

Supplement: This supplement elaborates on the detailed water quality measurement campaign conducted in Can Tho on 7 October 2013. These include 4 descriptive tables of water quality data and four processed figures of spatial and temporal variations of contaminants during flood event.

Table S1. Water quality parameters recorded in flood locations.

	Xang Thoi lake		Can Tho River	Rach Ngong Canal	Hoa Binh Avenue		Tran Van Kheo St.		Hai Ba Trung St.	Tran Ngoc Que St.	Phan Van Tri St.	Mau Than St.	Quang Trung St.
Water bodies	SU	SE	SU	SU	FL	SE	FL	SE	FL	FL	FL	SE	
BOD ₅ 20°C	X	X	X	X	X	X	X	X	X	X	X	X	X
Total P	X	X	X	X	X	X	X	X	X	X	X	X	X
Total N	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>E.Coli</i>	X		X	X	X		X		X	X	X		
Coliform	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Salmonella</i>	X	X	X	X	X	X	X	X	X	X	X	X	X
Water level	X						X			X	X	X	X
Sample	3	3	3	3	3	3	4	3	5	5	3	3	

SU: Open/Surface water, SE: Sewer Water, FL: Flood water.

Table S2. Water quality analytical methods.

ID	Parameters	Units	Analytical Methods
1.	BOD ₅ at 20°C	mg/l	Oxitop meter ¹
2.	Total Nitrogen	mg/l	10071/DR 3900 ²
3.	Total Phosphorus	mg/l	10127/DR 3900 ³
4.	<i>Salmonella</i>	MPN/100ml	Most probable number (MPN) ⁴
5.	<i>E.coli</i>	MPN/100ml	MPN
6.	Total Coliform	MPN/100ml	MPN

¹ <https://www.wtw.com/en/products/product-categories/benchtop-meters/oxitopr-measuring-systems/oxitopr-is.html> (accessed 27 March 2017)

² <https://www.hach.com/tensette-sup-sup-pipet-1-0-10-ml/product-downloads?id=7640447374> (search 10071, accessed 27 March 2017)

³ <https://www.hach.com/tensette-sup-sup-pipet-1-0-10-ml/product-downloads?id=7640447374> (search 10127, accessed 27 March 2017)

⁴ http://www.who.int/water_sanitation_health/resourcesquality/wqmchap10.pdf

Table S3. Characteristics at flooded sites.

	Tran Van Kheo Str.	Phan Van Tri St.	Quang Trung St.
Rising time *	15:00	19:00	15:00
Time to Peak *	19:30	20:30	19:30
Receding time *	20:15	21:30	21:00
Maximum levels (cm)	22	13	42

*: Referred as “High”, “Peak” and “Low” respectively in **Error! Reference source not found.**

Table S4. Descriptive statistics of water data.

		n	mean	sd	median	min	max
Flood water							
BOD	mg/l	15	24.8	13.4	23.0	6.0	45.0
P	mg/l	15	0.5	0.3	0.5	0.1	1.1
N	mg/l	14	6.4	6.6	3.4	1.4	22.8
<i>E.Coli</i>	Log (10), MPN/100mL	20	4.3	4.3	4.0	3.2	4.8
Coliform	Log (10), MPN/100mL	20	5.8	5.7	5.7	4.0	6.3
<i>Salmonella</i>	Log (10), MPN/100mL	20	3.1	3.3	2.8	2.1	4.0
Sewer water							
BOD	mg/l	12	42.8	20.3	50.0	8.0	80.0
P	mg/l	12	0.8	0.3	0.8	0.3	1.3
N	mg/l	12	10.2	7.4	7.6	4.7	30.4
Coliform	Log (10), MPN/100mL	12	7.2	7.5	6.2	4.0	8.0
<i>Salmonella</i>	Log (10), MPN/100mL	12	3.4	3.4	3.1	2.3	4.0
Surface water							
BOD	mg/l	9	33.0	5.7	34.0	22.0	39.0
P	mg/l	9	0.4	0.1	0.3	0.3	0.7
N	mg/l	9	2.5	1.5	2.3	0.4	4.6
<i>E.Coli</i>	Log (10), MPN/100mL	9	3.5	3.2	3.5	2.3	3.8
Coliform	Log (10), MPN/100mL	9	5.3	5.1	5.2	4.3	5.5
<i>Salmonella</i>	Log (10), MPN/100mL	9	3.4	3.7	3.0	2.4	4.2

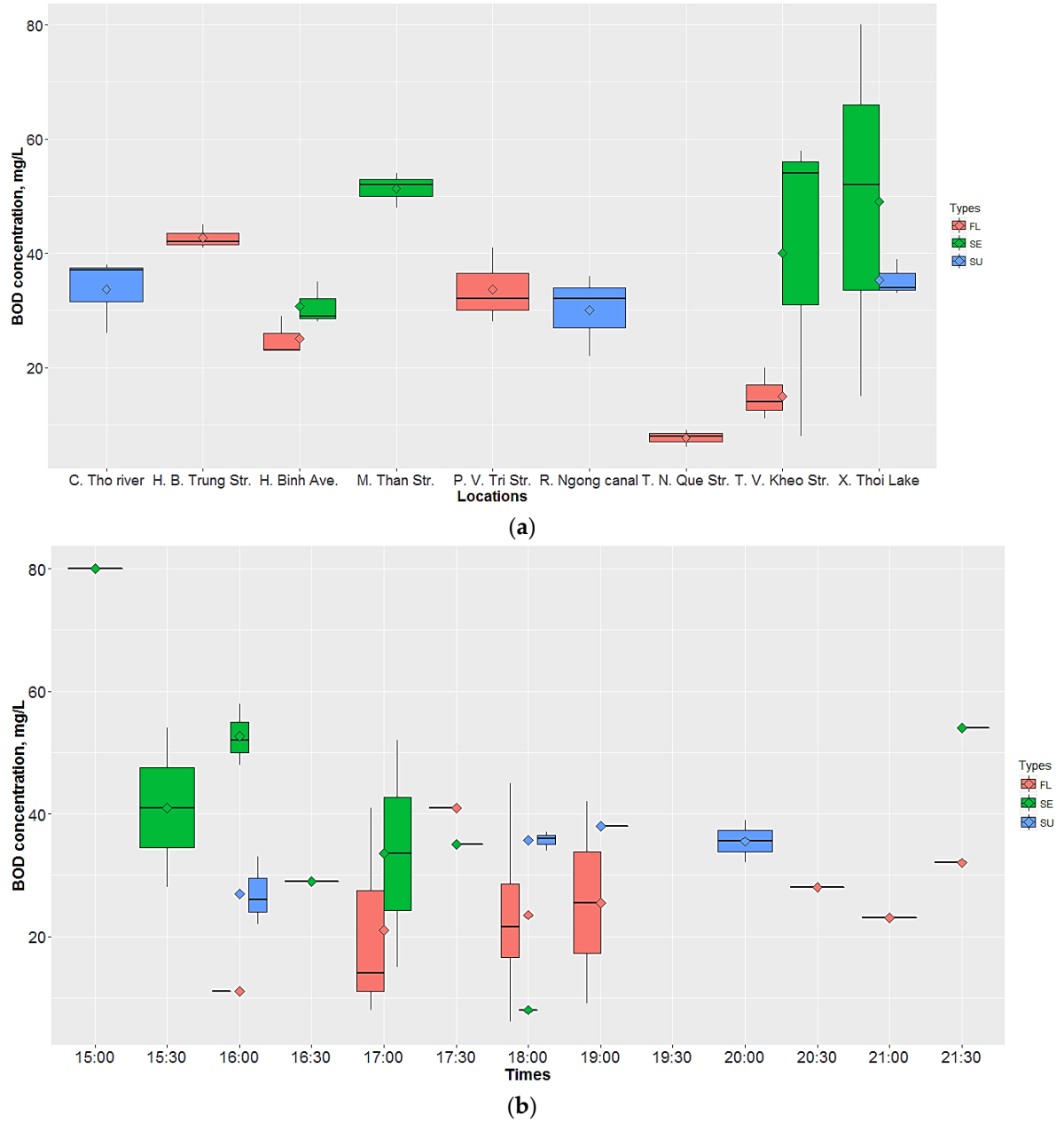
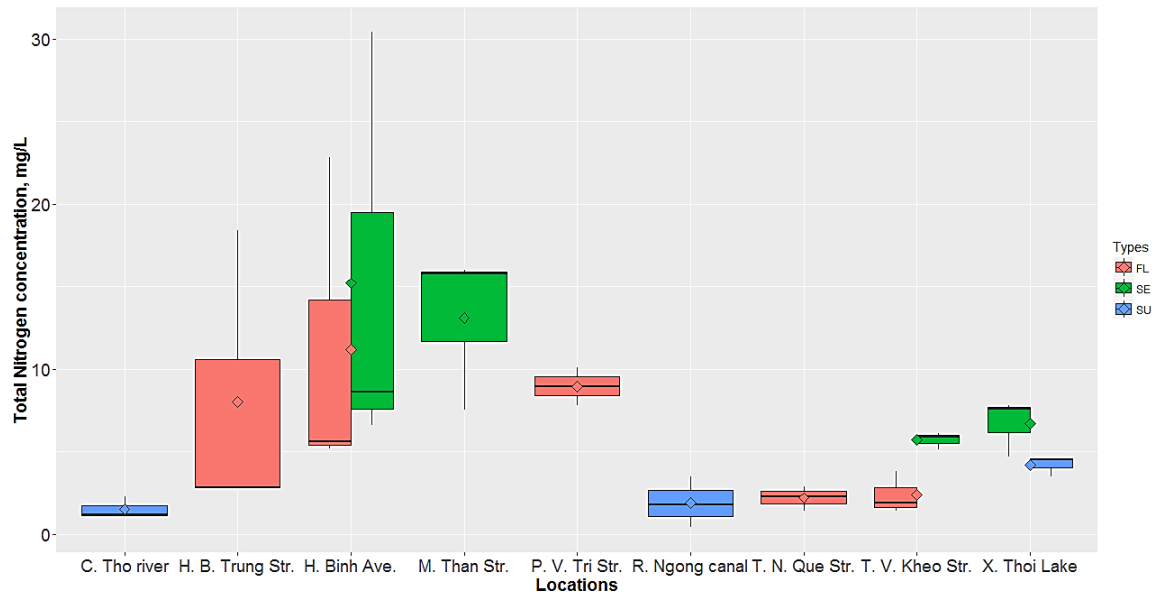
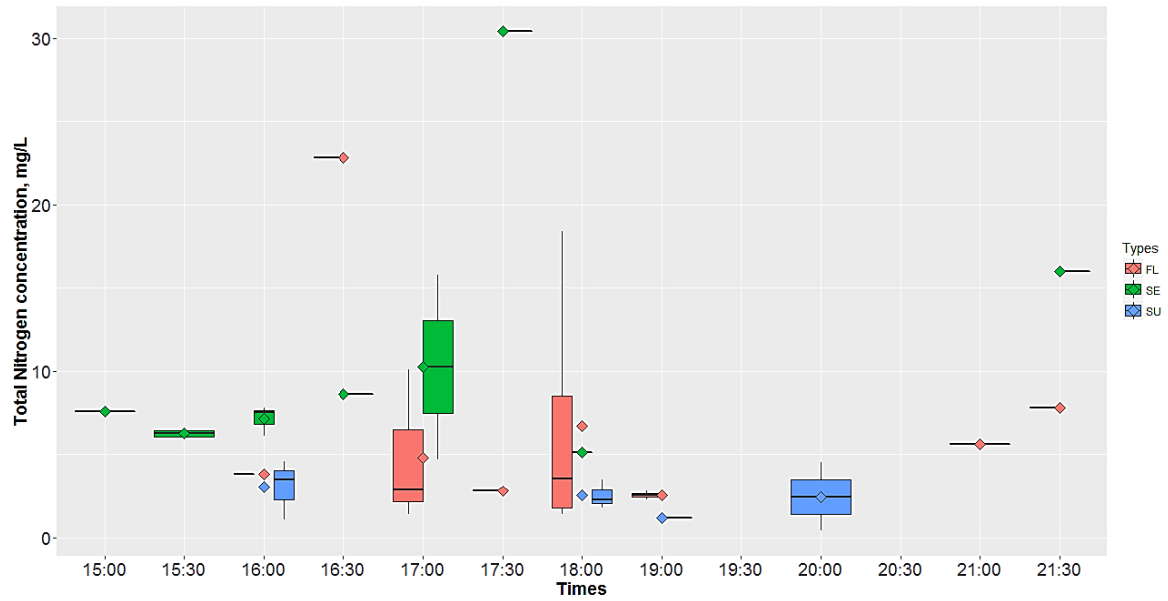


Figure S1. Box plot of variations of BOD concentration during flood event Locations **(a)**, Time **(b)** (SU: Open/Surface water, SE: Sewer Water, FL: Flood water; the diamond symbols representing average values).



(a)



(b)

Figure S2. Box plot of variations of Total Nitrogen concentration during flood event Locations (a), Time (b) (SU: Open/Surface water, SE: Sewer Water, FL: Flood water; the diamond symbols representing average values).

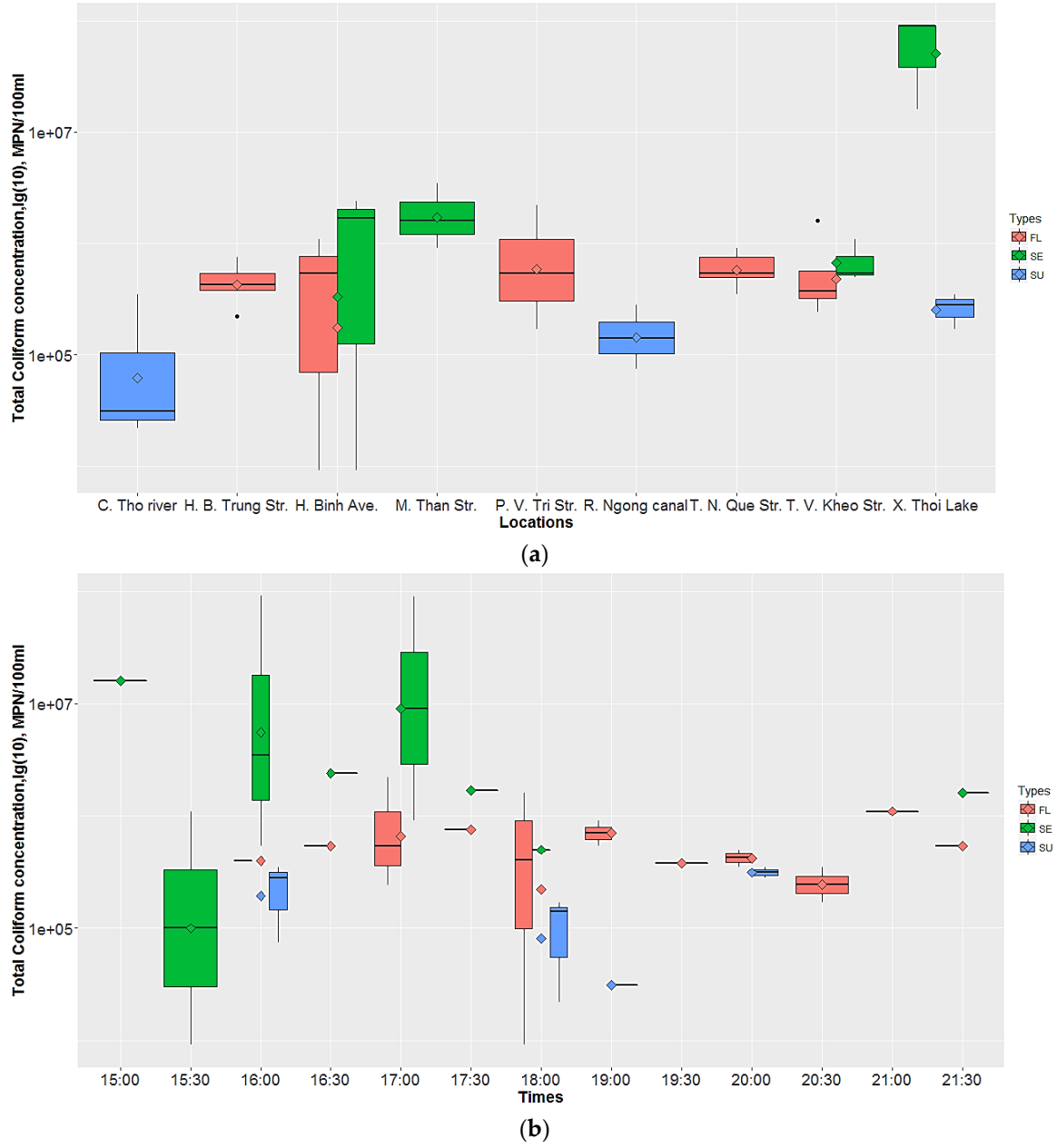


Figure S3. Box plot of variations of Total Coliform concentration during flood event Locations **(a)**, Time **(b)** (SU: Open/Surface water, SE: Sewer Water, FL: Flood water; the diamond symbols representing average values).

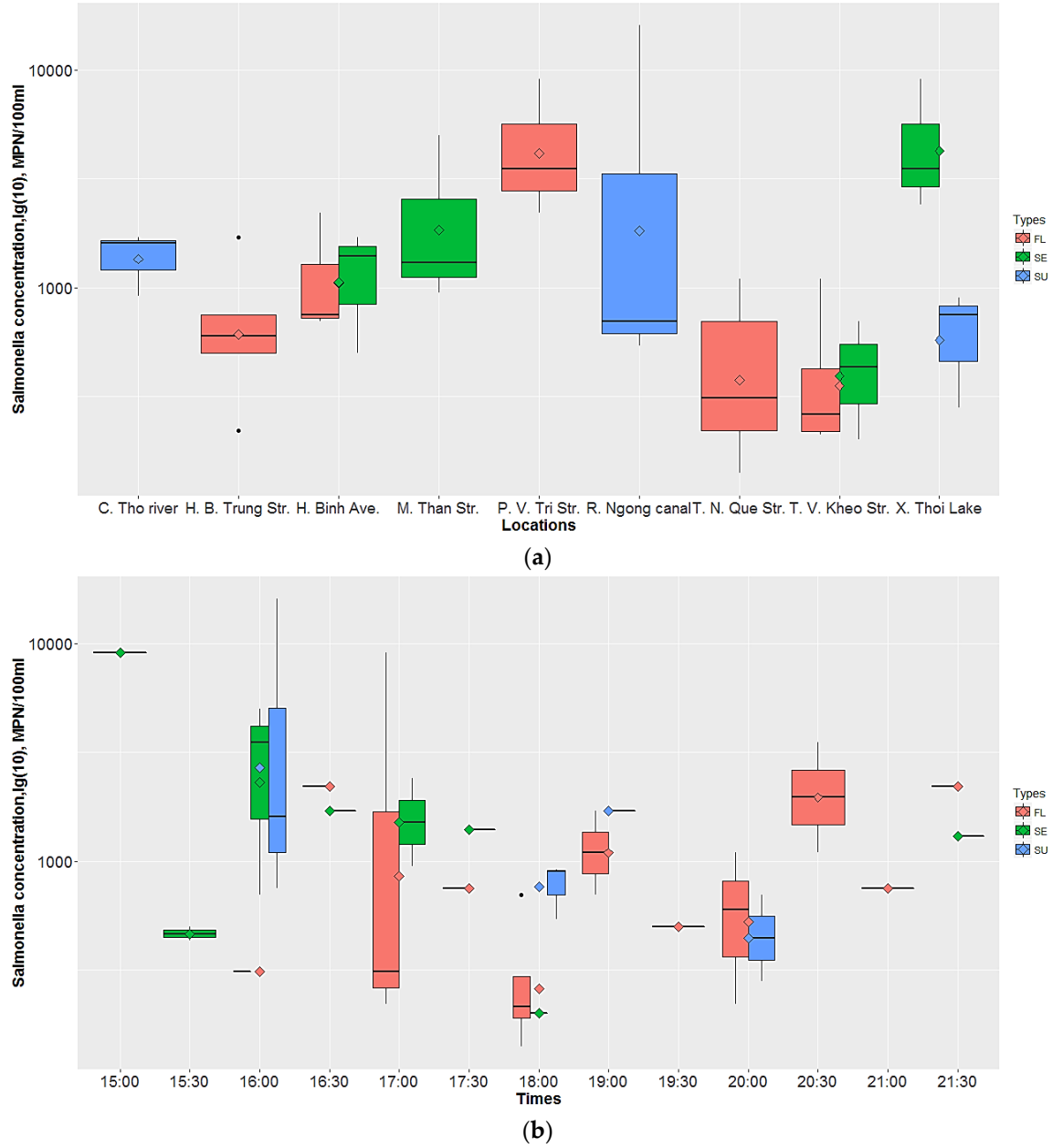


Figure S4. Box plot of variations of Salmonella concentration during flood event Locations **(a)**, Time **(b)** (SU: Open/Surface water, SE: Sewer Water, FL: Flood water; the diamond symbols representing average values).