1 **Supporting information**

2 *Table SI1: Trends at Cape Point for the 2007 – 2014 period.*

Species	Monthly	Annual slope	Unit	R, n, significance
GEM	average	16.91 ± 3.60	$pg\ m^{-3}\ yr^{-1}$	0.4436, 92, >99.9%
	median	16.18 ± 3.61		0.4273, 92, >99.9%
CO_2	average	2.072 ± 0.025	$ppm\ yr^{-1}$	0.9932, 96, >99.9%
	median	2.080 ± 0.020		0.9953, 96, >99.9%
Rn	average	-7.91 ± 12.76	$mBq\ m^{-3}\ yr^{-1}$	-0.0641, 95, ns
	median	-6.77 ± 7.03		-0.0994, 95, ns
CO	average	-1.152 ± 0.500	$ppb\ yr^{-1}$	-0.2313, 96, >95%
	median	-0.500 ± 0.356		-0.1434, 96, ns
CH_4	average	5.698 ± 0.659	$ppb\ yr^{-1}$	0.6655, 96, >99.9%
	median	5.849 ± 0.534		0.7490, 96, >99.9%
O_3	average	0.157 ± 0.236	$ppb\ yr^{-1}$	0.0685, 96, ns
	median	0.152 ± 0.253		0.0620, 96, ns

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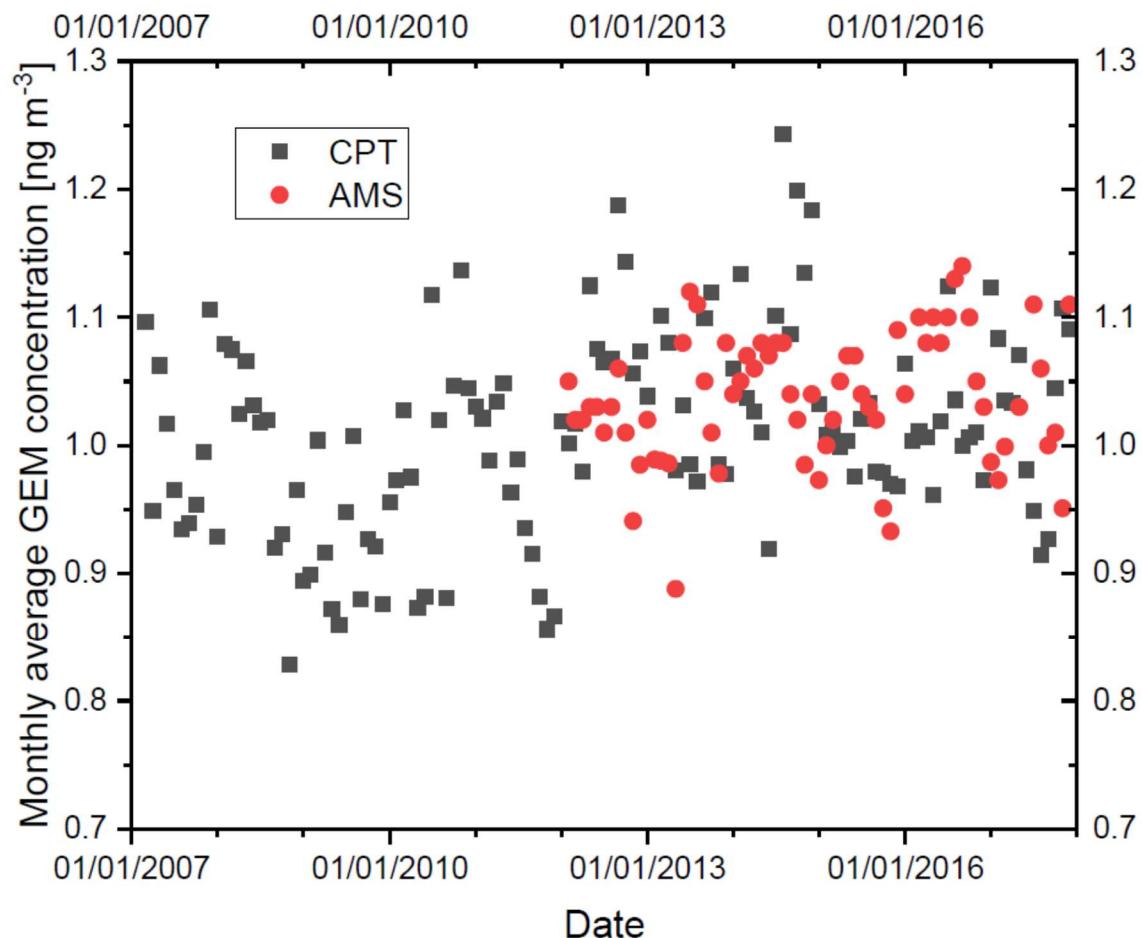
9   Figure SI1: Monthly median GEM concentrations at Cape Point (CPT) since March 2007 until December
10 2017 and at Amsterdam Island (AMS) since February 2012 until December 2017. Months with data
11 coverage of less than 10% were not considered.