ACTAE
Towards an agroecological transition in South East Asia

AFD

ALISEA Vietnam Annual General Meeting

Hanoi - 14th of November 2017

R&D activities granted by ACTAE-Cansea component

cirad
AGRICULTURAL RESEARCH FOR DEVELOPMENT

GRET
Professionals for Fair Development

ACTAE

➔ **A Regional Project**
Cambodia, Laos, Myanmar and Vietnam

➔ To build **durable and effective networking mechanisms** to facilitate synergies among **agroecology initiatives**

➔ Funded by AFD: 2,5 millions Euros for 3 years

⇨ Financial Agreement between AFD and CIRAD

➔ **Involving 2 operators :**

cirad AGRICULTURAL RESEARCH FOR DEVELOPMENT

GRET Professionals for Fair Development

↳ Delegated project contracting between CIRAD and GRET

Two complementary components for synergic results

Component 1

Component 2

Laos, Vietnam, Cambodia, Myanmar

CANSEA

covering the whole field of agroecology

ALISEA

Providing institutional and operational backstopping to the existing CANSEA Network and the coming Platform for Research and Training on Agroecology (ASEA)

Emergence of an Agroecology Learning alliance in South East Asia, ALiSEA focussing on civil society's stakeholders

cirad
AGRICULTURAL RESEARCH FOR DEVELOPMENT

GRET
Professionals for Fair Development

Agro-ecology: historical principles (Altieri and al. 2005)

1. **Enhanced recycling of biomass (**nutrient availability, nutrient flows).
2. **Securing favourable soil conditions for plant growth**, (organic matter, soil biotic activity).
3. **Minimising losses** due to flows of solar radiation, air and water.
4. **Species and genetic diversification** of the agro-ecosystem in time and space.
5. **Promotion of key ecological processes and services**

2) What is Agroecological transition ? The approach

Scientific approach

Ecology science applied to the study, design and management of sustainable agroecosystems

Social Movement

Support to smallholder farming as opposed to industrial agriculture

Agricultural practices

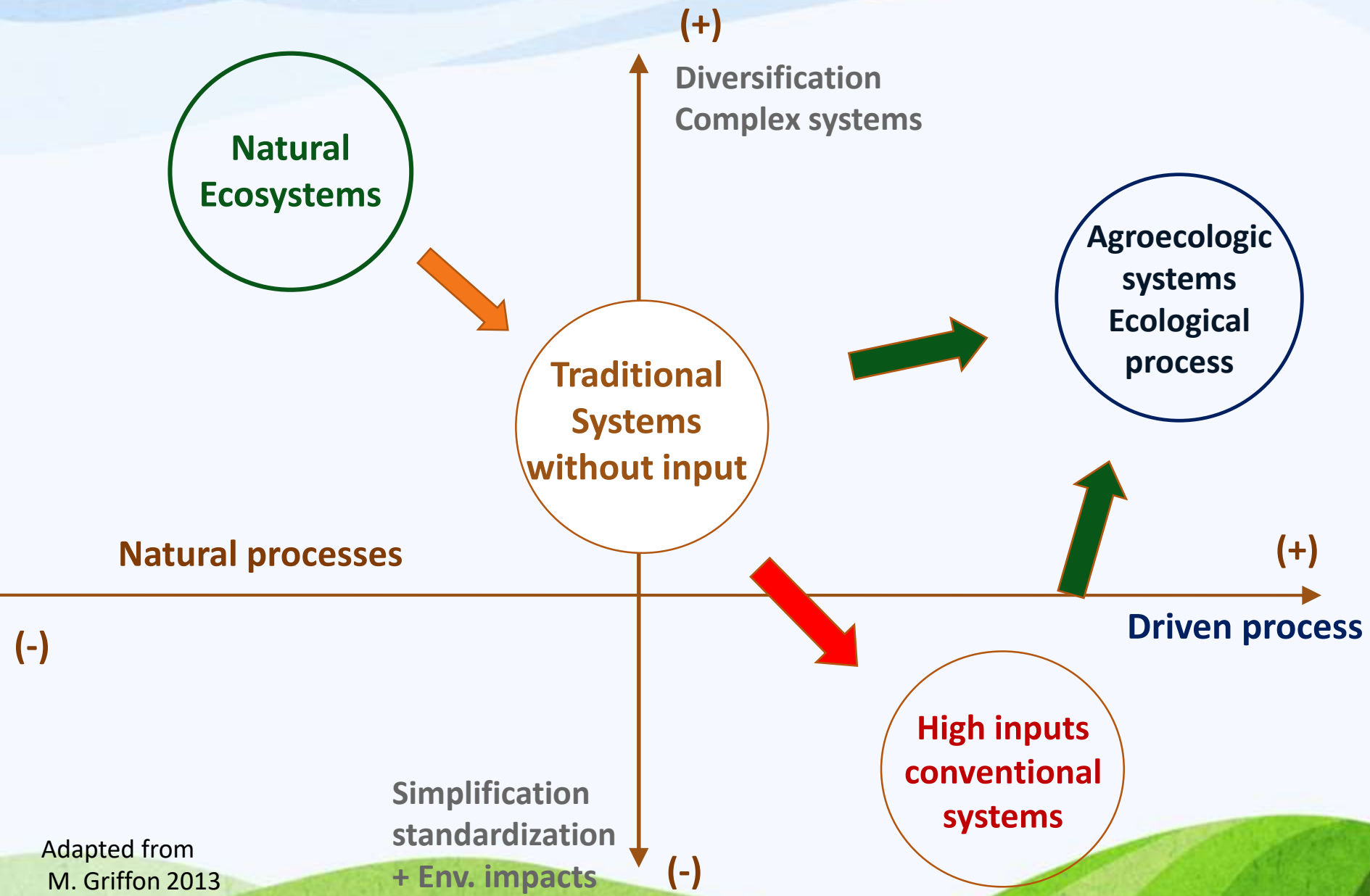
Practices mimicking natural processes and harnessing biological interactions in agroecosystems

It is not a "one size fits all" approach

Designing of farming systems accordingly to local, socio-economical, agropedological contexts.

- ➔ Systemic and holistic approach
- ➔ Multiscale and multidisciplinary approach
- ➔ High diversity of knowledge
- ➔ Association of traditional and up to date knowledge

2) AE transition: What do we mean by ecological intensification?



Adapted from
M. Griffon 2013

Objectives of CANSEA activities : Promote sustainable management of agro-ecosystems based on the principles of agroecology

- Develop participatory and territorial approaches that places agro-ecological transition at the center of multi-stakeholder negotiations on land and natural resource management,
- Co-design and assess innovative farming systems that make the best use of a large diversity of plants, enhancing ecological processes and genotype × environment interactions,
- Reinforce education and training programs and develop a capacity building strategy to empower smallholder farmers, local service providers, and R&D operators,
- Provide strategic elements to feed national and ASEAN initiatives for identifying intervention mechanisms to enhance the promotion of agro-ecological production systems.

Limiting soil erosion and deforestation

Increase in soil organic matter driving nutrient cycling, soil biological activity, water retention and adaptation to climate change

Enhance biodiversity (vegetal/animal)

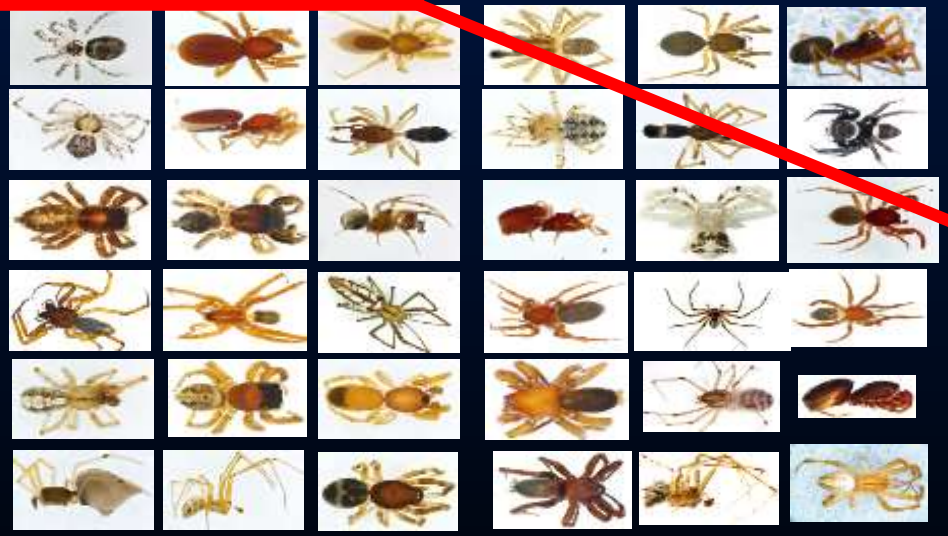
→communities management

Thanh Xuan Commune : organic vegetable farm / Field tour under Alisea VN AGM

Biodiversity : Arthropods in a fruit orchard in Reunion Island

Study on 3 years : 126753 arthropods collected and identified

797 species



Parasitoïds : 190 species

4 pest species

➔ Increase Conservation biological control

Cansea is supporting 12 (+ 1) projects:

- 3 existing sites (NOMAFSI in VN) for the dissemination of CA practices
- 9 (+1) R&D projects :
  - Agrarian dynamics
  - Organic amendments
  - Field soil characterization (Biofunctool)
  - Seed production for CA
  - **Soil microbiology**
  - **Participatory approach**
  - **Agroecological Crop Protection**
  - **Conservation agriculture X livestock production**
  - (Agroforestry)

Conservation agriculture X livestock production

Context in mountainous areas (North VN andLaos)

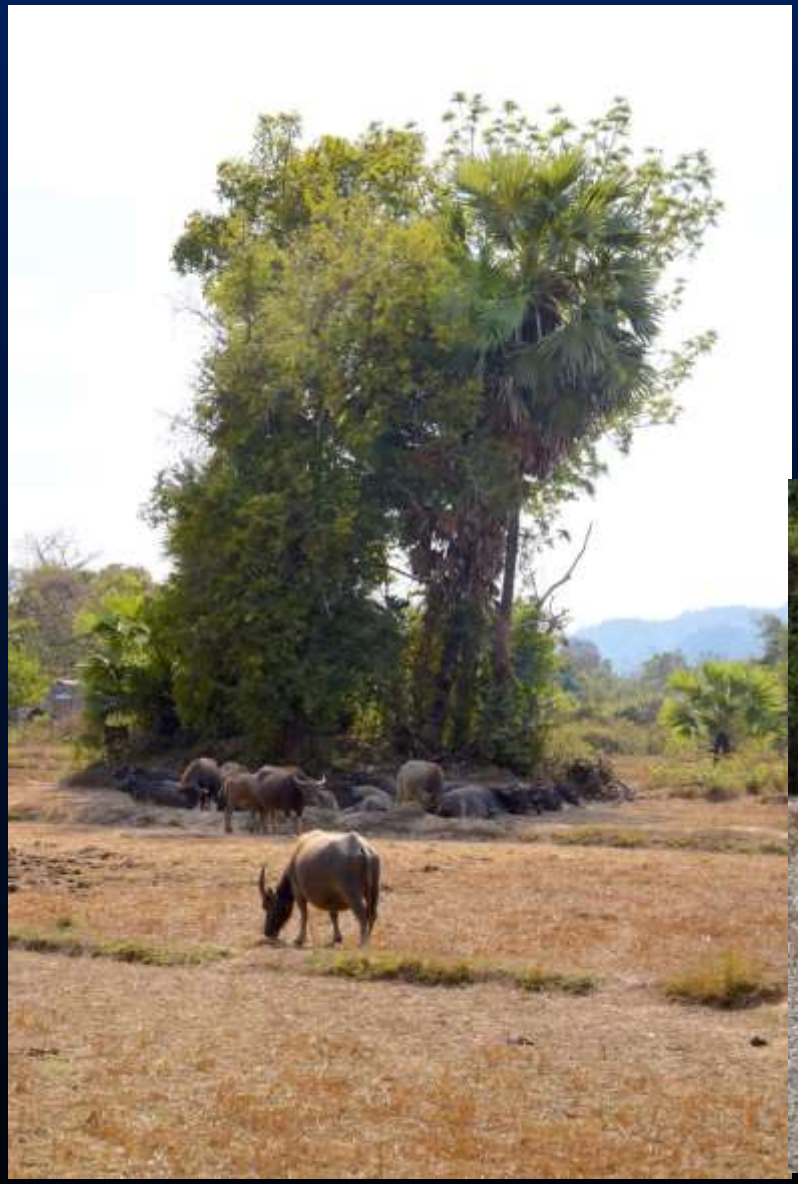
1- Deforestation and extension of monoculture on the hill slopes generating soil erosion and nutrient losses

⇨Implementation of CA (and DMC) to improve fertility / soil health and limit erosion

⮌ Roaming of cattle and buffaloes damages the cover crops

CA / DMC # conventionnal livestock

Conventional livestock



Conservation agriculture X livestock production

Context in mountainous areas (North VN andLaos)

2- Demand for intensive livestock and high quality meat

⇨Use of upland pasture / forage fields to feed animals

⇨ CA can provide a quantitative and qualitative improvement of the agricultural system in mountain area at the condition to be able to integrate livestock production in the landscape

Conservation agriculture X livestock production

Context in mountainous areas (North VN andLaos)

How to bring farmers and village communities to adopt the agroecology options and CA while combining beef cattle production?

How to develop synergies ?

Conservation agriculture X livestock production

Trade-off and synergies of integrating intensive Livestock production with AGroecology in Mountainous regions (TAG)

Partnership between CIRAD and NIAS

Analyze with smallholders mixed farms and extension officers, the conditions for insertion of intensive livestock production in complex agro-ecological systems based on CA: trade off and synergies in terms of **flows of biomass**, **use of space and resources**, mobilizing simulation tools for the use of resources and space.

Thank you for your attention