

Supplementary Information

Table S1. Results of the Daily Streamflow Simulation Models (training period)

Computational Point	Performance metrics							
	<i>SWAT</i>				<i>LGBM</i>			
	RMSE	NSE	MAE	KGE	RMSE	NSE	MAE	KGE
<i>Ka Nak</i>	27.53	0.51	14.55	0.49	29.50	0.44	12.72	0.35
<i>An Khe</i>	18.34	0.81	11.32	0.78	26.94	0.59	16.78	0.74
<i>Pomore</i>	7.01	0.48	4.91	0.46	3.97	0.84	1.55	0.86
<i>Krong H'nanh</i>	50.28	0.56	21.56	0.56	48.93	0.58	14.58	0.53
<i>Song Ba Ha</i>	284.87	0.34	126.24	0.19	105.32	0.91	38.18	0.91
<i>Song Hinh</i>	87.42	0.62	41.59	0.50	39.55	0.92	22.37	0.94

Table S2. Results of the Monthly Streamflow Simulation Models (training period)

Computational Point	Performance metrics							
	<i>SWAT</i>				<i>LGBM</i>			
	RMSE	NSE	MAE	KGE	RMSE	NSE	MAE	KGE
<i>Ka Nak</i>	17.67	0.50	12.19	0.52	14.03	0.69	9.18	0.71
<i>An Khe</i>	18.71	0.69	12.46	0.64	26.23	0.39	16.64	0.37
<i>Pomore</i>	4.44	0.55	3.52	0.52	2.50	0.86	1.56	0.84
<i>Krong H'nanh</i>	19.45	0.78	13.63	0.79	20.88	0.74	11.22	0.80
<i>Song Ba Ha</i>	191.66	0.31	111.42	0.19	89.50	0.85	50.98	0.82
<i>Song Hinh</i>	69.47	0.37	38.92	0.23	48.51	0.69	28.57	0.74