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| Expanded observation of forest albedo documents significant offsets to reported carbon benefits |
| Rapidly maturing frameworks for investing in and committing to mitigation of climate change through forest management have focused almost exclusively on the benefits of carbon sequestration and storage, without accounting for collateral changes in geophysical factors such as surface albedo. Newly available high-resolution albedo imagery from the Landsat 8 satellite, analyzed at 325,000 field plots monitored by the United States Forest Service, suggests that large areas of the country’s forests have a net warming impact, and that albedo impacts offset approximately half of recognized non-soil carbon benefits, nationally. This research highlights a correctable source of uncertainty in operational monitoring of forest-climate interactions, and it may temper expectations for forest establishment as a means of mitigating global climate change. |