Department of Sanitary Engineering

ผศ.ดร.สุวิสา มหาสันทนะ

SUWISA MAHASANDANA, D.Eng

Position: Assistant Professor

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Education

D.Eng (Remote Sensing and Geographic Information System)
Asian Institute of Technology, Thailand
M.Eng (Environmental Engineering), Chulalongkorn Unversity, Thailand
B.Eng (Water Resources), Kasetsart Unversity, Thailand

Expertise

Geographic Information System (GIS) Applications for Health and Environment
Spectral Indices for Water Quality Estimation
Satellite Image Application for Environment
Water & Wastewater Treatment

Research Projects

1. หัวหน้าโครงการวิจัย: การพัฒนาแบบจำลองเพื่อใช้เทคโนโลยีภาพถ่ายดาวเทียมร่วมกับการใช้ระบบเทคโนโลยีสารสนเทศทางภูมิศาสตร์(GIS)ในการสำรวจคุณภาพน้ำชายฝั่งทะเลสำหรับเขตระเบียงเศรษฐกิจพิเศษภาคตะวันออก สำนักงานการวิจัยแห่งชาติ (วช.) ประจำปีงบประมาณ พ.ศ. 2563

Publications

1. Riewklang K., Polprasert C., Nakason K., Polprasert S., Kwonpongsagoon S., **Mahasandana S.**, & Panyapinyopol B*. 2023. Enhancing chemical phosphorus precipitation from tapioca starch anaerobic digestion effluent in a modified pilotscale fluidized bed reactor. Environmental Research. 231, 116277

2. Pimpeach W., Patthanaissaranukool W., Polprasert C., Polprasert S., **Mahasandana S.**, Panyapinyopol B. Optimization and Kinetic Study of Phosphorus Dissolution from Primary Settled-Nightsoil Sludge Environment and Natural Resources Journal. 2023; 21(2): 102-112 (Sustainable Development Goals 2023: Responsible consumption and production **Goal 12)**

3. Pimpeach W., Polprasert C., Panyapinyopol B., Polprasert S., **Mahasandana S.**, Patthanaissaranukool W. Enhancing anaerobic co-digestion of primary settled - nightsoil sludge and food waste for phosphorus extraction and biogas production: effect of operating parameters and determining phosphorus transformation. Environmental Science and Pollution Research 2023; 30(9): 2317323183

4. Khaing KT, Polprasert C, **Mahasandana S**, Pimpeach W, Patthanaissaranukool W, Polprasert S. Phosphorus recovery and bioavailability from chemical extraction of municipal wastewater treatment's waste activated sludge: a case of Bangkok Metropolis, Thailand. ENNRJ 2022 (Sustainable Development Goals 2023: Clean water and sanitation **Goal 6,** Sustainable cities and communities **Goal 11)**

5. Chotpanitpong C, Lirdwitayaprasit T, Thongcomdee I, **Mahasandana S**. Chlorophyll a and Total Suspended Solids Characteristics at Eastern Economic Corridor Coastal Areas of Thailand, Proceeding of ICELS the 3rd International Conference, 14th-16th March 2022:379-87.

6. Wongsawat N, **Mahasandana S**, Lirdwitayaprasit T. Total Petroleum Hydrocarbons Spatial Distribution in 5 Eastern Economic Corridor Coastal Areas of Thailand using Geographic Information System Technology. Proceeding of ICELS the 3rd International Conference, 14th16th March 2022:388-401.

7. Eden P, Thongdara R, **Mahasandana S**, Izuru S. Identification and spatial mapping of High Conservation Value Forests for an Improved Forest Management in Bhutan. Proceedings of 8th International Conference on Green and Sustainable Innovation (ICGSI) On "Driving the New Normal towards a Sustainable New Future", 10th-12th November 2021, Krabi, Thailand, 2021:52-60.

8. Peatmak P, Lirdwitayaprasit T, **Mahasandana S**. The survey of vertical temperature distribution within sea water column using geoinformatics technology, Proceedings of the Conference on GIS-IDEAS 2021, 2nd-4st September 2021, Phitsanulok, Thailand, 2021:213-8.

9. Nakason K, Khemthong P, Kraithong W, **Mahasandana S**, Panyapinyopol B. Effect of alkaline pretreatment on the properties of cassava rhizome, Chiang Mai J. Sci. 2021; 48(6):1511-1523.

10. Thayarat Athicharrudej and **Suwisa Mahasandana**, VARIATION OF SEA SURFACE TEMPERATURE IN A DAY OF MAP TA PHUT COSTAL ZONE USING GEOGRAPHIC INFORMATION SYSTEM, RAYONG PROVINCE.
    Center of Excellence on Environmental Health and Toxicology (EHT) 2018

11. Phongsatorn Eamsan and **Suwisa Mahasandana**, SEA TEMPERATURE IN THE COASTAL WATER COLUMN: A CASE STUDY OF MAP TA PHUT COSTALZONE, RAYONG PROVINCE.
    Center of Excellence on Environmental Health and Toxicology (EHT) 2018

12. Sara Arphorn, Tomohiro Ishimaru, Kunio Hara & **Suwisa Mahasandana** Considering the effects of ambient particulate matter on the lung function of motorcycle taxi drivers in Bangkok, Thailand Journal of the Air and Waste Management Association Jan. 2018;68 (2) :139-145 (Sustainable Development Goals 2023: Good health and well-being **Goal 3**)

13. S.SUNTHARAPOT[ab] , T.LIRDWITAYAPRASI.T[c], P. FONGSATITKUL[ab] and **S.MAHASANDANA**[ab*] Sea Surface Chlorophyll *a* Monitoring Using Geographic Information System Case Study : Samet Island, Rayong Province Center of Excellence on Environmental Health and Toxicology (EHT) 2015

14. Sirima Pangul [1,2] Panagiotis Elefsiniotis[1] Chayawee Wangcharoenrung [3] Chongchin Polprasert[1,2] and **Suwisa Mahasandana**[1,2*] ARSENIC MONITORING IN SOIL USING A GEOGRAPHIC INFORMATION SYSTEM: A CASE STUDY OF MAPTAPHUT AREA, RAYONG PROVINCE, THAILAND Center of Excellence on Environmental Health and Toxicology (EHT) 2015

15. Akaranut Meetwattana[a], Prayoon Fongsatitkul[a], Chongchin Polprasert[a] and **Suwisa Mahasandana**[a*] Asenic in Shallow Groundwater Monitoring Using Geographic Information System; Case Study: Maptaphut Area, Rayong Province, Thailand Center of Excellence on Environmental Health and Toxicology (EHT) 2015

16. Worasaen, A[1,2], **Mahasandana, S**[1,2] Coastal Suspended Sediment Concentration Estimation using THEOS Satellite Imagery on the Chao Phraya River Mouth, Thailand International Journal of Geoinformatics. Dec2014, Vol.10 Issue 4, p59-67

17. N. SRIBOONRUANG[a], T. LIRDWITAYAPRASIT[b], P. FONGSATITKUL[a], A. TONGKUMDEE[b] and **S. MAHASANDANA**[a*] SEASONAL CHLOROPHYLL *A* AND NITRATE RELATIONSHIP IN PRANBURI ESTUARY, THAILAND – USING GEOGRAPHIC INFORMATION SYSTEM Center of Excellence on Environmental Health and Toxicology (EHT) 2014

18. Apidet Worasaen[*] and **Suwisa Mahasandana**[*a] Suitable GIS Interpolation for Suspended Sediment Concentration Estimation on the Chaophraya River mouth area Center of Excellence on Environmental Health and Toxicology (EHT) 2013

19. **Suwisa Mahasandana**, Nitin Kumar Tripathi & Kiyoshi Honda Sea surface multispectral index model for estimating chlorophyll *a* concentration of prcoastal waters in Thailand Cannadian Journal of Remote Sensing, 2009, 35: (3) 287-296

20. สนธินี ไวยารัตน์, ประยูร ฟองสถิตย์กุล, ไทยถาวร เลิศวิทยาประสิทธิ และ**สุวิสา มหาสันทนะ** “แบบจำลองดัชนีคลื่นแสงที่เหมาะสมต่อการประมาณค่าคลอโรฟิลล์เอของน้ำบริเวณปากแม่น้ำบางปะกงของประเทศไทย” สารสนเทศภูมิศาสตร์นเรศวร, ฉบับที่ 1 (ก.ค.-ธ.ค.2553)