

**Table S1.** Characteristics of the water bodies in the study

Water bodies	Sign	Type stations	Coordinate		Characteristics
			X	Y	
Tien river	N1	Base line	552211	1194912	Water quality control of Tien River.
	N2	Base line	564988	1185446	Controlling water quality of Tien river, at the confluence between Cai Vung and Tien rivers.
	N3	Base line	567312	1169499	Controlling water quality of Tien river, at the confluence between Vam Nao and Tien rivers.
	N4	Base line	575663	1167064	Controlling the water quality of Tien River, the confluence between the two branches of the Tien River and the beginning of Gieng Islet.
	N5	Base line	589784	1153830	Controlling water quality at the end of the Tien River in the province before flowing through Dong Thap.
	DT1	Impact	554699	1194414	Monitoring the impact of wastewater in Tan Chau urban area.
	DT2	Impact	571273	1166986	Monitoring the impact of wastewater in the Cho Moi urban area.
	DT3	Impact	581029	1162307	Monitoring the impact of wastewater in My Luong urban area
	TS1	Impact	559880	1188560	Monitoring the impact of aquaculture activities on the Tien River.
	TS2	Impact	570753	1168426	Monitoring the impact of aquaculture activities on the Tien River.
	TS3	Impact	584521	1157065	Monitoring the impact of aquaculture activities on the Tien River.
	TS4	Impact	548134	1201285	Monitoring the impact of aquaculture activities on the Tien River.
Hau river	N6	Base line	540670	1184515	Controlling water quality of Hau river, the confluence between Hau river and Chau Doc river.
	N7	Base line	550449	1174732	Controlling the water quality of Hau River.
	N8	Base line	562947	1165749	Controlling water quality of Hau river, the confluence between Vam Nao and Hau rivers.
	DT4	Impact	576273	1147845	Monitoring the impact of wastewater in the urban area of Long Xuyen City.
	DT5	Impact	553659	1168368	Monitoring the impact of wastewater in Cai Dau urban area.
	CN1	Impact	554720	1168808	Monitoring the impact of wastewater in Binh Long industrial area.
	CN2	Impact	577294	1146119	Monitoring the impact of wastewater in My Qui industrial area.
	TS5	Impact	540708	1184988	Monitoring the impact of aquaculture activities on the Hau River.
	TS6	Impact	567496	1156042	Monitoring the impact of aquaculture activities on the Hau River.
	TS7	Impact	576840	1153173	Monitoring the impact of aquaculture activities on the Hau River.
	TS8	Impact	576289	1151944	Monitoring the impact of aquaculture activities on the Hau River.
	TS9	Impact	552578	1171504	Monitoring the impact of aquaculture activities on the Hau River.
Phu Hoi river	N9	Base line	531256	1205019	Control the quality of water from Cambodia entering the Phu Hoi River before entering the Chau Doc River.
Chau Doc river	N10	Base line	534292	1194004	Control the quality of water from Cambodia entering Chau Doc River before entering Hau River.
	TS10	Impact	540104	1184937	Monitoring the impact of aquaculture activities on Chau Doc river
Vinh Te canal	N11	Base line	539213	1185061	Controlling inlet water quality of Vinh Te canal
	N12	Base line	528668	1178628	Monitoring water quality inlet Tra Su canal, impact between Tra Su canal and Vinh Te canal

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	N13	Base line	520940	1172766	Controlling water quality on Vinh Te canal.
	N14	Base line	503347	1161809	Monitoring water quality at the end of Vinh Te canal in the province, before pouring into Kien Giang.
Xang Vinh Tre canal	N15	Base line	550225	1174314	Monitoring water quality inlet Xang Vinh Tre canal.
	N16	Base line	537950	1159865	Monitoring water quality in the middle of Xang Vinh Tre canal.
	N17	Base line	531393	1144610	Monitoring water quality at the end of Xang Vinh Tre canal
	TS11	Impact	548722	1172710	Monitoring the impact of aquaculture activities on Xang Vinh Tre canal.
	TS12	Impact	546162	1169627	Monitoring the impact of aquaculture activities on Hao De Lon canal and Xang Vinh Tre canal.
Mac Can Dung canal	N18	Base line	559084	1156769	Monitoring water quality at the beginning of the Mac Can Dung canal.
	N19	Base line	545651	1154767	Monitoring water quality in the middle of the Mac Can Dung canal.
	TS13	Impact	548706	1158636	Monitoring the impact of aquaculture activities on canal 13 and Xang Cay Duong canal.
Tam Ngan canal	N20	Base line	527109	1153571	Monitoring the quality of input water in Tam Ngan canal.
	N21	Base line	517292	1151708	Monitoring water quality in the middle of Tam Ngan canal.
	N22	Base line	512407	1145192	Monitoring water quality at the end of Tam Ngan canal.
Rach Gia-Long Xuyen canal	N23	Base line	574103	1149148	Monitoring the quality of input water in Rach Gia - Long Xuyen canal
	N24	Base line	561676	1145018	Monitoring water quality between Rach Gia - Long Xuyen canal
	N25	Base line	549764	1126205	Monitoring water quality at the end of Rach Gia - Long Xuyen canal
Ong Chuong canal	N26	Base line	570173	1166771	Controlling the quality of input water in Ong Chuong canal
	N27	Base line	577475	1159423	Water quality control between Ong Chuong canal.
	N28	Base line	575835	1155311	Controlling water quality at the end of Ong Chuong canal into Hau river.
7 canal	N29	Base line	544256	1197582	Controlling water quality in canal 7
Xang canal	N30	Base line	544796	1192396	Controlling water quality of Xang canal
Muong Khai canal	N31	Base line	555256	1171914	Water quality control of Muong Khai canal
Xang Ca Mau canal	N32	Base line	571688	1160927	Controlling water quality between Xang Ca Mau canal
Xang A-B canal	N33	Base line	581055	1156386	Water quality control of Xang A-B canal
Cong Dong canal	DT6	Impact	556890	1135692	Monitoring the impact of urban wastewater on Cong Dong canal
Tri Ton canal	DT7	Impact	527588	1152631	Monitoring the impact of urban wastewater on Tri Ton canal
Thay Ban canal	DT8	Impact	536805	1196295	Monitoring the impact of urban wastewater on Thay Ban canal.
Huynh Van Thu canal	DT9	Impact	540636	1181296	Monitoring the impact of urban wastewater on Huynh Van Thu canal.
Hau canal	CN3	Impact	564144	1156496	Monitoring the impact of wastewater in Binh Hoa industrial area
Than Nong canal	KS1	Impact	549706	1191018	Monitoring the water quality of Than Nong canal, the flank canal of Bac Vam Nao area
	KS2	Impact	557041	1177484	Monitoring the water quality of Than Nong canal, the flank canal of Bac Vam Nao area
	KS3	Impact	561014	1171435	Monitoring the water quality of Than Nong canal, the flank canal of Bac Vam Nao area

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	KS4	Impact	554529	1181170	Monitoring the water quality of Than Nong canal, the flank canal of Bac Vam Nao area
26 canal	KS5	Impact	564339	1182671	Monitoring water quality in K26 canal
Cai Tac canal	KS6	Impact	560766	1171443	Control inside and outside the flood control area of Bac Vam Nao.
Phu Binh-Hiep Xuong canal	KS7	Impact	551140	1175051	Water quality monitoring in Phu Binh – Hiep Xuong canal.
Don Dong canal	TS14	Impact	574103	1139929	Monitoring the impact of aquaculture activities on Don Dong canal.
	TS15	Impact	570916	1138524	Monitoring the impact of aquaculture activities on Don Dong canal.
	TS16	Impact	572673	1139250	Monitoring the impact of aquaculture activities on Don Dong canal.
	TS17	Impact	565734	1136318	Monitoring the impact of aquaculture activities on Don Dong canal.
Xa Doi canal	TS18	Impact	569697	1142640	Monitoring the impact of aquaculture activities on Xa Doi canal.
Tra Cu caanal	TS19	Impact	552267	1153651	Monitoring the impact of aquaculture activities on Tra Cu canal.
Nui Cam mountain	DL1	Impact	526065	1161496	Monitoring the impact of wastewater in the tourist area.
Tra Su forest	DL2	Impact	533160	1169076	Controlling water quality when supplying to Melaleuca forest