



CE SAIN
Transforming Agri-Food Systems



GreenShoots
FOUNDATION

INTEGRATED AGROECOLOGY
ALiSEA Small Grants Facility 2023

ALiSEA National General Assembly 2025
Phnom Penh, Cambodia 30 October 2025

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It was developed in partnership with Centre for Excellence in Sustainable Agriculture Intensification and Nutrition (CESAIN) part of the Royal University of Agriculture, Phnom Penh, Cambodia.

The project ran from the Green Shoots AgriTech Centre between March 2024- May 2025.



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Belgium
partner in development

Agenda

Project Introduction

Methodology

Monitoring & Evaluation

Achievements

Knowledge Products

Lessons Learned & What is next?



Project Introduction



Summary

Location: Siem Reap and Oddar Meanchey Provinces, Cambodia

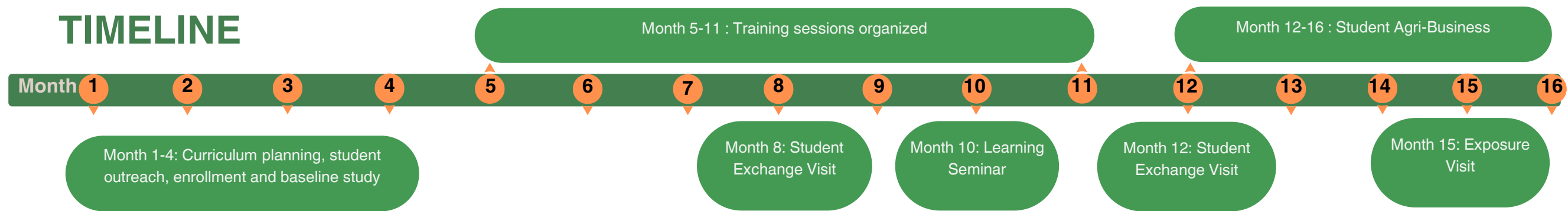
Target Group: 80-100 high school students (ages 14-16)

Overall Goal: Empower youth to engage in agroecology through training, field experience, and entrepreneurship

Focus Themes:

- Wild-food knowledge and biodiversity
- Conservation agriculture and soil health
- Agroecology-based social business

TIMELINE



Why This Project?

Inspire young people to view agriculture as innovative, sustainable, and viable.

Building on Green Shoots' decade-long experience in school-based agricultural education and eco-building, the program combined agroecological training, field learning, and entrepreneurship to promote food security, biodiversity, and cultural preservation.

Methodology

Bio-centric approach: equal focus on ecology, economy, and social dimensions of food production in rural and urban areas

Three Phases of Project Delivery:

Study - Training curriculum (5 modules):

- Introduction to Agroecology
- Soil Health
- Wild Food Plants
- Social Business for Agriculture
- Aquaculture

→ Combined theory, games, and field exercises

Implementation - Cross-learning and exchange visits

Monk-protected forests and Agri-Tech Centre

Learning Seminars on Climate Change & Traditional Knowledge and Marketing & Communication

Practice - Student-led agri-business projects

11 group projects (vegetables, fish, frog, mushroom)

Weekly coaching on planning, bookkeeping, and marketing



Pedagogical/ Educational Approach

- **Play-based and experiential learning-** using games and practical exercises for each training.
- **Emphasis on teamwork** and real-world problem-solving
- **Adapting Business Canvas Model** for agriculture business planning
- **Discussion-based learning** on traditional ecological knowledge within Khmer culture and “scientific” solutions



Monitoring & Evaluation

Project Stage

STUDY

Five training modules—Introduction to Agroecology, Soil Health, Wild Food Plants, Social Business, and Aquaculture—were delivered to 80 students in two locations.

Trainers employed participatory methods such as games, demonstrations, and field-based learning.

Baseline study was conducted before start of training

IMPLEMENTATION

Students participated in two cross-learning exchange visits and two learning seminars.

These included visits to the Green Shoots Agri-Tech Centre, monk-protected forests, and the Together Project farm in Siem Reap. Here traditional ecological knowledge, soil health, and agroecological practices were observed. Students completed field Reports

PRACTICE

Students formed 11 project teams (6 in Oddar Meanchey, 5 in Siem Reap) developing agri-business plans including vegetable, mushroom, frog, and fish production.

Guided weekly by staff, students practiced project management, recordkeeping, sales, and financial reporting. Local teachers acted as focal mentors, ensuring continuity despite academic breaks

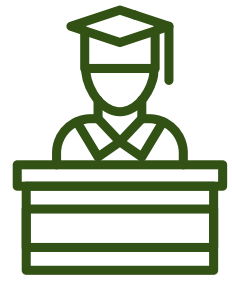
Measuring Success

Post- Training Feedback From
Post-training Assessment Score
Staff completion of M&E form
Feedback form from trainer

Poll completed on Telegram Group
Staff and Facilitator notes
Student completion of field report

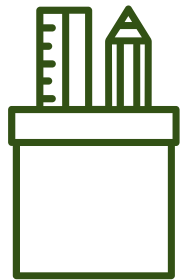
Students book keeping and financial reports
Focus group discussions
Staff feedback

Achievements



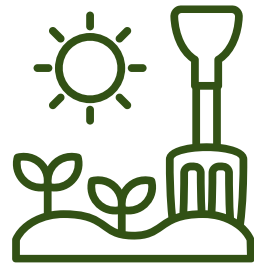
71%

Retention rate for the project. 80 students enrolled and 57 graduated



3

High schools engaged directly



7

Agroecology practices introduced



4

Field-visits between to visit other projects



12

Student businesses launched

“The most memorable moments from participating in this project were witnessing the students' eagerness to learn more about the lesson. And I hope to come back again.”

Soil health Trainer

“I was so excited to be able to share what we are working on like agroecology with younger generation. My most memorable experience is seeing the students from Oddar Meanchey were so active, willing to learn and respectful to me as a trainer.”

Introduction to Agroecology Trainer

“What I gained from this visit was a deep impression in my mind that I've learned new and good things about the forest and knowledge that I had never known before”

Field visit feedback from student

“Yes, because it's essential to build an agricultural community and show young people that agriculture matters — and that they have a meaningful role to play in it.”

Focus Group Discussion

Knowledge Products

ALiSEA AGROECOLOGY LEARNING ALLIANCE IN SOUTH EAST ASIA

GreenShoots FOUNDATION

ALiSEA Practice Brief
ALiSEA Small Grant Facility 2023

INTEGRATED AGROECOLOGY: STUDY, IMPLEMENTATION AND PRACTICE (IASIP)
AN EDUCATIONAL CURRICULUM FOR HIGH SCHOOL STUDENTS TO ENGAGE WITH AGROECOLOGY TEACHING AND BEST PRACTICES

KEY TAKEAWAYS

- Student Outreach to maintain buy-in from all actors for the duration of the project
- Consider working with younger classes to ensure more availability of students
- Start business planning earlier to ensure better execution
- Empower and strengthen Youth involvement in Agroecology through practical activities
- Ensure a mix of experiential learning, critical thinking and conveying interconnectedness
- Strong focus on understanding student cohort, their motivations and engagement styles
- Bio-Centric Approach: Taking an ecological viewpoint and designing interventions that balance human needs and natural environment protection.

QUICK PROJECT STATS
Students Enrolled: **80** Locations Implemented: **2** Education sessions: **8** Student business Launched: **11**

Integrated Agroecology: Study, Implementation, Practice
Location: Cambodia
Duration: 2020-2025
Implemented by: GSF & CESAIN

CONTEXT
The agricultural sector plays a vital role in the economy of Cambodia. However, the labor inputs in agricultural production has declined substantially in the last decade, caused possibly by the migration to industrial and service sectors. Approximately 60% of Cambodia's population are under the age of 25, making Cambodia the fourth largest youth population in South East Asia (UNDP, 2018). However, the participation of youth in agricultural development remains low. Youth often perceive agricultural activities as laborious and less profitable. There is also a lack of investment in building an infrastructure for vegetable production (particularly in some provinces)- for example, Siem Reap is a province with greater focus on Tourism industry and hence investments are made in that sector. For Oddar Meanchey, 40 km from the Thai border, the priority is roads and accessibility to ensure thoroughways for trade- but less investment in water resource management, electrification of villages and so forth. This keeps the agriculture-sector mostly a subsistence model and presents itself as a sector that is debt-ridden and exposed to the impacts of climate change. Most youth grow up seeing their parents struggling as farmers- and thus family systems reject agriculture as a viable option for their children.

Agroecology Principles:

- Recycling
- Input Reduction
- Soil health
- Animal Health
- Connectivity
- Biodiversity
- Economic Diversification
- Energy
- Education of Knowledge
- Land & Natural Resource Governance
- Social Values & Ethics
- Fairness
- Participation

ALiSEA Knowledge Product Categories:

- Animal health
- Biodiversity
- Climate
- Collaboration
- Economy and income
- Equity
- Input reduction and recycling
- Integrated systems
- Knowledge and values
- Natural resource governance
- Nutrition and diets
- Seed management
- Soil health
- Supportive policies
- Sustainable food systems
- Water management

1- Practice Brief

Guidance Document to:

Promote youth engagement in agroecology: The document outlines a pilot educational program in Cambodia designed to involve high school students in sustainable farming through study, implementation, and practice.

Develop practical, eco-centered curricula: It introduces an agroecology curriculum combining theory and hands-on learning, rooted in a biocentric approach that balances human needs with environmental protection.

Establish a replicable model: The project provides a framework for monitoring, evaluation, and scaling, offering lessons for expanding agroecology education across Cambodia and the region.

Knowledge Products



**Integrated Agroecology project :
Study, Implementation and
Practice**

- **Training course about**
Growing mixed vegetables

Students will gain knowledge about

- Construction of vegetable garden
- Seed selection
- Understand each other and work together
- Ability to work in a team
- Know how to control water volume
- Use of natural fertilizers
- Pests and extermination
- Harvest

 Hunsen Oddarmeanchey High School

Organized by Deth Panhavortey and Hoeuy Siyoung

The poster features a green background with a circular inset image showing students working in a vegetable garden. The text is in white and yellow, providing details about the training course and the organizing team.

2- Student Project Case Study

- Case study prepared by student team in Oddar Meanchey
- Student to student guidance on growing mixed vegetables in the high school.

3- Student project video

- Video prepared by student in Samdach Euv Highschool
- Introducing the project and activities in Siem Reap



Lessons Learnt and What Next?

Key Successes

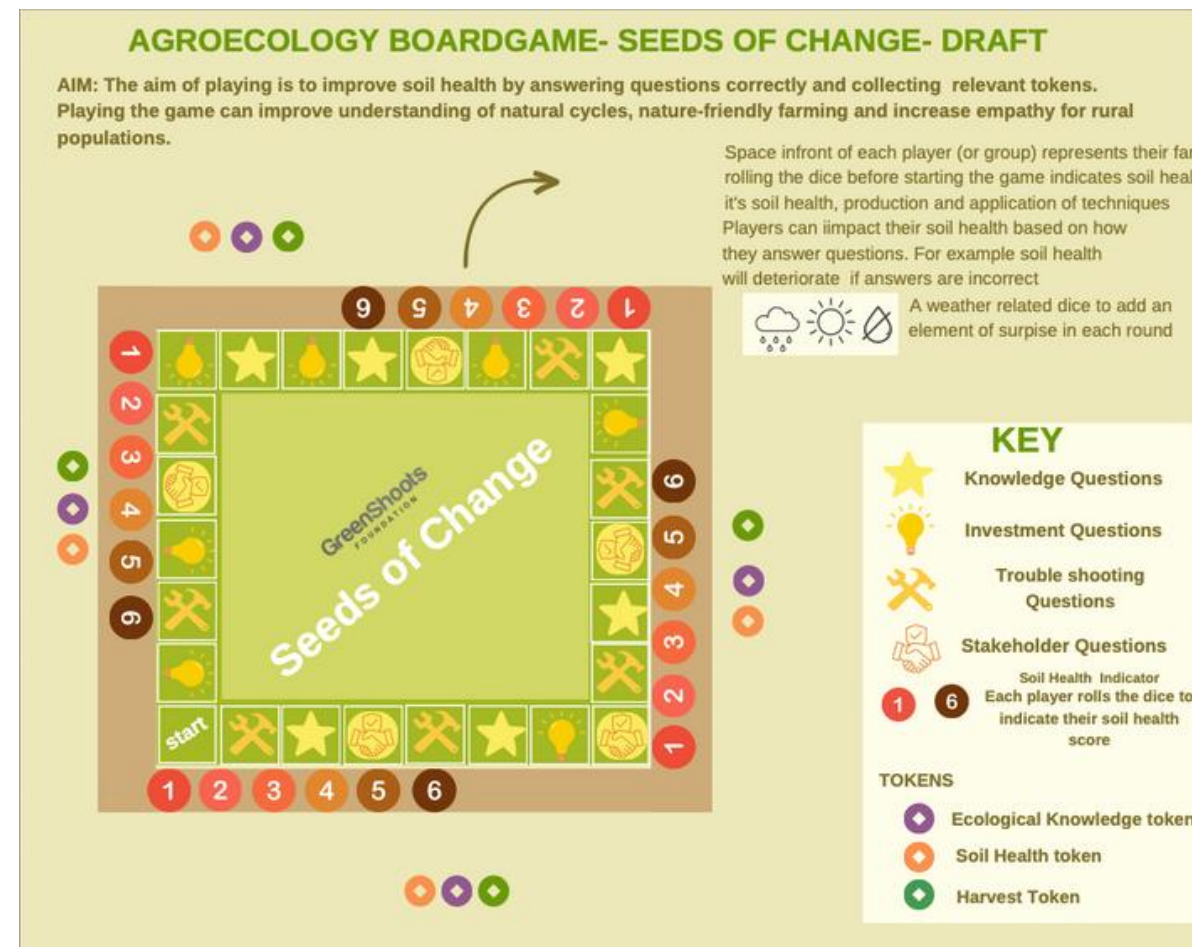
- Strong engagement and creativity among youth participants.
- Integration of traditional ecological wisdom with modern agroecology.
- Sustainable physical outputs (gardens, aquaculture systems).
- Development of replicable educational tools (curriculum and board game).

Challenges

- Scheduling conflicts due to school examinations and holidays being different in the provinces.
- Need for continuous mentorship during business implementation.
- Timing of project meant student projects were in April, which is hottest time and Khmer New Year holidays.

Future Recommendations

- Deepen collaboration with local farmers and cooperatives for mentorship.
- Align curriculum more closely with national agricultural policies.
- Expand training to additional schools and provinces by helping them apply the same methodology
- Continue developing play-based tools like Seeds of Change to enhance accessibility.





THANK YOU