Mr. Aphitsatha Vilaysack

M.Tech Student | Water Resources Engineering | IIT Bombay

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📍 Khammouane Province, Laos



Research and Work Domain

Hydrological-hydraulic modelling, water resources infrastructure planning and design, rural water supply systems, irrigation engineering, and GIS-based watershed analysis.

Education

Indian Institute of Technology (IIT) Bombay - Mumbai, India

Master of Technology in Civil Engineering, Water Resources Engineering

Current student (2025 – Present)

National University of Laos - Vientiane capital, Laos

B.Eng, Water Resources Management

2019 – 2023 | CGPA: 3.76/4.00

Thesis: Urban Drainage System Design, Viengvilay Village, Thakhek District, Khammouane Province

Previous Education

2016-2018: Study at Nongbok Upper secondary School.

2007-2015: Study at Hatxiengdy Primary school and Secondary school.

Work Experience

Junior Civil Engineer in INSI Development Construction Sole Co., Ltd in 2023 – 2025

2025:

- **Sustainable Rural Infrastructure and Watershed Management Sector Project; SRIWSM (UXO-Programme), Owner: Ministry of Agriculture and Forestry, Department of Irrigation.**

  Responsibilities: Led project planning and coordinated technical activities with the project owner, supported field implementation, prepared project maps and progress reports, and managed documentation for project submissions and progress payment claims.

- **Scaling-Up Water Supply, Sanitation, and Hygiene (WASH) Project. (UXO Programme), Department of Water Supply, MWPT**

  Responsibilities: Coordinated project planning and technical implementation, communicated with project stakeholders, prepared project maps and technical reports, and managed project documentation and supporting records for payment claims.

- **Luangprabang Hydropower Project package 4 - Transmission line Luangprabang province (UXO Programme), Owner: CHC Engineering Co., Ltd.**

  Responsibilities: Coordinated technical and administrative project activities with the project owner, supported site implementation, prepared project maps and progress reports, delivered project presentations, and prepared supporting documentation for progress payment claims and invoicing.

2024:

- **Nam Xao 2 Hydropower Construction Project, Xiangkhouang Province, Lao PDR. Owner: Nam Xao Hydropower Co., Ltd.**

  Responsibilities: Developed and finalized engineering drawings for the canal leading to the forebay, coordinated design review and approval with the project consultant, conducted site setting-out surveys for the canal centerline, and supervised construction workers during canal construction.

- **Road Rehabilitation and Repair Project from Xayvongthilath Village (Lak Lek) to the 402nd Regiment. Owner: Ministry of National Defence.**

  Responsibilities: Assisted in supervising construction workers during culvert installation, road construction, and compaction works; prepared daily progress reports, monitored material usage and work progress, and supported quantity verification and payment claim documentation for submission to the project owner.

- **Survey and Design of an Asphalt-Paved Access Road in Don Tiao Village, Xaythany District, Vientiane Capital. Owner: Department of Public Works and Transport, Vientiane Capital, Lao PDR.**

  Responsibilities: Conducted road surveys and completed engineering design, prepared technical drawings and project documentation, and developed and delivered project presentations to the owner for review and approval.

2023:

- **Survey and Design of the Intake Water Supply System in Phien Luang village, Phoukout District, Xieng Khouang Province, Lao PDR. Owner: Electricite Du Laos (EDL).**

  Responsibilities: Assisted in preparing and reviewing engineering drawings using AutoCAD, checking drawing accuracy, dimensions, and design details.

- **Lao-Vietnam Railway Project (LVRP) Phase 1A - UXO programme, Owner: Petrotrade**

  Responsibilities: Prepared the project proposal and technical documentation for the UXO programme, including the proposed scope of work, and implementation plan.

- **Luangprabang Hydropower Project, Resettlement and new site development work in Lat Han village, Nga district, Oudomxay province - UXO programme.**

  Responsibilities: Prepared project maps and site layouts, developed daily and monthly progress reports, and assisted in project planning, scope of work preparation, and coordination of construction activities.

- **Luangprabang Hydropower Project, Resettlement and new site development work in Khok kham village, Pak Ou district, Langprabang province - UXO programme.**

  Responsibilities: Prepared project maps and site layouts, developed daily and monthly progress reports, and assisted in project planning, scope of work preparation, and coordination of construction activities.

Internship:

2023:

- **Namxang Reservoir construction and irrigation system design, Xayaboury Province. Owner: Department of Irrigation, MAF**

  Responsibilities: Conducted topographic surveys and dam setting-out using a theodolite based on design coordinates, prepared CAD drawings for bridge slope protection works, and assisted in daily site inspections and construction supervision of the control house.

2022:

- **Scaling-Up Nutrition and Water Infrastructure Project (SUNWIP), Sepon District**

  Responsibility: CAD as built-drawing of the urban water supply system in Lot 3 and Lot 7

- **Bridge construction area according to the No.20 road from Champasak province to Salavan province total 12 sites - UXO Progrmme. Owner: Department of Road, MPWT, Lao PDR.**

  Responsibilities: Prepared project maps and deliverable boards to support UXO survey planning and project documentation.

- **Transmission Line 220 KV Lao - Vietnam construction project - UXO Progrmme. Owner: LANXANG POWER**

  Responsibilities: Prepared project maps and deliverable boards to support UXO survey activities and technical reporting.

2021:

- **Nam Hinboun Downstream Hydropower Project, Hinboun District, Khammouane province.**

  Responsibility: Land survey and level checking for a riverbank protection construction project.

Technical Skills

Tool	Proficiency
AutoCAD & Civil 3D	Advanced
Google Earth, QGIS, ArcMap & ArcGIS Pro	Advanced
SketchUp, LayOut & Lumion	Intermediate
MS Word, Excel, PowerPoint	Proficient
HEC-HMS	Basic
HEC-RAS	Intermediate

Training course Details

2023:

- Successfully completed the training course on "Applied Autodesk Civil3D in the Irrigation Scheme Design and Civil Engineering Work" at BPS SURVEY ENGINEERING-DESIGN SOLE CO., LTD
- Participated in training to use the Theodolite, Total station and Traverse method for survey work

2022:

- Participated in training to use the programs Sketchup BIM, BOQ for House design course in Thailand (Sketchup Home)
- Successfully completed the training course on "Analysis-Design-Detailing DWG for House Design work" by Arema Group at Lao Youth Union
- Participated in training to use the programs Land desktop 2006 for irrigation design work at ThaNgon Irrigation College

2021:

- Successfully completed the training course on: 3D Design for Architect and Engineer by Sketchup, LayOut and Lumion Program at SPPM IT
- Participated in training to English intermediate level at Seng Academy of English.

2020:

- Participated in training to use the programs Autodesk Civil3D for Road design work and AutoCAD 2D Basic for House Design at Lao-Japan Technical Training Center (LJTTC), Faculty of Engineering (NUOL).
- Participated in training to use the programs 3S (ArcGIS-RS-GPS) For Mapping design with intermediate level at GIS Home center.

LANGUAGES

- Lao — Native
- Thai — Fluent
- English — Intermediate

PROFESSIONAL MEMBERSHIP

- Member, Association of Lao Architects and Civil Engineers (ALACE) — Member No. 1252 / Sant Eng-2023, issued June 2023

REFERENCES

Name	Occupation	Email	Telephone	Address
Prof. Somphone INKHAMSENG	Head of Science Research and Academic Service Division, Faculty of Water Resources, NUOL	inkhamsengs@gmail.com	020549680 59	Tadthong, Sikhottabong, Vientiane
Msc. Khamkeng CHANTHAVONGSA	Vice Dean, Faculty of Water Resources, NUOL	k.chanthavongsa@nuol.edu.la	020552224 95	Tadthong, Sikhottabong, Vientiane