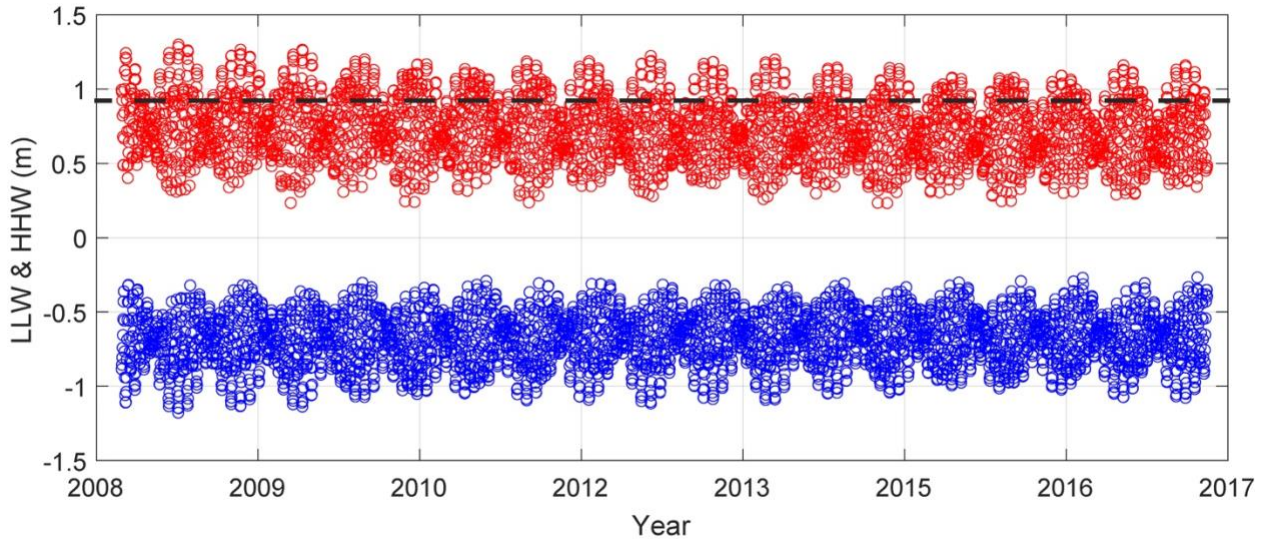
2   Figure S1. The comparison between simulated tide and measured tide during 1 Nov – 30 Nov, 2014 at locations
3   inside the simulation domain.

6   **Figure S2.** The daily higher high water (HHW) and lower low water (LLW) extracted from the modeled tide at Macau
7   tide station during 2008~2017, which shows the 0.927-m peak tide (dashed line) before Hato's landfall is only
8   moderately high compared with other HHW values.

Table S1

Point	Longitude	Latitude	Overland flow depth (m)	Data type
1	113.541473	22.209631	1.7	WM
2	113.540781	22.210944	1.7	WM
3	113.540134	22.21102	1.7	WM
4	113.538845	22.210262	1.3	WM
5	113.53947	22.210045	1.2	WM
6	113.538564	22.209913	1.0	WM, EW
7	113.53806	22.209556	1.0	WM
8	113.536824	22.209535	1.0	WM
9	113.53649	22.20933	1.2	WM, EW
10	113.536722	22.208763	1.0	WM
11	113.536873	22.208522	1.0	WM
12	113.535848	22.210609	0.5	WM, EW
13	113.535539	22.21127	0.5	WM, EW
14	113.53566	22.212899	1.8	WM, EW
15	113.537177	22.213231	1.7	WM
16	113.538159	22.213285	1.6	WM
17	113.539222	22.212726	1.2	WM
18	113.539365	22.211505	1.1	WM
19	113.556552	22.193242	1.2	WM, EW
20	113.556684	22.192842	1.0	WM
21	113.556534	22.191471	0.5	WM
22	113.557618	22.190951	0.5	WM, EW
23	113.557424	22.189337	0.0	WM, EW
24	113.5380556	22.19888889	1.9	WM, EW
25	113.5386439	22.19884593	2.0	EW
26	113.5386111	22.19888889	0.9	WM
27	113.5377778	22.19861111	2.0	WM
28	113.5372222	22.19861111	2.0	WM
29	113.5366667	22.19861111	2.0	WM
30	113.5365381	22.19871304	2.0	WM
31	113.5372222	22.19972222	3.1	EW
32	113.5369444	22.20083333	1.8	WM
33	113.5377778	22.20083333	1.6	WM, EW
34	113.5380556	22.20138889	1.9	WM, EW
35	113.5380556	22.20055556	0.4	WM, EW
36	113.5391667	22.20194444	1.4	WM
37	113.5394444	22.20194444	0.8	WM
38	113.5397222	22.20194444	0.8	WM, EW
39	113.54	22.2025	1.3	WM, EW
40	113.5402778	22.20333333	1.6	WM, EW
41	113.5405556	22.20277778	1.1	WM, EW
42	113.5405556	22.20194444	1.0	WM
43	113.5405556	22.20222222	1.1	WM
44	113.5408333	22.20083333	1.0	WM, EW
45	113.5413889	22.20138889	1.2	WM, EW
46	113.5422482	22.20178051	0.9	WM
47	113.5426002	22.2018358	1.4	WM
48	113.5430732	22.2016181	0.1	WM
49	113.5437806	22.2020529	0.3	WM
50	113.5443439	22.20229492	1.3	WM, EW

51	113.5448311	22.20202487	1.1	WM
52	113.5451083	22.2015095	0.6	WM, EW
53	113.5458387	22.2017806	0.5	WM, EW
54	113.5459941	22.20165248	0.2	WM
55	113.545996	22.20164092	0.4	WM, EW
56	113.5466034	22.2021301	0.3	WM, EW
57	113.5470972	22.20238221	0.3	WM, EW
58	113.5471585	22.20283969	0.5	WM
59	113.5478104	22.20264228	0.8	WM, EW
60	113.5474604	22.20231469	0.5	WM
61	113.5489096	22.20226139	0.2	WM
62	113.5483623	22.20360816	0.4	WM, EW
63	113.5459025	22.20457542	0.3	WM
64	113.546245	22.2055464	0.2	WM
65	113.5459167	22.2056825	0.5	WM
66	113.545646	22.20531846	0.7	WM
67	113.5455381	22.2051341	0.8	WM, EW
68	113.5450626	22.20450617	0.8	WM
69	113.5450027	22.20484432	0.9	WM
70	113.5448606	22.20510605	1.1	WM, EW
71	113.5450663	22.2056741	1.1	WM, EW
72	113.5443201	22.20616331	1.2	WM
73	113.5440066	22.20580789	1.4	WM
74	113.5434323	22.20641919	1.3	EW
75	113.5431074	22.20633403	1.2	WM
76	113.5425914	22.20719401	1.1	WM
77	113.5421133	22.2075409	1.4	WM
78	113.5419605	22.20777518	1.5	WM, EW
79	113.5413118	22.21020199	1.7	WM, EW
80	113.5421225	22.21226071	1.2	WM
81	113.5423593	22.21234218	1.0	WM
82	113.5428442	22.21229001	1.5	EW
83	113.5442703	22.21118774	1.4	EW
84	113.5447879	22.21059626	1.3	WM
85	113.544756	22.21053179	1.5	WM
86	113.544567	22.20995319	1.5	WM
87	113.5449486	22.20848621	1.4	WM
88	113.5460386	22.20763212	1.0	WM
89	113.5472765	22.20974819	1.3	WM
90	113.5475	22.21138889	1.1	WM
91	113.5475	22.21194444	1.0	WM
92	113.5475	22.2125	1.1	WM
93	113.5475	22.21305556	0.8	WM, EW
94	113.5480556	22.21361111	0.4	WM, EW
95	113.5483333	22.21333333	0.4	EW
96	113.5363623	22.19677296	2.1	WM
97	113.536305	22.19600109	1.9	WM
98	113.5353762	22.19416749	1.4	WM
99	113.5347608	22.19305179	2.1	WM
100	113.5341	22.1921	2.4	WM
101	113.5339	22.1919	2.3	WM
102	113.5335	22.1914	2.3	WM
103	113.533	22.1904	2.3	WM
104	113.5314	22.1883	1.4	WM

105	113.5316098	22.18765228	1.5	WM
106	113.5317	22.1877	1.7	WM
107	113.5317591	22.18495577	1.2	WM
108	113.5313602	22.18425475	1.1	WM
109	113.531589	22.18543006	0.8	WM
110	113.5313431	22.18564843	1.7	EW
111	113.5312743	22.1866406	1.2	WM
112	113.5313501	22.18770473	1.6	WM
113	113.5327151	22.18833656	1.5	WM
114	113.5332501	22.18879737	1.4	WM
115	113.5342135	22.18897389	1.6	WM, EW
116	113.5348	22.1895	1.6	WM
117	113.5354	22.1905	1.3	WM
118	113.5353	22.1902	0.6	EW
119	113.535	22.191	0.7	WM
120	113.5350692	22.19083046	0.8	WM
121	113.5348	22.1913	0.8	WM
122	113.5344006	22.19147555	1.0	WM
123	113.5344	22.1917	1.5	EW
124	113.5347	22.1924	1.8	EW
125			1.9	WM
126	113.5413955	22.20759398	1.5	WM
127	113.5409549	22.20745336	1.5	WM
128	113.5404819	22.20733261	1.7	WM
129	113.539661	22.207129	1.1	WM
130	113.5391216	22.20691512	0.7	WM
131	113.5389144	22.20687507	1.1	EW
132	113.53771088,22.20563093	22.20563093	1.4	EW
133	113.5393111	22.20624275	0.8	EW
134	113.5398156	22.20628559	0.7	WM, EW
135	113.5406412	22.20603	1.6	WM
136	113.5412856	22.20642385	1.3	WM
137	113.5418312	22.20661859	1.4	WM
138	113.541813	22.206501	1.2	WM
139	113.542245	22.206589	1.3	WM, EW
140	113.5417767	22.20588487	0.8	WM
141	113.5418434	22.2051939	1.0	WM
142	113.5414464	22.20463215	1.3	WM
143	113.5407538	22.20488396	1.3	WM, EW
144	113.5389674	22.20450387	1.0	WM
145	113.5378978	22.20412771	1.3	WM, EW
146	113.5379727	22.20299936	2.2	WM, EW
147	113.5380303	22.20256066	1.8	WM
148	113.5378848	22.20231554	1.6	WM
149	113.5374149	22.20242409	2.1	WM
150	113.5385148	22.20260663	1.7	WM, EW
151	113.537514	22.195464	2.2	WM
152	113.538124	22.19488297	1.9	WM
153	113.5386111	22.19888889	0.0	EW
154	113.5380556	22.20055556	0.0	EW
155	113.5430556	22.20138889	0.0	EW
156	113.5433493	22.2015523	0.0	EW
157	113.5459941	22.20165248	0.0	EW
158	113.5467252	22.20207399	0.0	EW

159	113.5316539	22.1870091	0.0	EW
160	113.5354	22.1905	0.0	EW
161	113.5353334	22.1905218	0.0	EW
162	113.5351	22.1911	0.0	EW
163	113.535166	22.19166927	0.0	EW
164	113.5484159	22.21331806	0.0	EW
165	113.5483623	22.20360816	0.0	EW
166	113.5480493	22.20236395	0.0	EW
167	113.5450543	22.20111579	0.0	EW
168	113.538195	22.20121956	0.0	EW
169	113.5348516	22.19159	0.0	EW
170	113.5350518	22.19090591	0.0	EW
171	113.5354783	22.19025069	0.0	EW
172	113.5316539	22.1870091	0.0	EW
173	113.5305096	22.18344892	0.0	EW
174	113.538408	22.198844	1.9	WM
175	113.537852	22.198864	2.0	WM
176	113.537148	22.198808	2.0	WM
177	113.536517	22.198653	2.0	WM, EW
178	113.536656	22.199151	1.8	WM
179	113.536711	22.199423	1.8	WM
180	113.536763	22.199782	3.1	WM
181	113.536997	22.200825	1.8	WM
182	113.537929	22.20079	1.7	WM, EW
183	113.538024	22.200978	1.6	WM, EW
184	113.538109	22.201255	1.9	WM, EW
185	113.538322	22.201198	0.5	WM
186	113.539379	22.202028	1.4	WM
187	113.539519	22.201827	0.8	WM
188	113.539827	22.202504	1.3	WM
189	113.540424	22.203084	1.5	WM
190	113.540607	22.203061	0.0	WM
191	113.540595	22.202639	1.0	WM
192	113.540638	22.202215	1.0	WM
193	113.540825	22.200951	1.0	WM
194	113.546598	22.20237	0.3	WM, EW
195	113.546834	22.202767	0.6	WM, EW
196	113.547459	22.203235	0.0	WM
197	113.54981	22.206255	0.0	WM
198	113.550295	22.206957	0.0	WM
199	113.552105	22.206941	0.2	WM, EW
200	113.554326	22.205257	0.0	WM
201	113.556289	22.207948	0.0	WM
202	113.557661	22.209637	0.0	WM
203	113.558554	22.210521	0.0	WM
204	113.55828	22.2103	0.0	WM
205	113.558191	22.212237	0.0	WM
206	113.555146	22.21344	0.0	WM
207	113.551502	22.212487	0.0	WM
208	113.548676	22.21398	0.7	WM, EW
209	113.54775	22.214096	0.5	WM
210	113.547578	22.211215	1.1	WM
211	113.547484	22.211514	1.0	WM
212	113.54781	22.21226	1.1	WM, EW

213	113.547453	22.213146	0.8	WM
214	113.548103	22.213494	0.4	WM
215	113.548215	22.213301	0.5	WM
216	113.536785	22.196281	1.9	WM
217	113.537358	22.19565	2.2	WM, EW
218	113.538144	22.194977	2.0	WM
219	113.538568	22.194589	1.5	WM
220	113.538744	22.194418	1.2	WM
221	113.539055	22.194126	0.4	WM
222	113.539174	22.193976	0.0	WM, EW
223	113.538509	22.193972	1.3	WM
224	113.538064	22.194154	1.2	WM
225	113.538172	22.193972	1.2	WM
226	113.538025	22.193919	0.8	WM
227	113.53771	22.194116	1.2	WM
228	113.537555	22.194519	1.7	WM, EW
229	113.537628	22.194519	2.0	WM
230	113.537409	22.195051	1.8	WM
231	113.537056	22.195327	2.0	WM
232	113.536773	22.195753	2.1	WM, EW
233	113.535828	22.194517	1.9	WM
234	113.536194	22.194339	2.2	WM, EW
235	113.536305	22.194153	1.7	WM, EW
236	113.536497	22.194077	1.5	WM
237	113.536623	22.194026	1.5	WM
238	113.536831	22.193887	1.2	WM
239	113.537068	22.193709	0.7	WM
240	113.537171	22.193592	0.0	WM, EW
241	113.536933	22.193365	0.9	WM
242	113.53661	22.19285	1.0	WM
243	113.536683	22.192475	1.4	WM
244	113.536152	22.192855	1.4	WM, EW
245	113.535696	22.193157	1.8	WM
246	113.535929	22.192139	1.9	WM, EW
247	113.5356	22.192607	1.9	WM
248	113.535379	22.192953	1.9	WM
249	113.535331	22.193061	2.0	WM
250	113.535075	22.19305	2.0	WM
251	113.534272	22.1913	1.6	WM
252	113.534633	22.191027	0.9	WM
253	113.534588	22.189619	1.5	WM, EW
254	113.533938	22.189998	1.6	WM, EW
255	113.533979	22.190093	1.7	WM
256	113.532968	22.189776	1.9	WM
257	113.532911	22.189686	1.9	WM
258	113.5329	22.189402	1.8	WM
259	113.532994	22.189217	1.7	WM
260	113.533407	22.188662	1.5	WM
261	113.533441	22.188555	1.1	WM, EW
262	113.53823	22.196282	2.0	WM
263	113.538535	22.196664	2.0	WM
264	113.538103	22.196839	2.1	WM
265	113.538778	22.196536	1.9	WM
266	113.539099	22.196298	1.8	WM

267	113.5395	22.196052	1.6	WM
268	113.53973	22.195959	1.4	WM
269	113.540123	22.195712	1.2	WM
270	113.540286	22.195629	0.0	WM, EW
271	113.540119	22.196138	1.3	WM
272	113.539942	22.196588	1.5	WM
273	113.53942	22.197172	1.5	WM
274	113.539194	22.197368	1.6	WM
275	113.538116	22.198393	1.4	WM
276	113.53807	22.198669	2.0	WM
277	113.537522	22.198772	1.9	WM
278	113.537863	22.197759	2.0	WM