

1. BUDGET.

On Monday, November 7th, UdG will initiate fund transfers to each SEA partner to facilitate the purchase of all necessary equipment for the living labs. At this stage, quotations are no longer mandatory. The primary goal is to supplement the first payment to achieve a total of 33,000 euros per partner, as initially budgeted in the project proposal. This includes 100% of subcontracting costs and a small portion (if feasible) for staff and travel costs (to cover meals, etc). It is crucial to note that NUOL will acquire 5 packages of IoT sensors, which will represent a reduction of 3,800 euros from the transferred funds to SU, VNU, ITC, and CTU, with these funds being redirected to NUOL's account.

It is of utmost importance that all equipment is purchased and payments are made in full during the month of November. This timeline is essential as the equipment must be installed by the end of the second year of the project to remain eligible. Failure to adhere to this schedule may require the return of funds to the EU.

We also request your timesheets for 2022 promptly in order to meet the 70% expenditure milestone of the first payment for the upcoming mid-term report. This is critical to receiving further funding from the EU for the project's conclusion. We estimate that the combined expenses of equipment, timesheets (Staff), and the costs associated with this trip to Vietnam will contribute significantly to reaching this 70%.

Upon receipt of the EU's second payment, UdG will distribute the corresponding funds to all partners to reach up to 70% of their budget, as outlined in the Partner Agreement (PA). However, decisions must be made regarding the three principal remaining expenses for 2023: students' internships and the two remaining Biannual SC consortium trips to Laos and Cambodia. There is a potential trip to Girona coinciding with the IWA ecostp2023 conference, the availability of funds for this purpose needs to be studied. A discussion with Begonya from OITT (UdG) this week will help plan the project expenditures based on these estimations.

2. STEERING COMMITTEE (SC) MEETINGS.

To streamline our meetings and enhance planning, some partners proposed maintaining a clear calendar for scheduling events in advance. While there is an existing calendar in Google Drive, it is not regularly updated and is less user-friendly. To address this, we have created a Google Calendar (<https://tuit.cat/ci48f>), incorporating upcoming virtual SC meetings (Nov 17th, Dec 1st), a specific mission to Laos/Cambodia (FSUB/UdG, December 2022 / January 2023), and tentative dates for the BSC consortium trips to Laos (April 2023) and Cambodia (November 2023). The local organizers of these trips will prepare agendas for discussion and approval during our monthly virtual SC meetings.

For further efficiency, we propose discussing in our next virtual SC meeting whether to retain the current schedule of the first Thursday of each month at 9:30 AM (CET) or consider consolidating general SC meetings every two months, reserving alternate months for specific topics with B2B meetings.

3. MID-TERM REPORT

The completion and submission of the mid-term report covering the period from January 2021 to October 2022 is URGENTLY required. This report encompasses both administrative components, essential for securing the second payment, and technical aspects crucial for a favorable project evaluation and for preventing a significant budget reduction. Please promptly send Annex C of each work package to Antonina and Ignasi, or upload it in the Inowasia Google Drive. We will thoroughly review and compile all the necessary information.

4. e-LEARNING COURSES

The completion of all necessary materials for the e-learning courses is crucial. A PowerPoint template for the e-course material, along with a Word file containing additional information, is available on our Google Drive. Please submit the material to Ignasi by the end of November to allow sufficient time for subsequent steps, including reviewing/refining content and language, and standardizing the format. WUSMED will then proceed to upload the courses to the e-learning platform currently under development. While a "definitive" list of subjects and responsibilities already exists, uncertainties remain regarding Laos and the potential inclusion of additional languages. Your prompt attention to this matter is greatly appreciated.

| Course title | Leading partner | Task force | Language(s) |
|--|---------------------------|------------|-----------------------------------|
| Introduction to aquatic ecology | NUBB (Ratha) | UdG, UT3? | English Cambodian (khemer?) |
| Chemistry for environmental engineering | ITC (Khy Eam) | | English |
| Natural services and aquatic conservation | UT3 (Magali) | NUBB, IRD | English French? |
| Natural technologies for sanitation | FSUB (Antonina) | UdG | English French |
| Introduction to WHAS (Water, Sanitation and Hygiene) | FSUB (Antonina) | UdG | English French? |
| Basic eco-hydrology | IRD (Didier) | | English |
| Municipal wastewater treatment | UdG (Ignasi) | FSUB | English Spanish? |
| Drinking water treatment | UdG (Laura Ferrandez) | | English |
| Material applied in water and wastewater treatment | VNU-HUS (Trinh) | | English |
| Watershed management | CTU (Ngân) | | English |
| ?? | SU | | |
| Biological approach for water quality monitoring | NUOL (Chanda Vongsombath) | | English Laosian? |

5. PBL COURSES

Problem-Based Learning (PBL) material has to be developed because the courses must be implemented along 2023 in official masters of each one of our six SEA universities. There is a list of “definitive” topics that will be partially or fully implemented as new elective subjects or as part of existing subjects. Please, modify or refine based on your real possibilities of implementation.

The development of Problem-Based Learning (PBL) material is essential as the courses must be implemented throughout 2023 in the official master's programs of each of our six Southeast Asian universities. A "definitive" list of topics has been established, intending to be integrated either partially or fully as new elective subjects or as part of existing subjects. We request SEA partners to review and, if necessary, refine the list based on your actual feasibility for implementation.

| SEA partner | Master's program | Subject title | Implementation | Estimated time | Leading partner | Task force |
|-------------|---|--|--|---|------------------------------|-------------------|
| NUBB | Sustainable Ecosystem Management MSc | Ecosystem's services (benefits to people valuation and payment for ecosystem services) | Existing subject (minor modifications of syllabus) | 45 h (1 or 2 PBL) June/JULY 2023 | NUBB (Ratha) | UT3, IRD |
| NUBB | Sustainable agriculture MSc Sustainable Ecosystem Management MSc | Water quality management | New subject | 45 h (2 PBL PILOT + 1 conventional credit) Sept 2023 | NUBB (Sochreat) | SU UT3 UdG? |
| NUOL | Environmental pollution and prevention MSc | Apply biological indicators for water quality assessment | Existing subject | 30 h (2 PBL) | NUOL (Chanda) | UT3, FSUB |
| SU | Agriculture and forest management | Tbc | Existing 16 students | Hours? March 2023 | SU (Bonpasith) | |
| ITC (maybe) | Water and environmental engineering MSc Maybe Master in engineering students | Resource recovery Not sure if they have grants. Optional 25 eng. students | New subject (elective) | 32 h (2 PBL) | UdG and ITC (Theng Vouchley) | FSUB |

| | | | | | | |
|-----|--|--|-----------------------------------|---|---|-------------|
| ITC | Water and environmental engineering MSc M2 October 2023 | Management of water supply and sanitation | Existing | 32 h (2 PBL) October 2023 | UdG and ITC (Heu Rina + 1 male) Kong will send me the syllabus | VNU |
| CTU | Water engineering MSc | Hydrological modelling | Existing 22 students (1 group) | 32 h (2 PBL), 2 nd semester 1 st year, January 23) | CTU (material prepared) Dr. Nam | IRD |
| VNU | Environmental chemistry MSc Environmental Engineering MSc | Wastewater treatment design | Existing | 15 (1 PBL) When? | VNU UdG Teacher? | FSUB UT3 |
| VNU | Environmental chemistry MSc Environmental Engineering MSc | Water and smart cities sustainable water management. Green cities | Existing | 15 (1 PBL) When? | Who? Teacher? | IRD UT3 |

6. STUDENTS INTERNSHIPS

In 2023, two international internships/student mobilities are planned (among Southeast Asian countries) for MSc or PhD students from CTU, VNU, NUBB, ITC, NUOL, and SU. The allocated budget for the project includes a total of 2.920 euros for mobility Travel Costs (estimated of 180 to 275 euros per student based on distance) and 45.720 euros for the Costs of Stay (approx 3.810 euros per student). The duration of stays was agreed to range from 3 to 6 months, with the same budget for the entire duration. Selection criteria and committees must be transparent and include gender/minority issues (as outlined in deliverable 2.4, made by Kong). In November, a public call will be issued through the INOWASIA web page and all project/SEA partners' social media to engage potential stakeholders (public entities, private companies, and universities, including APC members and, of course, CTU, VNU, SU, NUOL, NUBB, and ITC) offering internships. Another call will be directed at all the SEA HEI students interested in applying for the internship.

There is a tentative list detailing the length and period of stay for students from each INOWASIA SEA university; kindly review and adjust based on your preferences.

| University | Period |
|------------|-----------------------------|
| VNU | 6 months, July-December |
| CTU | 4 months, January-May |
| NUOL | 3 months, from end of April |
| NUBB | 3 months, April-June |



| | |
|-----|--------------------------------|
| SU | 3 months, from February |
| ITC | 3 months, from end of February |

Independently to the place of the internship, INOWASIA will require the students to collect some data from the water oriented living labs implemented in the universities of the country of stay (request of wp3).

7. WATER ORIENTED LIVING LABS (WOLL)

The installation of equipment in the Water-Oriented Living Labs (WOLL) is scheduled for the end of the project's second year (ie, by 14th January 2023), with purchases to be completed in November. This procurement is crucial to justify having expended 70% of the initial payment for the mid term report. NUOL is responsible for acquiring 5 identical packages of IoT sensors, with UT3 providing training for their installation. Data sharing will occur through the virtual network which will be available through the INOWASIA platform.

8. ACADEMIC AND PROFESSIONAL COMMITTEE (APC):

Recent outreach efforts with potential stakeholders, including Nano Entech Co, Ltd and AUF, have resulted in their expressed interest in joining the Academic and Professional Committee (APC). To align with these positive developments, it is essential to promptly update the web page with the relevant information and logos of all APC members. WP5 to follow up.

Annex 1. List of Consortium attendants

- 1 Ignasi RODRIGUEZ-RODA LAYRET, University of Girona, Spain
- 2 Coco GONZÁLEZ PI, University of Girona, Spain
- 3 Antonina TORRENS ARMENGOL, Fundació Solidaritat Universitat de Barcelona, Spain
- 4 Estel Guillaumes Vilarrasa, World University Service of the Mediterranean, Spain
- 5 Didier ORANGE, National Research Institute for Sustainable Development, France
- 6 Magali GERINO, University Paul Sabatier Toulouse III, France
- 7 Lou ACKERMANN, University Paul Sabatier Toulouse III, France
- 8 Santi KONGMANY, National University of Laos, Laos
- 9 Soulichan LAMXAY, National University of Laos, Laos
- 10 Sonelam THANMANY, National University of Laos, Laos
- 11 Soulideth KEOBOUALAPHETH, Souphanouvong University, Laos
- 12 Vongpasith CHANTHAKHOUN, Souphanouvong University, Laos
- 13 Bounmy KEOHAVONG, Souphanouvong University, Laos
- 14 Khy Eam EANG, Institute of Technology of Cambodia, Cambodia
- 15 Vannak ANN, Institute of Technology of Cambodia, Cambodia
- 16 Kong CHHUON, Institute of Technology of Cambodia, Cambodia
- 17 Ratha CHEA, National University of Battambang, Cambodia
- 18 Socheat CHREA, National University of Battambang, Cambodia
- 19 Dinh Trinh TRAN, HaNoi University of Science, Vietnam
- 20 Nguyen Minh VIET, Ha Noi University of Science, Vietnam
- 21 Nguyen Hieu TRUNG, Can Tho University, Vietnam
- 22 Nguyen Vo Chau NGAN, Can Tho University, Vietnam