

Annex III

Main Threats to African Great Apes, by Range Country

Country	Threats		Source
Angola (Cabinda)	Habitat loss from artisanal logging		Ron and Refisch (2013)
	Poaching		
Burundi	Disease		Hakizimana and Huynen (2013); Plumptre <i>et al.</i> (2010)
	Habitat loss and fragmentation from conversion into agricultural land		
	Habitat loss	illegal logging activities for timber and firewood	Plumptre <i>et al.</i> (2010)
		infrastructure development (such as roads and dams)	Hakizimana and Huynen (2013); Plumptre <i>et al.</i> (2010, 2016a)
Poaching			
Cameroon	Disease		Bergl <i>et al.</i> (2016); Maisels <i>et al.</i> (2016, 2018); Oates <i>et al.</i> (2016)
	Habitat loss	conversion into agricultural land	IUCN (2014); Morgan <i>et al.</i> (2011); Walsh <i>et al.</i> (2003)
		logging activities for timber and firewood	IUCN (2014)
		resource extraction, such as mining activities	Bergl <i>et al.</i> (2016); Maisels <i>et al.</i> (2016, 2018); Oates <i>et al.</i> (2016)
		infrastructure development (such as roads and dams)	Kormos <i>et al.</i> (2014)
	Illegal wildlife trade		EAGLE (2017)
	Poaching		
Central African Republic	Disease		Maisels <i>et al.</i> (2016, 2018); Plumptre <i>et al.</i> (2016a)
	Habitat loss	conversion into agricultural land	
		infrastructure construction (such as roads and dams)	
	Poaching		
Democratic Republic of Congo	Disease		Fruth <i>et al.</i> (2016); Kirkby <i>et al.</i> (2015); Plumptre <i>et al.</i> (2015)
	Habitat loss	conversion into agricultural land	
		natural resource extraction (artisanal and industrial mining extraction, logging for timber)	
	Poaching		Plumptre, Robbins and Williamson (2019); Plumptre <i>et al.</i> (2015)

Country	Threats	Source	
Equatorial Guinea	Disease	IUCN (2014)	
	Poaching	Murai <i>et al.</i> (2013)	
	Habitat loss	conversion into agricultural land infrastructure construction (such as roads and dams)	
Gabon	Disease (Ebola)	Bermejo <i>et al.</i> (2006); IUCN (2014); Walsh <i>et al.</i> (2003)	
	Habitat loss	resource extraction (such as mining extraction and logging concessions) infrastructure construction (such as roads and dams)	Maisels <i>et al.</i> (2016)
	Illegal wildlife trade	EAGLE (2017)	
	Poaching	Foerster <i>et al.</i> (2012); IUCN (2014)	
	Disease	Humle <i>et al.</i> (2016)	
Ghana	Habitat loss	conversion into agricultural land infrastructure construction (such as roads and dams)	Danquah <i>et al.</i> (2012); Kühl <i>et al.</i> (2017) Humle <i>et al.</i> (2016)
	Poaching		
	Disease	Humle <i>et al.</i> (2016); Matsuzawa, Humle and Sugiyama (2011)	
Guinea	Habitat loss	conversion into agricultural land resource extraction (such as mining concessions)	Kühl <i>et al.</i> (2017) Kormos <i>et al.</i> (2014); Kühl <i>et al.</i> (2017)
	Illegal wildlife trade	EAGLE (2017)	
	Poaching	Kühl <i>et al.</i> (2017)	
	Disease	Sá and van Schijndel (2010)	
Guinea-Bissau	Habitat loss	infrastructure construction (such as roads and dams) conversion into agricultural land resource extraction (a mining site overlaps with chimpanzee territory)	Dias <i>et al.</i> (2019); van der Meer (2014); Wenceslau (2014) Dias <i>et al.</i> (2019); Wenceslau (2014) Dias <i>et al.</i> (2019); Humle <i>et al.</i> (2016); Wenceslau (2014)
	Poaching	van der Meer (2016); Wenceslau (2014)	
	Disease	Campbell <i>et al.</i> (2008); Köndgen <i>et al.</i> (2008)	
	Habitat loss	conversion into agricultural land infrastructure construction (such as roads and dams)	Campbell <i>et al.</i> (2008); Kühl <i>et al.</i> (2017) Kühl <i>et al.</i> (2017)
Ivory Coast	Poaching	Campbell <i>et al.</i> (2008); Kühl <i>et al.</i> (2017)	

Country	Threats		Source
Liberia	Habitat loss	infrastructure construction (such as roads and dams)	Greengrass (2015); Kühl <i>et al.</i> (2017)
		conversion into agricultural land and forest concessions	Junker <i>et al.</i> (2015)
		resource extraction (logging and mining activities)	
	Poaching		Tweh <i>et al.</i> (2015)
Mali	Habitat loss and fragmentation from agriculture, fires and resource extraction (open-pit mining)		Duvall (2008); Duvall and Smith (2005)
	Poaching		
Nigeria	Habitat loss	resource extraction (such as forest logging for timber)	Bergh <i>et al.</i> (2016); Oates <i>et al.</i> (2016)
		conversion into agricultural land	Imong <i>et al.</i> (2014a, 2014b)
		infrastructure construction (such as roads and dams)	Dunn <i>et al.</i> (2014); Morgan <i>et al.</i> (2011)
	Poaching		
	Habitat loss and fragmentation from conversion into agricultural land		Bergh <i>et al.</i> (2016); Oates <i>et al.</i> (2016)
	Disease		
Republic of Congo	Disease		IUCN (2014)
	Habitat loss	infrastructure construction (such as roads and dams)	
		resource extraction (such as artisanal and industrial mining activities and logging)	
	Poaching		
Rwanda	Disease		Plumptre <i>et al.</i> (2010)
	Habitat loss and degradation	infrastructure construction (such as roads)	Gray <i>et al.</i> (2013); Plumptre, Robbins and Williamson (2019); Plumptre <i>et al.</i> (2010); Robbins <i>et al.</i> (2011)
		resource extraction	
	Poaching		
Senegal	Disease		Boyer (2011); Ndiaye (2011)
	Habitat loss, fragmentation and degradation from agriculture, bush fires, fodder extraction and drought		Ndiaye (2011); Wessling <i>et al.</i> (2018)
	Habitat loss	resource extraction (such as open-pit, small-scale and large-scale mining)	Lindshield <i>et al.</i> (2019); Ndiaye (2011)
		infrastructure construction (such as roads and dams)	Boyer (2011)
	Poaching (human–wildlife conflict)		Ndiaye (2011)

Country	Threats		Source
Sierra Leone	Disease		Brncic, Amarasekaran and McKenna (2010)
	Habitat loss	infrastructure construction (such as roads and dams)	Kühl <i>et al.</i> (2017); Kormos <i>et al.</i> (2014)
		resource extraction (such as mining)	Brncic, Amarasekaran and McKenna (2010)
	Habitat loss and fragmentation from conversion into agricultural land		Garriga <i>et al.</i> (2018); Humle <i>et al.</i> (2016)
	Poaching for meat and in retaliation for crop raiding		Garriga <i>et al.</i> (2018); Kühl <i>et al.</i> (2017)
Tanzania	Disease		Plumptre <i>et al.</i> (2016a)
	Habitat loss	bush fires	JGI <i>et al.</i> (2011)
		logging for timber and firewood	
		infrastructure development (such as roads and dams)	
	Poaching		
Habitat loss and fragmentation from conversion into agricultural land			
Uganda	Disease		Hickey <i>et al.</i> (2018); Plumptre <i>et al.</i> (2016a); Robbins <i>et al.</i> (2009)
	Habitat loss	infrastructure construction (such as roads and dams)	Hickey <i>et al.</i> (2018); Plumptre, Robbins and Williamson (2019); Plumptre <i>et al.</i> (2016a)
		resource extraction	Plumptre, Robbins and Williamson (2019); Plumptre <i>et al.</i> (2010)
	Poaching in retaliation for crop raiding (using guns, snares, traps)		

Notes: Threats were derived from the IUCN SSC A.P.E.S. database (IUCN SSC, n.d.-b) and references. This table does not quantify or compare the impact levels of listed threats. "Poaching" includes illegal killing carried out to obtain wild meat or body parts, in human-wildlife conflict, in retaliation for crop raiding and based on fears for personal or community safety, as well as incidental trapping. In addition to the cited threats, climate breakdown affects all great ape taxa (IUCN, 2020).

Source: GRASP and IUCN, unpublished data, 2018