E-learning at the Royal University of Agriculture
First steps … and way forwards

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A 1st project: Innovative pedagogical Resources in Agroecology and Conservation Agriculture in South-East Asia (IPERCA)

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- Partners: CIRAD, GDA, UBB, SupAgro, UEPG and RUA
TOWARDS A REGIONAL INITIATIVE TO DEVELOP E-LEARNING RESOURCES IN AGROECOLOGY

An E-learning platform: http://e-learning.rua.edu.kh/
4 main dimensions: 9 main courses, 25 lessons

To adapt appropriate-scale machinery

To co-design agroecological practices

To support the transition to agroecological practices in South-East Asia

To quantify the efficiency and impacts of agroecological practices

Learning, sharing knowledge, building connection with grassroots level, fostering synergies with development operators, NGOs and others research teams
BUILD THE CONTENT

- **Scenarichain** as a authoring tool (open source)
- **Scenariserver** as collaborative authoring tool
MUTUALIZE PEDAGOGICAL CONTENT & ICT USES

• **Content Management System** (Wordpress) broadcasting e-learning courses & teaching content material (iperca.org)

• **Youtube** as a tool for tutorial (21) and video/testimonies used in the courses (45 for a total of 250 published)
A CMS to mutualize and broadcast teaching materials – clips and pictures

A Learning Content Management System (LCMS or CMS) is currently being set up at RUA Computer Center. We are planning to host the e-learning courses (around 12 courses and thirty module). The platform features a range of services such as an Agrological online library, forum, course enrollment, e-learning news, and content about experiences gained on the campus (digital campus). More than a connection between Royal University of Agriculture from Penh and University of Battambang will be set up in the platform in order to promote the soil digital museum of Battambang, and on the other hand to promote online courses for University of Battambang students. We hope the numerical initiative will strengthen knowledge in agroecology, agriculture in general, for both universities.
TO DISSEMINATE RESOURCES

- **LCMS E-learning platform**: e-learning.rua.edu.kh
- **Social network**: Facebook (RUA online course & CA service center groups)
- **QR code** on technical leaflets and signs on the campus
FOCUS ON COURSES DESIGN
Example of E-learning course: Land Use and Cover Change

LEARNING PATH: FROM E-LEARNING PLATFORM TO COURSE
E-learning: course’s interface

**OBJECTIVES**

- Study case description
- Introduction
  - PART I: Changes of land use and land cover (LULC)
  - PART II: Process of land use and land cover changes
  - PART III: Proximate causes, underlying factors, and their linkages
  - Conclusion of the case study

**INTRODUCTION**

**COURSE MENU**

**OBJECTIVES**

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**REQUIREMENTS**

**LEARNING TIME**

- Pre-requisite: There is no any specific pre-requisite for this case study. We welcome all students who are interested to know land use and land cover changes in the Northwestern uplands of Cambodia, former Khmer Rouge stro

**Required time:**

- The case study is divided into three parts with below required time for learning.
  - Part I: Changes of land use and land cover (LULC): 20mn
  - Part II: Process of land use and land cover changes: 30mn
Drag and drop: a pedagogical usage of ICT

Linkages of proximate causes and underlying factors

The past studies on deforestation in the tropical regions showed that there are not multiple proximate causes and underlying factors, but also in most cases the interactions of multiple underlying factors drive multiple proximate causes.

- In this case study, political and territorial strategies to integrate Khmer Rouge to end the long standing civil wars in Cambodia, the need for socio-economic development for the demobilized military families, and populated poor families with saturated paddy lands drove agricultural expansion and intensification and the improvement of roads infrastructure in the Northwestern regions.

- Access to agricultural technologies such as agro-chemicals and machineries, high variation of rainfall and soil degradation led to the changes of land use for instance shifting from annual upland crops such as maize and cassava to fruit trees like mango and Falam longans. These two kinds of fruit trees sustain very well with depleted soil and drought. Furthermore, it could be stimulated the production using agro-chemicals to schedule the harvest at premium price.

Based on previous contents, select a colored box on the left side and drag it to its right location on the graphic. Once you’ve finished, click on the “Correction” button at the bottom of the graphic.
Online assessment on the platform

The score is saved on the platform. Students can have access to their scores by their personal dashboard.

Teacher have access to the score of students

After assessment, the correction of the quizz gives a feedback related to the answer
A REFLECTION ON THE USE OF E LEARNING

• What could be our strategy:
  • To engage a broader community of professors/lecturers? Only few were involved on this first step.
  • To use the E-learning: blended-learning, complementary to face-to-face teaching...
  • Which added-value? E-learning and credit?
  • To co-design the ressources between professors/lecturers and pedagogical engineers?
  • To strengthen the capacity of IT staff from RUA
  • To have access to regular support from the Cyber University of ITC (LMS management; RUA is part of the network of national universities receiving support from the Cyber University)
OUR CONTRIBUTION TO A NATIONAL AND REGIONAL DYNAMIC ON GROECOLOGY

• Almost all faculties from RUA can develop theoretical content that can be connected with agroecological principles. Win-win process for professors that will develop their own courses that can also be used within this AE dynamic.
• Case studies can also be used to illustrate and bring ‘life’ to the courses.
• The Faculty of Agronomy implements studies through grants from ACTAE (ALISEA & CANSEA) and ECOLAND through different projects: such studies can be translated into e-learning content.
• RUA teaches the new generation of researchers.
Thank you for your attention!

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