

CAN TRONG NGUYEN

Prince of Songkla University (Hatyai campus)
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Hat Yai, Songkhla 90110, Thailand

Geo-Informatics & Space Technology Development Agency
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RESEARCH INTERESTS

Environmental Geography, Urban Environmental Management & Planning, RS and GIS-related Applications, Ecosystem Services, Coastal farming and Coastal ecosystems.

EDUCATION

- Ph.D.** King Mongkut's University of Technology Thonburi, Thailand 08/2019 – 08/2022
Environmental Technology
Dissertation: *"Assessment of Climate Change and Urbanization Impacts on Urban Surface Temperature and Ecosystem Services of Urban Green Spaces"*
Committee: A/Prof. Dr. Amnat Chidthaisong (*advisor*); Dr. Pariwate Varnakovida; Dr. Chaiwat Ekkawatpanit; Dr. Atsamon Limsakul; Prof. Dr. Qi Jiaguo.
- M.S.** Can Tho University, Vietnam 08/2016 – 12/2018
Land Management (3.71/4.00)
Thesis: *"Analysis of Urban Heat Island and Energy Consumption in Bangkok Metropolitan Area using Remote sensing"*
Advisor: A/Prof. Dr. Nguyen Thi Hong Diep
- B.Eng.** Can Tho University, Vietnam 08/2012 – 02/2016
Land Management (3.53/4.00)
Thesis: *"Studying and Evaluating Ecosystem Service of Rice-Shrimp Farming in An Minh district, Kien Giang province"*.
Advisor: Dr. Nguyen Thi Hong Diep

RESEARCH EXPERIENCE

- Prince of Songkhla University (PSU) and** 09/2022 – present
Geo-Informatics & Space Technology Development Agency, Thailand
Postdoctoral researcher
- Being a consultant for the urban heat/cool islands project
 - Consultant for undergraduate and graduate students
 - Supporting the Future Earth Thailand project.
- JGSEE, KMUTT, Thailand** 08/2019 – 08/2022
Research Assistant (RA) and Freelance Researcher (FR)
- Processing Earth observation & Geospatial data, and Data Analysis

Can Tho University, Vietnam

03/2016 – 07/2019

Research Assistant (RA), College of Environment and Natural Resources

- *Project implementation, Field data collection, and Research proposal development.*

King Mongkut's University of Technology Thonburi, Thailand

12/2017 – 05/2018

Visiting Researcher, KMUTT Geospatial Engineering and Innovation Center

- *Processing Remotely sensed data & Geospatial data Analysis.*

TEACHING ASSISTANCE EXPERIENCE

Can Tho University, Vietnam

03/2016 – 07/2019

Teaching Assistant (TA), College of Environment and Natural Resources

- **Courses:** *Applied Remote Sensing, Geographic Information System (GIS), Geostatistics.*
- Thesis mentoring for Undergraduates and Master students of Land Management.
- Trainer for specialized workshops: *Applications of GIS and Remote sensing in Monitoring growth, pests, and disease on Rice, Forest, and Land use, land cover changes.*

HONORS AND AWARDS

Petchra Pra Jom Klao Ph.D. Research Scholarship, KMUTT

2019–2022 (~25,750\$)

It provides research funds and living expenses for excellent candidates to conduct research and gain experience under highly experienced research groups and advisors.

Ph.D. Research Fund, JGSEE

(2019–2022: ~8,500\$)

JGSEE provides thesis expense, which aims to produce high-quality research work.

Research fellowship

Dec 2017 – May 2018 (~1,800\$)

It provides research funds and living expenses for 6 months at KGEO, KMUTT, Thailand

University's incentive fellowship

2014, 2015

It is awarded to the Top 5% of excellent students annually.

PUBLICATIONS

Author's name: Can Trong Nguyen or Nguyen Trong Can; * indicates Correspondence author

2022

Nguyen, C. T.*, Chidthaisong, A., Limsakul, A., Varnakovid, P., Ekkawatpanit, C., Diem, P. K., & Diep, N. T. H., 2022. How do disparate urbanization and climate change imprint on urban thermal variations? A comparison between two dynamic cities in Southeast Asia. *Sustainable Cities and Society*, 103882. <https://doi.org/10.1016/j.scs.2022.103882>

Diep, N.T.H., **Can, N.T.***, Diem, P.K., Hoang, N.X., Kafy, A.A., 2022. Assessment on controlling factors of urbanization possibility in a newly developing city of the Vietnamese Mekong delta using logistic regression analysis. *Physics and Chemistry of the Earth, Parts A/B/C*. 103065. <https://doi.org/10.1016/j.pce.2021.103065>

Diem, P. K., Diem, N. K., **Can, N. T.**, Minh, V. Q., Huong, H. T. T., Diep, N. T. H., & Tao, P. C., 2022. Assessing the applicability of Fusion Landsat-MODIS data for mapping agricultural land use - A case study in An Giang Province. *IOP Conference Series: Earth and Environmental Science*, 964(1), 012005. <https://doi.org/10.1088/1755-1315/964/1/012005>

2021

Yaung, K. La, Chidthaisong, A., Limsakul, A., Varnakovida, P., **Can, N.T.**, 2021. Land Use Land Cover Changes and Their Effects on Surface Air Temperature in Myanmar and Thailand. Sustainability 13, 1–21. <https://doi.org/10.3390/su131910942>

Can, N.T., Chidthaisong, A., Diem, P.K., Huo, L., 2021. A Modified Bare Soil Index to Identify Bare Land Features during Agricultural Fallow-Period in Southeast Asia Using Landsat 8. Land 10, 1–17. <https://doi.org/10.3390/land10030231>

Can, N.T.*, Diep, N.T.H., Iabchoon, S., 2021. Direction of urban expansion in the Bangkok Metropolitan Area, Thailand under the impacts of a national strategy. Vietnam Journal of Earth Sciences. 43. <https://doi.org/10.15625/2615-9783/16313>

Loc, H.H., Park, E., Thu, T.N., Diep, N.T.H., **Can, N.T.**, 2021. An enhanced analytical framework of participatory GIS for ecosystem services assessment applied to a Ramsar wetland site in the Vietnam Mekong Delta. Ecosystem Services. 48, 101245. <https://doi.org/10.1016/j.ecoser.2021.101245>

2020

Can, N.T.*, Diep, N.T.H., Diem, P.K., 2020. Factors Affecting Urban Electricity Consumption: a case study in the Bangkok Metropolitan Area using an Integrated approach of Earth Observation data and Data analysis. Environ. Environmental Science and Pollution Research. 28, 12056–12066. <https://doi.org/10.1007/s11356-020-09157-6>

Nguyen, T. H. D., **Can, N.T.**, Nguyen, T. N. T., & Doan, T. N. (2020). Flood inundation mapping using Sentinel-1A in An Giang province in 2019. Vietnam Journal of Science, Technology and Engineering, 62(4), 36–42. [https://doi.org/10.31276/vjste.62\(4\).36-42](https://doi.org/10.31276/vjste.62(4).36-42)

2019

Can, N.T.*, Diep, N.T.H., Iabchoon, S., Varnakovida, P., Minh, V.Q., 2019. Analysis of Factors Affecting Urban Heat Island Phenomenon in Bangkok Metropolitan Area, Thailand. VNU Journal of Science: Earth and Environmental Sciences. 35, 53–62. <https://doi.org/10.25073/2588-1094/vnuees.4355>

Diep, N. T. H., Korsem, T., **Can, N. T.**, Phonphan, W., & Vo Quang Minh., 2019. Determination of aquaculture distribution by using remote sensing technology in Thanh Phu district, Ben Tre province, Vietnam. Vietnam Journal of Science, Technology and Engineering, 61(2), 35–41. [https://doi.org/10.31276/VJSTE.61\(2\).35-41](https://doi.org/10.31276/VJSTE.61(2).35-41)

2018

Diep, N.T.H., Loi, N.T., **Can, N.T.**, 2018. Monitoring erosion and accretion situation in the coastal zone at Kien Giang province, in: The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, GeoInformation for Disaster Management (Gi4DM). Istanbul, Turkey, pp. 197–203. (Conference).

2017

Loc, H.H., Diep, N.T.H., **Can, N.T.**, Irvine, K.N., Shimizu, Y., 2017. Integrated evaluation of Ecosystem Services in Prawn-Rice rotational crops, Vietnam. Ecosystem Services. 26, 377–387. <https://doi.org/10.1016/j.ecoser.2016.04.007>

PRESENTATIONS AND INVITED LECTURES

- **Invited talk**, “Nexus between Urbanization, Climate change, and Urban Surface Temperature: Evidence in Bangkok and Ho Chi Minh City” at the Workshop on Urbanization and Urban Morphology Modeling focusing on mega urban regions. Munich, Germany (13-14/10/2022).

- **Paper Presentation**, "Urban Green Space Inventory using Different Spatial Resolution Satellite Images: Practical notes in Bangkok" at The 11th International Conference on Environmental Engineering, Science and Management. Bangkok, Thailand (13/05/2022).
- **Invited lecture**, "Google Earth Engine: from basic" for master students of Land Management in Can Tho University. Can Tho city, Vietnam (13/03/2022).
- **Paper Presentation**, "Urbanization and Climate change impacts on Urban Heat Island in Bangkok and Ho Chi Minh city" at the 2nd International Ph.D. Students Conference on Environment. Mahidol University, Thailand (05/08/2021).
- **Seminar**, "InVEST – Urban Cooling Model and Applications" at KMUTT Steering Committee for Carbon Neutrality by 2040. KMUTT, Thailand (23/06/2021).
- **Training**, "Mapping Cultural Ecosystem Services using Public Participatory Mapping" at training on Approaches to Evaluating Ecosystem Services. Can Tho University, Vietnam (18/06/2021).

PROFESSIONAL TRAINING

- May - June 2022: "*Bioclimatic Architecture: Principle and Best Practices*". ADEME, DSTE, Ministry of Construction (MOC) in Vietnam with support of Vietnam Energy Efficiency Network (EEN)
- Dec 2019: "*Remote Sensing Land use/cover Change and Climate Impacts in Coastal Zone*". South/Southeast Asia Research Initiative (SARI), Land cover/land use Change Program, NASA and Prince of Songkla University (Phuket, Thailand).
- Dec 2018: "*R-Statistics*". Nagasaki University and Can Tho University (Can Tho, Vietnam).
- Oct 2018: "*Google Earth Engine Training*". HCMC Institute of Resources Geography and SERVIR-Mekong (HCMC, Vietnam).
- July 2018: "*Water and Its many issues: Methods and Cross-cutting analysis*". Asian water platform 2018 - WANASEA (Can Tho, Vietnam).
- Mar 2018: "*GeoServices-4-Sustainability*" - Smart City and GIS for Health modules. University of Salzburg and Nanjing Normal University (Nanjing, China).
- Dec 2016: "*Methods and Practices for Analyzing Local Ecological Knowledge*", Social Science Summer School (SSSS) of SEDES IJL and HCM University of Science (HCMC, Vietnam).
- Nov 2016: "*Stable Isotope Analysis for the Study of Coastal Food Webs: Theory and Practice*", SEDES IJL (HCMC, Vietnam).
- Nov 2016: "*Ecosystem-based Adaptation Approach for Sustainable Management and Governance of Coastal Ecosystems (ENGAGE)*". AITVN (Can Tho, Vietnam).

PROJECTS

- "So COOL KMUTT Plan" (2021). Funded by KMUTT under KMUTT Steering Committee for Carbon Neutrality by 2040. Duties: Leader (01 subproject) & Member (01 subproject).
- "Land resource Assessment for Sustainable Development of Agriculture - Forestry - Fisheries and Socio-economic development in An Bien District, Kien Giang Province" (2020). Duty: Remote sensing Technical Assistance.
- Can Tho University Improvement Project (2017-2021). Co-funded by JICA and Japanese ODA loan. Duties: Proposal Development (03 branch topics) & Implementation (subproject ODA-E8).
- "Monitoring the Development and Seasonal calendar of Rice for Forecasting Rice pests". Funded by Department of Cultivation and Plant Protection in Vinh Long province (2017). Duty: Remote sensing Technical Assistance.
- "Solution for Cloud removal on MODIS time to Assess Variations of Rice crop Structures in the Mekong Delta region, Vietnam". Funded by Can Tho University (2017-2018). Duty: Member.

- "Impact Assessment of Climate Change on Aquaculture/Fisheries Household Livelihood in the Lower Mekong Delta, Vietnam". Funded by SEARCA Seed Fund for Strategic Research and Training (SFRT) Program (2015-2016). Duty: Remote sensing Technical Assistance.

PROFESSIONAL SERVICE

Peer-Reviewed Articles for:

- The Egyptian Journal of Remote Sensing and Space Sciences, Elsevier
- International Journal of Digital Earth, Taylor and Francis
- Sustainable Cities and Society, Elsevier
- Environmental Challenges, Elsevier
- Heliyon, Elsevier
- Journal of Applied Earth Observation and Geoinformation, Elsevier
- Geo-spatial Information Science, Taylor and Francis
- Environmental Research Letters, IOP
- Environmental Research Communications, IOP
- TEMA Journal of Land Use, Mobility and Environment
- The 42nd Asian Conference on Remote Sensing, AARS

COMPUTER SKILLS

Remote sensing: ENVI, Ecognition, SNAP, Google Earth Engine.

GIS: ArcGIS, Quantum GIS, Mapinfo, Global Mapper.

Programming and Statistics: R, GEE, SPSS, Python.

REFERENCES

Dr. Amnat Chidthaisong, [Assoc. Prof.]

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King Mongkut's University of Technology Thonburi, Thailand
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