Engaging with Academia and Research Institutions (ARIs) to support Family Farmers and Food System Transformation During and Post COVID-19 Pandemic in Asia

With technical assistance from the FAO Regional Office for Asia and the Pacific
Enhancing capacities of the young generation in Cambodia
for supporting rural transformation and agroecology mainstreaming through education for sustainable development (ESD)

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Embedding agroecology / SLM in higher education

CONTEXT

▪ Curricula of agriculture higher-level education institutions in Cambodia do not explicitly teach agroecology / sustainable land management (SLM) and sustainable development

▪ Large part of students go to work for extension and need to build up the right competences

TASK

▪ Agroecology/SLM needs to be integrated as a key topic in higher education

▪ Future generation needs to be trained on climate-resilient agroecology/SLM solutions
How can we capacitate the young generation to become future change agents?

What competences do students need to master to foster sustainable development in their future jobs?

How are they able to address today’s and future challenges of food security, climate change, resource degradation, and poverty?

Graduates of RUA assume positions of responsibility in government, extension, research, teaching, private industry, civil society, ...

How can we design effective teaching-learning arrangements at RUA to build these competences?
Pilot project: develop a Sustainable Development and Sustainable Land Management / Agroecology curriculum at RUA

Collaborative process

- Co-design of curriculum for the RUA and other agriculture-focused higher education institutions in Cambodia.
  - Including systemic perspective
  - Including tailored solutions for specific contexts
  - Building on existing knowledge bases, e.g. Global WOCAT SLM Database
  - Including participatory processes between science and practice
- Support and high interest by the rector of RUA and the UNCCD focal point of the Ministry.
Education for Sustainable Development (ESD) approaches

Combination of innovative didactics, new teaching-learning arrangements, and thematic issues of sustainable development, SLM, agroecology, climate change, DRR, ...

At the end of the course ...

- ... what do they need to know (academic knowledge)?
- ... what do they need to be able to do (professional skills)?
- ... what should their attitude and values be (critical awareness)?

High interest by rector of RUA on ESD approaches
Joint development of SD-SLM curriculum

Which competences have to be built?

- **Understand concepts and frameworks** in land degradation (LD), sustainable land management (SLM), agroecology, climate change adaptation & mitigation, and disaster risk reduction in the context of sustainable development, particularly the SDGs, and relate them to the context in Cambodia.
- **Understand the fundamental principles and functioning of (complex) nature-human interactions**
- **Master tools and methods** to document, assess and evaluate LD and SLM/agroecology practices at farm and landscape levels
- **Develop potential solutions** for SD challenges jointly with farmers and other actors (multi-perspective knowledge)
- **Monitor impacts** of implemented solutions
- **Communicate adequately** with a broad range of actors
- **Share results** in writing (reports, posters) and orally (presentations)
- Etc.
# Topics of SD-SLM curriculum

## 6 thematic chapters

- Chapter 1: Introduction to SD, LD and SLM
- Chapter 2: SLM Technologies and Approaches, and Ecosystem Services
- Chapter 3: SLM, Climate Change and DRR
- Chapter 4: Mapping land degradation and SLM by using different tools
- Chapter 5: Decision-support tools for SLM and assessment of ecosystem services
- Chapter 6: Concluding session
High-level launch of SD-SLM curriculum

The **High-level official launching event** of the SD-SLM curriculum held in January 2020 in Phnom Penh

- 64 participants: policy-level officials, donors, HEI lecturers and researchers
- Among others high interest by the UNCCD focal point of the Ministry.
Training of Trainers (ToT)

4.5-days for 15 RUA’s lecturers and researchers, delivered by CDE senior research scientists

- innovative didactics, new teaching-learning arrangements, and
- thematic issues of SD-SLM-agroecology
Pilot teaching

1st pilot, May 2020

SD-SLM course at RUA Faculty of Forestry Science, BSc. 3rd Year, 3 Credits, 64 hours

Challenges faced...
• Covid-19 problems
• Lecturer is teaching this course for the first time
• Concept of sustainability is new and abstract for students

2nd pilot, May 2021

SD-SLM course at RUA Faculty of Forestry Science, BSc. 3rd Year, 3 Credits, 64 hours

Improved experience...
• Covid-19 problems, yet virtual class via Zoom is improved due to the better familiarity with it
• Group exercises possible
• More adapting on the content

Students presenting group work results on Cambodia SDGs
Key takeaways

• Agroecology / SLM topics need to be included into higher education
  ✓ Including systemic perspective of landscape
  ✓ Tailored solutions for specific agro-ecological zones

• Education for Sustainable Development (ESD) approaches need to be included into higher education
  ✓ A broad range of competences need to be built
    (academic knowledge, skills and attitudes)

• Building on regional/global Databases related to agroecology/SLM
  ✓ Global WOCAT network, www.wocat.net and others

• Link outputs of implementation projects (e.g. tools developed and evidence generated) with higher education curricula
Further reading

New publication:

Herweg, Karl; Tribelhorn, Thomas; Lewis, Anna Lena; Providoli, Isabelle; Trechsel, Lilian Julia; Steinböck, Camilla (2021). *Transdisciplinary Learning for Sustainable Development. Sharing Experience in Course and Curriculum Design [Textbook]*. Bern, Switzerland: Centre for Development and Environment (CDE), University of Bern, with Bern Open Publishing (BOP)

https://www.bne.unibe.ch/unibe/portal/microsites/BNE/content/e497824/e504014/e1131493/150dpi_online_E_tdLearnSD_ger.pdf
Thank you!

Further information about the project: