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	
$BOD_5 20^0C$	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	
Total N	X	X	X	X	X	X	X	X	X	X	X	X	
E.Coli	X		X	X	X		X		X	X	X		
Coliform	X	X	X	X	X	X	X	X	X	X	X	X	
Salmonella	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.	BOD5 at 20oC	mg/l	Oxitop meter[1]
2.	Total Nitrogen	mg/l	10071/DR 3900[2]
3.	Total Phosphorus	mg/l	10127/DR 3900[3]
4.	*Salmonella*	MPN/100ml	Most probable number (MPN) [4]
5.	*E.coli*	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 Mar. 2017)

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

[3] https://www.hach.com/tensette-sup-sup-pipet-1-0-10-ml/product-downloads?id=7640447374 (search 10127, accessed 27 Mar. 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
E.Coli	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
Salmonella	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
Salmonella	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
E.Coli	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
Salmonella	Log (10), MPN/100mL	9	3.4	3.7	3.0	2.4	4.2

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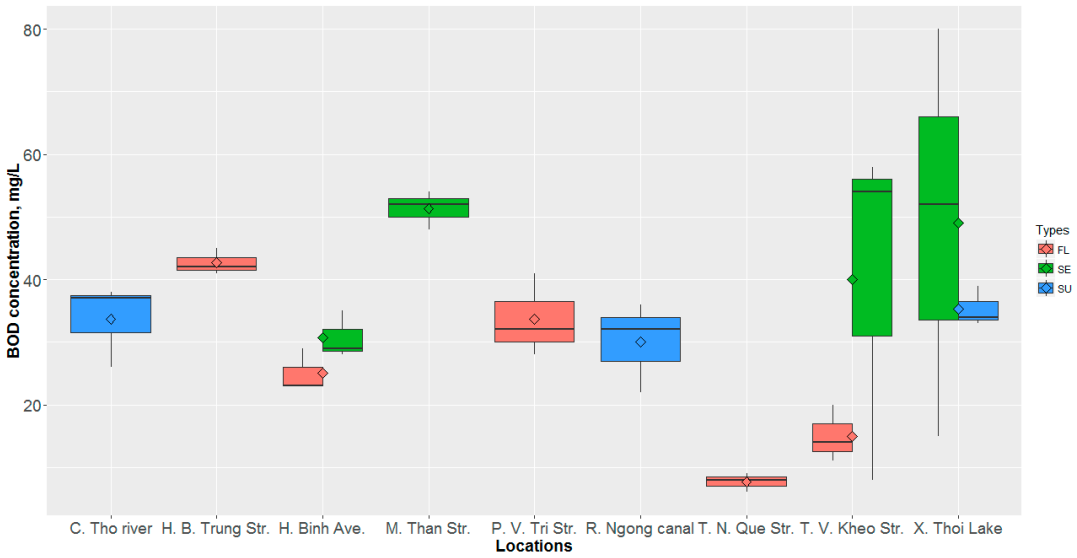

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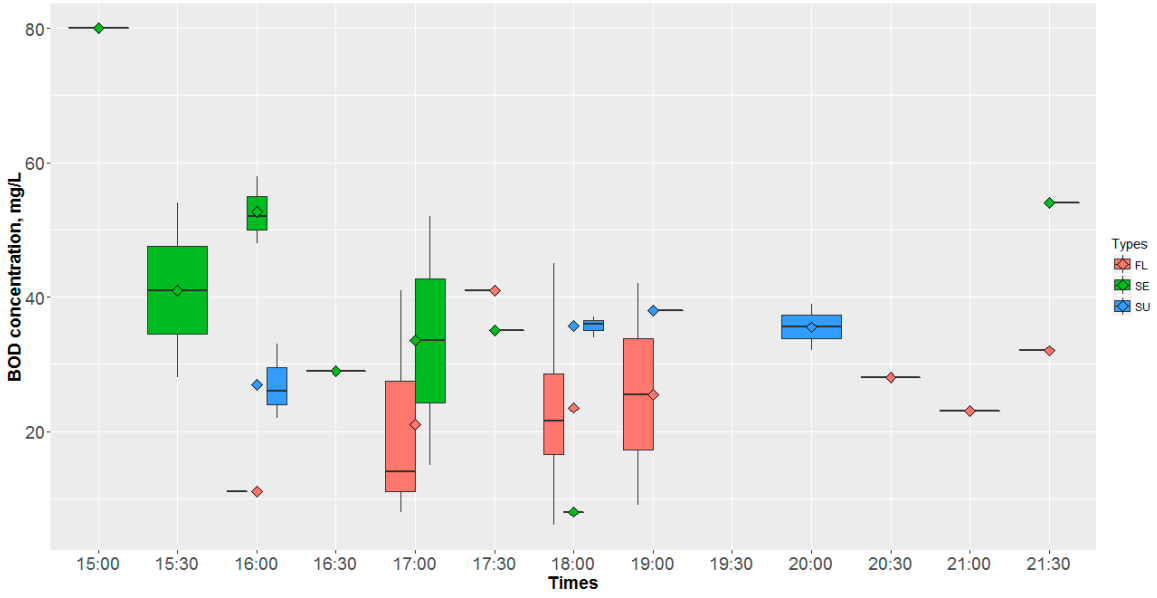
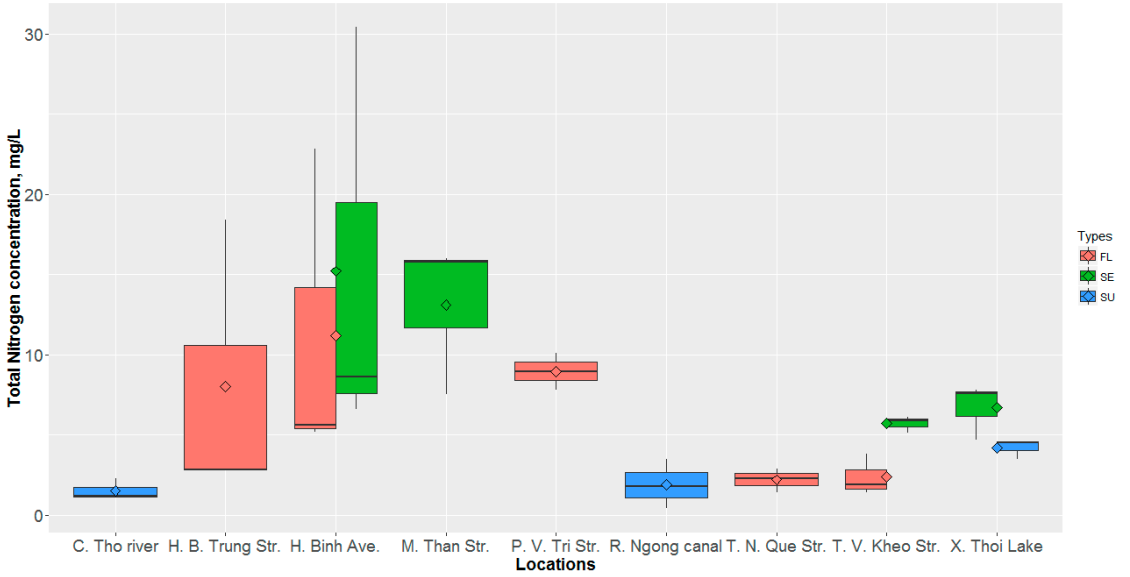
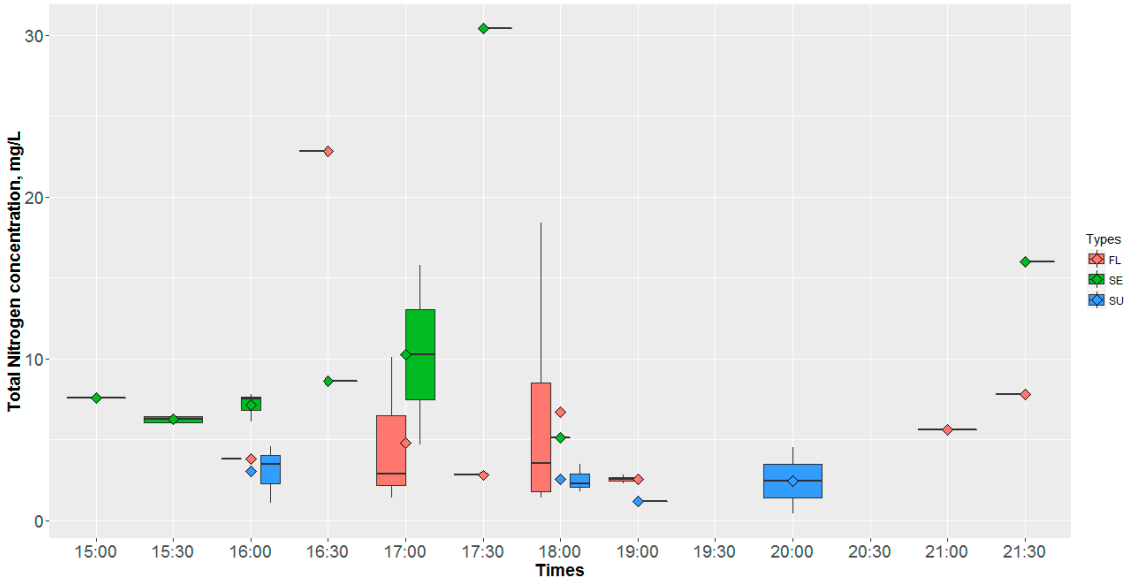


(b)

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*)

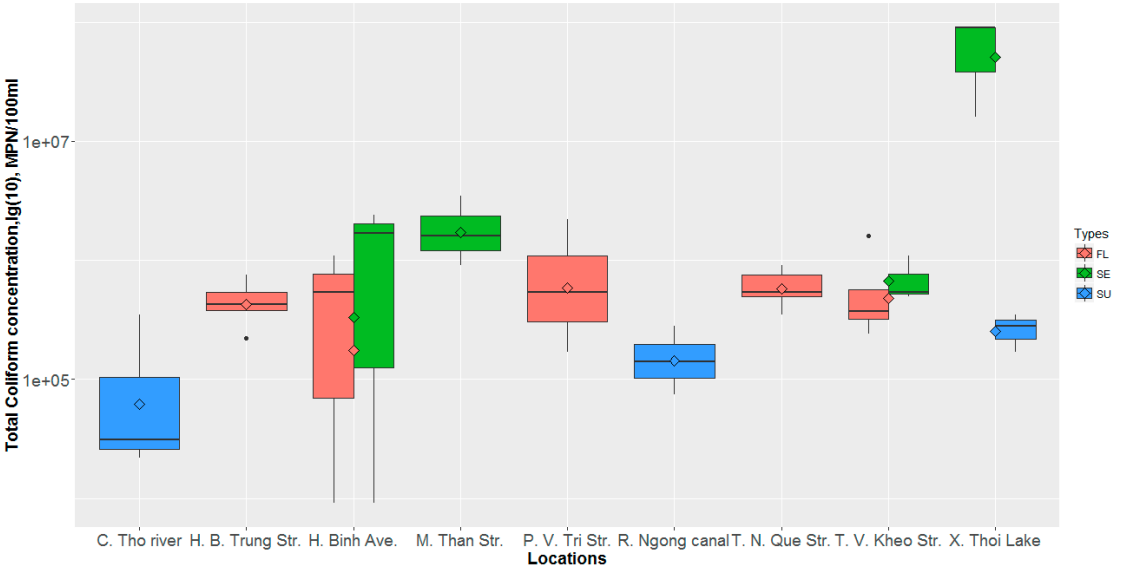


(a)



(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*)



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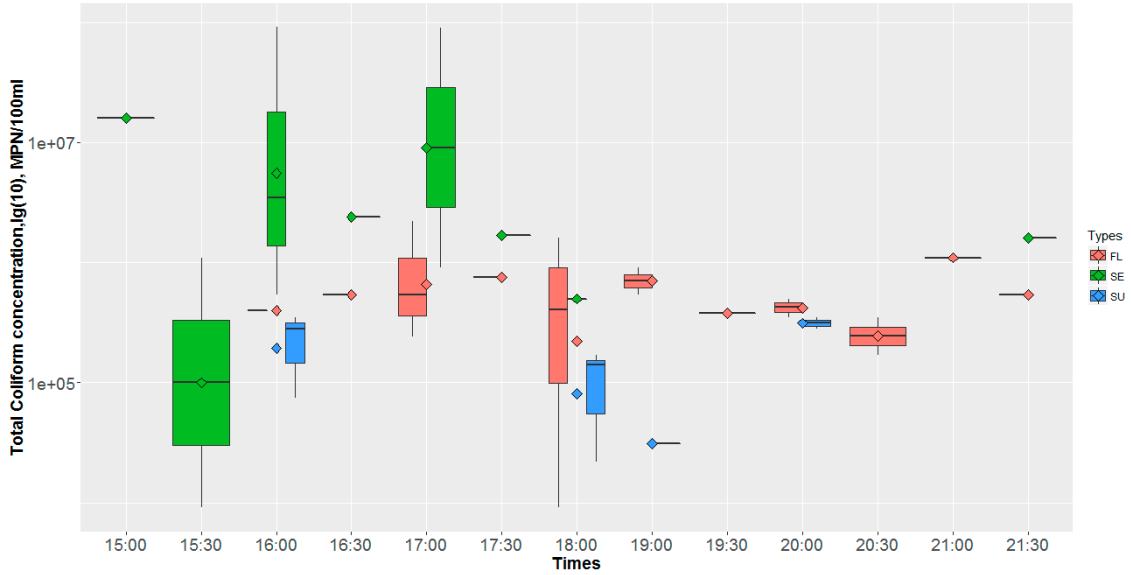
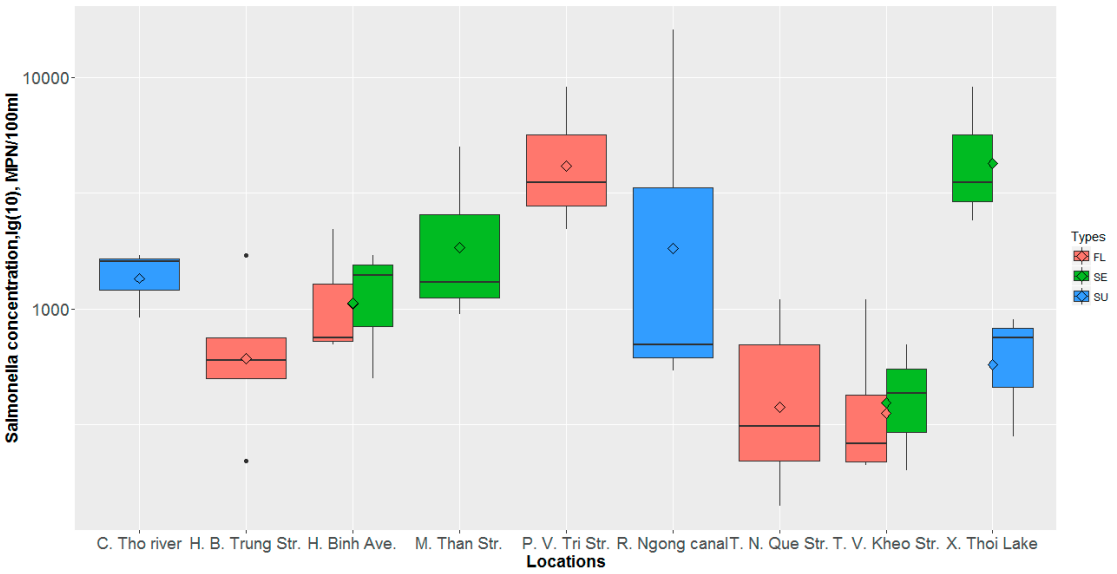
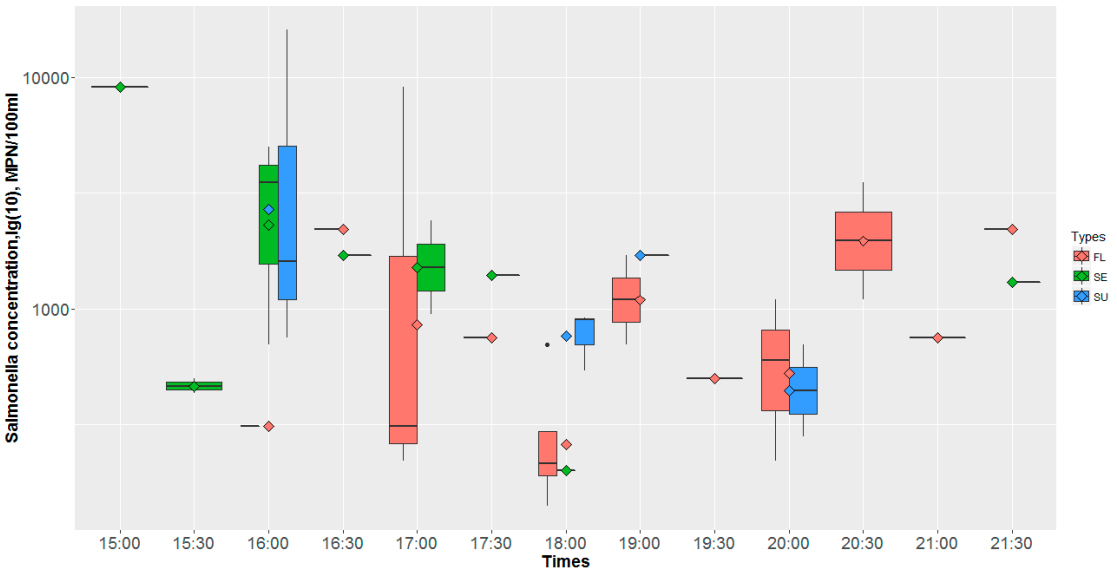


(b)

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*)



(a)



(b)

25 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*)