





















## Methods for estimating illegal logging and related timber trade

- Trade data discrepancies
- Wood-balance analysis
- Import source analysis
- Expert survey
- Hybrid method

12

Country	Source of estimate							
	Seneca Creek	World Bank	Hoare	Nellemann				
	Associates and	(2006)	(2015a)	(2012)				
	WRI (2004)							
Bolivia	80	80						
Brazil (Amazon)	20-47	20-47	> 50					
Cambodia	90	90		Some	octimator			
Cameroon	50	50	65	of iller	al loggin			
Colombia	42	42		are qu	ite			
Democratic Republic of				consis	stent. but			
Congo			> 90	some	estimates			
Ecuador	70	70		were b	based on			
Gabon	50-70	70		previo	us ones.			
Ghana	34-60		70					
Indonesia	70-80	70-80	60	They a	all focus			
Laos	45	45	80	on coi	mmercial			
Liberia	80			timber	r, but in			
Malaysia	35	35	35	differe	ent years			
Myanmar	50	50		with d	ifferent			
Papua New Guinea	70	70	70	metho	as.			
Peru	80-90	80						
Republic of the Congo			70					
Russia	20-50	10-50						
Thailand	40	40						
Vietnam	20-40	20-40			13			
World				15-30				

## Estimated percentages of illegal production and trade of primary wood products (in volume) at the global level (synthesized from Seneca Creek Associates and WRI, 2004)

Product	Illegal production in total production	Illegal trade	Illegal trade in total production	Illegal trade in illegal production	Legal trade in legal production
Roundwood (logs)	. 8	14	1	. 14	. 7
Softwood		12	1		
Hardwood		17	1		
Lumber	6	6	2	27	30
Softwood		2	1		
Hardwood		23	5		
Plywood	17	23	9	53	35
Softwood		4	1		
Hardwood		30	17		

• Most of the illegal timber is consumed domestically (except for plywood).

• Illegally-produced timber is most likely to be traded internationally than legal timber (except for lumber).

14

Source of estimate	Volume (million m <sup>3</sup> )	Value (USD billion)	Products covered	Countries covered
Seneca Creek Associates and WRI (2004)	18 (roundwood) 6.9 (lumber) 5.2 (plywood)	5	Primary wood products (roundwood, lumber, and plywood)	Worldwide
Hoare (2015a)	60 (roundwood equivalent)	17	Primary and secondary wood products (including furniture)	Imports into 10 countries (China, France, India, Japan, Netherlands, South Korea, Thailand, UK, USA, and Vietnam) from nine tropical countries (Brazil, Cameroon, Dem. Rep. of Congo, Ghana, Indonesia, Laos, Malaysia, Papua New Guinea, and Rep. of the Congo

Country	Total RWE	% of exports	Implied
	primary tropical	from forest	conversion
	product exports	conversion (main	exports RWE
	(million m <sup>3</sup> )	estimate)	(million m <sup>3</sup> )
Malaysia	15.6	65	10.1
Indonesia	10.4	75	7.8
Papua New Guinea	3.2	30	1.0
Burma	2.6	50	1.3
Solomon Islands	2.1	15	0.3
Cameroon	1.8	5	0.1
Laos	1.6	55	0.9
Brazil	0.5	20	0.1
Gabon	1.1	10	0.1
Congo	0.9	2	0.0
Ivory Coast	0.7	4	0.0
Ghana	0.5	1	0.0
Others	3.4	14	0.5
Total	44.4	50	22.2







Giobai lilegal ti	ane flov	d importe	er, 2014 (r	nillion USD	)	source re	gion
Source regions (exporters)						Total export	
	Russian Federation	South America	Congo Basin	Southeast Asia	Oceania	from all source regions	Percentage
Total export	6,328.0	682.0	1,004.9	6,082.8	978.9	15,076.6	on tota
Illegal logging rates (percent)	20 <sup>a</sup>	Brazil: 53 <sup>b</sup> ; Colombia 75°; Peru: 72.5 <sup>d</sup>	Cameroon: 33°; Dem. Rep. of Congo: 87 <sup>r</sup> ; Rep. of the Congo: 72.5 <sup>9</sup>	Cambodia: 94 <sup>h</sup> ; Laos: 87 <sup>i</sup> ; Indonesia: 30 <sup>i</sup> ; Malaysia: 18.5 <sup>k</sup> ; Myanmar: 72 <sup>i</sup>	Papua New Guinea: 70 <sup>m</sup>	Total illegal export towards importers	illegal export from all source regions
China	619.9	78.6	302.0	1730.6	564.7	3295.7	52.1
Vietnam		0.8	18.3	748.2		767.3	12.1
India		10.2	1.4	509.3	75.5	596.5	9.4
EU	239.4	55.2	113.7	45.6		453.9	7.2
Thailand				101.4		101.4	1.6
USA		75.6	12.6			88.2	1.4
South Korea	9.4				13.0	22.4	0.4
Japan			0.7	14.4		15.1	0.2
Malaysia				12.1		12.1	0.2
Australia					1.1	1.1	0.0
Others	396.9	166.7	72.7	309.7	30.9	976.9	15.4
Total illegal export from source regions	1,265.6	387.1	521.4	3,471.4	685.2	6,330.8	100.0
Percentage on total illegal export from all source regions	20.0	6.1	8.2	54.8	10.8	100.0	











