Present ongoing SDM project "Socio-Ecological Resilience Building through Mixed-Species Forest Restoration" at the International Forum for Sustainable Asia and the Pacific (ISAP)

12 November 2020

Presenter: Kien Dang

Our very grateful thanks to Yasuo-san, Yohsuke-san (SDM), Koji-san (IGES) and extending thanks to enormous supports from grassroots movement in Vietnam

1

Outline of presentation

- I. Global issues/challenges including Vietnam e.g. context, issues
- II. How SEPLS in Vietnam, through SDMs, have contributed to deliver socialecological outcomes and enhancing resilience to disasters.
 - Findings from SDM 2016-2017 results e.g. farms and landscapes examples
 - Findings from SDM 2019-2020 results e.g. farms and landscapes examples
 - Legal recognition by Vietnam Law on Forest 2019 and what will be foreseen?
- **III. Experiences drawn from Vietnam**, its relevance for the post COVID-19 era and implications for the post-2020 Global Biodiversity Framework.

Global Challenge!



15 LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss Issues: COVID-19 is the most currently dominating threat and one of the key to this is due forests destruction, i.e. the natural forest habitat for wildlife and species no longer available;

Young Generation Identity at risk



Hectares with opportunities for forest landscape restoration Latest issues from Vietnam October 2020



Landslides



Flooding

<u>Fact</u>: Tropical forest in Vietnam is a living natural resource but has been <u>decreasing</u>.

Context/issues: areas of earlier tropical forest are converted to mono-crop plantations and commercial-based agriculture i.e. an area of no biological or agricultural higher value in between less than 10 years;

Consequences: landscape degradation, losses in agrobiodiversity, market dependency, low resilience;



Vietnam

- Global Forest Resources Assessment 2020 (FAO) for Vietnam recently provided:
 - Plantation forest: 745,000 ha (1990)
 - Plantation forest: 4,349,370 ha (2020)
- MARD Vietnam provided areas of national forest and land use in the period 1995-2010:
 - Plantation forest: 994,000 ha (1995)
 - Plantation forest: 3,122,000 ha (2010)
- Thus, Action for Mixed-Species Forest Restoration for (SEPLS) Social Ecological Resilience Building is <u>highly needed</u>.



Latest image sees tropical forests being cleared for other land uses, October 2020 Central Highlands region of Vietnam

CENDI/SPERI approach to SEPLS started and obtain lessons

2011: First becoming a member of IPSI "Vision towards Societies in Harmony with Nature" Learning about SEPLS 2014: First meeting with IPSI, at COP 12 learning about SEPLS and First sharing about SEPLS through HEPA real example. 2016: First SDM project to initiative SEPLS and restoration in Vietnam; First initiative in Vietnam on Restoration of Local species, Trees nursery

2016-18: Fully voluntary uptake of Local species restoration expanding over many provinces, landscapes, and small actions by society-wide groups in Vietnam. 2019-20: Second SDM project targeting promoting Agrobiodiversity farms and **SEPLS** Landscape restoration for livelihoods and resilience for pioneering youths in Central region. Expecting outstanding impacts 2020-2025 CENDI approach to SEPLS i.e. through Mixed species Forest Restoration for Transformative Change and Enhancing Resilience (post COVID-19 era)

Diversity

- species/product diversity
- structural diversity, i.e. diversity of systems components
- functional diversity, i.e. diversity of relations between systems components
- cultural landscape diversity

Integration

- of production systems
- of nutrient and energy flows
- of management goals

Farms and landscape management: high internal input of local capacity;

SDM 2016 – SEPLS started successfully

- 1. The First Nursery of Local Species restores many varieties to improve agro-biodiversity and extension to groups.
- 2. All of these bring people closed to Nature, reconnecting humans to the Earth, the soil, and the root.



First Nursery 2017 Ha Tinh province







Vườn Ươm Mekong/ Mekong Nursery of Local Species Dec 24, 2018 · @



Vườn Ươm Mekong/ Mekong Nursery of Local Species update...



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Nursery 2018 Can Tho province, Mekong Delta

Nursery 2019 Quang Binh province



Nursery 2019 Lao Cai province

Jp-scaling mixed-species lantings to many landscapes	Countries	Area (hectares)	Planned Planting and Nursery (unit: seedlings, trees)	Actual planting (unit: seedlings, trees)	Number of local indigenous species including timber, fruit trees, shadow lover crops e.g. Ginger through Mixed Planting (unit: no of species)
HEPA Ha Tinh province	Vietnam		5 2,500	5,568	5
Simacai, Lao Cai province	Vietnam		5 2,500	9,542	5
Violak, Kon Tum province	Vietnam		8 14,000	7,447	9
Nam Bac, Lao PDR	Lao PDR		5 5,000	77,900	11
Long Lan, Lao PDR	Lao PDR	21 21 1	0 10,000	5,334	3
Quang Binh province	Vietnam	- Ale	5 5,000	5,200	6
Quang Binh province	Vietnam		5 5,000	1,800	4
Sin Chai, Lao Cai province	Vietnam		5 202,550	154,370	11
Thapene, Lao PDR	Lao PDR	ZE C	2 5,220	4,585	7
Bao Yen, Lao Cai province	Vietnam	Y 19	5 6,000		4
Building up SEPLS – Updating by June 2020 duration 2015–2020	- ALO	5	5 257,770	271,746	9

Landscape restoration SEPLS in Simacai district, northern Vietnam



-Restoring landscape with diverse trees' species;

- Foster traditional labor exchange;
- Provide livelihoods for young farmers;
- Enhancing good resiliency;



Landscape restoration SEPLS in Bao Yen district, northern Vietnam



- Choosing the sustainable lifestyle;
- Local species trees planting for greening the landscape;
- Integrating diverse livestock;
- Contributing to resiliency for smallholders;



Landscape restoration SEPLS in Quang Binh district, central VN



- Female-led agro-biodiversity farm;
- Planting mixed species local varieties; homegrown nursery; integrating livestock;
- Deliver great social ecological outcomes;



Landscape restoration SEPLS in HEPA

FFS-HEPA site Landsat and Sentinel 2 images







SDM 2019 – SEPLS enhancing resilience

- 1. Mixed species plantings supports agro-biodiversity.
- 2. Farms obtain income from short term crops and animals, and fruit trees.



- 3. Provide diverse produce i.e. acces to food and nutrition to families, local members.
- 4. Lessening risks to disasters including COVID-19.





SDM 2019 – SEPLS deliver social outcome



Mixed species planting in Lao Cai province

- Lao PDR 2019 Mixed species Lam Dong province
- 1. Extensive awareness of forest restoration and mixed species planting throughout Vietnam and Laos PDR;
- 2. Continuing wisdom and ecological knowledge;
- 3. Contributing to landscape restoration, environmental protection year-by-year;

Asia Challenge! Watershed forests cleared/land use change Declining yields, soil erosion, land and ES degradation poverty, low input, debt-trap unsustainable practices

- Lowland/downstream/cities impacts:
- A vicious cycle



<u>Example</u>: The estimated annual replacement cost of eroded soil nutrients in Claveria Philippines is approximately 800USD per hectare per year.

On average, for every dollar spent on restoration, at least nine dollars of economic benefits can be expected.

Plenary: One World One Health: setting the scene and the mood $_{\mbox{\tiny co}}$ Unlisted

Reference:

https://www.youtube.com/watch?v=sjGoEQhl4DE&feature=emb logo (October 28, 2020)

Lessons from and for Vietnam

- 1. Ecosystem Restoration e.g. forests and Biodiversity recovery planning clearly indicated; Mixed-species implementation prioritize.
- 2. Mixed species forest restoration is the way-forward to allow restoration of agro-biodiversity, humans wellbeing and landscapes/ecosystem functions.
- 3. SEPLS has been tried lively, and dynamically through scattered farms and landscapes.

NHÀ XUẤT BẢN LẠO ĐỘNG 16

Vision for Vietnam (2020-2035)

- Societies in Harmony with Nature' highly relevance for the post COVID-19 era, post-2020 Global Biodiversity Framework.
- Vietnam should develop a National Program utilizing SEPLS incorporating Restoration mindset and practices;
- Supporting growth-oriented model that prioritize Biodiversity and Human Wellbeing, and lifestyles in harmony with Nature.
- R&D should focus 'How restoration efforts contribute to Resilience building'.



INTRODUCTION

Tropical forests are being destroyed at alarming rates around the world, driving climate change and biodiversity loss, and intensifying poverty. The habitat loss from tropical deforestation is also leading to increased contact between humans and wildlife. This exposure increases incidence of zoonotic diseases, infectious diseases that are transmitted from animals to humans. As the loss of tropical forests accelerates, the public health danger from deforestation is growing worse.

The COVID-19 pandemic has laid bare a broken relationship with nature. Our global economy, consumption patterns, and production systems not only endanger nature, but our own well-being. The pandemic is a warning sign: failing to care for the planet, for forests and for biodiversity, means not taking care of ourselves.

EY FACTS

- Tropical deforestation and the destruction of wildlife habitat create the conditions for the emergence of new diseases to which humans have little resistance, and which can become the basis for pandemic
- → Human encroachment into tropical forests—driven by land conversion for agriculture and demand for commodities like beef, soy, and palm oil—is leading to animal-human interactions that did not exist previously, enabling pathogens once found only in animals to jump to human hosts.
- → COVID-19, like Ebola, SARS, Avian flu and other recent epidemics, is an infectious disease that originated from animals.
- → The COVID-19 pandemic and the potential for future pandemics are closely tied to tropical deforestation, habitat loss and ecosystem decline, and the many ways that humanity is mismanaging nature.