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Pervasive Rise of Small-scale Deforestation in Amazonia

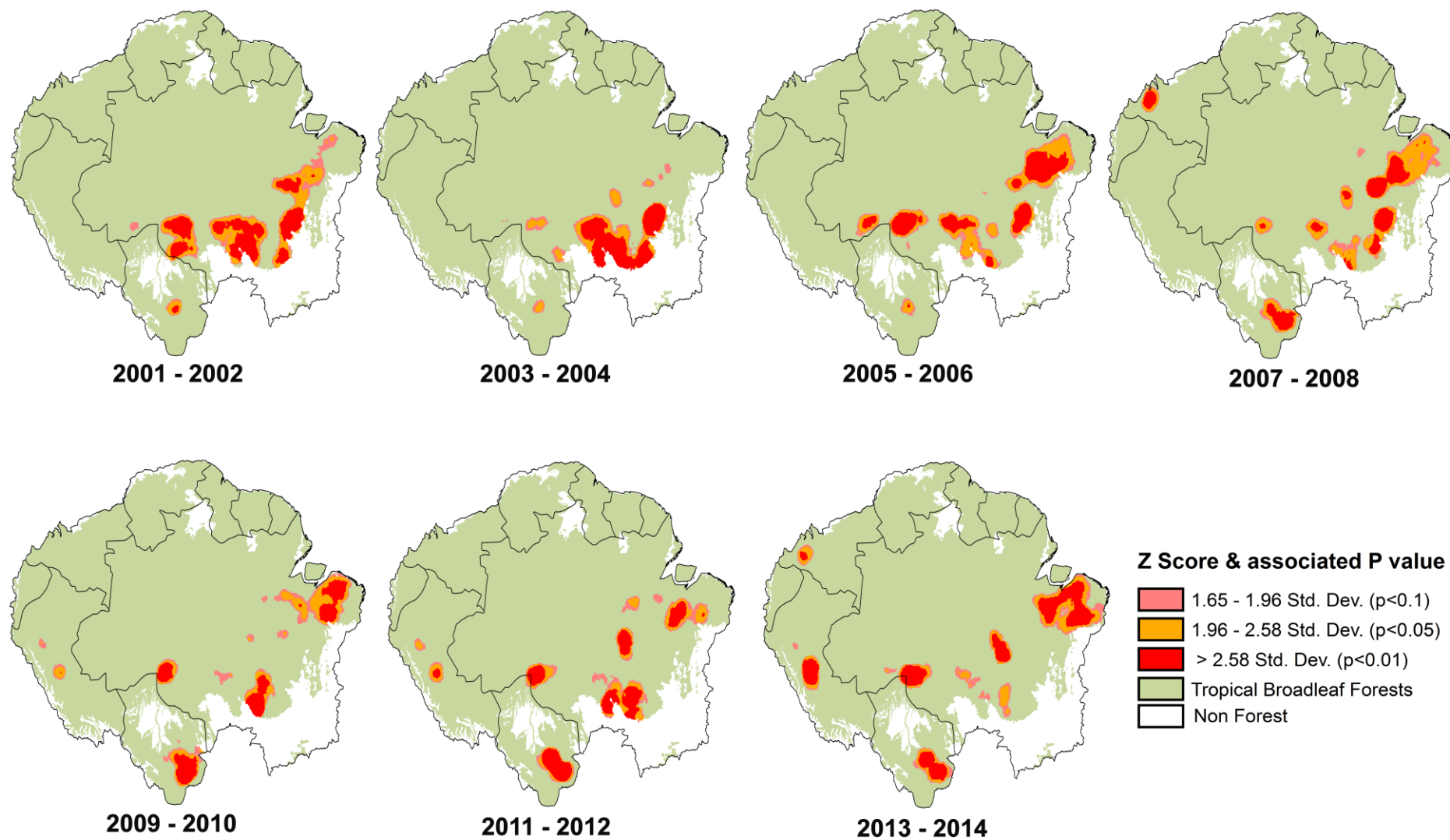
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SUPPLEMENTAL INFORMATION

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39 **Figure S1:** Bi-annual hotspots of forest loss (km²) across Amazonia (2001-2014) using the Getis-Ord Gi* analysis in ArcGIS 10.4.1
40 (www.esri.com).

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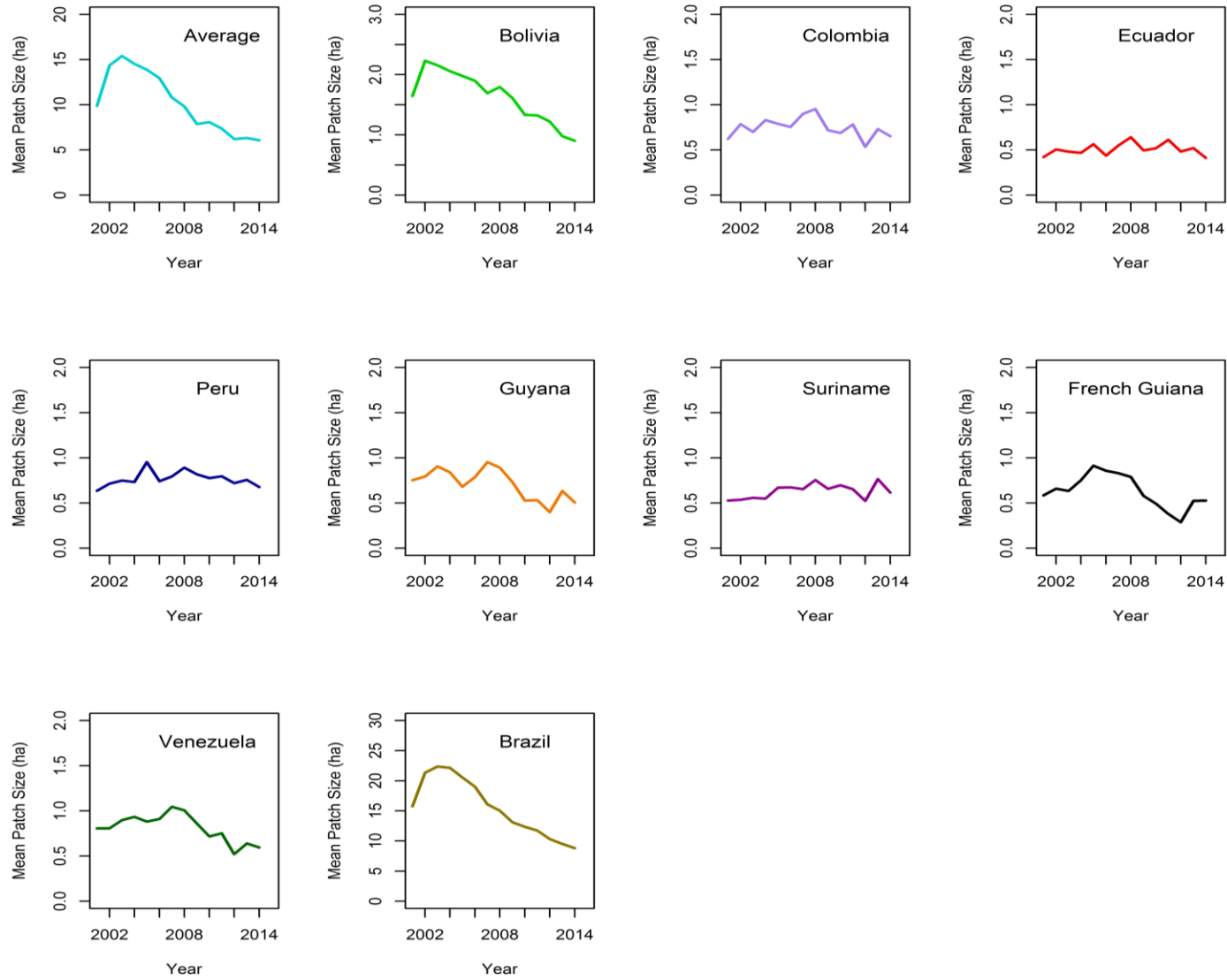


Figure S2: Mean Deforested Patch Sizes (ha) across Amazonia, 2001-2014.

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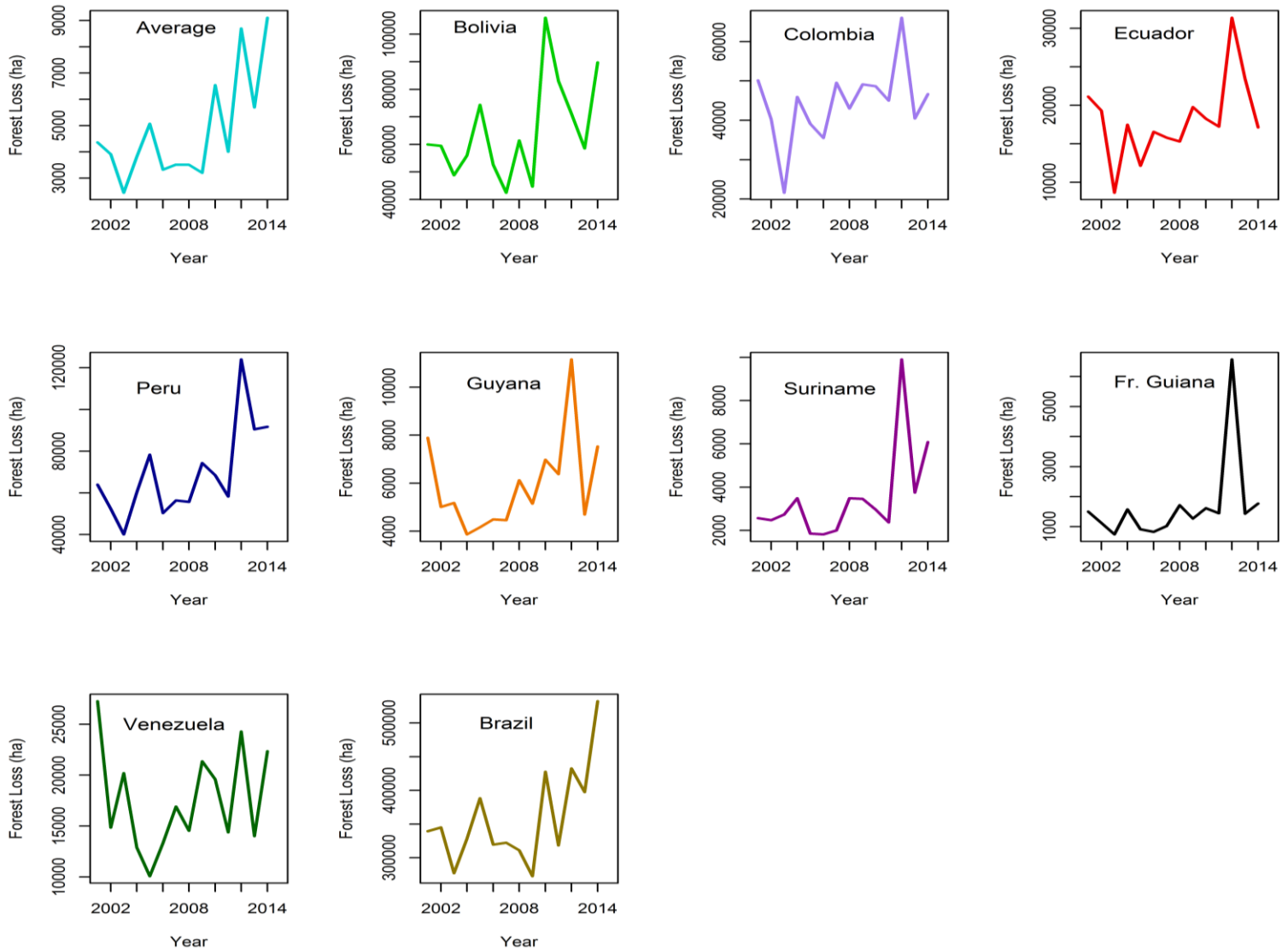
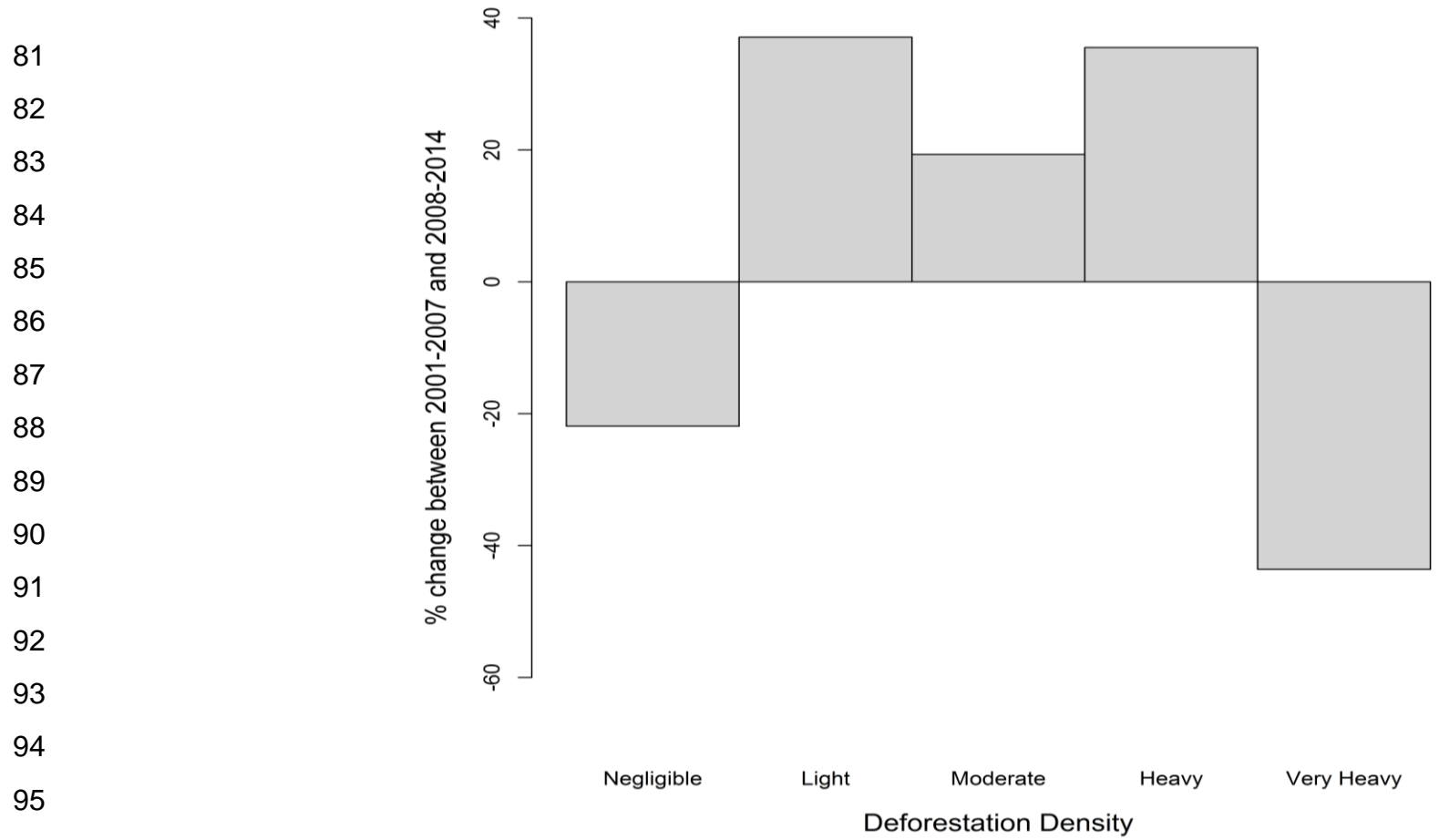


Figure S3: Trajectory of area of small-scale forest loss (<1 ha) across Amazonia, 2001-2014.



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 97 **Figure S4:** Change (%) in number of 10 x 10 km gridcells between 2001-2007 and 2008-2014 for five different forest loss density categories.
 98 Negligible: < 0.01 km² / 100 km². Light: 0.01 – 0.1 km² /100 km². Moderate: 0.1 – 1 km²/ 100 km². Heavy: 1-10 km²/100 km². Very heavy:
 99 10-100 km²/100 km².

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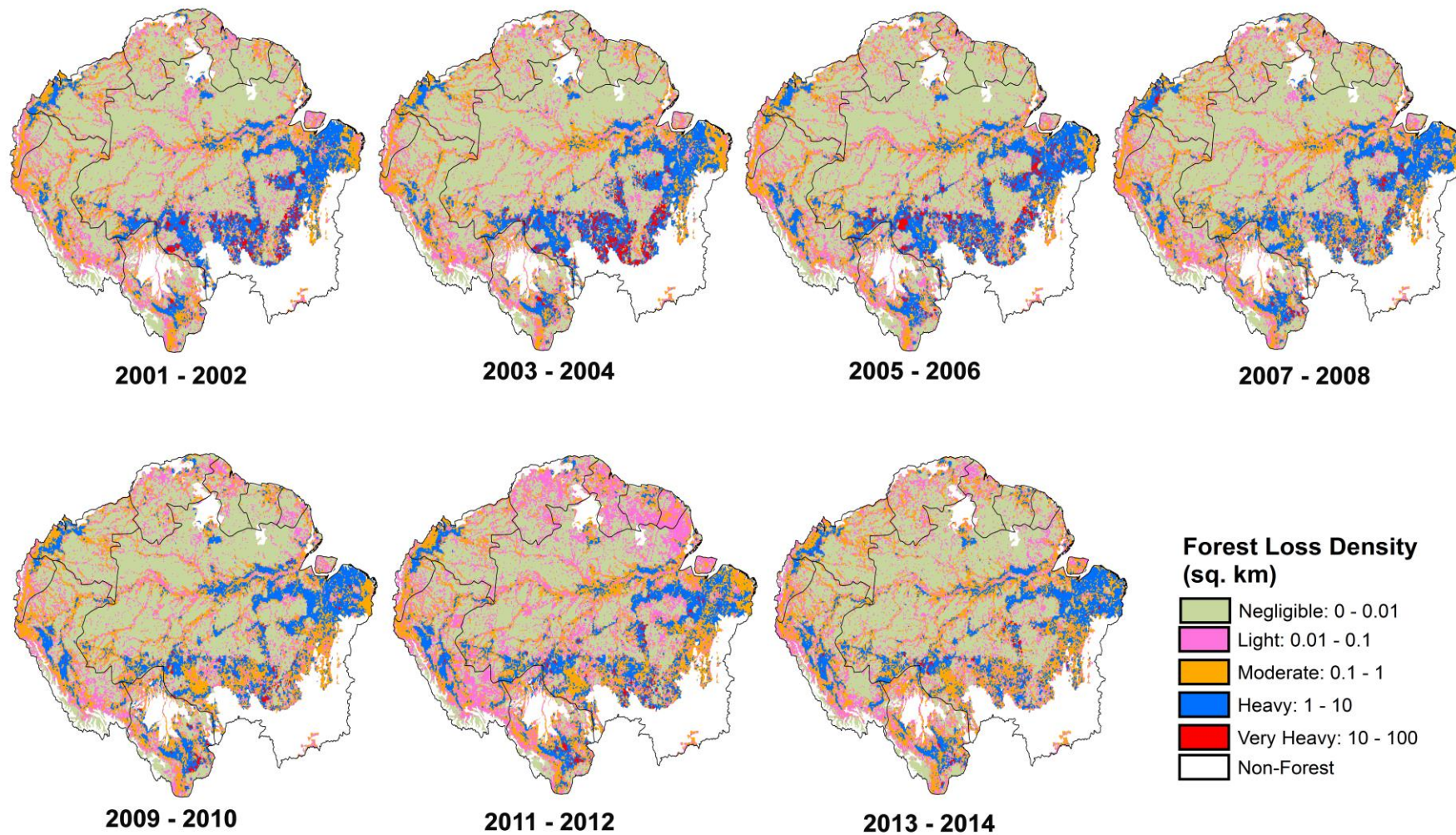


Figure S5: Bi-annual forest loss density (km^2 deforested area over the target period per 100 km^2 land area) across Amazonia (2001-2014) using ArcGIS 10.4.1 (www.esri.com).

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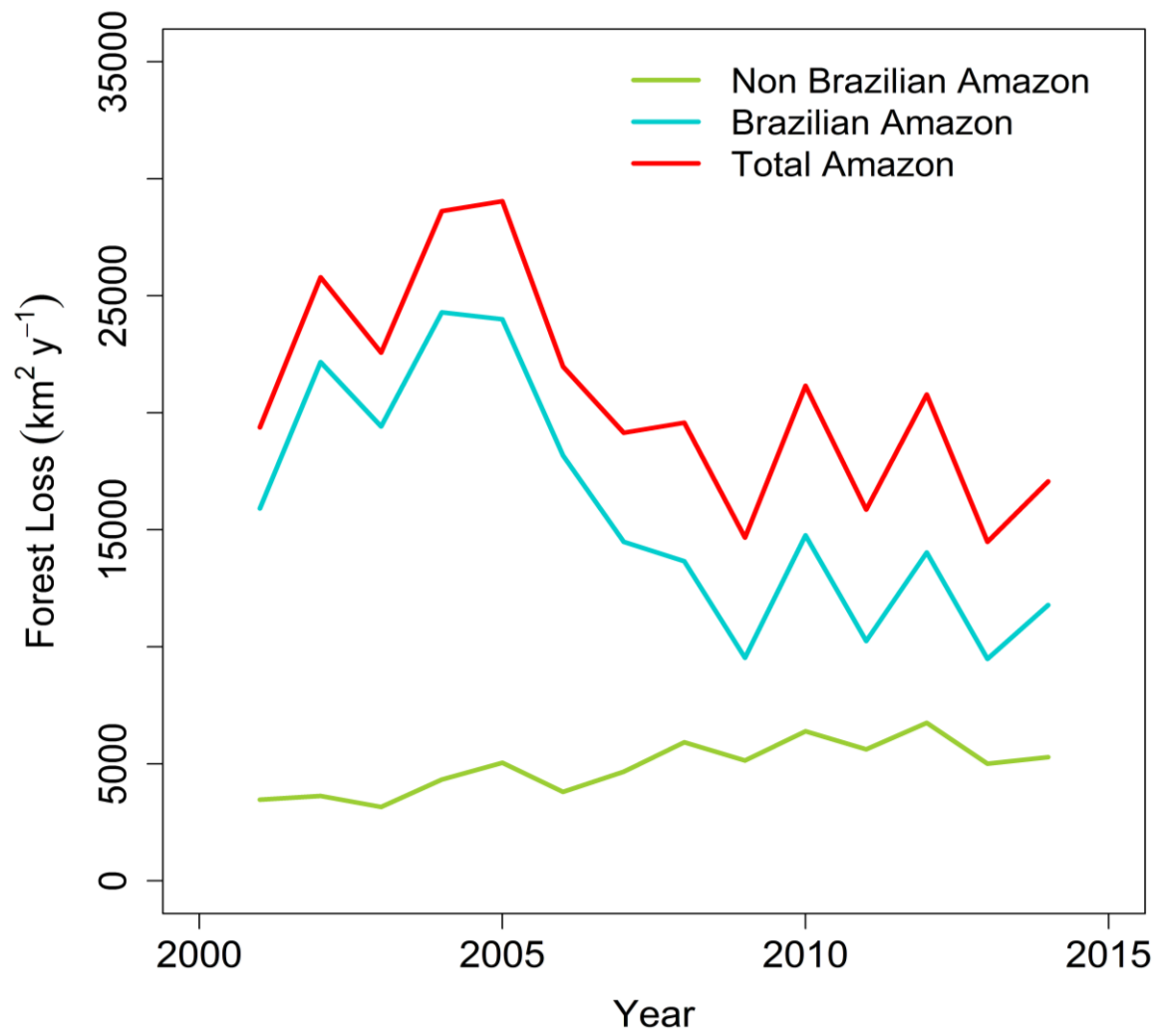


Figure S6: Annual forest lost (km²) across Amazonia for 2001-2014, based on the Global Forest Change (GFC) product.

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Country	GFC		
	Annual mean loss rate		Significance of mean
	2001-2007	2008-2014	
Bolivia	79.39	175.62	0.04**
Colombia	65.29	-24.47	0.7
Ecuador	-1.22	0.71	0.01**
Peru	70.84	130.85	0.004**
French Guiana	0.11	0.26	0.62
Guyana	-4.87	-0.76	0.02**
Suriname	0.32	11.62	0.001***
Venezuela	-1.94	-8.09	0.1
Brazil	-273.66	-230.22	0.001***

*P < 0.1
** P < 0.05
*** P < 0.001

Table S1: Significance (*p*-value) of forest loss (km²) across Amazonia for *Hansen et al* GFC product, 2001-2014. The significance was calculated on the means of the two time periods (2001-2007 & 2008-2014) using the Wilcoxon signed-ranked test.

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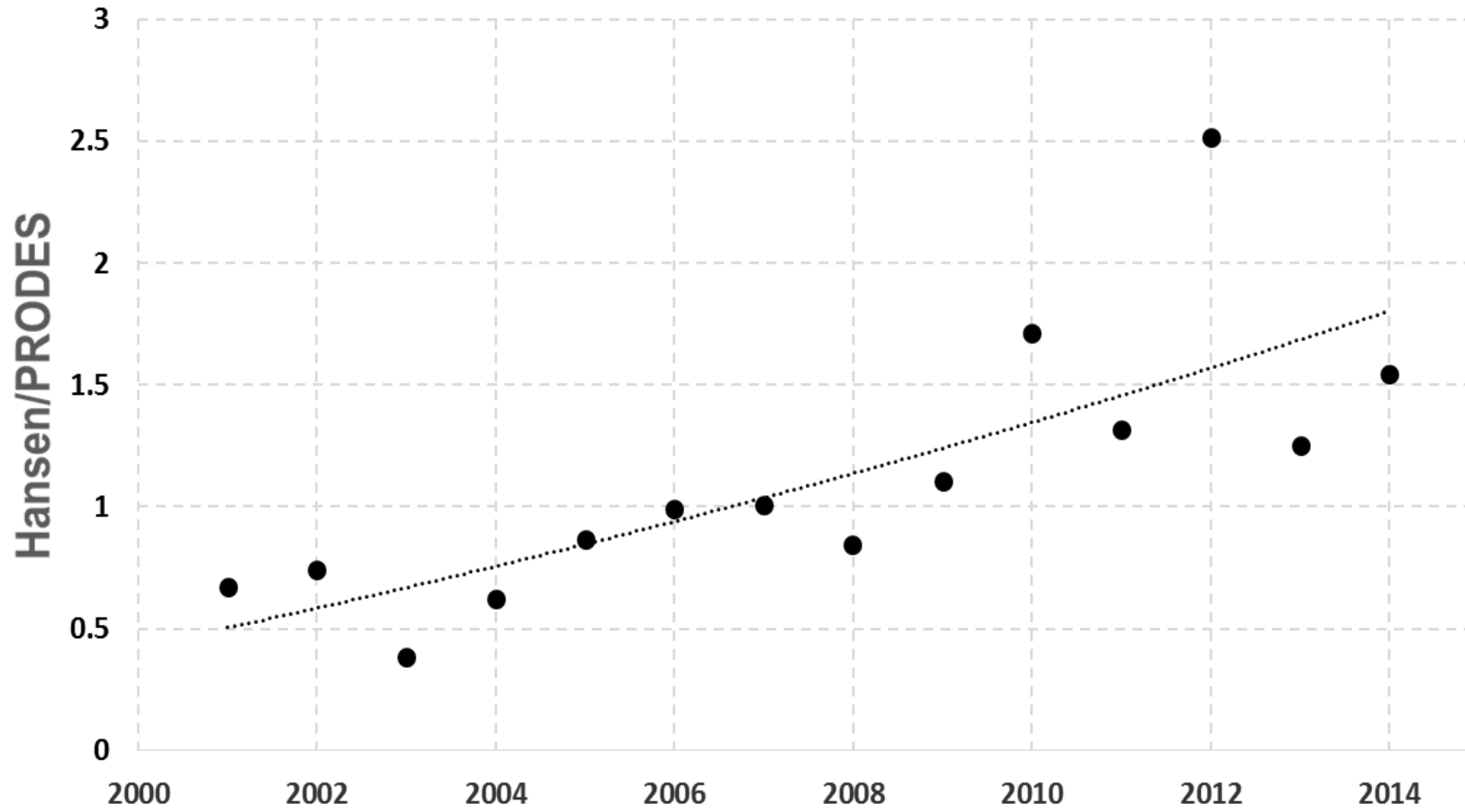


Figure S7: Ratio of annual forest loss area for the Brazilian Amazon estimated from Hansen *et al.* GFC product relative to PRODES deforestation estimates.

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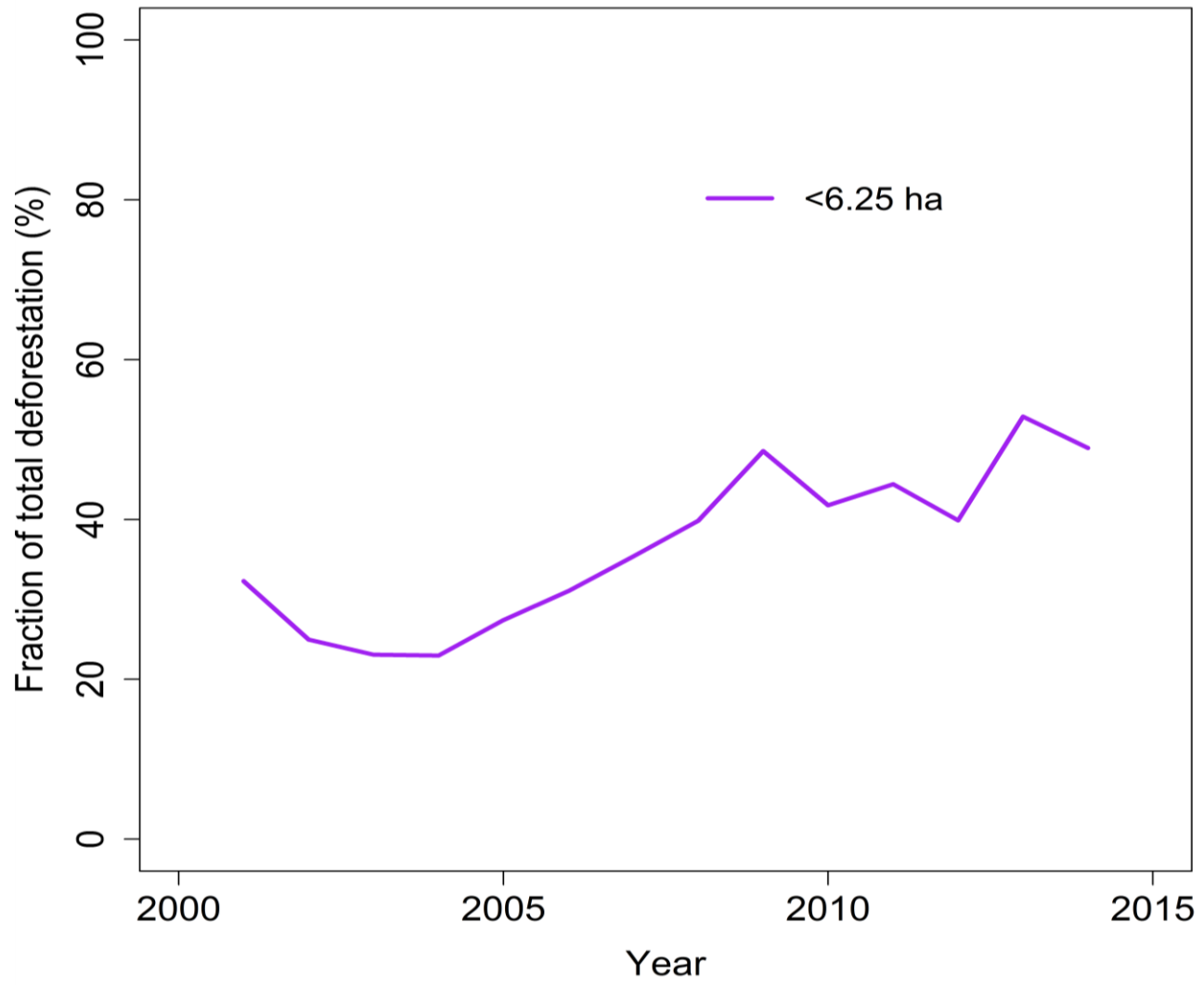


Figure S8: The fraction of total Hansen *et al.* GFC deforestation attributed to small patches <6.25ha (PRODES threshold).

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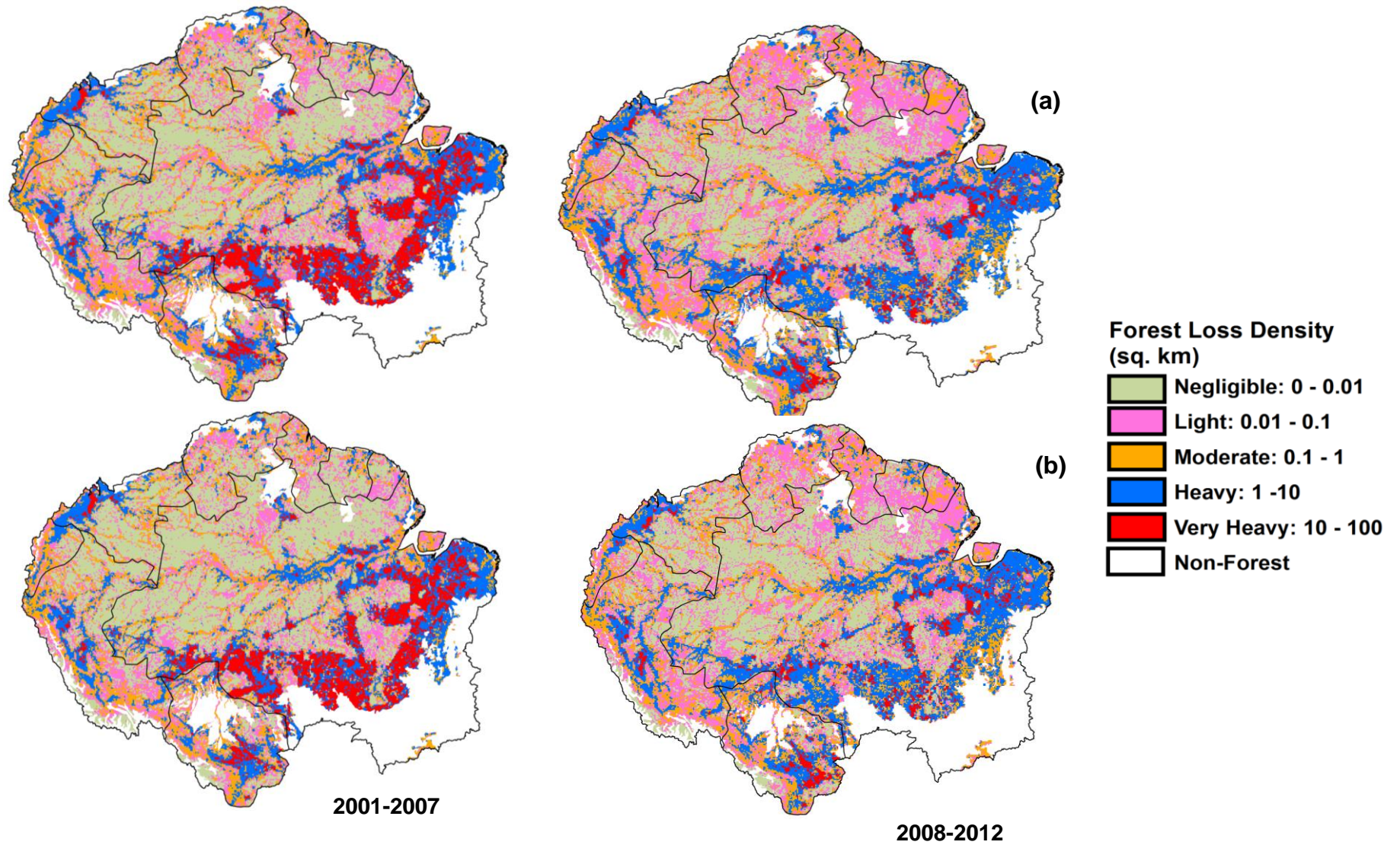
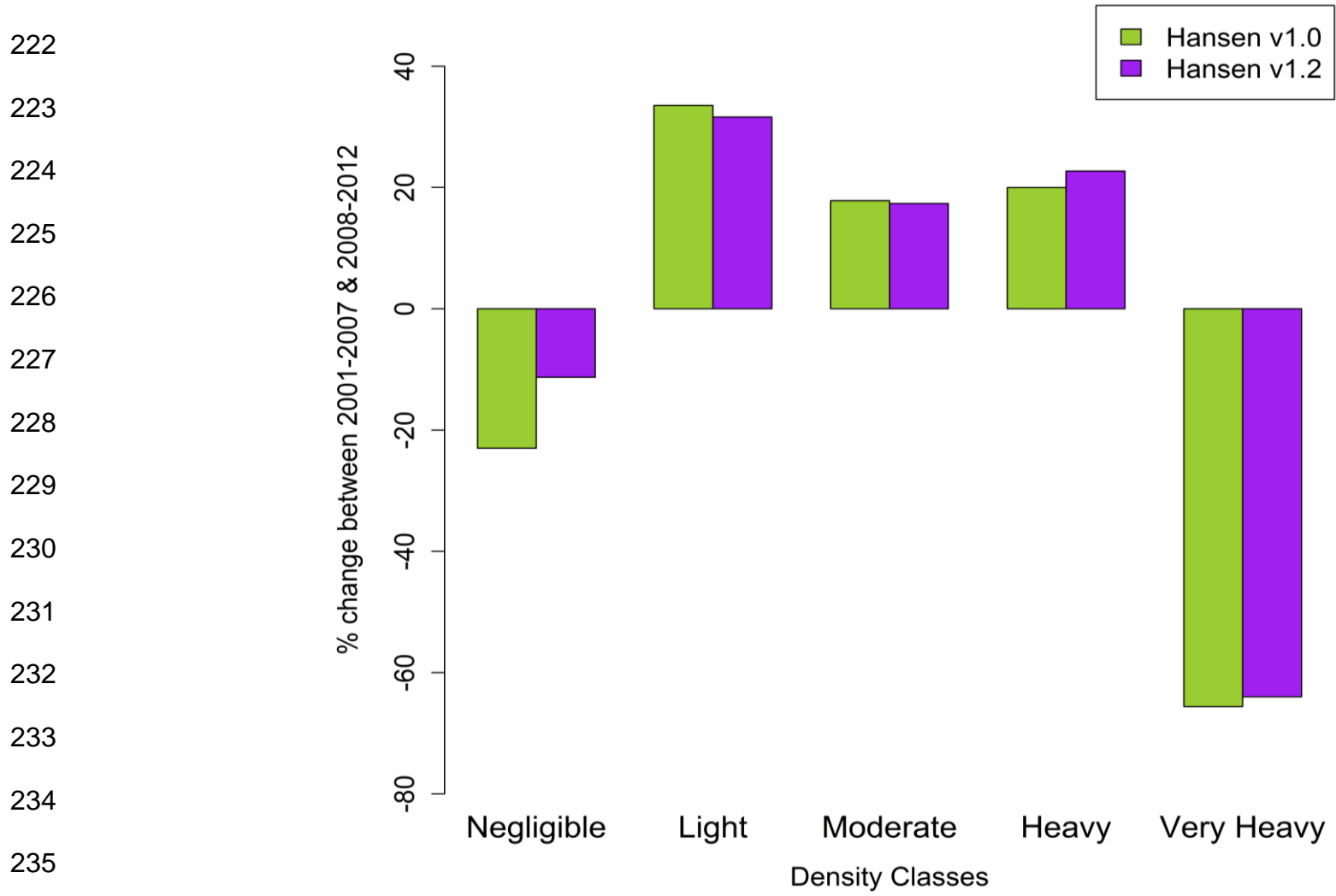
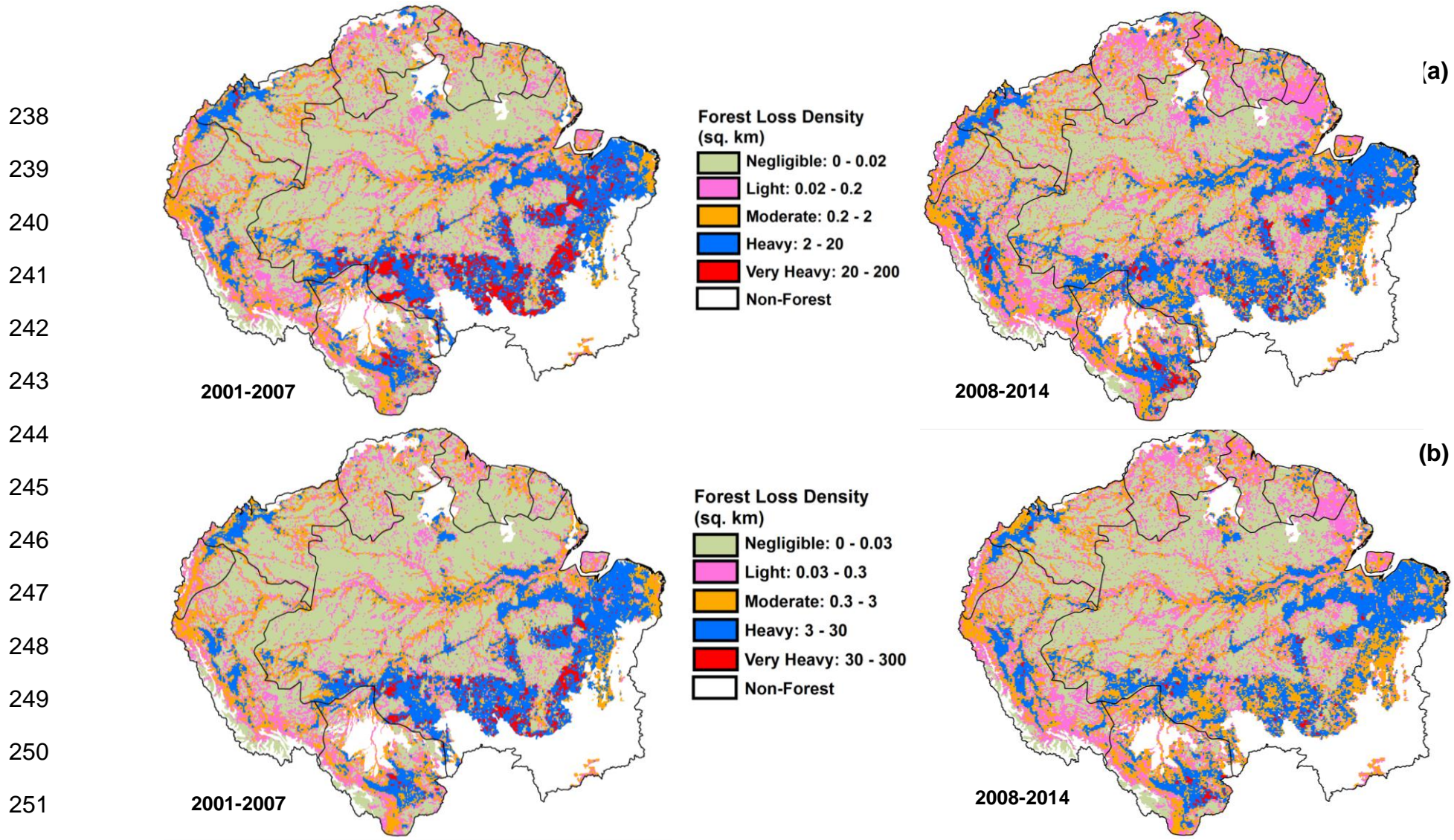


Figure S9: Comparison of forest loss density (km^2 forest loss per 100 km^2 land area) in Amazonia using the GFC (a) version 1.0 and (b) version 1.2 products for two time periods: 2001-2007 and 2008-2012 using ArcGIS 10.4.1 (www.esri.com).



236 **Figure S10:** Percent change of forest loss density categories for GFC versions 1.0 and 1.2 for 2001-2007 and 2008-2012 across Amazonia.

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252 **Figure S11:** Forest loss density (km² forest loss per 100 km² land area) in Amazonia, as calculated using the GFC Version 1.2 product for two
253 time periods: 2001-2007 and 2008-2014 using ArcGIS 10.4.1 (www.esri.com). Here, we (a) doubled and (b) trebled the lower classification to
254 examine whether classification influenced our density results. Relative differences were sustained at 15.6% between 2001-2007 and 2008-2014
255 across all classifications.