



Response to Potapov *et al.* 2008. “Mapping the World’s Intact Forest Landscapes by Remote Sensing”

Caution Against Using Intact Forest-Landscapes Data at Regional Scales

*Peter G. Lee*¹

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Potapov *et al.* (2008) provide a useful data set that applies to understanding intactness at a global scale, and roughly, how intactness differs from one continent or country to another. However, we caution against using these data for applied conservation analyses at scales finer than the earth as a whole, particularly in geographies with socioecological realities that differ markedly from those in Russia (the home region of Potapov and most of his co-authors). This caution stems from what may be an irresolvable scale-related issue in using global data for country-specific analyses. A suite of assumptions that are judicious for one geography can introduce large errors in other parts of the world with different socioecological forces determining where intact landscapes remain.

For example, Potapov *et al.* (2008) apply a decision rule regarding areas burned by stand-replacing fires during the previous 30–70 years that classes these burns as “not intact” if the fires occurred near the vicinity of human settlements and infrastructure, regardless of the ignition source. The authors likely applied this rule because of the extensive use in Russia of intentionally set fires for mining, prospecting, and oil and gas exploration. The application of this rule is problematic in the Canadian context, where 85% of the total area burned in recent decades resulted from lightning ignition (Stocks *et al.* 2002).

Although much of this area burned occurred in the remote northern areas of Canada, a nontrivial component also occurred near human settlements and infrastructure. In part because of this rule, Potapov *et al.* classified as “not intact” over 400 000 km² (an area roughly the size of 40% of the province of Ontario) that Global Forest Watch Canada’s country-specific mapping of intact landscapes classed as “intact.” The Canadian mapping was based on the notion that fire is an integral agent of change in Canada’s boreal and other forest landscapes.

Global Forest Watch Canada has many years of experience characterizing where intact forests in Canada remain, using satellite image-based methods similar to those used by Potapov *et al.* (2008), but with ground-truthed decision rules congruent with Canada’s socioecological reality. We invite interested readers and conservation practitioners to freely download these data and their supporting documentation from <http://www.globalforestwatch.ca/>. Until the conservation community can agree on a set of criteria that can adequately map intactness in a way that captures regional variation in the forces that drive transformative human activities, mapping this attribute so that it applies at both global and regional scales will unfortunately remain problematic.

Responses to this article can be read online at:
<http://www.ecologyandsociety.org/vol14/iss1/resp1/responses/>

¹Global Forest Watch Canada

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