

## UN launches Decade on Ecosystem Restoration to counter 'triple environmental emergency'

**Commentary by Kaoru Kitajima**

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Photo credit: CIFOR/ Ricky Martin "A man fishes in a forest lake in Indonesia"

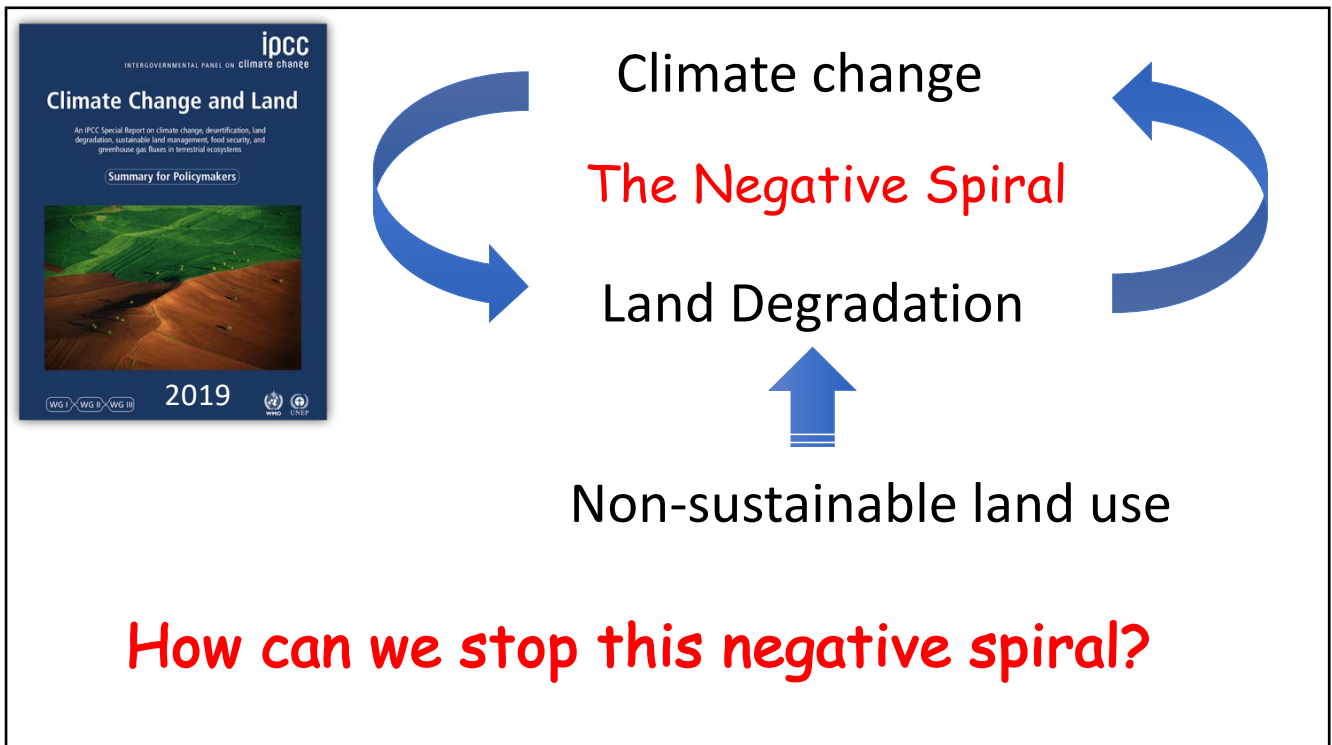
(4 June 2021) <https://news.un.org/en/story/2021/06/10933624>

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## Food production systems are partly responsible to the triple environmental emergency

Biodiversity loss	Climate disruption	Escalating pollution
<ul style="list-style-type: none"> <li>• 'Unprecedented' and dangerous</li> <li>• 'Accelerating' species extinction with 1,000,000 species threatened</li> </ul> <p>(IPBES Summary for Policy Makers, approved 29 April, 2021)</p> <p>→ Deforestation leads to emergent zoonotic diseases, including Covid-19, SARS, Ebola, Swine Fever, etc.</p>	<ul style="list-style-type: none"> <li>• Global temperature is rising</li> <li>• Leading to severe weather events, land degradation, loss of both biodiversity &amp; agricultural production</li> <li>• <b>Negative spiral accelerating</b></li> </ul> <p>(IPCC Special Report on Climate Change and Land, 2019)</p>	<ul style="list-style-type: none"> <li>• 19 million premature deaths due to pollution of air, freshwater pollution, and land</li> <li>• Ocean pollution by microplastic</li> </ul> <p>(UNEP Report, "Towards Pollution Free Planet", 2017)</p>

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## Slash & burn for commercial maize production, cattle grazing, charcoal making → uncontrolled fire

Web news: Afrique Panorama (Sep 30, 2019)



Fire inside ANP  
~ 3300 ha (2016) (MNP2017)  
~1,300 ha (Aug-Sep, 2019)

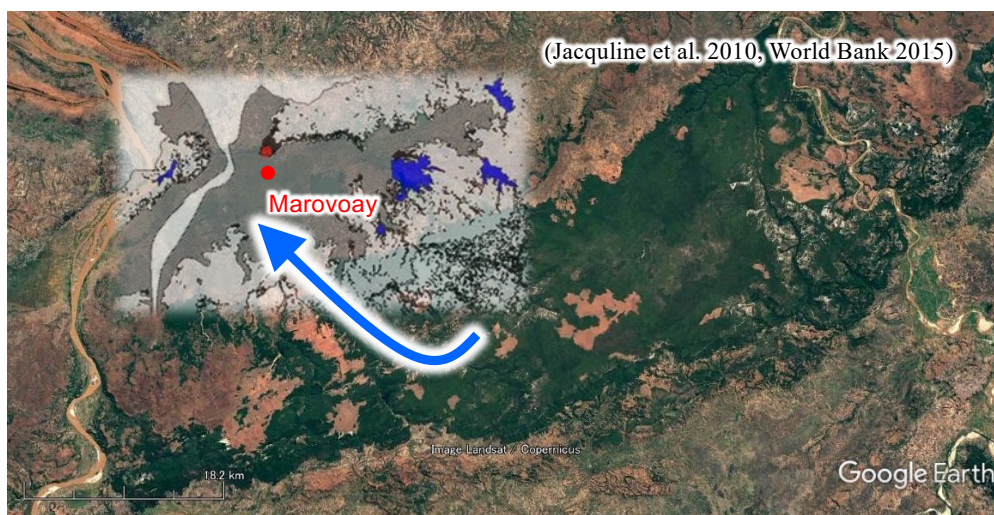
Web news: Mongabay (Oct 11, 2019)



Slide courtesy of Dr. H. Sato

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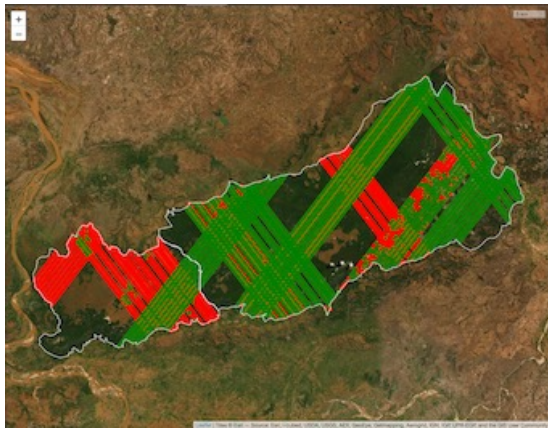
## Forests protect soil and regulate water supply to support rice production down stream



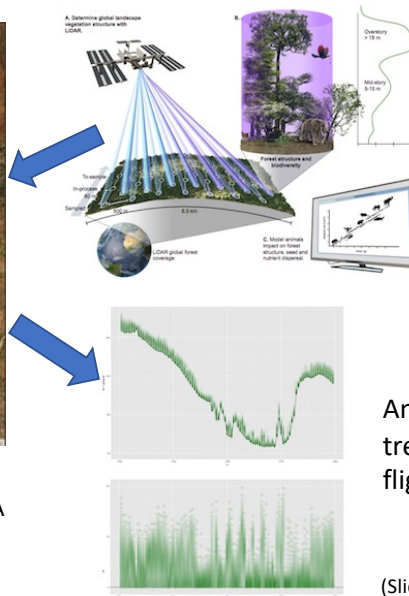
Slide courtesy of Dr. H. Sato

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## Advances in remote sensing technology allows improved on-time monitoring at finer spatial resolutions



Actual flight paths over Ankarafantsika NP for the available data from the global LiDAR data from NASA GEDI (green: good data, red: suboptimal data)



**GEDI:** Global Ecosystem Dynamics Investigation LiDAR (Image from Consbio.org)

Analysis of ground and tree height along each flight path

(Slide prepared by Joseph Percival)

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## How could possible trade-offs between feeding people and building resilient ecosystems be addressed?

- Avoid negative spirals stemming from the “Triple Environmental Emergency”
- Maintain DIVERSE natural ecosystems in the landscape
- Be aware of trade-offs, but also look for “synergies” in policy options
- Attention to regional specifics as “One solution does not fit all”



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*Trade-offs?*

*Synergies?*

Policy interventions that

# Optimize

multiple SDGs