

Brief Description of Learning Units

The structure and the delivery of the units will contain a number of innovations. These will rely on the interactive and well tried CompEdu open learning platform compiled by Professor Fransson at KTH. Training will be supplied at KTH to facilitate the assembly of open learning units by staff at DLSU. This will include software training for the virtual laboratory. The units themselves will comprise three learning strands; firstly, core material, secondly, problem solving and thirdly, comparative studies. Each unit will be led by a centre of expertise in a partner university but contributions will be made by other partners in the areas of problem solving and comparative studies. The latter will require students to investigate the application of sustainable technologies to a particular problem in Europe and Asia. Postgraduate research students will take part in mobility to other partner universities to action this innovation. The intention is to establish common quality assurance standards, unit credit ratings and syllabuses leading to international and local recognition at MSc, Diploma and Certificate levels. The major learning elements are as follows:

Unit 1: Energy Engineering

This is based on the commitment of all partner countries to comply with their Kyoto Protocol obligations to reduce reliance on fossil fuels and to rapidly introduce renewable energy technologies. The production of biofuels in Malaysia and the Philippines is having a significant impact on improving employment. Also, micro-hydro projects are providing important health and economic benefits to villagers living in locations remote from power lines.

Unit 2: Cleaner Technology and Life Cycle Analysis

Cleaner Technologies and Life Cycle Analysis are concerned with the conservation of resources, particularly materials used in manufacturing industry and transport fuels, and life cycle methods which can be employed to analyse clean technologies. This has been a strong area of collaboration between UOP and DLSU for some ten years.

Unit 3: Environmental Management Systems

Environmental Management Systems is recognized as an essential tool in the assessment of sustainable technologies. Many companies in partner countries are seeking training for accreditation according to ISO 14001. The willingness of stakeholders to invest in companies is increasingly becoming dependent upon such actions. It is known that an increasingly significant proportion of international stock market transactions are being driven by the green stakeholder.

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Postgraduate and Industrial Training in Sustainable Technology



University of Portsmouth – England, U.K.
Royal Institute of Technology, Sweden
De La Salle University-Manila
Xavier University – Philippines
Universiti Teknologi Malaysia

Project Summary

There is an identifiable need to provide focussed support for training and business in sustainable development. The aim of the project is to develop, test and disseminate three open learning units allied to the subject area of sustainable development. The project relies on a consortium of five university partners located in the UK, Sweden, Malaysia, North Philippines and South Philippines. A focus for the preparation of the open learning units will be at a newly formed Centre for Sustainable Development (CSD) based at De La Salle University, Manila, Philippines. The units will be applied to postgraduate programmes within the partner universities and also be used as industrial short courses. The target groups are academic staff and postgraduate students, companies and other organisation who will affiliate with the Centre for Sustainable Development during the term of the project. The project will investigate extensions to the units offered and conditions for quality assurance leading to proposals for an accredited International MSc Degree in Sustainable Technology. It is intended that the CSD will act as a centre for business cooperation between Asia and Europe. The EU funded project will run for a term of three years after which the activities are expected to be self sustaining.

Project Objectives

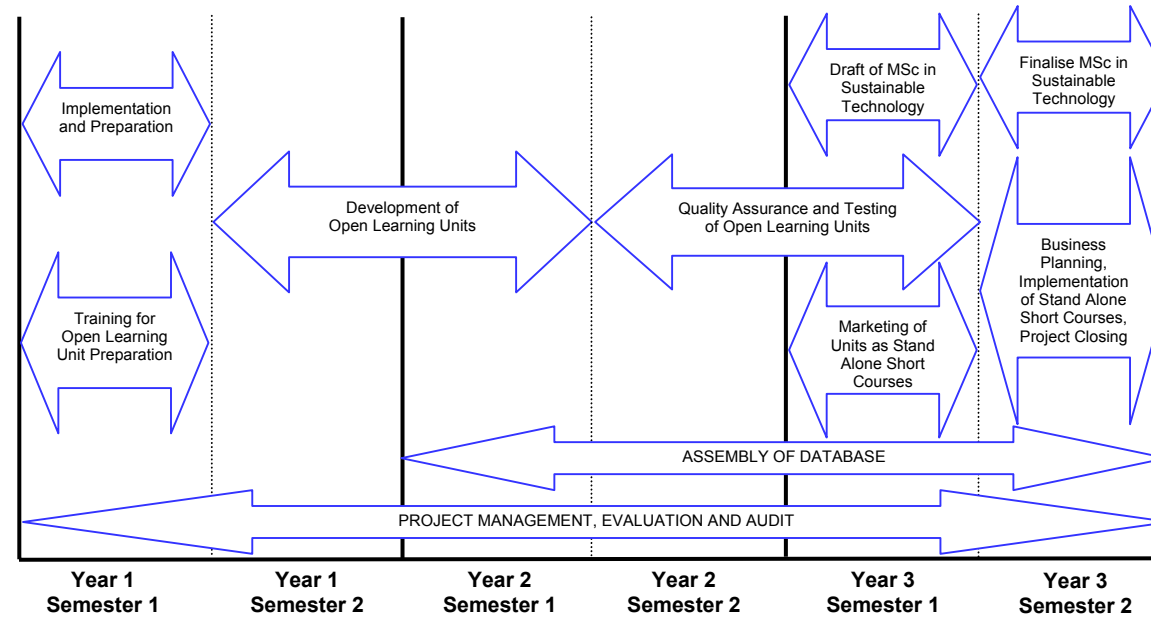
The Project Objectives are:

1. Develop and test three open learning units in areas of Energy Engineering, Life Cycle Analysis and Environmental Management Systems.
2. Embed units in partner postgraduate programmes
3. Develop units as stand alone short courses for industry in partner countries
4. Establish a Centre for Sustainable Development in Manila, Philippines to act as a focus for pedagogic and business activity between Europe and Asia

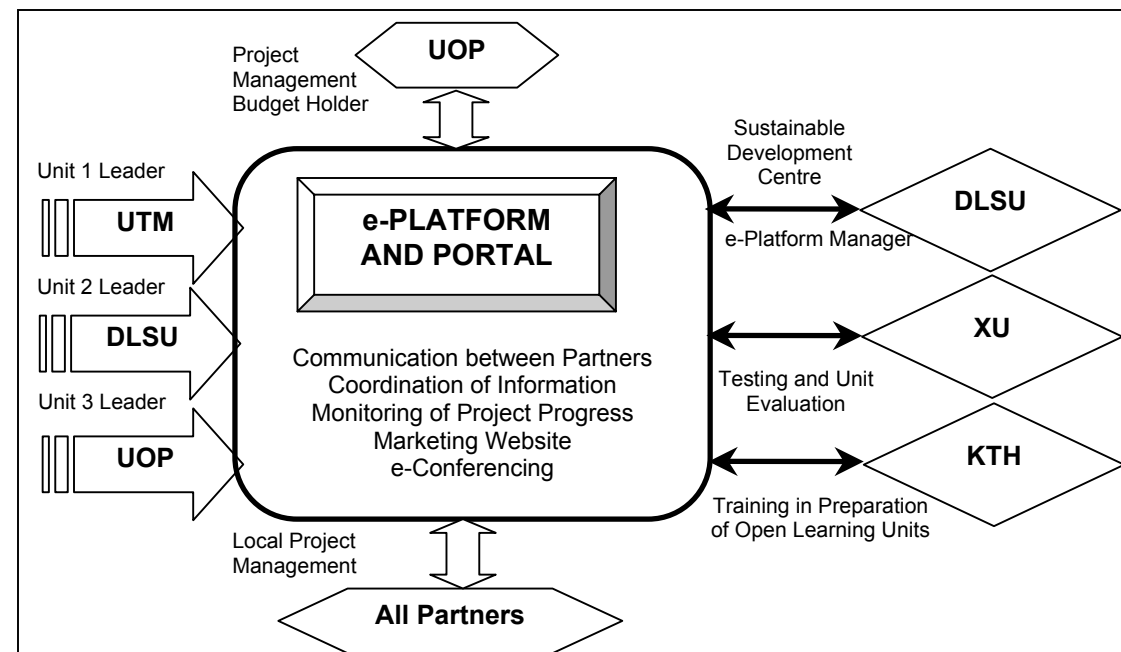
Main Activities

1. Development of training tools on Sustainable development and tools;
2. Offering of open learning units on sustainable technologies and energy engineering;
3. Modelling for resource conservation and environmental impact assessment and management systems;
4. Adaptation of units to account for local conditions using case studies and comparative studies;
5. Use of units in partner postgraduate programmes;
6. Development of short course programmes for the industry;
7. Establishment of a Centre for Sustainable Development at Manila, Philippines;
8. Study of professional accreditation for environmental auditors and teachers in further and higher education; formulation of curriculum for international MSc in Sustainable Technology;
9. Generation of business activity between Europe and Asia using the specialisms focused on the Centre for Sustainable Development.

Project Schedule



Management Profile and Communication System



Role of Partners

University of Portsmouth (UCP), United Kingdom

- Applicant and overall management of the project
- Lead institution for the preparation of the content of Unit 3 (Environmental Management System)
- Contributor to problem solving activity, 'Cleaner Production' in Unit 2 (Life Cycle Analysis)
- Lead institution for project reporting and evaluation
- Contribution to problem solving activity, 'Biomass Combustion' in Unit 1 (Energy Engineering)

De La Salle University – Manila (DLSU-M)

- Management of Centre for Sustainable Development at DLSU
- Lead institution for the preparation, delivery and dissemination of three open learning units in the Philippines
- Lead institution for the preparation of the content of Unit 2
- Assembly of industrial database
- Contributor to problem solving activity, 'Renewable Energy' in Unit 1
- Contributor to problem solving activity, 'Contaminated Land' for Unit 3
- Manager of e-platform

Royal Institute of Technology- Kungliga Tekniska Högskolan (KTH), Sweden

- Lead institution for training and advisory service for the preparation of open learning units
- Networking and publicity of the units

Universiti Teknologi Malaysia (UTM)

- Lead institution for preparation of the content of open learning Unit 1
- Contributor to problem solving activity, 'Economics of Waste Management' for Unit 2
- Institution for the dissemination of the project in Malaysia

Xavier University (XU), Cagayan De Oro

- Lead institution for comparative studies in Educational Quality Management and testing of open learning units in industry and university
- Contributor to problem solving activity, 'Agro-Waste Management' for Unit 3