

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub> <sup>(1)</sup>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	Unspecified mix of HFCs and PFCs	NF <sub>3</sub>	Total	ETS	non-ETS
	CO <sub>2</sub> equivalent (kt)									CO <sub>2</sub> equivalent (Gg)	
<b>Total (net emissions)<sup>(1)</sup></b>	<b>60 130,64</b>	<b>12 265,96</b>	<b>3 746,37</b>	<b>3 059,85</b>	<b>15,29</b>	<b>23,45</b>	<b>NO</b>	<b>NO</b>	<b>79 241,56</b>		
<b>1. Energy</b>	<b>50 308,75</b>	<b>413,79</b>	<b>567,01</b>						<b>51 289,55</b>	<b>27 262</b>	<b>24 028</b>
A. Fuel combustion (sectoral approach)	49 233,59	341,19	563,97						50 138,74	26 156	23 983
1. Energy industries	21 001,42	18,27	164,32						21 184,01	20 426	758
2. Manufacturing industries and construction	7 407,93	49,65	92,27						7 549,85	5 222	2 328
3. Transport	16 809,69	25,69	163,26						16 998,65	508	16 491
4. Other sectors	3 970,68	247,57	143,76						4 362,00	0	4 362
5. Other	43,87	0,01	0,37						44,24	0	44
B. Fugitive emissions from fuels	1 075,16	72,61	3,03						1 150,80	1 106	45
1. Solid fuels	0,00	8,48	0,00						8,48	8	0
2. Oil and natural gas and other emissions from energy production	1 075,16	64,12	3,03						1 142,32	1 098	45
C. CO <sub>2</sub> transport and storage											
<b>2. Industrial processes and product use</b>	<b>4340,17</b>	<b>44,49</b>	<b>71,27</b>	<b>3059,85</b>	<b>15,29</b>	<b>23,45</b>	<b>0,00</b>	<b>0,00</b>	<b>7554,52</b>	<b>3 298</b>	<b>4 257</b>
A. Mineral industry	3408,66								3408,66	3 145	264
B. Chemical industry	671,86	26,93	24,51	NO	NO	NO	NO	NO	723,30	110	613
C. Metal industry	52,97	16,60	NO	NO	NO	NO	NO	NO	69,58	43	27
D. Non-energy products from fuels and solvent use	206,68	0,96	NO						207,63	0	208
E. Electronic industry				NO	NO	NO	NO	NO	NO	0	NO
F. Product uses as ODS substitutes				3059,85	15,29				3075,14	0	3 075
G. Other product manufacture and use	NO	NO	46,77	NO	NO	23,45	NO	NO	70,21	0	70
H. Other	NO	NO	NO						NO	0	NO
<b>3. Agriculture</b>	<b>53,06</b>	<b>4 543,46</b>	<b>2 322,83</b>						<b>6 919,35</b>	<b>0</b>	<b>6 919</b>
A. Enteric fermentation		3 640,80							3 640,80	0	3 641
B. Manure management		738,97	175,95						914,92	0	915
C. Rice cultivation		134,72							134,72	0	135
D. Agricultural soils		0,00	2 130,30						2 130,30	0	2 130
E. Prescribed burning of savannahs		0,00	0,00						0,00	NO	0
F. Field burning of agricultural residues		28,97	16,57						45,55	0	46
G. Liming	6,89								6,89	0	7
H. Urea application	46,16								46,16	0	46
I. Other carbon-containing fertilizers	0,00								0,00	NO	0
J. Other	0,00	0,00	0,00						0,00	NO	0
<b>4. Land use, land-use change and forestry<sup>(1)</sup></b>	<b>5 403,58</b>	<b>1 258,74</b>	<b>521,66</b>						<b>7 183,99</b>		
A. Forest land	3 235,10	808,29	155,17						4 198,56		
B. Cropland	545,40	43,13	54,52						643,05		
C. Grassland	13,59	8,14	28,07						49,80		
D. Wetlands	353,11	0,00	28,06						381,17		
E. Settlements	2 366,08	0,00	174,23						2 540,31		
F. Other land	-996,79	399,18	81,60						-516,01		
G. Harvested wood products	-112,90	NA	NA						-112,90		
H. Other	NO	NO	NO						NO		
<b>5. Waste</b>	<b>25,08</b>	<b>6 005,47</b>	<b>263,61</b>						<b>6 294,16</b>	<b>0</b>	<b>6 294</b>
A. Solid waste disposal	0,00	3 665,68	0,00						3 665,68	0	3 666
B. Biological treatment of solid waste		23,69	12,67						36,36	0	36
C. Incineration and open burning of waste	25,08	0,14	0,66						25,88	0	26
D. Waste water treatment and discharge		2 315,96	250,28						2 566,23	0	2 566
E. Other	0,00	0,002	0,002						0,004	0	0
<b>6. Other (as specified in summary 1.A)</b>											
<b>Memo items:<sup>(2)</sup></b>											
<b>International bunkers</b>	NE	NE	NE						NE		
Aviation	NE	NE	NE						NE		
Navigation	NE	NE	NE						NE		
<b>Multilateral operations</b>	NE	NE	NE						NE		
<b>CO<sub>2</sub> emissions from biomass</b>	NE								NE		
<b>CO<sub>2</sub> captured</b>	NE								NE		
<b>Long-term storage of C in waste disposal sites</b>	NE								NE		
<b>Indirect N<sub>2</sub>O</b>			NE								
<b>Indirect CO<sub>2</sub><sup>(3)</sup></b>	<b>153,13</b>										
<b>Total CO<sub>2</sub> equivalent emissions without land use, land-use change and forestry</b>									<b>72 057,58</b>	<b>30 559,42</b>	<b>41 498,16</b>
<b>Total CO<sub>2</sub> equivalent emissions with land use, land-use change and forestry</b>									<b>79 241,56</b>		
<b>Total CO<sub>2</sub> equivalent emissions, including indirect CO<sub>2</sub>, without land use, land-use change and forestry</b>									<b>72 210,71</b>		
<b>Total CO<sub>2</sub> equivalent emissions, including indirect CO<sub>2</sub>, with land use, land-use change and forestry</b>									<b>79 394,69</b>		

<sup>(1)</sup> For carbon dioxide (CO<sub>2</sub>) from land use, land-use change and forestry the net emissions/removals are to be reported. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(2)</sup> See footnote 7 to table Summary 1.A.

<sup>(3)</sup> In accordance with the UNFCCC Annex I inventory reporting guidelines, for Parties that decide to report indirect CO<sub>2</sub>, the national totals shall be provided with and without indirect CO<sub>2</sub>.

Brief description of the key drivers underpinning the increase or decrease in GHG emissions in t-1 (proxy) compared to t-2 (inventory). If this information is publicly available please include the hyperlink to the relevant website.
The +9.0% increase of emissions in the Energy sector is explained with the increase of consumption of solid and gaseous fuels, due to a dry hydrologic year and a reduction in hydraulic electric production, compensated by the increase of thermal production. Fuel/Energy consumption: <a href="http://www.dgeg.pt/">http://www.dgeg.pt/</a>
There is an increase of about 2.0% in the agriculture GHG emissions mostly due to an increase in the livestock numbers- dairy cattle (0.8%), non dairy cattle (3.1%), sheep (3.1%) and swine(0.6%)
The LULUCF sector has changed to a net emitter due to the exceptional year in terms of forests area burnt in 2017, which represented more than 400% of the area burned in relation to the annual average of the previous 10 years.
The -2.8% decrease of emissions in the waste sector are mainly related with the waste diversion from land deposition (5A) in latest years and biogas recovery.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Pressupostos/Metodologia estimativa Proxy
<b>Total (net emissions)<sup>(1)</sup></b>	
<b>1. Energy</b>	
A. Fuel combustion (sectoral approach)	
1. Energy industries	1.A.1.a : 2015/2016 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2015. 1.A.1.b: CO <sub>2</sub> emission estimation based in 2016 ETS data.
2. Manufacturing industries and construction	2015/2016 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2015.
3. Transport	2015/2016 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2015. Differentiated fuel trends for road transport, aviation and navigation
4. Other sectors	2015/2016 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2015.
5. Other	2015/2016 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2015.
B. Fugitive emissions from fuels	
1. Solid fuels	Last year value (2015)
2. Oil and natural gas and other emissions from energy production	2015 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2014.
C. CO <sub>2</sub> transport and storage	2015/2016 consumption trend for solid, liquid and gaseous fuels applied to inventory data for 2015.
<b>2. Industrial processes and product use</b>	
A. Mineral industry	2017 ETS data
B. Chemical industry	Last year value (2016)
C. Metal industry	2017 ETS data
D. Non-energy products from fuels and solvent use	Last year value (2016)
E. Electronic Industry	Last year value (2016)
F. Product uses as ODS substitutes	Last year value (2016)
G. Other product manufacture and use	Last year value (2016)
H. Other	Last year value (2016)
<b>3. Agriculture</b>	
A. Enteric fermentation	Change in livestock numbers from 2016 to 2017
B. Manure management	Change in livestock numbers from 2016 to 2017
C. Rice cultivation	Linear trend extrapolation: 2011-2016
D. Agricultural soils	Linear trend extrapolation: 2011-2016
E. Prescribed burning of savannahs	
F. Field burning of agricultural residues	Linear trend extrapolation: 2011-2016
G. Liming	Linear trend extrapolation: 2011-2016
H. Urea application	Linear trend extrapolation: 2011-2016
I. Other carbon-containing fertilizers	NO
J. Other	NO
<b>4. Land use, land-use change and forestry<sup>(1)</sup></b>	
A. Forest land	<p>General methodology: Assumes same values as previous years except for the variables described below.                      Burnt areas 2017: Based on the provisional report by ICNF.                      Harvest 2017: Assumes average 2012-2016 as representative of the 2017 value for industrial harvest.                      HWP 2017: Assumes average 2012-2016 as representative of the 2016 value for "production" "imports" and "exports" for all 3 product categories: "sawnwood"; "wood panels"; "paper and paperboard".                      Special Activities 2017: Assumes average 2012-2016 as representative of the 2017 value for "no tillage" and "biodiverse pastures".</p>
B. Cropland	
C. Grassland	
D. Wetlands	
E. Settlements	
F. Other land	
G. Harvested wood products	
H. Other	
<b>5. Waste</b>	
A. Solid waste disposal	Urban waste: preliminary data for 2017; Industrial w.: linear trend extrapolation based on 2017 GDP
B. Biological treatment of solid waste	Last year value (2016)
C. Incineration and open burning of waste	Industrial waste: linear trend extrapolation based on 2017 GDP; Clinical w.: last year value (2016)
D. Waste water treatment and discharge	Last year value (2016)
E. Other	Last year value (2016)
<b>6. Other (as specified in summary 1.A)</b>	
<b>Memo items:<sup>(2)</sup></b>	
<b>International bunkers</b>	
Aviation	
Navigation	
<b>Multilateral operations</b>	
<b>CO<sub>2</sub> emissions from biomass</b>	
<b>CO<sub>2</sub> captured</b>	
<b>Long-term storage of C in waste disposal sites</b>	
<b>Indirect N<sub>2</sub>O</b>	
<b>Indirect CO<sub>2</sub><sup>(3)</sup></b>	Based on the same share of 2016 sectoral CO <sub>2</sub> indirect emissions in relation to the 2017 total for each category/sector.