ELNAB belongs to the Erasmus + Programme for the action Capacity Building in Higher Education (CBHE). This action aims to support the modernization, accessibility and Internationalization of higher education in the Partner Countries to contribute to the development of sustainable and inclusive socio-economic growth.

ELNAB will improve the situation and enhance the opportunities of all target groups by providing them with detailed new higher education tools in a wide range of interdisciplinary lighting related professions.

Teaching and training programmes, laboratory to be developed in the project will help to establish a sound international academic environment that offer suitable academic programmes inspired from advanced EU practices for teachers, students, industry people in Nepal and in Bhutan.

The courses will help to expand the current narrow focus on lighting technology at higher education level in target countries. Teachers, students, and lighting professionals will be able to expand their knowledge and skills on efficient lighting technology. The projects will also disseminate knowledge regarding new efficient lighting technology to lighting industries and this will help them to achieve high value adding competence required to implement efficient lighting in Nepal and in Bhutan.

The workshops and seminars organized in the advance knowledge within and outside the academic institutions in partner countries. The events help explore best practice solutions and replicate them around relevant beneficiaries in target countries.
Lighting is the major consumer of electricity in developing countries consuming up to 86% of total electricity production. Energy efficient lighting comes on the top among all measures having potential for CO2 reduction in buildings in developing countries. Nepal and Bhutan have large potential of renewable energy and energy saving by applying energy efficient techniques.

There is a growing need of technical expertise and experience to convert that potential into reality.

Current engineering curricula in universities and colleges in Nepal and Bhutan do not fully cover efficient lighting and renewable energy. The project will provide opportunities and access to advanced education, research, and training programmes in efficient lighting systems.

### Objectives & Actions

The overall objective of the project is to support Nepali and Bhutanese Higher Education Institutions to provide education that promotes sustainable socio-economic development. The project aims to assist Nepal and Bhutan to reduce electricity consumption as well as greenhouse gas emissions through capacity building of human resources in the fields of energy efficient lighting systems.

The specific objectives of the project are:

1. To raise awareness in efficient lighting management and to identify important factors of needs and opportunities in efficient lighting in Nepal and Bhutan
2. To develop energy efficient lighting courses and lighting laboratory
3. To enhance and upgrade the skills of teaching staffs for improved academic environment

The project activities are divided into following five work packages.

**WP1:** Project management
**WP2:** Need Assessment and Awareness Raising
**WP3:** Developing courses, teaching methods, and lighting
**WP4:** Accreditation of courses, testing and training
**WP5:** Dissemination and promotion and collaboration with industry

### Partners

- **Aalto University (Aalto), Finland**
  - [http://www.lightinglab.fi](http://www.lightinglab.fi)
- **Université Toulouse III Paul Sabatier (UPS), France**
- **National Technical University of Athens (NTUA), Greece**
- **Royal University of Bhutan (RUB), Bhutan**
  - [http://www.jnec.edu.bt](http://www.jnec.edu.bt)
- **Kathmandu University (KU), Nepal**
  - [http://www.ku.edu.np/ee](http://www.ku.edu.np/ee)
- **Nepal Engineering Collage (NEC), Nepal**
  - [http://www.nec.edu.np](http://www.nec.edu.np)
- **Sagarmatha Engineering Collage, (SEC) Nepal**
  - [http://www.sagarmatha.edu.np](http://www.sagarmatha.edu.np)