

**LAO UPLANDS FORUM**  
Nov 2017 - Mar 2018  
*land source of opportunities*

# Soil carbon is what we need!

*investing in soils to sustain agriculture in Lao uplands*

**23 November 2017 - from 6 to 8 pm,**  
**at the French Institute (IFL, Avenue Lane Xang, Vientiane)**

HOSTED BY:

IN PARTNERSHIP WITH:

FUNDED BY:

**LAO UPLANDS FORUM**  
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## Soil carbon is what we need!

*investing in soils to sustain agriculture in Lao uplands*

**SOIL IS MADE OF**

- 45% minerals
- 25% water
- 25% air
- 3% organic matter

1cm  
It can take up to 1,000 years to produce 1 cm of soil

1,000 years

**95%**  
of our food comes from our soil

SOILS ARE A PRECIOUS NON-RENEWABLE RESOURCE: ITS LOSS AND DEGRADATION IS NOT RECOVERABLE WITHIN A HUMAN LIFESPAN

Soils also store and filter water, recycle nutrients, contribute a buffer against floods, sequester carbon, help to combat & adapt to climate change and more organisms in soil (biodiversity) than there are people in Earth!

### OPTIONS FOR SUSTAINABLE LAND MANAGEMENT

**Key messages**

- Engage the whole community into implementation of sustainable land management practices
- Favor the definition of regulations for forest governance and control rather than a single one

**SOILS ARE ESSENTIAL TO A HEALTHY PLANET & HUMAN WELL-BEING. WE NEED TO PROTECT THEM... NOW!**

Infographics on soils available on

<https://laouplandsforum.org/>

/laouplandsforum

laouplands.forum@gmail.com



<http://www.fao.org/globalsoilpartnership/en>



**World Soil Day**  
5th of December



We need soils to produce food, feed, clothes, shelter, and energy...


95%

of our food comes from our soil

- Soil carbon as key element of **soil fertility ...**
- ... and of **healthy landscapes & livelihoods**

Soils also:

- store and filter water,
- recycle nutrients,
- constitute a buffer against floods,
- sequester carbon helping to combat & adapt to climate change,
- and host a quarter of our planet's biodiversity



*There is more Organic Carbon in our soil than in vegetation and the atmosphere combined !*

*There are more organisms in one tablespoon of healthy soil... than there are people on Earth!*

**Unsustainable soil management**  
leads to soil degradation and CO<sub>2</sub> emission into the atmosphere

**Sustainable soil management**  
fosters CO<sub>2</sub> sequestration to boost soil health and contribute to achieving SDGs

### COP23 in Bonn, Germany (13-14 Nov 2017)

The "4 for 1000" Initiative at a glance

<p>The quantity of carbon contained in the <b>atmosphere</b> increases by <b>4.3 billion tons</b> every year</p> <p style="font-size: 2em; font-weight: bold; color: white;">+4.3 bn tons carbon / year</p> <p style="text-align: center;">↑↑ CO<sub>2</sub> emissions</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Forests ⊖</p> <p>Oceans ⊖</p> <p>Human activities ⊕⊕⊕⊕</p> <p>Deforestation ⊕</p> <p><small>⊖ absorption ⊕ emission</small></p> </div> </div>	<p>The world's <b>soils</b> contain <b>1 500 billion tons</b> of carbon in the form of organic material</p> <p style="text-align: center;">absorption of CO<sub>2</sub> by plants</p> <p style="text-align: center;">↓ ↓</p> <p style="text-align: center;">↓ ↓</p> <p style="text-align: center;">storage of organic carbon in soils</p> <p style="font-size: 2em; font-weight: bold; color: white; border: 2px solid white; border-radius: 50%; padding: 5px; display: inline-block;">1500 bn tons carbon</p>	<p><b>If we increase by 4‰ (0.4%) a year the quantity of carbon contained in soils, we can halt the annual increase in CO<sub>2</sub> in the atmosphere,</b> which is a major contributor to the greenhouse effect and climate change</p> <p style="text-align: center;">increased absorption of CO<sub>2</sub> by plants :</p> <p style="text-align: center;">↓ ↓</p> <p style="text-align: right; margin-right: 20px;">farmlands, meadows, forests...</p> <p style="text-align: center; font-weight: bold;">↓ ↓</p> <p style="text-align: center; font-weight: bold;">+4‰ carbon storage in the world's soils</p> <p style="text-align: center; font-weight: bold;">= more fertile soils = soils better able to cope with the effects of climate change</p>
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<http://4p1000-front.milky.fr/4-1000-initiative-few-words>

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Conference at the French Institute of Luang Prabang  
5 to 7 March 2018

www.laouplandsforum.org

5 Meetings, 1 conference

THEMES & TOPICS

CHANGING UPLANDS

challenges & opportunities

- Drivers of changes in landscapes & livelihoods
- Increasing the resilience of uplands systems

ENGINEERING TRANSITION

towards agroecology

- Co-designing development pathway
- Changing role of extension services

ENABLING ENVIRONMENTS

for uplands development

- Policy incentives & intervention mechanisms
- Towards agroecology-friendly value chains

Time	Topic	Speakers
18:10 - 18:15	Video: "let's talk about soil"	
18:15 - 18:30	Sustainable land management (SLM) and soil carbon monitoring in Laos maize-prone areas	Pascal Lienhard (CIRAD)
18:30 - 18:45	SLM technologies and approaches: experience from the WOCAT initiative in Laos	Bounthanom Bouahom (NAFRI)
18:45 - 19:00	Video: "Grass strips against soil erosion" (CIAT, Vietnam)	
19:00 - 19:15	MAF-DALaM mandate and strategy regarding agricultural land management in Laos	Sisavath Phimmasone (DALaM)
19:15 - 20:00	Debate with the audience	4 presenters



2015  
International  
Year of Soils

*Let's talk about Soil*

