

## Adding values to upland agriculture

### A vision and roadmap for sustainable agriculture in the Lao Uplands

Jean-Christophe Castella, Khamson Sysanhouth, Thatheva Saphangthong, Michael Victor, Micah Ingalls, Michael Epprecht, Pascal Lienhard, Andrew Bartlett, Sengphachanh Sonethavixay, Souvanthong Namvong, Isabelle Vagneron, Pierre Ferrand

## Knowledge Capitalization Process:

### Objectives

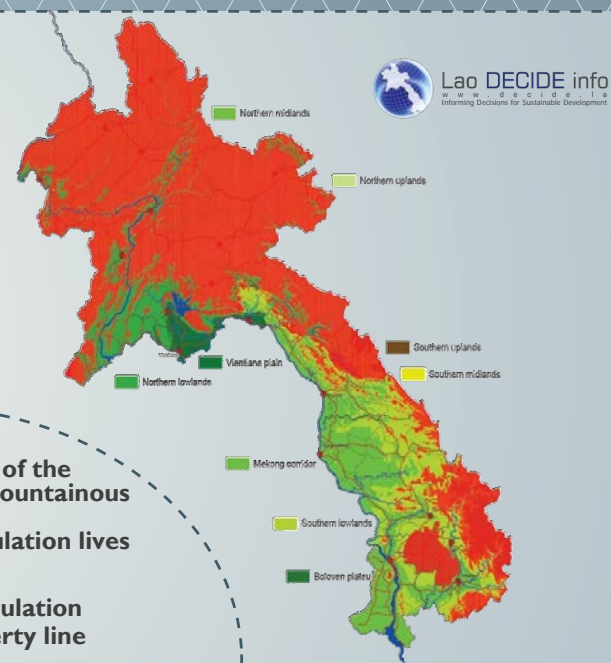
- ▶ Taking stock of knowledge about development in the Lao Uplands;
- ▶ Developing a common vision for the future to feed development policies;
- ▶ Provide guidance to strategic planning of the Ministry of Agriculture and Forestry and other relevant ministries.

### Institutional set-up and process

- ▶ Initiative chaired by Minister of MAF;
- ▶ Hosted by the Sector Working Group of Agriculture and Rural Development – Communication platform between Govt agencies and Development Partners;
- ▶ Workshop series – multi-stakeholder platform.

Date	Workshop topic	Organizers
Nov 23, 2017	Soil carbon is what we need!	DALaM, CIRAD, EFICAS
Dec 9, 2017	We are what we eat	MAF, GRET, CIRAD, ACTAE
Feb 9, 2018	Bringing agroecology to market	ALiSEA, NUoL, GRET, CIRAD
Feb 23, 2018	Vulnerabilities and adaptation to changes in the Lao Uplands	DALaM, NAFRI, CIRAD, CDE, CARE, CCL, SAEDA
Feb 27-Mar 1, 2018	Green extension practitioner's workshop	DTEAP, LURAS, FAO
Mar 12-14, 2018	Lao Uplands Conference: landscape of opportunities	DALaM, NAFRI, CIRAD, CDE, TABI, LURAS
May 2, 2018	Alternative Futures in the Lao Uplands: a macro-level perspective	NAFRI, DALaM, CDE, TABI
June 18, 2018	Sector Working Group of Agriculture and Rural Development	Govt agencies and Development Partners

- CHANGING UPLANDS** challenges & opportunities
- ENGINEERING TRANSITION** towards agroecology
- ENABLING ENVIRONMENTS** for uplands development
- Alternative futures** in the Lao uplands
- Vulnerabilities and adaptation** to change
- Landscape approaches:** co-designing development pathway
- Green Extension:** learning processes for sustainable agriculture
- Bringing agroecology to market**
- Youths in agriculture**



2/3 of total area of the country is mountainous  
 1/4 of total population lives in uplands  
 1/3 of upland population is below poverty line

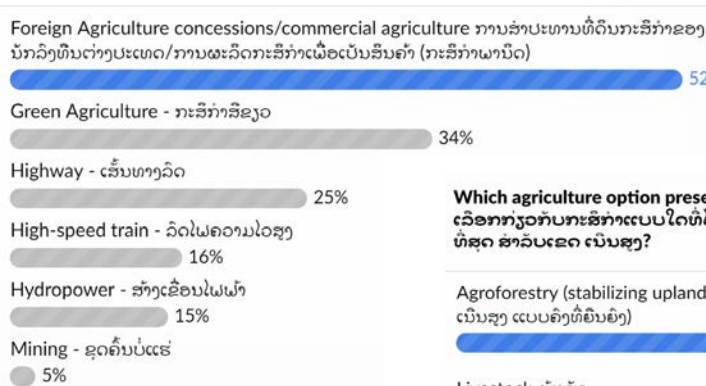
## Re-connecting Upland Areas to Economic Growth

Competing visions remain for green growth in the uplands, with alternative development pathways, i.e. niche vs industrial agriculture, non-farm jobs in mountain areas and rural-urban migration.

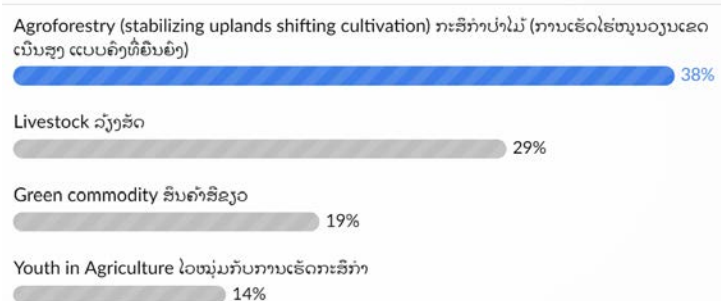


### Main drivers of change in the uplands as envisioned by conference participants

Based on the presentations and panel, what do you think is the main driver of change in the uplands in the next 10 years? ອີງຕາມການບັນຍາຍ ແລະ ການສົນທະນາລັກສະນະການຖາມ-ຕອບບັນຫາ, ເຈົ້າຄິດວ່າປັດໄຈຫຍັງທີ່ເປັນຕົວຂັບເຄື່ອນຂອງການປ່ຽນແປງຜູ້ເຮັດເປັນສູງໃນ 10 ຕໍ່ໜ້າ?



### Which agriculture option presented is most viable for the uplands? ທາງເລືອກກຽມກັບກະສິກໍາແບບໃດທີ່ໄດ້ນຳສະເໜີແລ້ວ ສາມາດນຳໄປປະຕິບັດໄດ້ຫຼາຍທີ່ສຸດ ສຳລັບເຂດ ເປັນສູງ?



## A Roadmap to Green Agriculture

### Adding values to upland agriculture

- ▶ Green agriculture is an essential component of green growth in the Lao Uplands. It should be supported by smallholder farmers engaged in agroecology practices.
- ▶ Indicators used to assess progresses; monetary, moral, meaning values

### Inside-out development process

- ▶ Co-designing intervention pathways driven from the inside and less influenced from the outside to preserve the values of the Lao society,
- ▶ Increasing competitiveness could be associated with increasing quality and safety of agricultural products based on Lao standards.
- ▶ The envisioned transition towards agroecology requires massive investment into capacity development to empower the next generation of Lao upland farmers to seize emerging opportunities that are brought in by the next revolution in communication technologies.

### From projects to policies... with the private sector

- ▶ The projects-based development model is reaching its limits and must be reformed -> revisiting program-based approaches?
- ▶ Innovative intervention mechanisms are required to create an enabling environment for agribusinesses and SMEs through partnering with the private sector.

## Key Lessons from the Lao Uplands Initiative

### Changing uplands are

- ▶ putting stress on the smallholder farmers who are the main labor force and actors of future green growth scenarios,
- ▶ external interventions should buffer negative impacts of on-going mega-trends on the most vulnerable populations, and buffer risks for innovators and entrepreneurs.

### Engineering transitions requires

- ▶ innovative thinking, beyond current problem solving approaches, and
- ▶ local ownership and empowerment of people to take control of their own activities

### Enabling environments are essentials

- ▶ to put policies into action and avoid policy gaps
- ▶ requires a '3-I reform' of *Institutions, Indicators and Incentives*.

laouplands.org

/laouplandsinitiative





# LAO UPLANDS INITIATIVE

landscape of opportunities



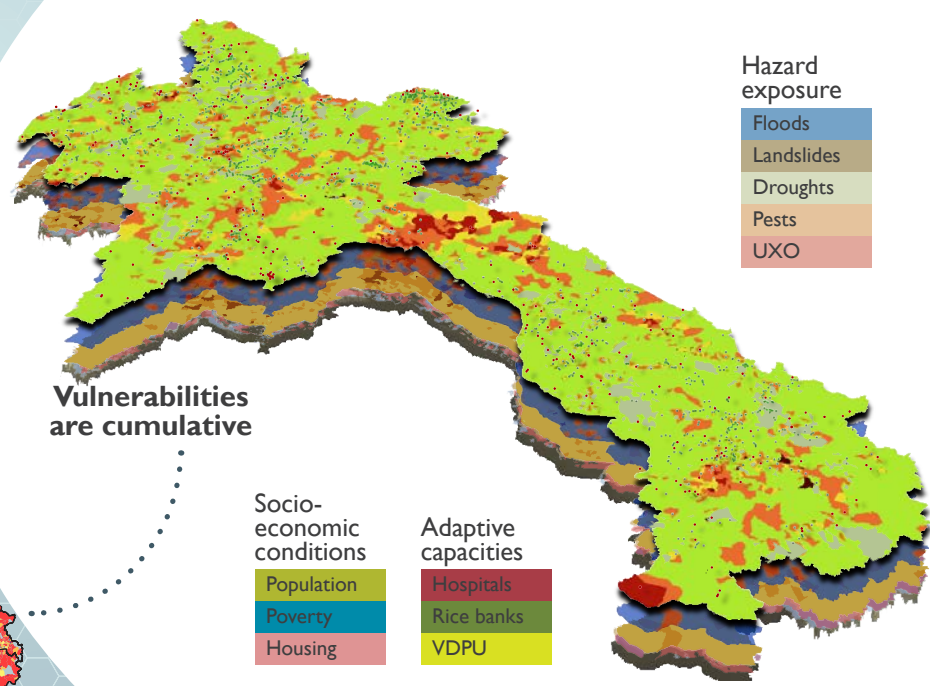
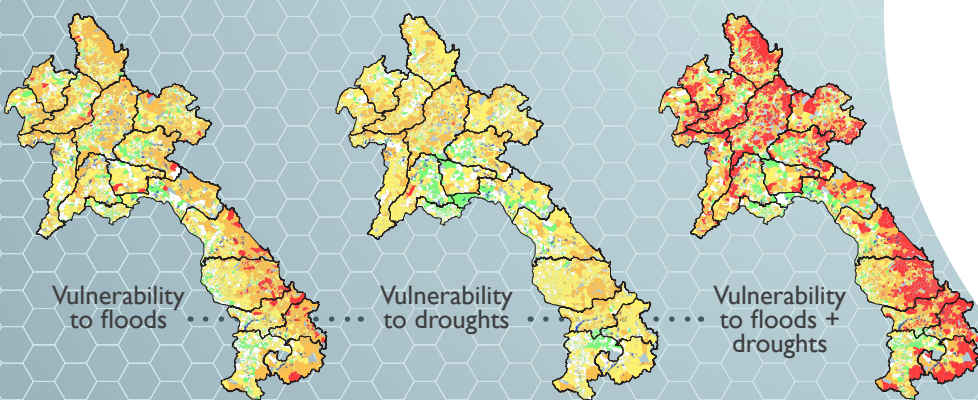
## Vulnerabilities and adaptation in the changing Lao Uplands

Thatheva Saphanthong, Tassilo Tiemann, Michael Epprecht, Micah Ingalls, Khamson Sysanhouth, Pascal Lienhard, Jean-Christophe Castella

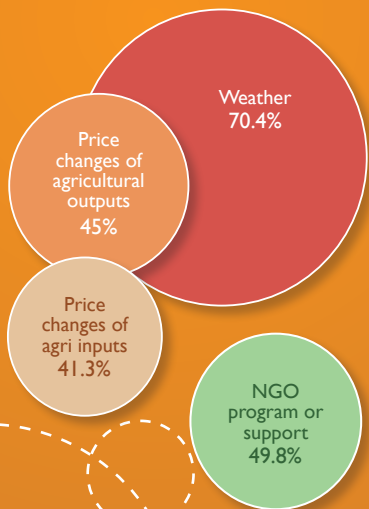
### What do we mean by vulnerabilities in the context of the Lao Uplands?

**Vulnerability** refers to the degree to which a system is unable to cope with, or adapt to, negative effects of external shocks, of knowledge about development in the Lao Uplands.

**Resilience** refers to the capacity to accommodate adverse effects, in order to maintain or improve basic structures and ways of functioning.



### Both Traditional & New Vulnerabilities Affect Upland People



- Weather and markets are main uncertainties**
  - Climate change exacerbates issues, market volatility adds risk
  - Vulnerabilities are context and location specific, relevant interventions require ample context analysis
  - All change can bring vulnerabilities, also non-hazardous change (e.g. large projects, population displacement)
- Large scale projects occupy vast land areas**
  - Two major threats: indebtedness in a context of economic competition; eviction due to large scale investments (e.g. dams, mines, concessions)
  - Market economy fuels desires that require cash
  - Can lead to unsustainable land management
- The role of development partners is to buffer the risks for the most vulnerable.**

240,000 upland families  
6 mio ha upland rice  
1 mio ha of concession  
10 mio ha exploration concessions

### Buffering Negative Impacts of On-Going Changes

Beside traditional approaches to disaster risk reduction, reducing exposure to risk and sensitivity to damages major efforts are required to increase adaptive response.

#### Mobile 4D Disaster reporting tool, successfully tested in Laos

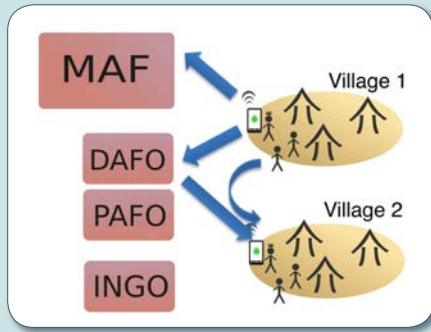


#### Pilot testing

- 2014 - Disaster Monitoring - Vientiane Capital, Luangprabang
- 2015 - MAF (CST, DoPC) - Sekong, Saravan, Attapeu
- 2016-2017 - Monitoring locust outbreaks - Luangprabang, Huaphan

#### Early warning systems

- For disaster risk reduction and adaptation to unpredictable events
- Accurate, locally relevant data, for timely intervention
- Modern ICT tools can provide early warnings on hazards
- Decentralized information structure using ICT tools and social media was found to be the most successful



#### Smartphone App



- Send out warnings
- Receive warnings (location based)
- Contact other people

#### Web-Administration



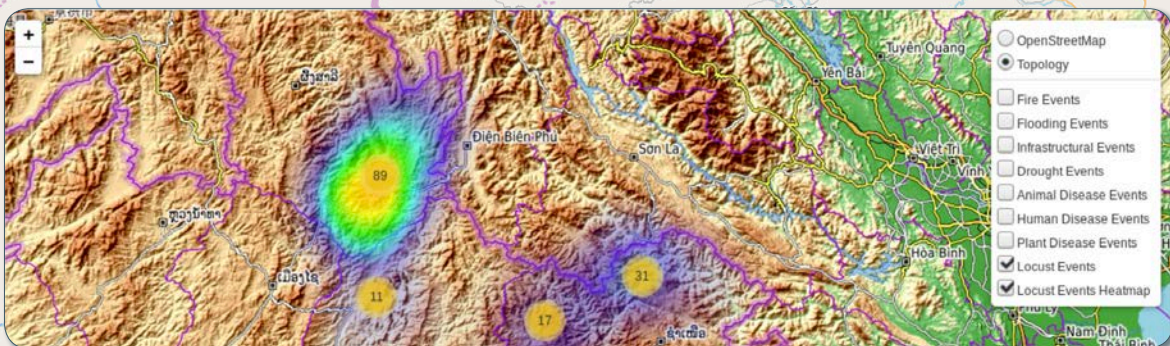
- Send out warnings
- Administration: combine, edit, close warnings
- Provide further help

#### Cloud-Server



- Handles incoming warnings
- Sends out notifications to people in danger
- Is connected to the cloud server

### 2016-2017 - Locust outbreaks - Luangprabang, Huaphan

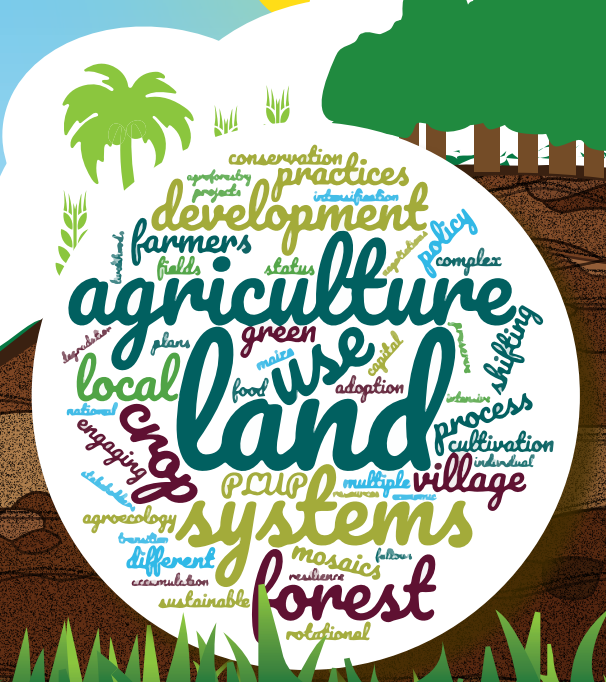
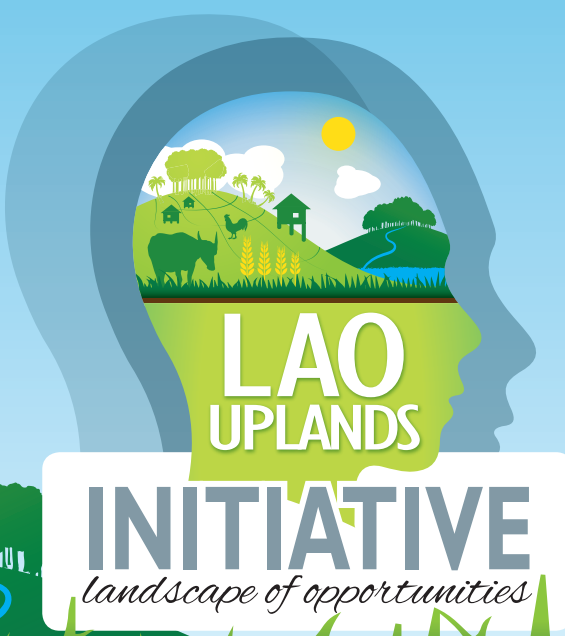


### Lessons from ICT testing for early warning

- Information has to have 3 vital qualities: timely, relevant, easy to understand
- Extension into further service provision is easy once the tool is established

### Looking ahead...

- Relieve constraints: technical, financial, human capacity
- Expand collaborations: MLSW, MoNRE, MOPH, MPWT, MEM, DCCM and CSOs



# Landscape approaches

## An avenue for agrobiodiversity & agroecology in the Lao Uplands

Thatheva Saphangthong, Jean-Christophe Castella, Michael Victor, Micah Ingalls, Pascal Lienhard

### Why a Landscape Approach for the Uplands in Lao PDR?

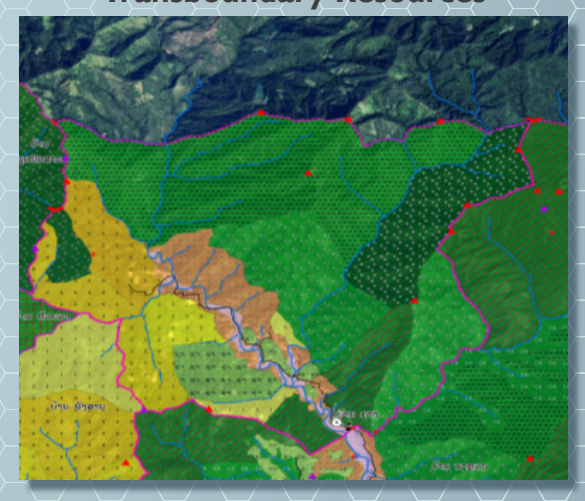
Tenure Insecurity



Unclear Boundaries



Transboundary Resources



National Forest Targets



Negotiating Trade-offs



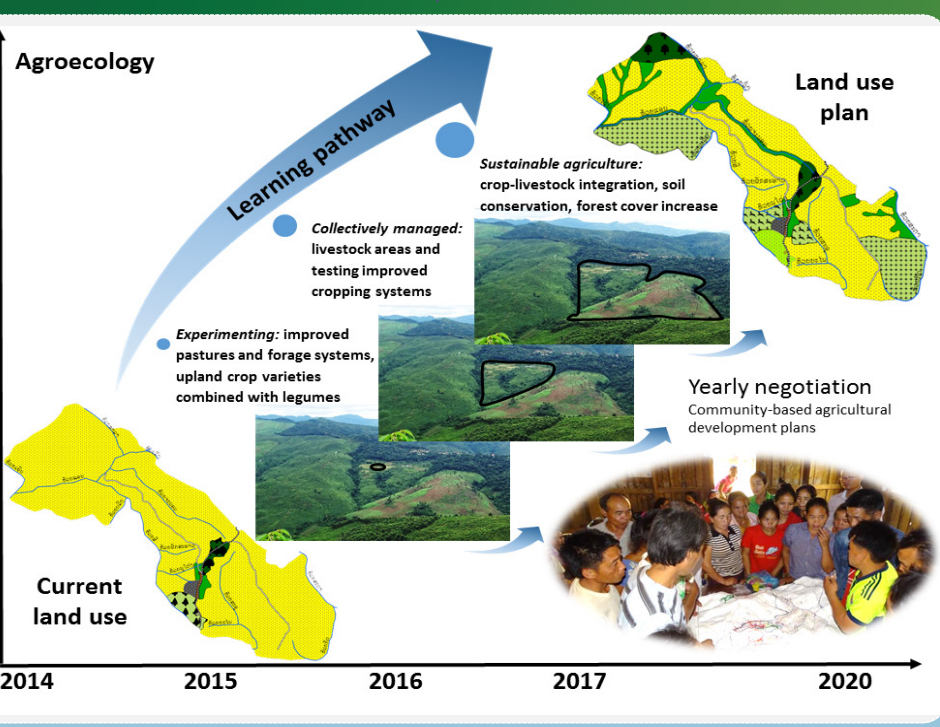
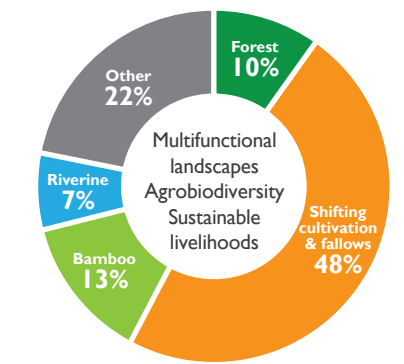
Sustainable Development



### Multifunctional landscapes support food security and promote the resilience of upland livelihoods

- ▶ New pressures relating to commercial agriculture, large-scale land investments and socioeconomic changes means that innovative solutions are needed to enable smallholder farming systems that leverage natural capital and enhance multifunctional landscape values.
- ▶ Diversified landscapes enhance farming systems' capacity to resist or recover from economic or environmental shocks through multiple income generating activities
- ▶ Addressing stabilization of shifting cultivation in a realistic and practical manner requires clear policy guidelines about the legal status of complex landscape mosaics in the uplands.
- ▶ The transition from traditional shifting cultivation systems to modern agroforestry systems requires to provide a legal status to the complex landscape mosaics that are the basis of uplands livelihoods.

Shifting cultivation fields and fallows provide 48% of total average income of upland households (five times that of forests), TABI-CDE



### How to Maintain Multifunctional Landscapes?

- ▶ Participatory Land Use Planning is used to strike a balance between productivity increase and forest conservation goals at the local level; PLUP translates green growth policy into multifunctional landscapes;
- ▶ Integrated landscape approaches engage local communities in co-designing their own development pathway towards ecological intensification of agriculture as negotiated during the PLUP;
- ▶ In the transition from traditional shifting cultivation systems to modern agroforestry systems the scenarios initially revolve around the transformation of crop-livestock-forest interactions;
- ▶ Issues related to local land use rights (both individual and communal) and forest land allocation within three forest categories need to be addressed in the land law to preserve the complex landscape mosaics that ensure the resilience of upland communities and ecosystems.

