Day 1 Final Remarks
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sean Healey</td>
<td>US Forest Service</td>
<td>Sensor fusion using daily Planet imagery allows rapid deforestation monitoring in</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td>Madagascar</td>
</tr>
<tr>
<td>New PI to LCLUC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volker Radeloff</td>
<td>U. Wisconsin</td>
<td>Global Hotspots of the Wildland-Urban Interface</td>
</tr>
<tr>
<td>Global</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dave Skole</td>
<td>Michigan State</td>
<td>Hotspot detection for monitoring new trends in carbon sequestration in systems of</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td>Trees Outside of Forests (TOF)</td>
</tr>
<tr>
<td>David Lutz</td>
<td>Dartmouth College</td>
<td>Rapid Change from Alluvial Mining and Development in Madre de Dios, Peru: A Multi-</td>
</tr>
<tr>
<td>South America</td>
<td></td>
<td>Sensor Fusion Approach to Quantify Terrestrial and Aquatic Impacts and Test Policy</td>
</tr>
<tr>
<td>New PI to LCLUC</td>
<td></td>
<td>Effectiveness</td>
</tr>
<tr>
<td>Alexandra Tyukavina</td>
<td>U. Maryland</td>
<td>Multi-Resolution Quantification and Driver Assessment of Hot Spots of Global Forest</td>
</tr>
<tr>
<td>Global</td>
<td></td>
<td>Disturbance</td>
</tr>
<tr>
<td>New PI to LCLUC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chris Neigh</td>
<td>NASA GSFC</td>
<td>The Impact of Investment on Irrigated Rice, Dryland Agriculture and Afforestation in</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td>Senegal using SAR and Optical Time-Series Imagery in Data Fusion Approaches</td>
</tr>
<tr>
<td>Michael Keller</td>
<td>US Forest Service @JPL</td>
<td>Quantifying agricultural expansion and tropical forest degradation in the Brazilian</td>
</tr>
<tr>
<td>South America</td>
<td></td>
<td>Arc of Deforestation: A multi-sensor, multi-scale approach</td>
</tr>
<tr>
<td>New PI to LCLUC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jody Vogeler</td>
<td>Africa</td>
<td>Colorado State U.</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
<td>------------------</td>
</tr>
<tr>
<td>David Roy</td>
<td>Global</td>
<td>Michigan State U.</td>
</tr>
<tr>
<td>Marc Simard</td>
<td>Global</td>
<td>JPL</td>
</tr>
<tr>
<td>Yufang Jin</td>
<td>USA/California</td>
<td>U. California, Davis</td>
</tr>
<tr>
<td>Sergii Skakun, Ukraine/Poland</td>
<td>U. Maryland</td>
<td></td>
</tr>
<tr>
<td>Nicholas Magliocca</td>
<td>Central America</td>
<td>U. Alabama</td>
</tr>
</tbody>
</table>
Data and Techniques

Data to be used:

- Optical
  - Coarse and mid-resolution: MODIS, VIIRS, Landsat, Sentinel-2
  - Very High-Resolution data (PlanetScope, Digital Globe)
- Radars: Sentinel-1, SRTM, ICESAT, PALSAR
- Lidars: ICESAT-1, -2, GEDI
- Hyperspectral: PRISMA
- Airborne: UAV, LIDAR, NAIP aerial imagery

Techniques to be used:

- Spectral mixture analysis, time-series analysis, Semantic image segmentation, Support Vector Machines, Semi-supervised learning, Geographical Object-Based Image Analysis, Machine Learning, Dyna-CLUE model, Kalman filtering fusion, Neural Networks
  - Convolutional neural networks
  - Deep neural networks
  - Super resolution Generative Adversarial Networks (SRGAN)
  - Long short-term memory network (LSTM)
LCLUC-20 Selections: PI’s Institutions

- Jody Vogeler, Colorado State University
- Volker Radeloff, University of Wisconsin, Madison
- David Skole and David Roy, Michigan State University
- Christopher Neigh, NASA GSFC
- Yufang Jin, UC Davis, California
- Sean Healey, Rocky Mt. Research Station, US Forest Service, Utah
- Nicholas Magliocca, U. of Alabama, Tuscaloosa
- Marc Simard and Mike Keller, JPL
- Sergii Shakun and Alexandra TyuKavina, U. of Maryland College Park
Global Distribution of Hotspots

- Fires in Wildland Urban Interface
- Forest Degradation and Agricultural Intensification
- Agricultural LCLUC
- Mangroves and LCLUC
- Wild Fires and Urban Interface
- Illegal trading and LCLUC
- Illegal Gold Mining and LCLUC
- Deforestation and LCLUC
- Trees Outside Forests and Agricultural LCLUC
- Small Cities and Urban LCLUC
- Forest Degradation and LCLUC
Outreach

• LCLUC website
• E-newsletters
• Facebook

Kudos to Meghavi!

LCLUC Webinars series

• During 2014-2020 presentations on Urban, Urban-Ag transitions, Ag, last two years focus on SARI

Presenter: Mark Cochrane, University of Maryland
*Land-Use Transitions in Indonesian Peatlands*
October 09, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Registration link

Presenter: Lin Yan, Michigan State University
*Forced and Truncated Agrarian Transitions in Asia Through the Lens of Field Size Change*
October 02, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Registration link

Presenter: Peter Potapov, University of Maryland
*Shifting Cultivation at a Crossroad: Drivers and Outcomes of Recent Land-Use Changes in Laos*
September 17, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Webinar Recording

Presenter: Pellei Fan, Michigan State University
*Divergent Local Responses to Globalization: Urbanization, Land Transition, and Environmental Changes in Southeast Asia*
September 4, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Webinar Recording

Presenter: Davie Skole, Michigan State University
*New Transitions in Smallholder Agricultural Systems that Promote Increased Tree Cover Outside of Forests*
August 6, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Webinar Recording

Presenter: Josh Gray, North Carolina State University
*Slowtime: Climate Adaptive Agriculture in the Eastern Gangetic Plains*
July 31st, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Webinar Recording

Presenter: Naiara Pinto, NASA Jet Propulsion Laboratory
*Land-Cover/Land-Use Change in Southern Vietnam Through the Lenses of Conflict, Religion, and Politics, 1980s to Present*
June 25th, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Registration is closed. This event has already been held.
Webinar Recording

Presenter: Jessica McCarty, Miami University
*Land-Use Status Change and Impacts in Vietnam, Cambodia and Laos*
June 4th, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Registration is closed. This event has already been held.
Webinar Recording

Presenter: Son Nhjem, NASA Jet Propulsion Laboratory
*Consequences of Changing Mangrove Forests in South Asia on the Provision of Global Ecosystem Goods and Services*
May 26th, 2020, 11:00 AM Eastern Standard Time (New York, GMT-05:00)
Registration is closed. This event has already been held.
Webinar Recording

Presenter: Jeff Vincent, Nicholas School of the Environment Duke University
*Mapping and Monitoring Mangrove Forests in Southeast Asia*
May 18th, 2020, 03:00 PM Eastern Standard Time (New York, GMT-05:00)
Registration is closed. This event has already been held.
Webinar Recording

Presenter: Marc Simard, NASA Jet Propulsion Laboratory
*Mapping and Monitoring Mangrove Forests in Southeast Asia*
April 16th, 2020, 03:00 PM Eastern Standard Time (New York, GMT-05:00)
Registration is closed. This event has already been held.
Webinar Recording
• Total 21 SARI Webinars.
• Total 1845 individual participants from 117 countries registered for the SARI webinar.
• Highest participation from US and India, followed by other Asian countries.
Thanks go to

- Organizers: C. J. and Co.

Mary

Jack

Meghavi

Indu

Deputy LCLUC Program Manager
Krishna Vadrevu, NASA MSFC
Thank you
Join us the next 2 days