	0.01	0.01	0.00	0.02	0.02
35 Dniepr	510661	510998	509652	512020	0.00	0.00	0.00	0.02	0.02
36 Rio Grande	510056	476327	505589	554126	0.09	0.08	0.15	0.16	0.04
37 Senegal	436981	450164	445647	516555	0.15	0.17	0.14	0.14	0.02
38 Don	425630	437051	437346	437629	0.00	0.03	0.00	0.01	0.01
39 Balkhash	423657	218004	402770	411600	0.02	0.03	0.61	0.47	0.57
40 Limpopo	415623	404530	409052	410822	0.00	0.01	0.02	0.02	0.01
41 Volta	414004	409582	409217	410172	0.00	0.01	0.00	0.01	0.01
42 Irrawaddy	411516	376586	378409	378787	0.00	0.08	0.01	0.02	0.03
43 Rio Colorado	390631	295559	304850	380272	0.22	0.03	0.25	0.24	0.06
44 Xi	362894	360529	380285	405460	0.06	0.11	0.12	0.12	0.12
45 Indigirka	341228	326715	324468	325107	0.00	0.05	0.00	0.04	0.07
46 Ural	339084	210300	210885	211006	0.00	0.47	0.00	0.04	0.04
47 Rio Parnaiba	336584	330718	330407	331051	0.00	0.02	0.00	0.01	0.01
48 Dvina	323573	276178	353206	353478	0.00	0.09	0.25	0.24	0.25
49 Petchora	312763	286191	318636	319013	0.00	0.02	0.11	0.13	0.13
50 Godavari	311699	309198	308990	309360	0.00	0.01	0.00	0.02	0.01
51 Churchill	298505	292815	33081	292262	1.59	0.02	0.00	0.06	0.07
52 Khatanga	294908	294954	305536	305955	0.00	0.04	0.04	0.05	0.05
53 Krishna	269869	258468	257532	258628	0.00	0.04	0.00	0.02	0.02
54 Salado	266264	86594	185916	242611	0.26	0.09	0.95	0.71	0.29
55 Uruguay	265505	266156	266184	266052	0.00	0.00	0.00	0.01	0.01
56 Magdalena	261205	260209	259743	259949	0.00	0.00	0.00	0.02	0.01
57 Salween	258475	266943	264297	269574	0.02	0.04	0.01	0.04	0.04
58 Fraser	239678	230188	231169	230905	0.00	0.04	0.00	0.01	0.02
59 Thelon	238839	235747	238744	238736	0.00	0.00	0.01	0.15	0.14
60 Yana	233479	226834	226116	225811	0.00	0.03	0.00	0.03	0.10
61 Neva	223310	215881	283393	283383	0.00	0.24	0.27	0.26	0.26
62 Ogooue	222663	215199	215540	215629	0.00	0.03	0.00	0.02	0.02
63 Olenek	208522	218003	218643	218520	0.00	0.05	0.00	0.03	0.02
64 Rufiji	204639	177658	177316	177836	0.00	0.14	0.00	0.02	0.02
65 Liao	194436	185118	190338	192107	0.01	0.01	0.04	0.05	0.11
66 Wisla	193764	193307	193629	193340	0.00	0.00	0.00	0.03	0.03
67 Rhine	190522	192200	195462	195470	0.00	0.03	0.02	0.06	0.06
68 Chao Phraya	188419	143830	155069	154646	0.00	0.20	0.07	0.09	0.09
69 Kura	182283	188515	187227	188557	0.01	0.03	0.00	0.03	0.03
Color legend	Tributary missing (e.g., river delta)			mean	0.058	0.056	0.084	0.094	0.071
	Arid regions within river basin			median	0.003	0.026	0.008	0.039	0.028
	Endoreic regions within river basin								
	Other								