Translating EOS Datasets Into National Ecosystem Biophysical Indicators

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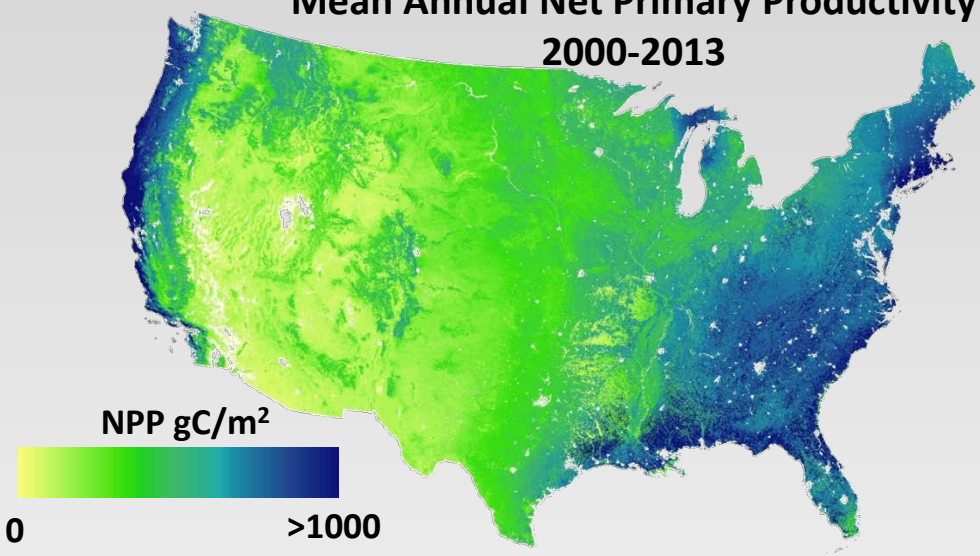
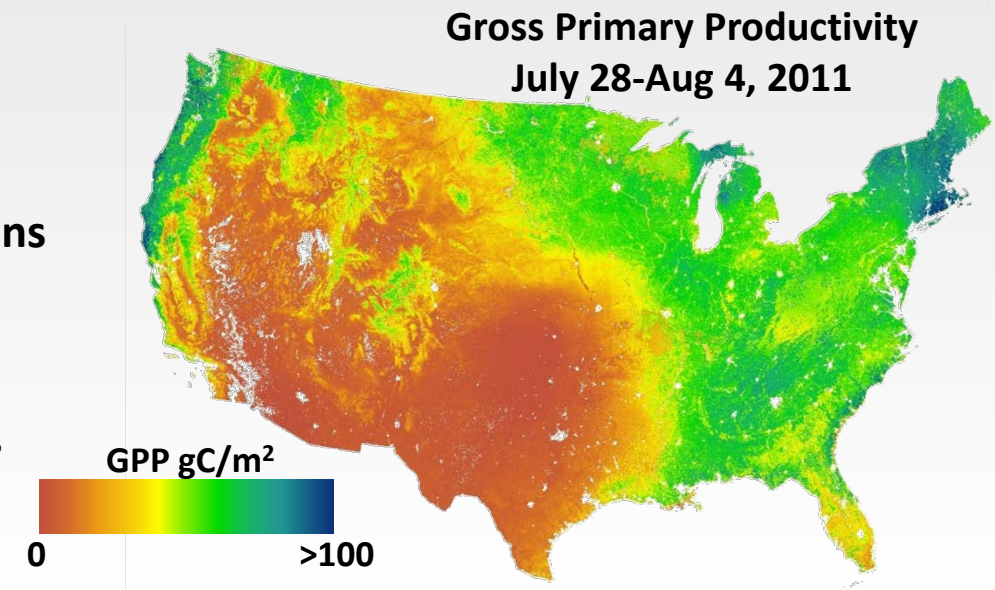
Net Primary Productivity Indicator

- Uses the MOD17A3 NPP 1km Product
- Yearly anomalies from long-term mean
- Tracks inter-annual variability
- Sensitive to climate fluctuations, drought, disturbance, changes in land cover/land use, and can inform carbon source/sink dynamics.



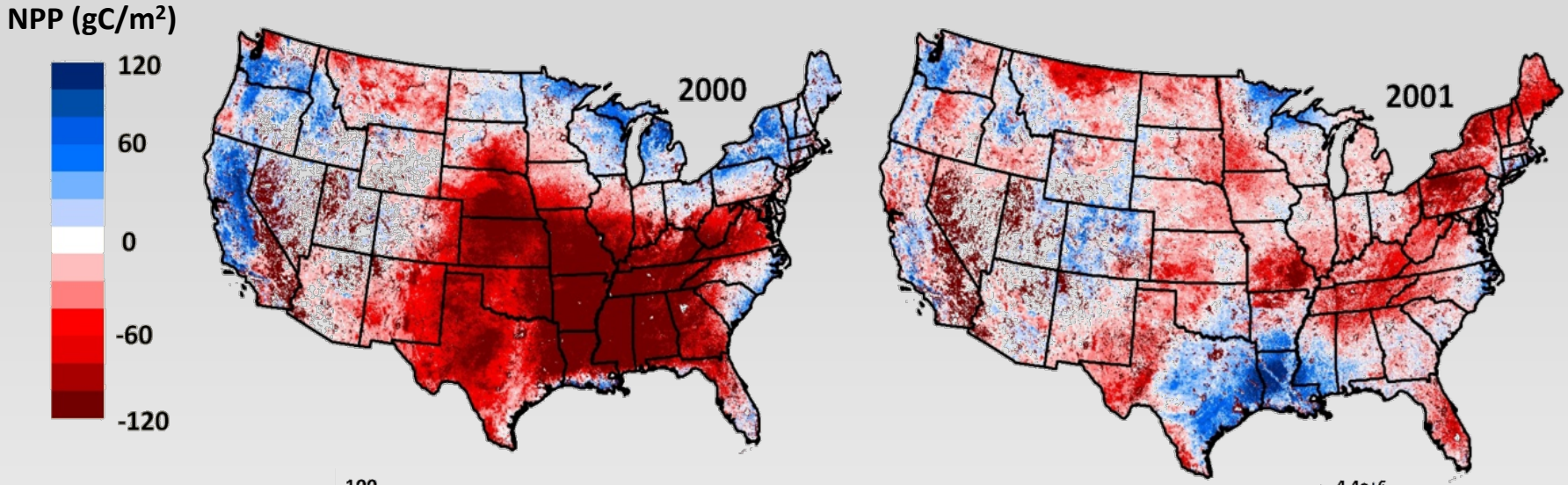
Gross Primary Productivity Indicator

- Uses the MOD17A2 GPP 1km Product
- 8-day anomalies from long-term 8-day means
- Tracks within season variability
- Ability to track vegetation responses to extreme events such as drought or wildfire.



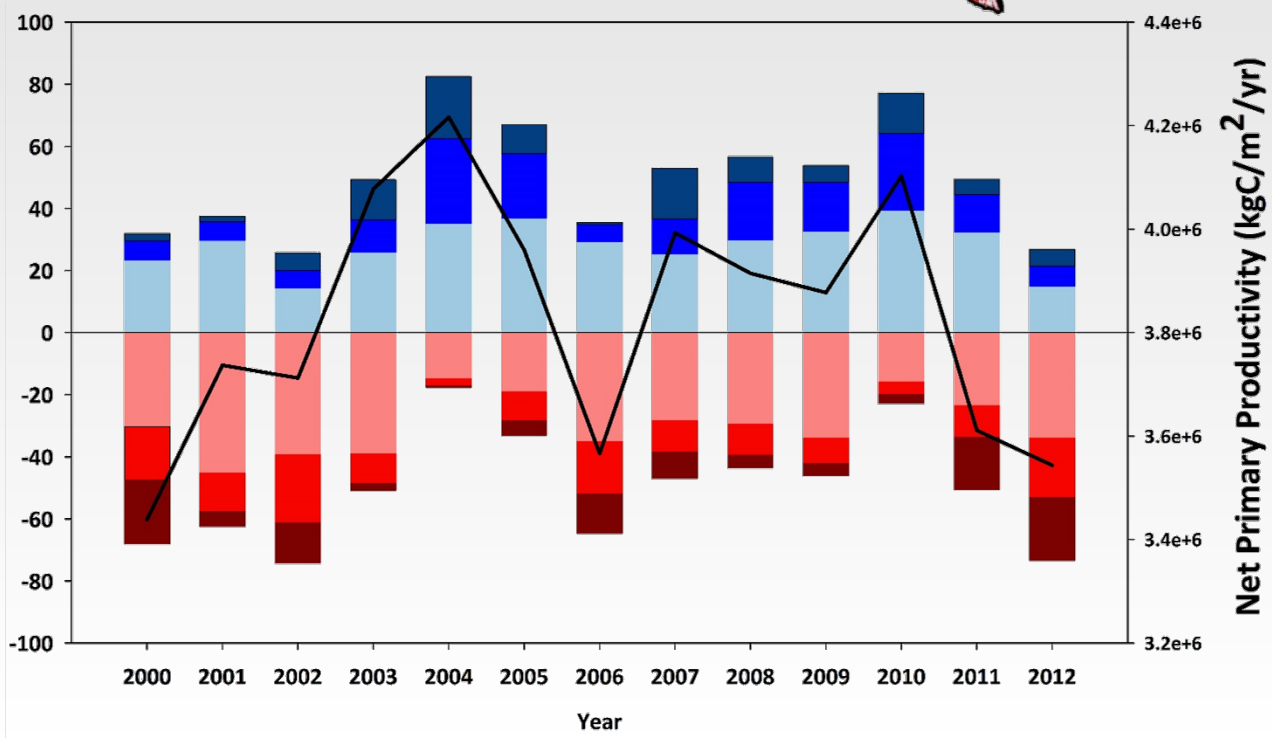
Net Primary Productivity Indicator

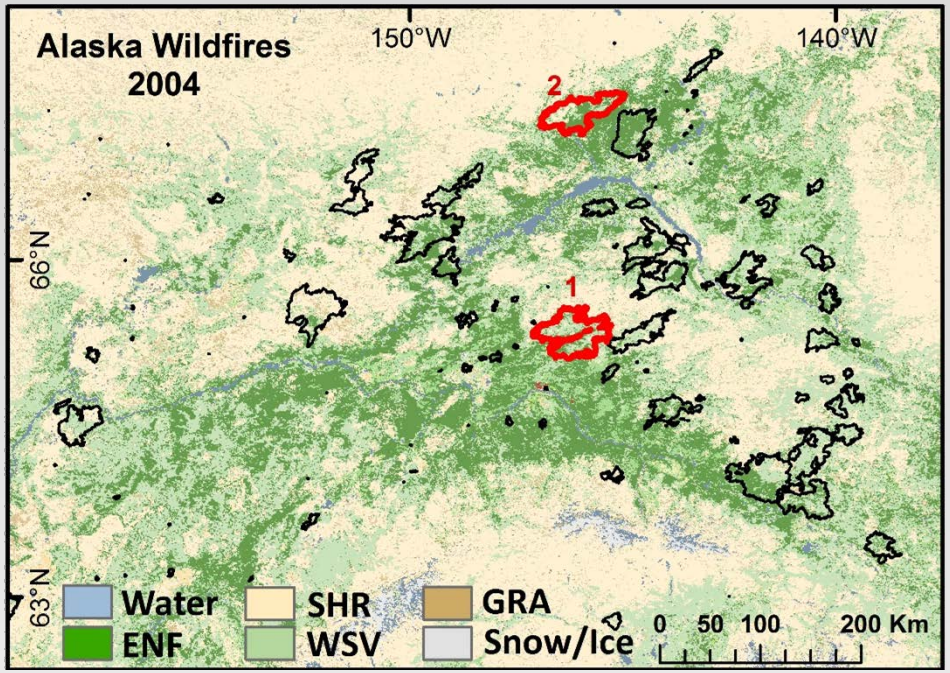
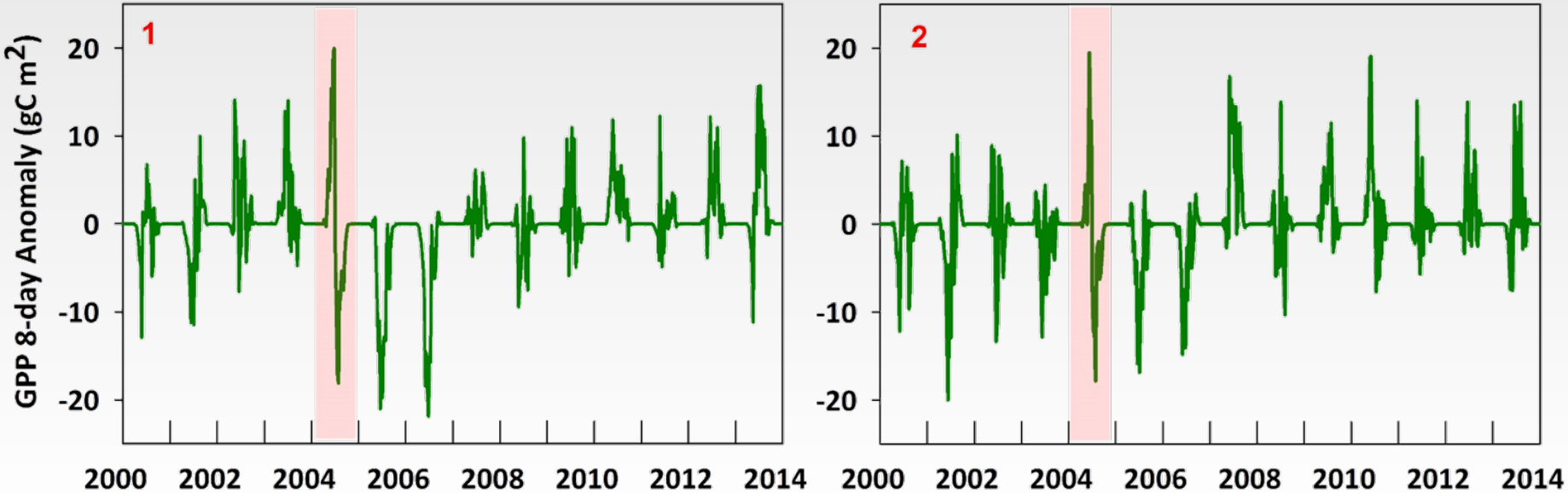
Net Primary Productivity Yearly Anomaly



Percentage of area above or below the 13-year NPP average

- > 80 gC m² yr⁻¹
- > 40 gC m² yr⁻¹
- > 0 gC m² yr⁻¹
- < 0 gC m² yr⁻¹
- < -40 gC m² yr⁻¹
- < -80 gC m² yr⁻¹



GPP Indicator & Vegetation Response to Disturbance

- GPP anomalies can serve as an indicator of vegetation disturbance and recovery.
- Significant intra-seasonal changes can identify disturbances affecting vegetation and carbon source/sink dynamics (e.g. logging, windfall, landslides, fire).
- Inter-annual variability provides an estimation of vegetation response and recovery to these disturbances; such as the recovery of GPP following wildfire.