

東京大学大学院工学系研究科
附属水環境制御研究センター

活動報告書



(第三期 3 か年：2016 年 4 月～ 2019 年 3 月)

2019 年 9 月

東京大学大学院工学系研究科
附属水環境制御研究センター

はじめに

ここに、東京大学大学院工学系研究科附属水環境制御研究センターの第3期3年間（2016年度～2018年度）の活動内容をまとめた報告書を作成いたしました。

第3期においては、引き続き当センターに関連する都市工学専攻などの研究協力教員の協力を得つつ、さらに学内の連携教員をはじめとした研究者との連携を強化してまいりました。また、工学系研究科特定客員大講座に公的な水関連機関から教員（委嘱）を迎えるなど、学外の研究機関との連携・支援を得て、研究教育活動の広げてまいりました。特に、アジア太平洋地域における水環境研究の先端的な拠点として、大型外部資金の獲得に基づく機動的な研究活動を展開するとともに、国際会議を主催・共催することにより研究活動の成果を普及してまいりました。さらに、こうした研究活動や国際会議の開催を通じて人材を育成し、また国内向けのセミナーなどにおいて研究成果を分かりやすく伝えることで社会貢献にも取り組んでまいりました。

また、第3期の終了前には、これら活動の自己点検を行うとともに外部評価を実施しました。これらの研究活動とその成果に基づき、今年度より第4期5年間の継続が認められ、新たなスタートを切りました。これにより7月にはセンターの名称を、水環境制御研究センターから水環境工学研究センターに変更し、部門も従来の1部門から3部門体制へと拡充いたしました。今後は、他分野との連携をさらに推し進めつつ、水環境工学分野の国内外の拠点となるべく活動してまいります。

今後とも、当センターの活動をご支援賜りますようお願い申し上げます。

2019年9月15日

東京大学大学院工学系研究科
附属水環境工学研究センター
センター長

滝 沢 智

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I センター活動報告書

1. 組織

1-1. センターの設置目的と概要

深刻な水資源の枯渇や水環境の悪化は、いまや地球的な課題といえる。課題の解決には、病原微生物対策、栄養塩除去、微量有害化学物質の制御、処理水再利用などといった、多様な社会的要請を同時に満たす新たな先端的水環境制御システムの構築が求められている。本研究センターでは、先端的水環境制御技術の開発研究を中心的な任務と考え、先駆的な研究および実用への展開を継続して行う、中核となる研究組織を目指している。そのために、微生物生態学などの基礎科学と水処理工学などの実学の融合・連携から、新たな技術体系を構築しようと取り組んでいる。さらに大学だけでなく実際の行政やプロセス管理に責任を持つ研究機関の研究者との連携を取り、多様な社会的要望に応えられるような研究を学術的・実用的にも推進している。さらに本センターは研究交流の拠点としての機能も有している。国際的には、東南アジアにおける水環境研究の拠点として、タイのアジア工科大学内に東南アジア水環境制御研究センター（SACWET）を設立しており、東南アジアの水環境に関わる研究者や実務者との交流や情報交換を目指したシンポジウムを開催したり、さらにアジア諸国においても研究交流を展開している。また、国内向けにも、テーマを絞ったシンポジウムの開催などを行っている。

以上に加えて第2期（2010-2016）においては、外部資金による研究プロジェクトを軸とした研究活動の機動的な展開や、東南アジアからアジアへの展開を重視した活動を行っている。特にアジア水環境研究国際フォーラムをアジア諸国で開催するなどの展開を行っている。第3期（2016-2019）においても上記活動を継続的に発展させるとともに、学内他分野の研究者との連携強化を実施している。

1-2. 沿革

本研究センターの沿革を以下に示す。

- | | |
|-------------|--|
| 1998 年 12 月 | 文部科学省 COE プロジェクト「複合微生物系の機能を利用した高度水処理技術の体系化とその評価」（1996 年度～ 2000 年度、代表：松尾友矩・工学系研究科都市工学専攻教授）の研究成果を展開すべく、工学系研究科附属の研究センターの設置を概算要求。 |
| 2000 年 4 月 | 工学系研究科に附属する教育研究施設としては初めての研究センターとして、センター長・大垣眞一郎、教授・矢木修身、助手・栗栖太の 3 名、および都市工学専攻をはじめとする 12 名の研究協力者（⇒表 1）で発足。当初設置期間は 2010 年 3 月までの 10 年間。 |
| 2000 年 9 月 | 設立記念式典、祝賀会および第 1 回水環境制御研究センターシンポジウムを開催。引き続きシンポジウムを毎年 1 回以上主催している。 |
| 2002 年 7 月 | センターの年報第 1 号を発刊。引き続き 2 年に 1 度刊行している。 |
| 2002 年 11 月 | 東南アジア水環境制御研究センター（SACWET）を設立（⇒ 4-2 1）参照）。 |
| 2003 年 10 月 | 第 1 回東南アジア水環境国際シンポジウムをバンコク・タイにて開催した。2012 年の第 10 回シンポジウムまで毎年開催し、2013 年以降はアジア水環境制御国際フォーラムと交互に隔年開催としている。 |
| 2006 年 1 月 | 東南アジア水環境国際シンポジウム講演論文集 “Southeast Asian Water Environment” 第 1 巻を IWA Publishing より刊行した。第 10 回シンポジウム講演集からの論文まで、5 巻を出版した。 |
| 2006 年 4 月 | 教授・矢木修身の停年退職に伴い、教授に古米弘明が着任。 |
| 2009 年 11 月 | 第 1 期 10 年間の活動をまとめた外部評価資料を作成し、国内外 8 名の評価委員による外部評価を実施。 |
| 2010 年 4 月 | 第 2 期 6 年間の活動を開始する。 |
| 2012 年 5 月 | センター主催の特別講演を “RECWET Special Seminar Series” としてシリーズ化。 |
| 2013 年 12 月 | 東南アジアからアジアへの展開として、第 1 回アジア水環境制御国際フォーラム（IFAWET）をインド・デリーにて主催した。以後、東南アジア水環境国際シンポジウムと交互に隔年で開催している。 |
| 2015 年 12 月 | 第 2 期 6 年間の活動をまとめた外部評価資料を作成し、国内外 8 名の評価委員による外部評価を実施。 |
| 2016 年 4 月 | 第 3 期 3 年間の活動を開始する。 |

1-3. 定員と組織

本センターは、大学院工学系研究科に附属する教育研究施設である。定員は常勤教員としてはセンター長（兼任）、教授 1 名、および准教授 1 名である。このほか、特任研究員 1 名がおり、また特定研究客員大講座の教授 1 名が所属している。各教職員の推移を図 1 に示す。

	2016 年度		2017 年度		2018 年度	
センター長	森口祐一					
専任教員	教 授：古米弘明 准教授：栗栖 太					
客員教員 (特定客員大講座)	教 授：浅見真理（国立保健医療科学院）					
客員研究員					Orlando Balderama	
					Barth Smets	
センター特任 研究員	Rajendra Khanal	Phanwatt Phungsai		Yuthawong Vithruch		
特任研究員	Jatuwat Sansanont					
	Jason Torrey					
	Wei Zhang					
	宇田川悦子					
	井上 健太郎					
		Sungae Lee				
		Miaomiao Liu				
					Hop Phan	
				Li Xie		
事務補佐員	木村幸子					

図 1 センター教職員の推移一覧

さらに本センターは、センター専任の教員と、都市工学専攻所属研究協力を行う教員との緊密な連携により、活動の幅を広げている。2019 年 3 月現在の研究協力教員の一覧を表 1 に示す。さらに、表 2 に示す連携教員とも連携して教育研究を遂行している。また、学内において関連の研究を行う教員のメールアドレスリストを作成し、連携を図っている（2-3.3）参照）。

表 1 研究協力教員（2019 年 3 月現在）

氏 名	職 名	所 属	専門領域
小貫 元治	准教授	サステナビリティ学連携研究機構	サステナビリティ教育、環境教育、生物学的廃水処理
小熊久美子	准教授	先端科学技術研究センター	水と健康、浄水技術、都市水環境管理
風間しのぶ	特任講師	工学系研究科都市工学専攻	環境ウイルス学、水環境工学、環境衛生工学
春日 郁朗	准教授	工学系研究科都市工学専攻	生物学的浄水処理、水環境保全制御
片山 浩之	准教授	工学系研究科都市工学専攻	水質衛生学、上水道、環境微生物動態
栗栖 聖	准教授	工学系研究科都市工学専攻	社会・経済的環境評価、環境低負荷型地域管理
佐藤 弘泰	准教授	新領域創成科学研究科	下水・廃水処理、環境分析化学、環境微生物工学
滝沢 智	教授	工学系研究科都市工学専攻	都市水システム、浄水技術、途上国水環境管理
飛野 智宏	講師	工学系研究科都市工学専攻	環境微生物工学、生物学的排水処理
中島 典之	教授	環境安全研究センター	環境生態毒性、水源水質管理、環境水質化学
中谷 隼	講師	工学系研究科都市工学専攻	環境経済評価、ライフサイクル評価
橋本 崇史	講師	工学系研究科都市工学専攻	浄水技術、途上国の水供給システム
端 昭彦	助教	工学系研究科都市工学専攻	健康関連微生物、水再生処理
福士 謙介	教授	サステナビリティ学連携研究機構	有害物質管理、リスク管理、広域水環境管理
味埜 俊	教授	新領域創成科学研究科	環境微生物工学、環境水質工学、サステナビリティ教育
森口 祐一	教授	工学系研究科都市工学専攻	資源循環管理、ライフサイクル分析、産業エコロジー

表 2 連携教員（2019 年 3 月現在）

氏 名	所 属	氏 名	所 属
沖 大幹	教授 生産技術研究所	知花武佳	准教授 工学系研究科社会基盤学専攻
黒倉 壽	教授 農学生命科学研究科農学国際専攻	佐藤慎司	教授 工学系研究科社会基盤学専攻
鯉淵幸生	准教授 新領域創成科学研究科社会文化環境学専攻	原田 昇	教授 工学系研究科都市工学専攻
迫田章義	教授 生産技術研究所	溝口 勝	教授 農学生命科学研究科農学国際専攻

1-4. 施設

本センターは現在、東京大学本郷キャンパス内の工学部 8 号館に研究室（4 室、99 m²）、14 号館に実験室（3 室、92 m²）、研究室（1 室、58 m²）がある。このほか、14 号館に専任教員 2 名の居室（2 室、52 m²）があるが、これはセンター固有の面積ではなく、都市工学専攻の面積である。実験室は、特に分子生物学的実験・分析を行う設備に特化している。研究室や実験室については、緊密な研究協力を行っている工学系研究科都市工学専攻と一体的に管理、運営している。実験室は研究協力者が共同で自由に利用できるようにしてセンターの研究設備を有効に活用するとともに、センターの研究活動で必要となる実験設備や化学分析機器などは都市工学専攻の実験室を活用している。



図2 工学部 8号館の研究室



図3 工学部 14号館の実験室

1-5. 予算

センターの運営費は、工学系研究科の特別設備費として配分されている。センターの運営費は、シンポジウム開催、年報の発行、事務補佐員人件費等として用いられている。

表 3 2016 年度決算

収入の部

	予算項目	運営費	外部資金	備 考
運営費	センター運営費	4,520,000		
	特定客員講座（浅見真理先生）	800,000		
小 計		5,320,000		

外部資金 （センター運営関連）	クリタ水・環境財団		1,000,000	SEAWE-12 開催助成
	委託費（国連大学）		1,100,000	SEAWE-12 開催経費として受託
	環境省 Water Environment Partnership in Asia		1,500,000	SEAWE-12 開催経費の一部負担
	センター教員研究費より		1,230,370	事務補佐員賃金等
	協力教員外部資金より		5,730,000	共用実験室維持管理費として。実費額
小 計			10,560,370	

資産	工学部バンク	2,000,000		
	前年度繰越額	659,127		
計		7,979,127	10,560,370	

支出の部

予算項目	細 目	運営費	外部資金	備 考
センター活動経費	東南アジア水環境国際シンポジウム	1,188,750	3,600,000	
	シンポジウム経費	162,552	40,370	
	論文集出版費	331,000	0	IFAWET-1 の論文集出版費、WHO 和訳本製作費の一部
	海外特任教授招聘・特別講義シリーズ	190,570	40,000	特別講義シリーズ謝金等
	センター管理運営費	635,735	0	
	パンフレット作成	39,420	0	
	事務補佐員賃金	2,128,349	1,150,000	事務補佐員 2 名
小 計		4,676,376	4,830,370	

研究経費	特定客員教授研究経費	545,940	0	残額は WHO 和訳本印刷のため工学部バンク預入
小 計		545,940	0	

その他	共用実験室維持管理費	257,304	5,730,000	
小 計		257,304	5,730,000	

工学部バンク	工学部バンク繰越	2,000,000		
	工学部バンク預入	254,060		上記印刷費として次年度当初に執行予定
小 計		2,254,060		

	次年度繰越	245,447		web 構築等のため留保
計		7,979,127	10,560,370	

表 4 2017 年度決算

収入の部

	予算項目		備 考
運営費	センター運営費	4,430,000	
	間接経費戻り分	668,580	
	間接経費戻り分（昨年度追加分）	92,250	
	特定客員講座（浅見真理先生）	800,000	
小 計		5,990,830	
資産	工学部バンク	1,527,260	海外教授招聘費用としてこれまで積み立てたもの
	前年度繰越額	-192,278	
計		7,325,812	

支出の部

予算項目	環境系内細目	実 績	備 考
センター活動経費	海外教授招聘 旅費滞在費	720,710	JSPS 招へい研究者（短期）獲得により負担減
	海外教授招聘 関連整備費	960,984	招へい教授居室整備（8号館）
	その他シンポジウム経費	256,453	国内シンポ、Special Seminar Series 等経費
	センター管理運営費	396,602	消耗品類、外部評価謝金等
	パンフレット作成	268,272	パンフレット、外部評価冊子作成
	事務補佐員賃金	2,400,905	海外教授招聘業務の対応等による
研究経費	特定客員教授研究経費	799,200	
	その他研究経費	5,625	
その他	共用実験室維持管理費	564,840	
	工学部バンク 繰越	800,000	JSPS 招へい研究者（短期）獲得による繰越
	次年度繰越	152,221	
計		7,325,812	

2. 研究拠点

2-1. 国際的活動

1) 東南アジア水環境制御研究センター

(Southeast Asian Center for Water Environment Technology, SACWET)

当センターの東南アジア地域での研究活動を発展させるとともに、国際ネットワーク機能を充実させるというセンターの計画に沿い、2002年11月、タイ王国バンコク郊外にあるアジア工科大学院（Asian Institute of Technology: AIT）と共同で東南アジア水環境制御研究センター（Southeast Asian Center for Water Environment Technology, SACWET）を設立した。SACWETは、水環境制御研究センターのいわば海外サテライトセンターである。SACWET オフィスは、AIT の環境資源開発学部内にある。現在は東京大学からの長期の人員派遣は行っておらず、AIT 教員との協力関係によって運営されている。年1度程度、AIT と東大のスタッフからなる運営委員会を開き、運営について協議を行っている。

センター第3期においては、主として以下2)の東南アジア水環境国際シンポジウムの共催を行っている。



図4 東京大学統合報告書 2018

2) 東南アジア水環境シンポジウム

(International Symposium on Southeast Asian Water Environment, SEAWWE)

文部科学省科学技術振興調整費「東南アジア水環境学際コンソーシアム形成」の助成を受け、2003年に第1回東南アジア水環境国際シンポジウムをタイ王国AITで開催した。以来、上記研

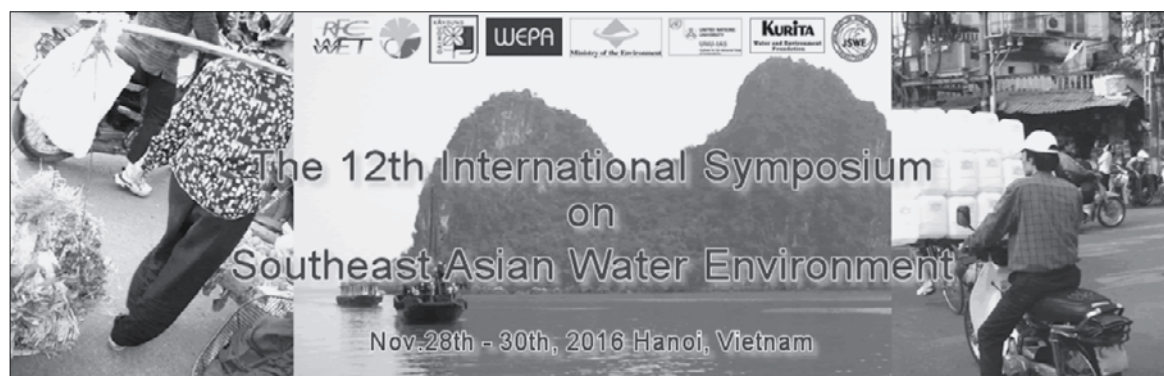
究助成終了後も、さまざまな助成金等を活用し、毎年開催してきた。

2012年に第10回シンポジウムを開催したことを区切りとして、第2期の課題でもある「東南アジアからアジアへ」の展開を行うため、姉妹イベント「アジア水環境制御国際フォーラム (International Forum on Asian Water Environment Technology, IFAWET)」を立ち上げた。IFAWETとSEAWETを隔年で交互に開催することとし、第11回目を2014年に開催しSEAWETの新しいスタートを切った。第3期に入ってから、2016年に第12回の会議を開催した。

2009年からは、会議において発表された若手による優秀な論文のなかから、Award for Asian Young Professional on Water Researchを選考し、授与している。

表5 東南アジア水環境国際シンポジウム開催状況

回	開催日程	開催地	発表論文数 (うちポスター発表)	参加者数	注記
1	2003/10/23-25	アジア工科大学 (タイ)	65	153	振興調整費による開催
2	2004/12/1-3	ソフィテルホテル・ハノイ (ベトナム)	101 (39)	181	振興調整費による開催
3	2005/12/6-8	アジア工科大学 (タイ)	67 (27)	100	
4	2006/12/6-8	アジア工科大学 (タイ)	54 (20)	100	最優秀ポスター賞の創設
5	2007/11/6-8	グリーンレークリゾート・ チェンマイ (タイ)	73 (40)	100	国際査読委員会による論文 査読の開始 現地大学との共催
6	2008/10/29-31	ジャヤカルタホテル・ バンドン (インドネシア)	89 (47)	136	
7	2009/10/28-30	アジア工科大学 (タイ)	71 (18)	260	AIT 創立 50 周年記念 Award for Asian Young Professional on Water Research の授与開始
8	2010/10/24-26	グレースランドリゾート・ プーケット (タイ)	67 (26)	190	
9	2011/12/1-3	エメラルドホテル・バンコク (タイ)	98 (40)	159	
10	2012/11/8-10	ヒルトンハノイホテル・ ハノイ (ベトナム)	92 (50)	149	以後隔年開催
11	2014/11/26-28	アジア工科大学 (タイ)	71 (38)	119	
12	2016/11/28-30	メリアハノイホテル・ ハノイ (ベトナム)	57 (22)	127	



The 12th International Symposium on Southeast Asian Water Environment (SEAW12)

28 - 30 November 2016

Melia Hotel, Hanoi, Vietnam

SEAW12 Technical Program

The 12th International Symposium on Southeast Asian Water Environment

28 - 30 November 2016

Melia Hotel, Hanoi, Vietnam

Conference Topics

The following specific subjects related to Asian water environment, especially in Southeast Asia, are selected as the topics.

- Water Supply and Treatment
- Wastewater Treatment and Management
- Emerging Contaminants and Environmental Technology
- Urban Flood and Its Health Consequences
- Climate Change and Water Environment Management
- Urban Water Quality Management
- Appropriate Technology for Water and Sanitation
- Coastal and Marine Water Environment

A special session is organized by Water Environment Partnership in Asia (WEPA, Japan)

- Groundwater Pollution Control – to Prevent and Mitigate Impacts of Industrial Activities

Registration

Online registration had been available for participants on SEAW12 website since Oct 26, 2016. Registration fee is collected at the venue of the symposium, only cash (Japanese yen or Vietnamese Dong) is acceptable. The fee includes attendance for the three-day activities, including technical sessions and technical tour, as well as symposium proceedings and other materials supplied by the symposium organizing office. Coffee break and lunch on Nov 29 and 30, as well as dinner on Nov 29, are included in the registration fee.

Registration Fee:

Normal participant: 20,000 JPY or 4,400,000 VND

Student: 5,000 JPY or 1,100,000 VND

Vietnamese only (both general and student): 1,100,000 VND

Accompanying person: 3,000 JPY or 660,000 VND

The registration periods are as followings;

28 November 08:00 – 18:00

29 November 08:00 – 17:30

30 November 08:00 – 12:00

The 12th International Symposium on Southeast Asian Water Environment (SEAW12)

28 - 30 November 2016

Melia Hotel, Hanoi, Vietnam

Awards

Oral Presentation Award

Since the 7th SEAW1, the Award for Asian Young Professional on Water Research has been established with a support from the Ohgaki Scholarship fund. The Award is given to distinguished young professionals who demonstrate the most outstanding and promising performance in oral presentation, and will be invited to the next symposium (SEAW13).

Excellent Poster Presentation Award

The Excellent Poster Presentation Award will be given for an outstanding presentation in poster session. The evaluation will be based on vote from all participants. Please take voting ticket at the venue for poster session and select Top 2 most outstanding presentation.

The awardees for both oral and poster presentation will be announced at the closing ceremony on 30 November (12.50~).

The 12th International Symposium on Southeast Asian Water Environment (SEAW12)

28 - 30 November 2016

Melia Hotel, Hanoi, Vietnam

Technical Program

Day 1 - 28 November 2016			
08:00	Registration		
18:00			
13:00	Technical Tour		
13:45	Depart from Melia Hotel to Ecopark		
13:45	Visiting Ecopark		
15:00			
15:00	Depart from Ecopark to Bat Trang Village		
15:30			
15:30	Visiting Bat Trang Village		
17:00			
17:00	Depart from Bat Trang Village to Melia Hotel		
17:30			
13:00	UNU-IAS Special Workshop (Invitee Only)		
18:00	Room B		
Day 2 - 29 November 2016			
08:00	Registration		
17:30			
Opening Ceremony at Ballroom 1			
Opening remarks: Prof. Hiroaki Furumai (The University of Tokyo, Japan)			
Welcome remarks:			
Prof. Pham Duy Hoa (Rector, National University of Civil Engineering, Vietnam)			
Dr. Mai Thanh Dzung (Deputy Director General, Vietnam Environment Administration, Ministry of Natural Resources and Environment, Vietnam)			
09:00	Mr. Yasumasa Watanabe (Director, Ministry of the Environment, Japan)		
10:30	Keynote lectures:		
Prof. Shinichiro Ohgaki (President, Japan Water Research Center, Japan)			
Title: Water Infrastructure of Mega-cities under the Changeable World			
Dr. Tran Thi Viet Nga (Dean, National University of Civil Engineering, Vietnam)			
Title: Emerging Water Environment Issues in Vietnam: Multidimensional Challenges for Sustainable Development			
10:30	Coffee break At the Foyer		
11:00			
A1 Water Supply and Treatment (1) Room A		B1 Wastewater Treatment and Management (1) Room B	C1 Emerging Contaminants and Environmental Technology (1) Room C
A1-1 Development of a Water Safety Plan for Vientiane City, Lao PDR		B1-1 Application of Taguchi method for Optimizing Nitrate Removal using Continuous Electro-Coagulation (CEC) Process	C1-1 Factors Influencing Sorption and Biodegradation of 17 α -Ethinylestradiol in Relation to Nitrification
11:00	Bishal Bhari	M.R. Alavi Moghaddam	Liza Bautista-Patacsil
11:25			
A1-2 Consumers' Perception of Intermittent Water Supply in Kathmandu Valley		B1-2 Treatment of Textile Wastewaters by Electrocoagulation Employing Fe-Al Composite Electrode	C1-2 Nanotechnology for in Situ Stabilization of Mercury Contaminated Aquifers
11:25	Bibas Guragai	Akshaya Kumar Verma	Murugesan Devasena
11:50			
A1-3 Comparative Assessment of Green Supply Chain Management (GSCM) in Drinking Water Service Industry in Lao PDR, Thailand, and South Korea		B1-3 Application of Direct Contact Membrane Distillation to the Treatment of Raw and Biologically Treated Municipal Solid Waste Leachate	C1-3 Occurrence of Perfluorinated Compounds (PFCs) in Surface Water and Groundwater near Unsuitable Disposal Sites in Thailand
11:50	Dong Hak Park	Pawinee Milintawisamai	Chanidaporn Hongkachok
12:15			
13:30	Buffet Lunch at Hotel restaurant		

The 12th International Symposium on Southeast Asian Water Environment (SEAW12)

28 - 30 November 2016

Melia Hotel, Hanoi, Vietnam

Technical Program

Day 2 - 29 November 2016 (Cont'd)

A2 KURITA - Water Supply and Treatment (2) Room A		B2 UNU-IAS - Urban Flood and Its Health Consequences Room B		WEPA Session Groundwater Pollution Control to Prevent and to Mitigate Impacts of Industrial Activities Room C
13:30 – 13:55	A2-1 Defluoridation of Water using Aluminum Oxide/hydroxide Nanoparticles: Optimization of Process Parameters and Management of Spent Adsorbent <i>Vineet Kumar Rathore</i>	B2-1 Simulation of Flood Inundation in the Mega Cities of Southeast Asia, Case Study: Metro Manila <i>Ammar Rafiei Emam</i>		
13:55 – 14:20	A2-2 Application of the Simultaneous Process of Nitrification and Denitrification by using Moving Bed Biofilm Reactor for Groundwater Treatment in Ha Noi <i>Trinh Xuan Duc</i>	B2-2 Estimating Probability of Infection by Noroviruses in Floodwater: A Case Study in the Ciliwung River Basin, Indonesia <i>Yoshifumi Masago</i>		
14:20 – 14:45	A2-3 Mechanisms Driving Water Exchange Processes and Circulation in Sakai Channel, Japan <i>Muchebeve Edwin</i>	B2-3 Does Urban Flood Fecally Contaminate Agricultural Fields at the Downstream? - A Case in Central Vietnam <i>Jian Pu</i>		
14:45 – 16:00	Poster Session at Foyer Ballroom 1 Coffee Break (15:00-15:30)		Coffee Break	
A3 KURITA Climate Change and Water Environment Management Room A		B3 UNU-IAS Urban Water Quality Management Room B		WEPA Session (Cont'd) Groundwater Pollution Control to Prevent and to Mitigate Impacts of Industrial Activities Room C
16:00 – 16:25	A3-1 Climate Change Induced Impact on Agriculture and Food Security in Southwest Coastal Region of Bangladesh <i>Khondoker Mahbub Hassan</i>	B3-1 Fostering Regional Cooperation and Collaboration Frameworks between Researchers and Policymakers through Policy-Relevant Nexus Research: <i>Experiences of Nexus Observatory Regional Workshops in Asia</i> <i>Kristin Meyer</i>		
16:25 – 16:50	A3-2 Foreign Investment in Vietnam's Water Sector: Lessons from Bangladesh <i>Kimberley Thomas</i>	B3-2 An Initial Economic Evaluation of the Surface Water Quality Improvements in Metro Manila, the Philippines <i>Shokhrukh Jalilov</i>		
16:50 – 17:15	A3-3 Application of SIPHER Model in Analyzing Present and Future Water Temperature in Takasaki River, Chiba, Japan <i>Hiroaki Furumai</i>	B3-3 Quality Assessment and Scenario Modeling for Water Resource Management in the Context of Future Climate and Development Changes: Case of Jakarta City, Indonesia <i>Pankaj Kumar</i>		
17:15 – 17:40	A3-4 Simulating Impacts of El Niño and Climate Change on Rainfed Corn in Isabela Province, Philippines using Aquacrop Model <i>Orlando F. Balderama</i>	B3-4 The Estimation of Water Quality Based on New Scheme of Streeter-Phelps Equation for Upstream Site of Citarum River <i>Nguyen Thi Ngoc Anh</i>		
18:30 – 20:30	Gala Dinner at Gia Vien Vietnamese Restaurant <i>Bus to the restaurant available at the entrance of Melia Hotel. Please gather punctuanly at 17:50.</i> <i>Bus on the way back is available at 20:45.</i>			

The 12th International Symposium on Southeast Asian Water Environment (SEAW12)

28 - 30 November 2016

Melia Hotel, Hanoi, Vietnam

Technical Program

Day 3 - 30 November 2016		
	A4 Appropriate Technology for Water and Sanitation <i>Room A</i>	B4 Coastal and Marine Water Environment <i>Room B</i>
08:30 – 08:55	A4-1 Biochemicals Content of <i>Aphanothece</i> sp Cultured in Photobioreactor Originated from an Urban Lake and its Dried Biomass Capability to Uptake Cadmium Ion in Aqueous Solution <i>Awalina Satya</i>	B4-1 Siltation along Hinadkaban Bay, Surigao Provinces, Philippines: Impact of Nickel Laterite Mining on Coastal Water Quality <i>Dahlia C. Apodaca</i>
08:55 – 09:20	A4-2 Zyclone Cube as a Potential Sanitation Technology for Southeast Asian Countries <i>Saroj Kumar Chapagain</i>	B4-2 Industrial Activities and Its Effects to River Water Quality (Case Study Citarum, Bengawan Solo and Brantas), An Evaluation for Java Island as an Economic Corridor in Master Plan of Acceleration and Expansion of Indonesia Economic Development (MP3EI) 2001-2025 <i>Mochamad Adi Septiono</i>
09:20 – 10:00	Morning Lecture over Coffee - Room B Morning lecture 1: Dr. Do Thuan An (Water Resources University, Vietnam) <i>Title: Efficiency of Common Point of Use Water Treatment Systems in Hanoi</i> Morning lecture 2: Dr. Kumiko Oguma (The University of Tokyo, Japan) <i>Title: Water Quality in Drinking Water Supply Systems in Hanoi</i>	
	A5 Emerging Contaminants and Environmental Technology <i>Room A</i>	B5 Wastewater Treatment and Management <i>Room B</i>
10:00 – 10:25	A5-1 Diffusive Leaching Behaviour of Sulfamethoxazole in Selected Soils <i>Neelancherry Remya</i>	B5-1 Metronidazole Removal in Freely-Suspended-Biomass and Carrier-Supported-Biomass Systems <i>Mathava Kumar</i>
10:25 – 10:50	A5-2 Development of Activated Adsorbent from Water Treatment Sludge: Application for Constructed Wetland Media Treating Ammonium Nitrogen <i>Jedsada Chuiprasert</i>	B5-2 Comparison of Nitrogen Removal Capability by Anammox Process in Fluidized Bed Reactor and Fix Bed Reactor <i>Nguyen Thi My Hanh</i>
10:50 – 11:15	A5-3 Fate and Removal of Priority Phthalates in UASB + Polishing Pond Based Full Scale Wastewater Treatment Plant- a Sustainable Treatment Scheme of Developing Countries <i>Khalid Muzamil GANI</i>	B5-3 Degradation Behavior of Polyhydroxyalkanoates Accumulated in Activated Sludge as a Possible Source of Bioenergy <i>S. M. Shamsul HUDA</i>
11:15 – 11:40	A5-4 Biodegradation of Tiamulin by Bacterial Consortia Enriched from Swine Wastewater under Different Substrates <i>Nguyen Thi Kim Xuan</i>	B5-4 Performance Evaluation of a Submerged Anaerobic Membrane Bioreactor (AnMBR) Treating Slaughterhouse Wastewater in Hanoi city <i>Duong Thu Hang</i>
11:40 – 12:40	Farewell Lunch at Ballroom 1	
12:40 – 13:10	Closing Ceremony at Ballroom 1 - Award ceremony - Announcement of SEAW13 - Closing remarks	

The Twelfth Annual Meeting of
WEPA
(Invitee Only)
Room C

3) アジア水環境制御国際フォーラム

(International Forum on Asian Water Environment Technology, IFAWET)

この会議は、対象を東南アジアからその他のアジア地域に広げつつ、開催国における水環境制御に関する課題についてより集中的におこなうことを特徴に掲げている。東南アジアシンポジウムとは異なり、比較的少数の研究者同士によるインテンシブな議論を行う場とすることを目的としている。2013年に第1回の会議をインド・ニューデリーにて開催した。東南アジアシンポジウムと交互に隔年で開催している。第3期においては、2018年3月にシンガポール国立大学において第3回を開催した。

表6 アジア水環境制御国際フォーラム開催状況

回	開催日程	開催地	発表論文数	参加者数	注記
1	2013/12/18-20	ジャワハルラー・ネルー大学 (インド・ニューデリー)	82	90	インド側の強い希望があり、インド国内の研究者から広く公募により発表を募って発表者を決定した。
2	2015/10/26-27	プサン国立大学 (韓国・プサン)	15	50	
3	2018/3/2-3	シンガポール国立大学 (シンガポール)	39	50	



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Program

Registration

Call for Poster Presentation

Organizers& Contact

Archives

Invitation to the 3rd IFAWET

The 3rd international forum will be jointly organized by The Centre of Water Research, National University of Singapore and The Research Center for Water Environment Technology, The University of Tokyo. This forum will be held on National University of Singapore on March 2-3, 2018. The aim of the conference is to provide a 'forum' for scientists and practitioners to discuss issues ranging from cutting edge to practical levels on water environment technologies in Asian context. We welcome all scientists and practitioners to exchange their knowledge on water environment technology.

Hiroaki Furumai
Professor
RECWET, The University of Tokyo

Jiangyoung Hu
Professor
Center for Water Research, National University of Singapore

3rd Announcement

Date and Venue

- Date: March 2-3, 2018
- Venue: Auditorium at Shaw Foundation Alumni House, 11 Kent Ridge Drive, Singapore 119244

Symposium Program

The 3rd International Forum on Asian Water Environment
Technology (IFAWET)

March 2-3, 2018

Auditorium at Shaw Foundation Alumni House, National University of Singapore



Friday, 2nd March 2018

FRIDAY, 2 MARCH 2018

Morning Session

Time	Contents	Speakers	Affiliation
8:00	Registration		
9:00	Opening Remarks	Hiroaki Furumai	UT, Japan
Session 1: Physicochemical technologies for water and wastewater treatment (Chair: Say Leong Ong)			
	Keynote		
9:10	UV technology advancement and application in Singapore	Jiangyong Hu	NUS, Singapore
9:40	Monitoring quorum sensing signaling molecules in MBRs	Tomohiro Tobino	UT, Japan
10:00	Ozonation and electrolysis for seawater application	Youmi Jung	NUS, Singapore
10:20	Application of membrane filtration against highly turbid surface water in tropical region -Pore size selection and particle rejection for appropriate potable water supply-	Takashi Hashimoto	UT, Japan
10:40	New approach to seawater desalination for sustainable water supply	Kim Choon Ng	NUS/KAUST
11:00	Networking Coffee Break and Poster Viewing		
Session 2: Emerging microbial risks in water environment and microbial ecology (Chair: Tomohiro Tobino)			
11:20	Novel methods for rapid detection of viral pathogens in water	Masaaki Kitajima	Hokkaido University, Japan
11:40	Rapid and real-time detection of microbial contamination using a Smart Technology	Sung Woo Bae	NUS, Singapore
12:00	Evaluation of biodegradable organic matter causing regrowth in drinking water	Ikuro Kasuga	UT, Japan
12:20	Lunch, Poster Viewing, and Poster Evaluation		

Afternoon Session

Time	Contents	Speakers	Affiliation
Session 3: Dynamics of micro-pollutants and dissolved organic matters in water environment (Chair: Ikuro Kasuga)			
	Keynote		
14:30	Ecotoxicity of micropollutants in urban water environment	Fumiyuki Nakajima	UT, Japan
15:00	Characterization of natural organic matter in a local reservoir	Fang Yee Lim	NUS, Singapore
15:20	Application of high resolution mass spectrometry to characterize dissolved organic matter in a eutrophic lake	Vitharuch Yuthawong	UT, Japan
15:40	Managing contaminants of emerging concern in Singapore	Mong Hoo Lim	PUB, Singapore
16:00	Networking Coffee Break and Poster Viewing		
Kurita Water and Environment Foundation Special Session: Future of membrane technology in water and wastewater treatment (Chair: Sung Woo Bae)			
16:30	Contribution of advanced membrane technologies to Singapore water projects	Kyaing Kyaing Latt	Toray Singapore Water Research Center, Singapore
17:00	Membrane distillation: principles, application and commercial aspects in water technology	Kyoungjin An	City University of Hong Kong
17:30	Anaerobic membrane bioreactor for wastewater treatment and reuse	How Yong Ng	NUS, Singapore
18:00	Simultaneous nutrients recovery and osmotic concentration of source-separated wastewater and urine	Hokyong Shon	University of Technology Sydney, Australia
18:30	Closing ceremony	Jiangyong Hu	NUS, Singapore
19:00	Networking Dinner		

SATURDAY, 3 MARCH 2018**Technical Tour**

Time	Contents
8:00 – 13:00	Visit to Changi Water Reclamation Plant (Changi WRP) and NEWater Visitor Centre (NVC) Meeting point: Shaw Foundation Alumni House, NUS

4) 諸外国研究組織との MoU の締結

水環境にかかわる諸外国の大学の研究組織との研究交流を目的とし、研究交流の了解覚書 (Memorandum of Understanding) を交わしている。

大 学 等	組 織	締結日
Changwon National University	Gyeongnam Regional Environmental Technology Development Center and Environmental Technology of BK 21	2008 年 1 月
Chinese Academy of Science	Research Center for Eco-Environmental Science	2016 年 1 月
University of Technology Sydney	Center for Technology in Water and Wastewater	2016 年 7 月
University of South Australia	Natural and Built Environments Research Centre	2016 年 6 月
The University of Wollongong	Strategic Water Infrastructure Laboratory	2018 年 9 月



図 5 The University of Wollongong と MoU の調印と手交

5) 国際シンポジウム、ワークショップの開催

以下の国際ワークショップやシンポジウムを、他の団体等共催して開催してきた。

① 環境水中の微量化学物質に関するワークショップ

(中国科学院生態環境研究センターとの共催)

主催：中国科学院生態環境研究センター

共催：東京大学大学院工学系研究科附属水環境制御研究センター

■期日：2016 年 11 月 03 日

■時間：13：30-17：00

■会場：423 Meeting Room, No.5 Building, RCEES

スケジュール

13：30-13：40

主催者挨拶

中国科学院生態環境研究センター 楊 敏 研究員

13：40-14：00

“Challenges of reclaimed water use for urban sustainability”

東京大学 古米 弘明 教授

14 : 00-14 : 20

“High throughput screening of petroleum related acids in water: A potential indicator for oil pollution”

北京大学 万 禕 教授

14 : 20-14 : 40

“Fate of low molecular weight dissolved organic matters in reclaimed water treatment systems”

東京大学 栗栖 太 准教授

14 : 40-15 : 00

“Elevated toxicity to fish embryo development caused by ozonation of secondary effluents and controlling methods”

RCEES 張 昱 研究員

15 : 00-15 : 20

“Toxicity-Directed Fate and Transformation of Benzophenone-type UV Filters in Chlorination Disinfection”

RCEES 魏 東斌 研究員

15 : 20-15 : 40

“Analysis on the adaptability of key indexes of reclaimed water quality standard in China”

北京都市下水グループ有限公司、李 魁暁 シニアエンジニア

15 : 40-16 : 00

“水中有機汚染物のスクリーニング法の現状と進展”

Waters 社、環境ビジネスマーケティング部 経理 陳 宇東

16 : 00-17 : 00

ディスカッション

② Brain Storming Communication Workshop on Development of New Water Supply Strategies and Vulnerability Assessment for Guwahati in relation to the Brahmaputra Watershed Management under the Climate Change Regime

共催 : Tezpur 大学 (インド)、Asian Pacific Network for Global Change Research (APN)

日時 : 2017 年 3 月 30 日

場所 : Tezpur 大学

Program

-Introduction-

- 10:00 ~ 10:10 Welcome remark, by Dr. Ashok Kumar (Dean, School of Sciences, Tezpur Central Univ.)
- 10:10 ~ 10:20 Introduction of the project, by Dr. Manish Kumar (Tezpur Central Univ., India)
- 10:20 ~ 10:30 Inaugural Talk, by Prof. Mihir Kanti Chaudhury (Vice-Chancellor, Tezpur Central Univ.)

-High Tea (10:30 ~ 11:00) -

-Session 1: Project background researches-

- 11:00 ~ 11:30 Japanese Experience of Urban Water and River Management: Lessons and relevance to India by Prof. Hiroaki Furumai (The Univ. of Tokyo, Japan)
- 11:30 ~ 12:00 Development of new water supply strategies in two major cities of India and Sri Lanka in the context of climate change, rapid urbanization and population growth: a vulnerability assessment approach, by Dr. Manish Kumar (Tezpur Central Univ., India)
- 12:00 ~ 12:30 Innovative ways to spread awareness among stakeholders and increase participation by Prof. R. R. Hoque (Tezpur Central Univ., India)
- 12:30 ~ 13:00 Brahmaputra Riverfront Management: Importance for water supply and flood management by Prof. Chandan Mahanta (IIT Guwahati, India)

-Lunch Break (13:00 ~ 14:00) -

- Session 2: Invited lectures on project related researches-

- 14:00 ~ 14:30 Rainwater Management and probable ways of water supply under climate change regime: Science and Sense, by Prof. R. D. Deshpande (Scientist-SG & Chairman, Physical Research Laboratory, Ahmedabad, India)
- 14:30 ~ 15:00 Status of solid waste management in Guwahati/Assam and its impact on Water management by Dr. Ajay Kalamdhad (IIT Guwahati, India)
- 15:00 ~ 15:30 Modelling, Simulations and Forecasting for climate change related aspects for sustainable water supply, by Dr. Manish Goyal (IIT Guwahati, India)

15:30 ~ 16:00 Water Supply, Sanitation and Health: Special reference to Assam and Guwahati, by Dr. Ritusmita Goswami (SERB-DST Young Scientist)

-Tea Break & Poster Session (16:00 ~ 17:00) -

-Conclusion-

17:00 ~ 17:45 Wrap-up discussion, coordinated, by Prof. Hiroaki Furumai & Dr. Manish Kumar

17:45 ~ 18:00 Felicitation, Best Poster Award & Vote of Thanks, by Dr. R. R. Hoque (Tezpur Central Univ., India)



③ International Symposium on Sustainable Urban Environment

共 催：Tezpur 大学, APN

日 時：2017 年 6 月 23-24 日

場 所：Tezpur 大学

参加者：55 名



Tezpur is a city known for its cultural heritage and is a destination for tourists. Three national parks of international importance known in, namely Kaziranga, Nameri and Orang are situated within a radius of 50kms from Tezpur. Participants will manage their own travel and accommodation. Limited accommodation is available in the University Guest House, which may be booked for participants on the first come first serve basis. Option for making request for booking accommodation is provided in the registration form.

Organizing by

Dept. of Environmental Science, Tezpur University, India
Kanazawa University, Japan
University of Ruhuna, Sri Lanka
The University of Tokyo, Japan

Supported by

Asia Pacific Network for Global Change Research (APN-GCR)
Research Centre for Water Environment Technology (RECWET),
UTokyo

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Prof. Hiroaki Furumai (The University of Tokyo, Japan)
Dr. Ryo Honda (Kanazawa University, Tokyo)
Dr. Tushara Chaminda (University of Ruhuna, Sri Lanka)
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Prof. K. P. Sarma (Tezpur University, India)
Dr. Manish Kumar (Tezpur University, India)

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Dr. Ashalata Devi, Tezpur University
Dr. Nirmali Gogoi, Tezpur University
Bani Pathak, Finance Officer, TU
All Faculty members of Env. Sc.

Contact:

Dr. Manish Kumar, Organizing Secretary
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INTERNATIONAL SYMPOSIUM On Sustainable Urban Environment June 23-24, 2017 (ISSUE 2017)

REGISTRATION FORM (Format)

Name (Dr/ Mr/ Mrs/ Ms)
Qualifications:
Designation:
Department:
Institution:
Address:
Email:
Contact No.:
Accommodation Required (Yes/No):
Gender (tick): Male / Female
Whether presenting a paper
(Yes/No):
If yes, Title of the paper:
Author (s):
Registration fee details:
Amount:
Mode of payment (tick): Demand Draft / Direct Bank
Deposit/ Online Transfer
Amount:

DD No. & Date:	
Name of the Bank:	
Detail of Bank Deposit	
Date of deposit:	
Bank:	
Details of Transfer:	
Transaction id & date/ journal no/ direct deposit:	
Payee A/C No.:	
Bank:	

Date:
Place:
Signature (above)

**This is a format of the Registration Form. The actual form is available on the Tezpur University website for download. Photocopy of the form downloaded from the website will also be accepted. The filled up forms should be sent to-
Dr. Manish Kumar Organizing Secretary
Dept. of Environmental Science, Tezpur University,
Napaam-784028, Tezpur, Assam*

INTERNATIONAL SYMPOSIUM On Sustainable Urban Environment June 23-24, 2017 (ISSUE 2017)



Organized by

Tezpur University, India
Kanazawa University, Japan
University of Ruhuna, Sri Lanka
The University of Tokyo, Japan



Supported by

Asia Pacific Network (APN)
&
Research Centre for Water Environment
Technology (RECWET), UTokyo

INVITATION

Dear Colleagues

It is our pleasure and honor to invite you for International Symposium on Sustainable Urban Environment (ISSUE) 2017 to be organized at the Department of Environmental Science, Tezpur University, Assam, India. ISSUE-2017 has its origin embedded in three nations, India-Japan-Sri Lankan, collaborative project on "Development of New Water Supply Strategies in Two Watersheds of India and Sri Lanka in the context of Climate Change, Rapid Urbanization and Population Growth: A Vulnerability Assessment Approach" funded by the Asia-Pacific Network (APN)-Global Change Research (GCR) (Project reference: CRRP2016-06MY-Kumar). The symposium is cofunded by Research Centre for Water Environment Technology (RECWET), The University of Tokyo and DST-JSPS initiative under India-Japan Science Cooperation Program (IJSCP). We would like to thank all funding partners for believing in the collaboration and funding for the activity.

As mentioned ISSUE-2017 targets to explore an emerging need of active and science-policy interface contributing to human endeavor to achieve resiliency against climate change, urbanization and population growth. The main objectives of this communication are to understand the expert's view, stakeholder's perspectives, organizational role and site-specific problems/solutions to achieve the sustainable urban water environment. ISSUE-2017 is the third tier of the activities after the previous editions occurred last year when Indian and Sri Lankan collaborators visited University of Tokyo and Kanazawa University, Japan and one-day brainstorming workshop during March, 2017, in India. According to the approved roadmap, another major event is going to be organized in the next year. On behalf of the symposium organizing committee, I would like to invite interested researchers/experts to send their abstract and actively disseminate this announcement to potentially interested people/organization.

Dr. Manish Kumar, Lead PI,
Organizing Secretary
Dept. of Environmental Science, Tezpur University,
Napaam-784028, Tezpur, Assam
apnsympo2017@gmail.com

About Tezpur University

Tezpur University was established in the year 1994. The University campus is located at Napaam about 15 km east of Tezpur town, the headquarters of the Sonitpur district of Assam. The University has been awarded as Visitor's Best University for the year 2016. The University has been ranked 5th among the Indian universities by the Ministry of Human Resource Development (MHRD), Government of India, through the National Institutional Ranking Framework (NIRF). The University has recently (2016) been accredited with "A" grade by National Assessment and Accreditation Council (NAAC).

About Department of Environmental Science

The Department of Environmental Science, Tezpur University was established in the year 2004. The Department offers M.Sc. and Ph.D. programmes. The mission of the Department is to impart knowledge through quality teaching and research to answer fundamental questions before mankind pertaining to environmental challenges with a special focus on contemporary national needs. The Department has earned recognition by receiving financial support under UGC-SAP and DST-FIST.

Submission of Abstract

Extended abstract within 350 words may be submitted by email to apnsympo2017@gmail.com. The abstract must address the research gap and objectives, methodology adopted and appreciation of results. The submission closes on **June 12, 2017**. Themes are as follows but not limited to:

- Water environmental issues and sustainability
- Climate change and water environment
- Water /wastewater treatment and reuse technologies
- Health-related water microbiology
- Water quality monitoring and modeling
- Public participation and involvement
- Water Resilience: Vulnerability and Response
- Data science and engineering for water system
- Innovation in operational water management
- River watershed management under the preview of urbanization, population growth and climate change
- Transforming water policy and groundwater governance for sustainable management

All submissions will be reviewed before acceptance. Successful submissions will be communicated by June 15, 2017.

Registration

Registration for the Seminar starts on June 01, 2017.

A link will be provided on the departmental official webpage. Participants are to pay the registration fees and submit the receipt along with the registration form for the confirmation of participation.

Registration Fee details

	With	Without
Faculty/Teachers	Rs. 3,000/-	Rs. 2,000/-
Research Scholar/Student	Rs. 1,500/-	Rs. 1,000/-

The registration fee includes Conference kit, breakfast, lunch and dinner.

* Limited seats are available in the university Guest House/ Hostel Guest Room on first come first basis.

** Must produce a certificate from the concerned Head of Department /Institute stating she/he is a Bona-fide Student/Research Scholar.

Mode of Payment

- The registration fee may be paid:
- through demand draft (DD) drawn in favour of "The Registrar, Tezpur University" payable at SBI, Tezpur University branch, Napaam
 - by depositing the amount in the following account
Bank A/C Details
Account Name: Registrar, Tezpur University
Bank: State Bank of India
A/C No: 10501585452
IFSC: SBIN00000195
MICR Code: 784002002

The DD or photocopy of the payment receipt (stamped counter foil or electronically generated) must be sent along with the registration form. In the case of DD, please write the name and address of the participant at the back.

Travel and Accommodation

Tezpur is well connected by road, rail and air. Flights are available from Kolkata on selected days of the week. However, it is convenient to get Tezpur by road from Guwahati. The distance from Guwahati to Tezpur University is about 200km and buses ply between Guwahati and Tezpur quite frequently. One may also hire a cab from Guwahati to Tezpur which is about 4 hours' drive.

**International Symposium on
Sustainable Urban Environment, Tezpur University
(ISSUE 2017)
23rd-24th June 2017**

Program Outline

	June 23, 2017 (Friday)	June 24, 2017 (Saturday)	June 25, 2017 (Sunday)
08:30 - 09:30	Registration		Excursion
09:30 - 09:35	Opening Ceremony	Parallel Session 4	
09:35 - 09:45			
09:45 - 09:55		High Tea	
09:55 - 10:25	Parallel Session 1	Parallel Session 5	
10:25 - 10:30			
10:30 - 11:00		Valedictory Function	
11:15 - 11:35	Lunch	Farewell Lunch	
11:35 - 11:55			
11:55 - 12:15			
12:15 - 12:35	Parallel Session 2		
12:35 - 13:00			
13:00 - 14:00			
14:00 - 14:20	Tea break		
14:20 - 14:40			
14:40 - 15:00			
15:00 - 15:20	Parallel Session 3		
15:20 - 15:30			
15:30 - 15:50			
15:50 - 16:10	Poster Session		
16:10 - 16:30			
16:30 - 16:50			
17:00 - 18:00	Cultural Program		
19:00 - 20:00			

Day 1: June 23, 2017 (Friday), 08:30 – 13:00

Opening Ceremony and Parallel Session 1

8:30 - 09:30	Registration Venue: Council Hall
09:30 - 09:35	Welcome Remarks
09:35 - 09:40	About Symposium
09:35-09:45	Inaugural Speech
09:45-09:55	APN Project Introduction
09:55 - 10:25	Keynote Speech
10:25 - 10:30	Vote of Thanks
10:30 - 11:00	High Tea

Session	APN Session (Venue: Conference Hall, Guest House)		
11:15 to 13:00	APN Session I	14:30 to 16:00	APN Session II
11:00-11:30	Development of New Water Supply Strategies in Two Watersheds of India and Sri Lanka in the context of Climate Change, Rapid Urbanization and Population Growth: A Vulnerability Assessment Approach by Dr. Manish Kumar	14:30 - 15:00	Toward a Food-Energy-Water-Ecosystem Services Nexus for Rapid Growing Cities in a Changing Climate Dr. Francisco Munoz-Arriola
11:30 - 12:00	Water and Wastewater Management in Urban Cities: Challenges and Solution Pathways Prof. Ashok K. Keshari	15:00 - 15:30	Managing land and water under changing population and climatic conditions in India Dr. Sudip Mitra
12:00 - 12:30	Challenges in the geomorphic management of a river system in response to urbanisation expansion around a mega city: Case study from Yamuna River around Delhi NCR Dr. Vikrant Jain	15:30 - 16:00	Deterioration of river water quality due to excessive use of chemical fertilizer – A case study at Gin River, Sri Lanka Dr. G.H.A.C.Silva
12:30 - 13:00	Relating characteristics of Regional Climate and Droughts in India Dr. Rajendra Prasad Pandey		

Day 1: June 23, 2017 (Friday), 08:30 – 13:00

Opening Ceremony and Parallel Session 1

Session	A-1 (Venue: Council Hall)		B-1 (Venue: MCJ, Screening Room)	
	[A1] Removal Technology		[B1] Urban Solid Waste Management	
11:15 to 12:55 Chairpersons	Dr. Rupam Kataki and Dr. Ritusmita Goswami		Prof. K. P. Sarma and Dr. S. S. Bhattacharya	
11:15 - 11:30	A1-1	Assessing the effect of arbuscular mycorrhizal fungi on the phytoremediation potential of <i>Eichhornia crassipes</i> (Mart.) Solms on cadmium uptake	B1-1 11:15 – 11:35	Evaluation of biogas generation from different wastes by using single inoculum: A batch study
11:30 - 11:45	A1-2	Removal of Fluoride and Hardness from Groundwater using Carbon Electrolysis and Chicken Bone Char Filtration	B1-2 11:35 - 11:55	Urbanization and municipal solid waste: Evaluation of metal solubility and ecotoxicity potential
11:45 - 12:00	A1-3	Sandalwood (<i>Santalum album</i>) Leaf Powder as an Effective Biosorbent for removal of Dyes from water	B1-3 11:55-12:15	C-H bond activation in methane over Pd _n Pt _{4-n} (n=0-4) subnanoclusters: A comprehensive density functional study
12:00 - 12:15	A1-4	Starch immobilized TiO ₂ nanoparticles in As(V) remediation from aqueous solution	B1-4 12:15 – 12:35	Assessment of plant growth promoting rhizobacteria (PGPR) on potential biodegradation of glyphosate in contaminated soil and aquifers.
12:15 - 12:30	A1-5	Arsenic removal from drinking water by Carbon based material	B1-5 12:35 – 12:55	pH dependent leaching behaviours of Cd, Cu, Ni, Pb, and Zn from lead smelting slag
12:30 – 12:45	A1-6	Comparative LCA Study of Biological Nutrient Removal Plants		
12:45 – 13:00	A1-7	Decentralized and low-cost system for nutrient removal from primary treated sewage by aquatic weeds		
13:00 - 14:00	Lunch break			

Day 1: June 23, 2017 (Friday), 14:00 – 15:20

Parallel Session 2

Session	A-2 (Venue: Council Hall)		B-2 (Venue: MCJ, Screening Room)	
	[A2] Surface water Issues		[B2] Water /wastewater treatment and reuse technologies	
14:00 to 15:20 Chairpersons	Prof. A. K. Keshari and Dr. R. P. Pandey		Dr. S. Brahma and Dr. Santanu Das	
14:00-14:20	A2-1	Evaluation of Water Quality in Downstream of Kelani River, Sri Lanka	B2-1 14:00-14:15	Conflict Resolution of Enhanced Biological Phosphate Removal and Sludge Reduction in Oxidic-Settling-Anaerobic (OSA) SBR
14:20 - 14:40	A2-2	Assessment of the impact of population density and land use pattern on the replenishment of the stream nutrient of the Brahmaputra	B2-2 14:15 - 14:30	Phase Distribution and Chemical Partitioning of Metals in Waste water systems
14:40 – 15:00	A2-3	Assessment of the river water quality parameters and pollution: An insight from Dhaka city	B2-3 14:30 - 14:45	Operation and maintenance issues with full scale UASB reactors treating sewage in India.
15:00 - 15:20	A2-4	Estimation of groundwater inflow to Dal Lake using isotopic mass balance approach	B2-4 14:45 - 15:00	Treatment options for grey water reuse in residential buildings
15:20- 15:30			B2-5 15:00 – 15:15	Upgradation of CETP Effluent for Non-Potable Reuse
	Tea break			

Day 1: June 23, 2017 (Friday), 15:30 – 16:50

Parallel Session 3

Session	A-3 (Venue: Council Hall)		B-3 (Venue: MCJ, Screening Room)	
15:30 to 16:50 Chairpersons 15:30 - 15:50	[A3] Groundwater Issues		[B3] Recharge and Contamination	
	Dr. Abhay Kumar and Dr. Amlanjyoti Kar		Dr. Nityanand Singh and Dr. Aparna Das	
	A3-1	Environs of Arsenic & Heavy Metal Contamination in Aquifers of Eastern Part of Bardhaman District, West Bengal	B3-1	Assessment of the impact of leachate percolation on ground water quality: A case study of Varanasi city, India
15:50 - 16:10	A3-2	An attempt to understand the mechanism of recharge in the mountain front and the riparian zone aquifers using integrated techniques	B3-2	Co-occurrence Perspective of Arsenic, Fluoride and Metals in The Aquifer of Lakhimpur District, Assam, India
16:10 - 16:30	A3-3	Isotopes ($\delta^{18}\text{O}$ and δD) in precipitation and groundwater in the alluvial basin of Kashmir western Himalayas	B3-3	Conservation of Urban Lakes in Coimbatore
16:30 - 16:50	A3-4	Vulnerability of karst aquifer to contamination	B4-4	Groundwater Resilience & Response in South west Neyveli basin, Cuddalore District, Tamil Nadu, India
17:00 – 18:00	Poster Session			
	P1	Simultaneous removal of Cong red and Cr (VI) in aqueous solution using Manganese powder from battery waste solution Deepa Kumari, Payal Mazumder, Jeong-Muk Lim and Jaehong Shim		
	P2	Phytoremediation of zinc by <i>Lemma minor</i> from aqueous solution Monashree Sarma Bora, Priyanka Gogoi, Kali Prasad Sarma		
	P3	An Attempt To Enhance Potassium Content In Vermicompost By Adding Mica Waste -A High Potassium Containing Mineral		

18:00 – 19:00 19:00 – 20:00 20:30 – 21:00		Chayanika Kalita, Prabhat Pramanik
	P4	Distribution of Heavy metals in road deposited sediments of NH37 in the stretches of Kaziranga National Park of Eastern Himalayan Region Upasona Devi, Raza Rafiqul Hoque, Kali Prasad Sarma
	P5	Consequences of climate changes on watershed and its effect on Urban Environment, a case study of Guwahati watershed Jyoti Prakash Deka, Sudipta Biswas, Arbind Kumar Patel, Manish Kumar
	P6	Effects of unhygienic practices on water quality and health risk to population of Chincholi industrial area of Solapur, Maharashtra, India Shrikant Mukate, Dipak Panaskar, Vasant Wagh, Aniket Muley and Chandrakant Jangam
	P7	Groundwater quality assessment on Arsenic and Fluoride contamination in the Guwahati city, Assam Northeast India Arbind Kumar Patel, Manish Kumar
	P8	Assessment of pH dependent leaching behaviours of As, Mo, and Se from lead smelting slag Rashmi Rekha Bora, Monikonkana Saikia, Mumeegogoi, Kabirijyoti Konwar, Nabajyoti Saikia
	P9	Arbuscular mycorrhizal fungi alleviates drought stress on growth and yield of soybean (<i>Glycine max</i> L.) A.G.D. Pavithra, P.N. Yapa, T.C. Bamunuarachchige and P.T. Jayasooriya
	P10	Assessment of physicochemical properties of drinking water used in Departments and Centers in Central University of Allahabad, Allahabad Nirdesh Kumar Ravi, Dr. Pawan Kumar Jha, Yaduvendra, Sutikchan
	P11	Development of new policy making strategies for sustainable water management for Guwahati City (Assam) Payal Mazumder
	P12	Development of flower garden through waste supply water Dhrubajyoti Nath, Nandita Medhi, and Bidisha Kashyap
	P13	Green Nanochemistry for safe environment :Exploring Murraya koenigii Spreng. Leaf Extract An Efficient Green Multifunction Agent for the degradation of organic dyes from aqueous medium Deepa Kumari, Pratap Kumar Padhy and Nanzi Ara Begum
	P14	The kinetics of sorption of Cr(III) from aqueous solution onto powdered leaf biomass of <i>Celosia argentea</i> Rajat Shubro Bose, Pronab Mudoi, and Kali Prasad Sarma
	Break	
	Cultural Program	
	Conference Dinner	

Day 2: June 24, 2017 (Saturday), 09:00 – 10:20

Parallel Session 4

Session	A-4 (Venue: Council Hall)		B-4 (Venue: MCJ, Screening Room)	
09:00 to 10:20 Chairpersons	[A4] Water quality monitoring and modeling Prof AL. Ramanathan and Dr. Francisco M Arriola		[B4] Health-related water microbiology Prof. Hiroaki Furumai and Dr. Anwar Khursheed	
9:00-9:20	A4-1	An assessment to evaluate the effects of changing climate on glaciers using stable isotopes and remote sensing	B4-1	Application of ferrihydrite treatment to improve RT-qPCR virus detection in Tokyo coastal water after rainfall event
9:20-9:40	A4-2	Estimation of Re-aeration Coefficient Using MLR for Modelling Water Quality of Rivers in Urban Environment	B4-2	Influence of DOM and POM on Photolysis of Diclofenac
9:40-10:00	A4-3	A sustainable resilience framework for regional coastal wetlands through aquaculture and geospatial monitoring	B4-3	Human exposure and health risk assessment in the upper Brahmaputra floodplain (Lakhimpur, Assam, India) with special reference to arsenic and fluoride geochemistry
10:00-10:20	A4-4	Artificial Neural Network Model for Prediction of Nitrate concentration in groundwater of Kadava River basin.	B4-4	Mechanism and identification of reaction byproducts for the degradation of Chloramphenicol drug in heterogeneous photocatalytic process
10:20-10:30	Tea break			

Day 2: June 24, 2017 (Saturday), 10:30 – 10:20

Parallel Session 5

Session	A-5 (Venue: Council Hall)		APN Session (Venue: Conference Hall, Guest House)	
10:30 to 11:50 Chairpersons	[A5] Water environmental issues and sustainability Dr. Vikrant Jain and Dr. Sudip Mitra		APN III Prof. Hiroaki Furumai	
10:30-10:50	A5-1	Performance and cost analysis of decentralized wastewater treatment plants: A case study from Northern India	10:30 – 11:00	Health of Himalayan glaciers in changing climate scenario and its implication on water resources and livelihood by Prof. AL.Ramanathan
10:50-11:10	A5-2	Characterizing River Morphology and Watershed Characteristics Using Satellite Data for Improved Hydrological Forecasting	11:00 – 11:30	Sustainable Approach to Urban Hydrological System: A Case Study of an Emerging City of Assam Prof. Chandan Mahanta
11:10-11:30	A5-3	A Paradigm shift towards integrated approach in wastewater management for future cities	11:30 – 12:00	Environmental Education and Water: Implications for Sustainable Development Goals Dr. Abhay Kumar
11:30-11:50	A5-4	Nepal's agriculture and climate change challenges	12:00 - 12:30	Can bio-treatments of solid waste minimize the water contamination risk? Satya Sundar Bhattacharya
11:50-12:10	A5-5	Water Resource Management of Port Blair City: An appraisal	12:30 – 13:00	Concluding Brainstorming
13:00-14:00	Valedictory Function			
14:00 -15:00	Farewell Lunch			

④ SUEE-UNIST&RECWET-UT workshop on Sustainable Urban Environment

日 時：2017 年 8 月 21 日

場 所：東京大学

参加者：25 名

School of Urban and Environmental Engineering, Ulsan National Institute of Science and Technology (蔚山科学技術大学校 都市環境工学部) からのゲストを向け、水環境制御研究センターとのワークショップを開催した。

Program

- 13:30-13:45 Opening — Prof. Furumai
- 13:45-14:15 Lecture 1— Prof. Furumai, Hiroaki
Modeling and monitoring research on combined sewer overflows in Tokyo coastal area
- 14:15-14:50 Lecture 2— Prof. Lee, Changha
High-valent metal complexes as oxidants for water treatment
- 14:50-15:20 Lecture 3— Dr. Rattanakul, Surapong
Application of UV-LEDs for water disinfection: Effects of wavelengths on surrogate and pathogenic microorganisms
- Break
- 15:40-16:10 Lecture 4— Dr. Phungsai, Phanwatt
Molecular Changes in Dissolved Organic Matter in Drinking Water Treatment Processes and Formation of Unknown Disinfection By-products
- 16:10-16:45 Lecture 5— Prof. Cho, Kyunghwa
Direct observation of membrane fouling using the optical coherence tomography
- 16:45-17:15 Lecture 6— Dr. Zhang, Wei
Developing graphene-based electrochemical biosensors as early Microcystin-LR detection tool in water
- 17:15-17:20 Closing — Prof. Lee, Changha

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⑤ SNU & RECWET joint symposium on Sustainable Water Treatment and Management

日 時：2018 年 1 月 9 日

場 所：東京大学

参加者：30 名

Seoul National University（ソウル大学校）環境工学の教員 3 名と水環境制御研究センター専任、協力教員らによるシンポジウムを開催した。

13:30-13:35	Opening Remarks	Hiroaki FURUMAI, Professor (UT)
13:35-13:40	Brief Overview of Environmental Engineering Research Areas at The University of Tokyo	Hiroaki FURUMAI, Professor (UT)
13:40-13:45	Brief Overview of Environmental Engineering Research Areas at Seoul National University	Mooyoung HAN Professor (SNU)
13:45-14:10	Development of a Sustainable Treatment Technology for Oxyanions in Drinking Water	Jong Kwon CHOE Assistant Professor in (SNU)
14:10-14:30	Application of membrane filtration for sustainable water supply in developing countries-Should pore size be smaller or larger?	Takashi HASHIMOTO Assistant professor (UT)
14:30-14:50	Side effects of UV treatment against disinfection by-products precursors	Hiroshi SAKAI Associate Professor (Tokyo Metropolitan University)
Break (15min)		
15:05-15:30	Sorption-based Technologies for Water Quality Management	Yongju CHOI Assistant Professor (SNU)
15:30-15:50		

6) 海外研修プログラム

以下のような海外研修プログラムを学内および国内連携大学と連携して開催した。

年 月	開催国・都市	テーマ	海外連携大学	国内連携大学、学内連携研究科	参加者数
2016年8月	タイ・バンコク	Integrated management of urban environment for sustainable development	チュラロンコン大学、タマサート大学、マヒドン大学、AIT	新領域創成科学研究科	24
2017年 7-8月	タイ・バンコク	Public awareness and participation in environmental decision-making toward sustainable urban development in developing countries: Case study in Thailand	チュラロンコン大学、キングモンクン大学、AIT	新領域創成科学研究科	20
2018年 2-3月	ベトナム・ハノイ	Sustainable Development in Mid Vietnam	日越大学	立命館大学	18
2018年 7-8月	タイ・バンコク	Public awareness and participation in environmental decision-making toward sustainable urban development in developing countries: Air pollution in Thailand	チュラロンコン大学、キングモンクン大学、AIT	新領域創成科学研究科	20

2017年度バンコクユニットの概要（ユニットリーダー：古米弘明教授）：

都市工学科、都市工学専攻の学生およびサステナビリティ学グローバルリーダー養成大学院プログラム（GPSS-GLI）の大学院学生を対象とし、10名をバンコクに12日間派遣した。現地カウンターパートのチュラロンコン大学、アジア工科大学（AIT）、King Mongkut 大学トンブリ校（KMUTT）からも10名程度の学生が参加した。都市化に伴う環境問題（上下水、水環境、廃棄物、大気、等）をテーマに、現場視察を行うとともに、現地の講師・行政関係者からの講義を受けた。また、4-5名のグループに分かれて特定の課題を設定し、背景調査、現場調査（アンケート調査）、解決に向けた提案をまとめ、プレゼンテーションを行った。これらの講義・実習・演習を通して、知識および現場経験の取得と、コミュニケーション能力・リーダーシップ能力の開発を行った。



Department of Urban Engineering
The University of Tokyo



Graduate Program in Sustainability Science
Global Leadership Initiative, Graduate School of
Frontier Sciences, The University of Tokyo

Intensive field exercise course AY2017: Bangkok unit

Public awareness and participation in environmental decision-making toward sustainable urban development in developing countries: Case study in Thailand

<Date: 29th July - 10th August 2017>

Organized by Department of Urban Engineering and Graduate Program in Sustainability Science Global Leadership Initiative (GPSS-GLI) of the University of Tokyo

1. Aim and contents

This two-week field exercise course is provided for the graduate students from Department of Urban Engineering, Graduate Program in Sustainability Science Global Leadership Initiative (GPSS-GLI) of the University of Tokyo, Japan and Department of Environmental Engineering of Chulalongkorn University, King Mongkut's University of Technology Thonburi, and Asian Institute of Technology, Thailand.

In 2015, the UN adopted 17 Sustainable Development Goals (SDG) at the United Nations Sustainable Development Summit to end poverty, protect the planet, and ensure prosperity for all by year 2030. These goals represent a commitment by all countries to tackle the global challenge issues such as environmental and health related issues and include specific goals targeting water and sanitation (SDG 6), energy (SDG7), sustainable cities (SDG 11), and wastes (SDG 12). In the preamble, it is stated "no one will be left behind". To achieve this, not only governmental, industrial, or institutional efforts but public awareness and participation in the decision-making processes in development projects and implementation of pro-environmental daily action are inevitable.

Thailand, as a developing nation with growing of economic growth and population, is confronting environmental and health challenges in order to secure the sufficiency of human needs with high human living quality standards. Thai government introduces the numerous policies and projects to improve the infrastructure and environment nationwide. The engagement of the public in decision-making and full consideration to the public input is one of the key issues to achieve sustainable development for safe and sustainable future.

The objective of the two-week program is to let the participants learn about i) various environmental development projects associated with urbanization, ii) the importance of the engagement of public in environmental decision-making, and iii) future prospects of Bangkok city development toward the SDGs through lectures, field studies and group work. In the group work, the participants identify an urban/environmental problem in Bangkok, form a hypothesis, conduct a survey, and make a presentation to propose how to have successful public participation toward the achievement of SDGs.



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2. Summary

The program focuses on the role of public awareness and participation in environmental decision-making toward sustainable urban development in developing countries. Participants can learn i) various environmental development projects associated with urbanization, ii) the importance of the engagement of the public in environmental decision-making, and iii) future prospects of Bangkok city development toward the SDGs through lectures, field studies and group work. In the group work, the participants identify an urban/environmental problem in Bangkok, form a hypothesis, conduct a survey, and make a presentation to propose how to realize successful public participation toward the achievement of SDGs.

3. Unit leader

Prof. Hiroaki Furumai, Department of Urban Engineering, The University of Tokyo

4. Place

The main workshop will be at Faculty of Engineering, Chulalongkorn University, Phaya Thai District, Bangkok, Thailand. The accommodation will be provided near the Chulalongkorn University. You will share the room with another student.

5. Support

Learning materials, partial financial support for transportation, accommodation and meal.

6. Credit

2 credits for Field Exercise I-B and II-B (環境フィールド演習I-B(E) & II-B(E)).

7. Requirement & Application form

Pre-assignment will be given before the program. As this is an intensive full time field exercise course, the participants are expected to work in the whole program during 29th July - 10th August, 2017. In addition, evening group work might also be expected. Participants need to participate in preliminary lecture and meeting, assignments, active discussion and participation during field exercise, proposal presentation at the end of the program by group.

We expect that all students should take responsibility to attend the core program from the beginning to the end. Please carefully check your schedule before applying to the program. The cancellation after you get the acceptance will make trouble to the program management. It will give the bad reputation for you to engage in the activity in our department in future.

Applicants should get prior permission from their thesis supervisor, and then send an application form and an approval letter/e-mail from their academic/thesis supervisor. The application form can be downloaded from the URL below (or request to Dr. Tobino) and should be submitted to Dr. Tobino (t_tobino@esc.u-tokyo.ac.jp) no later than the deadline below.

Application form: http://www.env.t.u-tokyo.ac.jp/project/bangkok_unit/UE_Application_Bangkok_2017.docx



Department of Urban Engineering
The University of Tokyo



Graduate Program in Sustainability Science
Global Leadership Initiative, Graduate School of
Frontier Sciences, The University of Tokyo

8. Application deadline

Noon of 12th May (Fri) 2017

9. Contact

For submission of application form and any inquiries, please email to:

Dr. Tomohiro Tobino, Environmental Science Center, The University of Tokyo

t_tobino@esc.u-tokyo.ac.jp

10. Tentative day by day schedule

Day	Date	Schedule	
		Morning	Afternoon
1	29-July (Sat)	Departure to BKK	Check in
2	30-July (Sun)	Opening	Lecture
3	31-July (Mon)	Lecture	Lecture
4	01-Aug (Tue)	Lecture	Technical visit/study
5	02-Aug (Wed)	Lecture	Technical visit/study
6	03-Aug (Thu)	Technical visit/study	Technical visit/study
7	04-Aug (Fri)	Theme selection	Group work
8	05-Aug (Sat)	Group work	Group work
9	06-Aug (Sun)	City Tour/ Group work	City Tour/Group work
10	07-Aug (Mon)	Group work	Group work
11	08-Aug (Tue)	Group work	Group work
12	09-Aug (Wed)	Final presentation	
13	10-Aug (Thu)	Check out	Go back

Note: The schedule is subject to change according to the availability of lecturer and field visit sites.

For technical visit/study, lectures with discussion would be arranged at Bangkok Metropolitan Administration, Ministry of Health, and Ministry of Natural Resource and Environment.

You can find field exercise report website on previous Bangkok Field Exercise Programs.

2015 Integrated Management of Urban Environment for Sustainable Development

<http://www.sustainability.k.u-tokyo.ac.jp/exercises/2842.html>

2014 Health risk assessment for vulnerable environment due to urban development

<http://www.sustainability.k.u-tokyo.ac.jp/exercises/1970.html>

2013 Sustainable Urban Water Management: Special focus on flood management and public health issues in Thailand

<http://www.sustainability.k.u-tokyo.ac.jp/exercises/1663.html>

2012 Sustainable Urban Water Management: special focus on flood management in Bangkok

<http://www3.sustainability.k.u-tokyo.ac.jp/field/?units=thailand-unit>

7) 国際会議の共催等

① 国際水協会 ((International Water Association) 世界大会 (World Water Congress and Exhibition))

隔年でおこなわれる世界大会を、2018 年東京で開催した。本会議は 100 を越える国と地域から毎回 5000 人規模の参加者がある、世界最大の水の会議である。学術だけでなく、企業展示もおこなわれ、産学の連携強化もこの会議のテーマとなっている。その実行委員長を古米教授が努めた。



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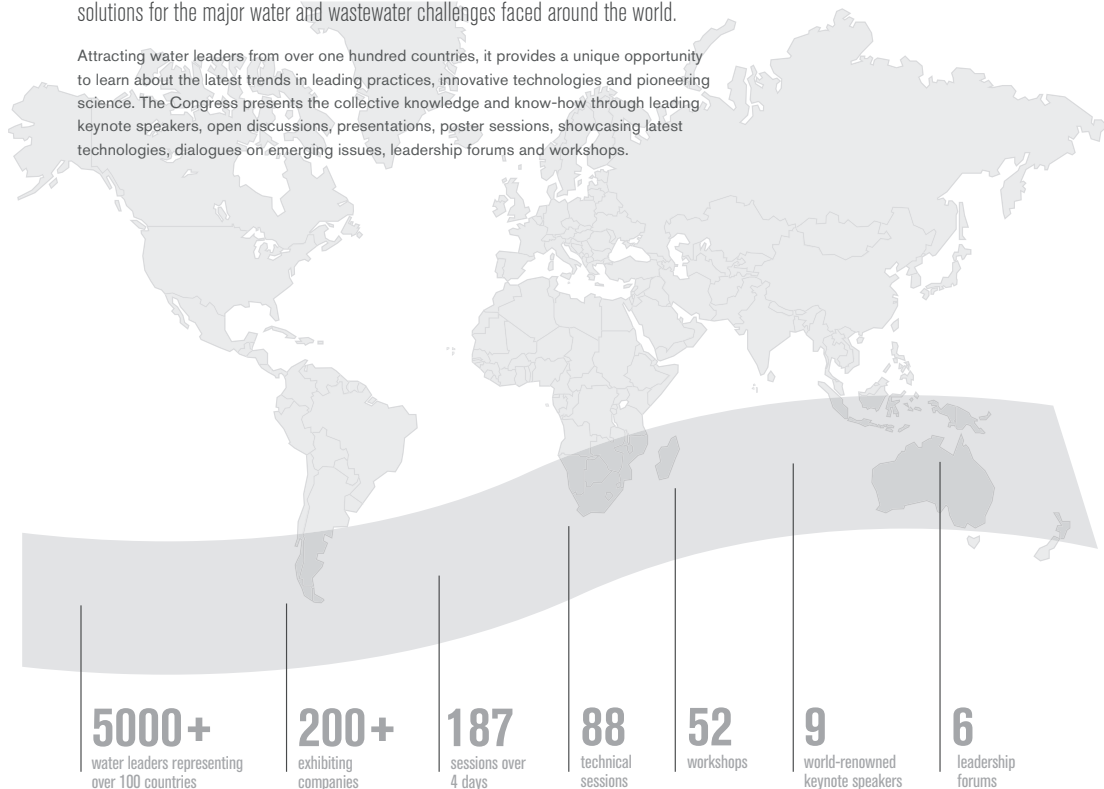
JSWE **JAPAN SOCIETY ON WATER ENVIRONMENT** **JAPAN WATER WORKS ASSOCIATION** **JSWA** **Japan Sewerage Works Association**

The IWA World Water Congress & Exhibition:

The Global Event Shaping our Water Future

The IWA World Water Congress & Exhibition has established itself as a not-to-be-missed event. It brings together water professionals, and those with a professional interest in water, from across the international community to share best practice, acquire new knowledge, and build networks and partnerships that will deliver solutions for the major water and wastewater challenges faced around the world.

Attracting water leaders from over one hundred countries, it provides a unique opportunity to learn about the latest trends in leading practices, innovative technologies and pioneering science. The Congress presents the collective knowledge and know-how through leading keynote speakers, open discussions, presentations, poster sessions, showcasing latest technologies, dialogues on emerging issues, leadership forums and workshops.



Welcome to Tokyo



It is our great pleasure to welcome you with "OMOTENASHI", a Japan-style distinctive hospitality to the IWA World Water Congress & Exhibition taking place in Tokyo, from September 16-21, 2018.

We have realized that there are several important water challenges such as the achievement of Sustainable Development Goals (SDGs) and the implementation of water wise city principles. For this purpose, we need to deepen our scientific knowledge and develop new innovative technology for Sustainable and Resilient Water Society considering the global warming prevention and secured sound water cycle.

Japan has proactively and continuously shared its experiences and know-how in the water sectors with other countries. We do our best to provide a wonderful opportunity for looking at the Real challenges of Mega-city, Showcase for innovative water technology, and Business opportunity with strengthening our partnership and expanding network of water professionals.

We experienced the Great East Japan Earthquake and Tsunami in 2011. We plan to organize the Forum on Disaster Counter-measures and Risk Management based on our lessons and experiences in water sectors. The forum could provide cues to develop the better disaster management for reducing the risk with wise manner all over the world.

Tokyo represents a vital crossroads where over 400 years of history and tradition meet innovation. The Congress and Exhibition takes place at the Tokyo International Exhibition Centre, which is located on the expansive Daiba waterfront near to the central Tokyo area. We sincerely look forward to seeing many attendants from across the world.

The IWA, and the World Water Congress, are ready to address the water challenges we collectively face. We come together in Tokyo, Japan to innovate and shape a better water future for all. We hope that you will enjoy and benefit from joining us on this journey.

Prof. Hiroaki FURUMAI

Chair of Host Country Committee



About Japan

Japan has proactively and continually shared the experiences and know-how with other countries. Keeping this tradition the country would like to share water-wise best practices and technologies. Japan's Quality, Japan's Experience – Stability & Resilience

Water supply and sanitation in Japan is characterized by numerous achievements and some challenges. The country has achieved universal access to water supply and sanitation; has one of the lowest levels of water distribution losses in the world; regularly exceeds its own strict standards for the quality of drinking water and treated waste water; uses an effective national system of performance benchmarking for water and sanitation utilities; makes extensive use of both advanced and appropriate technologies such as the jōkasō on-site sanitation system; and has pioneered the payment for ecosystem services before the term was even coined internationally.

Tokyo Expertise in Water Management

Tokyo has strong relationships with many countries around the world, especially with neighbour countries in Asia. This network has been mutually nurtured over the years and has the capability to effectively attract large numbers of water professionals from all over the world to Tokyo.

Tokyo is an excellent venue for the 2018 IWA WWC, convening the congress here will be a catalyst for progressing towards a water-wise world.

Towards solving together the problems common to all megacities, Tokyo is the platform upon which the know-how and knowledge of the IWA colleagues can be exchanged and deliberated in 2018. As a gateway to Asia and the world, Tokyo also provides attractive business opportunities to all the participants.

Being the busy capital of Japan, Tokyo doesn't lose its historic temples in the middle of neon-lit skyscrapers. This city offers exciting modern technology and enjoyment, along with the unique cultural experiences and activities.



実行委員長挨拶を行う古米教授

- ② 第17回世界湖沼会議（World Lake Conference）いばらき大会
2018年10月15日（月）～19日（金）に霞ヶ浦で開催される世界湖沼会議にて、古米教授が第7分科会部会長を務めている。

17th World Lake Conference
Lake Kasumigaura, Ibaraki, Japan, 2018

Harmonious Coexistence of Humans and Lakes
- Toward Sustainable Ecosystem Services -

Date: October 15-19, 2018
Venue: Tsukuba International Congress Center

Programs
Keynote Speech, Policy Forum, Lakes Session, Lake Kasumigaura Session, Technical Sessions (Oral / Poster), Exhibition, Excursions, Workshops, Student Conference, etc.

Registrations
Please register via online and complete the payment. The detail is available on the official website.

Deadlines of Application and Registration
April 20 (Fri.): Application for Technical Sessions (Poster/Oral), Lake Kasumigaura Session (Poster only)
May 7 (Mon.): Application for Workshops
May 22 (Thu.): Application for exhibition
July 16 (Mon.): Early registration
September 14 (Fri.): Regular registration
*On-site registration is available.

Registration Fee *All figures are in Japanese yen.

Period	Full Conference			One-day	
	Early	Regular	On-site	Advance	On-site
Feb. 5 - Jul. 15	16,000 (12,000)	18,000 (12,000)	20,000 (14,000)	4,500 (3,000)	5,000 (3,500)
Students	10,000 (8,000)	12,000 (10,000)	2,500 (2,000)	3,000 (2,500)	
Accompanying		4,000		1,000	

Notes
(1) If you register as a student, documents, such as a student ID card or official documents from your institution must be submitted; high school students and younger will be charge-free for registration.
(2) Developing countries rate will be applied to participants from developing countries in line with OECD standards (DAC list of ODA recipients). If you choose to register with this rate, please submit your passport copy.

All the detail is available on the official website.
<http://www.wlc17ibaraki.index.en/>

Hosts: Ibaraki Prefectural Government, The International Lake Environment Committee Foundation (ILEC)
Co-Hosts: Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Ministry of Environment (MET), Ministry of Agriculture, Forestry and Fisheries (MAFF), Tsukuba City, Utsunomiya City, Kasumigaura City, Maebashi City, Maebashi Town, Mito City, Council to Improve the Water Quality of Lake Kasumigaura, The Association of Lake Numa, Registered Number 516

The 17th World Conference (Lake Kasumigaura, Ibaraki, Japan, 2018)

Schedule

	May 3 (Thu.)	October 13 (Sat.)	October 14 (Sun.)	October 15 (Mon.)	October 16 (Tue.)	October 17 (Wed.)	October 18 (Thu.)	October 19 (Fri.)	October 20 (Sat.)	21 (Sun.)
Pre-Conference Programs		Environmental related events at Satellite venues	Student Conference	Participation Registration	Opening Ceremony	Policy Forum	Excursion (Site Visit)	Conference Summary	Optional Tours	
17th World Lake Conference (Lake Kasumigaura 2018)				Keynote Speech Ibaraki Kasumigaura Prize Award Ceremony	Technical Sessions	Kasumigaura Sessions	Technical Sessions	Closing Ceremony		
Post-Conference Programs										

Main programs

Keynote Speech
Speaker: Nobuo Mimura (President, Ibaraki University)

Policy Forum
Presenters: Kazuhiko Ogino (Governor, Ibaraki Prefecture)
3 National Policy managers from Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Ministry of Environment (MET), Ministry of Agriculture, Forestry and Fisheries (MAFF)
Policy managers from overseas
Keith Alverson (Director, United Nations Environment International Environmental Technology Center)

Lakes Session
Citizens, administrators, researchers, etc., of lake regions in Japan and other countries will have discussion as the theme of "Harmonious Coexistence of Humans and Lakes"

Lake Kasumigaura Session
Stakeholders in the Kasumigaura region will discuss the future vision of Kasumigaura.

Technical Sessions
Researchers and citizens' groups will present and discuss their papers and activity results.
Technical Session 1: Biodiversity and Biological Resources
Technical Session 2: Sustainable Use of Freshwater Resources
Technical Session 3: Water Quality and Ecosystem Functions of Lake Environments
Technical Session 4: Lakeside History and Culture
Technical Session 5: Regional Activities and Matter Cycles
Technical Session 6: Monitoring Based on Scientific Knowledge
Technical Session 7: Countermeasures and Technologies for Sustainable Use of Ecosystem Services
Technical Session 8: Citizens' Activities and Environmental Education
Technical Session 9: Integrated Lake Basin Management (ILBM)

Exhibition
Companies and research institutes will exhibit their activities and advanced cases.

Contact information

The 17th World Lake Conference (Lake Kasumigaura, Ibaraki, 2018)
Executive Committee Secretariat (Environmental Management Division, Ibaraki Prefecture)
978-8 Kashiwara-cho, Mito city, Ibaraki 310-8555 Japan
TEL +81-29-301-2995 FAX +81-29-301-2969 Email: wlc17@pref.ibaraki.jp

The 17th World Lake Conference (Lake Kasumigaura, Ibaraki, 2018)
Secretariat c/o Convention Linkage, Inc.
2 Sanbancho, Chiyoda-ku, Tokyo, 100-0075 JAPAN
TEL +81-3-3263-8695 FAX +81-3-3263-8693 Email: c/wlc17@conlinkage.co.jp

- ③ 国際水協会 NOM 会議

2019年10月7日～10日に東京にて開催予定の国際水協会天然有機物専門家会議を、協力教員の滝沢智教授が実行委員長、春日郁朗准教授がプログラム委員会に入って開催する準備が進められている。