

Appendix S1 - Human influence scores for mapping human footprint

Assigning scores of human influence to each layer involves considering a) if the land transformation is reversible; and b) how human influence varies with distance. During the calculation of the human footprint, only large human settlements and agricultural lands (extracted from land cover data) received land reversibility scores (10 and 6 respectively). Variables in point and line GIS format (roads, quarries, small settlements, and railroads) did not receive land reversibility scores because their size was typically smaller or narrower than a single 1-ha pixel, and the analysis of these variables was solely based on distance. Settlements in the Southern Yungas occur in the form of larger settlements such as towns and cities, and smaller, rural settlements including *caserios* (i.e., gathering of few houses, usually a first aid post and a school) and *puestos* (i.e., isolated houses).

We assigned human influences within 0-100, 100-500, 500-1000, and 1000-3000 m similar to the Woolmer *et al.* (2008) human footprint map in a forested, mountainous ecoregion, which utilized similar variables as we did. Among the different types of roads, paved roads received the highest scores with distance, trails the lowest, and unpaved roads values in between. Similarly, we assigned higher scores around large settlements than small ones. Quarries tend to be small in our study area and therefore we applied high values (10, 5) at short distances. Railroads are mostly abandoned so we assigned lower values to these than to roads. For variables in point and line GIS format (roads, quarries, small settlements, and railroads) the human influence scores applied within 0-100 m are a combination of both land reversibility and distance scores. Overall, large and small settlements and paved roads had the largest influence scores among all variables, consistent with previous studies.

Table S1. Human influence scores.

	Land reversibility	Variation of human influence with distance (distance in meters)			
		0-100	100-500	500-1000	1000-3000
Human settlements					
Large (cities, towns)	10	9	7	5	3
Small (caserios, puestos)	-	7	5	3	1
Agricultural lands	6	4	2	1	0
Roads					
Paved	-	8	6	4	2
Unpaved	-	6	4	2	0
Trails (huellas)	-	4	2	1	0
Quarries	-	10	5	0	0
Railroads (abandoned)	-	4	2	0	0

References:

Woolmer, G., Trombulak, S.C., Ray, J.C., Doran, P.J., Anderson, M.G., Baldwin, R.F., Morgan, A. & Sanderson, E.W. (2008) Rescaling the Human Footprint: A tool for conservation planning at an ecoregional scale. *Landscape and Urban Planning* **87**: 42–53.