LITHUANIA‘S NATIONAL INVENTORY REPORT 2016

GREENHOUSE GAS EMISSIONS 1990-2014

ANNEXES

VILNIUS, 2016

Contents

ANNEX I. Approach 1 and Approach 2 key categories analysis

Approach 1 Level Assessment for 1990

IPCC Category	Greenhouse gas	GHG emissions, kt CO_2 eqv.	Level assessment	Cumulative total
4.A.1 Forest land remaining forest land - carbon stock change in biomass	CO_2	-6,680.01	0.10	10.4%
1.A.1.a Public electricity and heat production - Liquid Fuels	CO_2	6,021.25	0.09	19.7%
1.A.1.a Public electricity and heat production - Gaseous Fuels	CO_2	5,806.05	0.09	28.8%
1.A.3.b Road transportation	CO_2	5,247.15	0.08	36.9%
4.B.2 Land converted to cropland - net carbon stock change in mineral soils	CO_2	4,615.45	0.07	44.1%
3.A.1 Enteric Fermentation - Cattle	CH_4	4,101.48	0.06	50.5%
1.A.2 Manufacturing industries and construction-Liquid fuels	CO_2	3,500.92	0.05	55.9%
1.A.4 Other sectors-Solid fuels	CO_2	2,760.55	0.04	60.2%
4.C.2 Land converted to grassland - net carbon stock change in mineral soils	CO_2	-2,082.10	0.03	63.4%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	2,048.76	0.03	66.6%
1.A.3.e Other transportation	CO_2	1,764.11	0.03	69.3%
2.A.1 Cement Production	CO_2	1,668.07	0.03	71.9%
1.A.1.b Petroleum refining - Liquid Fuels	CO_2	1,503.71	0.02	74.3%
1.A.4 Other sectors-Liquid fuels	CO_2	1,429.58	0.02	76.5%
1.A.4 Other sectors-Gaseous fuels	CO_2	1,381.52	0.02	78.6%
2.B.1 Ammonia Production	CO_2	1,255.82	0.02	80.6%
5.A Solid Waste Disposal	CH_4	1,028.83	0.02	82.2%
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	N_2O	992.77	0.02	83.7%
2.B.2 Nitric Acid Production	N_2O	893.01	0.01	85.1%
4.A.2 Land converted to forest land - carbon stock change in biomass	CO_2	-585.97	0.01	86.0%
5.D Wastewater Treatment and Discharge	CH_4	541.86	0.01	86.9%
4.D.1 Wetland remaining wetlands -net carbon stock change in organic soils	CO_2	517.33	0.01	87.7%
4.A.1 Forest land remaining forest land - net carbon stock change in dead wood	CO_2	-474.03	0.01	88.4%
4.A.2 Land converted to forest land - net carbon stock change in litter	CO_2	-448.14	0.01	89.1%
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	N_2O	414.48	0.01	89.7%
4.A Forest land-4(II) organic soils	CO_2	406.04	0.01	90.4%
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	N_2O	401.02	0.01	91.0%
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	N_2O	393.90	0.01	91.6%
4.B Cropland	N_2O	392.99	0.01	92.2%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.3.c Railways	***CO_2***	***349.97***	***0.01***	***92.8%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***260.55***	***0.00***	***93.2%***
3.B.1.1 Manure Management - Cattle	***CH_4***	***247.40***	***0.00***	***93.6%***
2.A.4 Other process use of carbonates	***CO_2***	***239.52***	***0.00***	***93.9%***
3.B.1.3 Manure Management - Swine	***CH_4***	***236.72***	***0.00***	***94.3%***
3.B.2 Manure Management - Indirect N_2O Emissions	***N_2O***	***227.47***	***0.00***	***94.7%***
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	***N_2O***	***223.03***	***0.00***	***95.0%***
2.A.2 Lime Production	***CO_2***	***222.68***	***0.00***	***95.3%***
3.B.2 Manure Management - Cattle	N_2O	201.63	0.00	95.7%
4.B.1 Cropland remaining cropland - net carbon stock change in mineral soils	CO_2	195.63	0.00	96.0%
1.A.3.e Other transportation	N_2O	186.51	0.00	96.3%
4.B.1 Cropland remaining cropland - net carbon stock change in organic soils	CO_2	178.17	0.00	96.5%
1.A.1. Energy industries-Solid fuels	CO_2	174.05	0.00	96.8%
1.A.2 Manufacturing industries and construction-Solid fuels	CO_2	171.63	0.00	97.1%
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	N_2O	139.12	0.00	97.3%
4.B.2 Land converted to cropland- net carbon stock change in organic soils	CO_2	133.17	0.00	97.5%
1.A.4 Other sectors-Solid fuels	CH_4	128.56	0.00	97.7%
3.A. Enteric Fermentation - Others	CH_4	118.06	0.00	97.9%
3.B.1 Manure Management - Other	N_2O	109.48	0.00	98.0%
4.B.2 Land converted to cropland- carbon stock change in biomass	CO_2	98.41	0.00	98.2%
2.G Other product manufacture and use	N_2O	96.05	0.00	98.3%
4.G Harvested wood products	CO_2	-95.65	0.00	98.5%
4.C.1 Grassland remaining grassland	CO_2	80.81	0.00	98.6%
4.B.1 Cropland remaining cropland - carbon stock change in biomass	CO_2	77.39	0.00	98.7%
3.B.1 Manure Management - Other	CH_4	75.24	0.00	98.9%
1.A.4 Other sectors-Biomass	CH_4	70.28	0.00	99.0%
5.D Wastewater Treatment and Discharge	N_2O	67.21	0.00	99.1%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	0.00	99.2%
1.A.3.b Road transportation	CH_4	48.11	0.00	99.2%
4.C.2 Land converted to grassland- net carbon stock change in organic soils	CO_2	45.06	0.00	99.3%
1.A.3.c Railways	N_2O	40.92	0.00	99.4%
1.A.3.b Road transportation	N_2O	39.09	0.00	99.4%
3.H Urea Application	CO_2	35.68	0.00	99.5%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
4.A Forest land	N_2O	33.55	0.00	99.5%
1.A.4 Other sectors-Peat	CO_2	27.13	0.00	99.6%
2.B.8.a Methanol	CO_2	24.35	0.00	99.6%
3.G Liming	CO_2	20.59	0.00	99.7%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	0.00	99.7%
2.C.1 Iron and Steel Production	CO_2	16.98	0.00	99.7%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	0.00	99.7%
1.A.3.d Domestic Navigation	CO_2	15.49	0.00	99.8%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	0.00	99.8%
1.A.4 Other sectors-Biomass	N_2O	12.97	0.00	99.8%
4.D Wetlands	N_2O	11.92	0.00	99.8%
2.A.3 Glass Production	CO_2	11.70	0.00	99.8%
1.A.1. Energy industries-Peat	CO_2	11.06	0.00	99.9%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	0.00	99.9%
1.A.3.a Domestic aviation	CO_2	8.16	0.00	99.9%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.00	99.9%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.00	99.9%
2.B.8.a Methanol	CH_4	5.24	0.00	99.9%
1.A.3.e Other transportation	CH_4	4.30	0.00	99.9%
4.A.1 Forest land remaining forest land	CO_2	4.28	0.00	99.9%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.00	99.9%
5.B Biological Treatment of Solid Waste	CH_4	4.04	0.00	99.9%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.00	99.9%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	0.00	100.0%
5.B Biological Treatment of Solid Waste	N_2O	2.89	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.00	100.0%
5.C Incineration and Open Burning of Waste	CO_2	2.66	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.00	100.0%
4.C Grassland	N_2O	2.31	0.00	100.0%
4.C Grassland	CH_4	2.12	0.00	100.0%
1.A.4 Other sectors-Peat	CH_4	1.12	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.00	100.0%
1.A.2 Manufacturing industries and	N_2O	0.81	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
construction-Solid fuels				
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.00	100.0%
4.A Forest land	CH_4	0.71	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	0.00	100.0%
1.A.1. Energy industries-Biomass	N_2O	0.63	0.00	100.0%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.00	100.0%
1.A.3.c Railways	CH_4	0.50	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	0.00	100.0%
1.A.1. Energy industries-Biomass	CH_4	0.40	0.00	100.0%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	0.00	100.0%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.00	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.00	100.0%
4.B Cropland	CH_4	0.05	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%

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2. E Electronic Industry	SF_6, NF_3	0.00	0.00	100.0%
2.F.1 Refrigeration and Air Conditioning Equipment	HFCs	0.00	0.00	100.0%
2.F.2 Foam Blowing Agents	HFCs	0.00	0.00	100.0%
2.F.3 Fire Protection	HFCs	0.00	0.00	100.0%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.00	0.00	100.0%
2.G Other product manufacture and use	SF_6	0.00	0.00	100.0%
4.D.2 Land converted to wetlands	CO_2	0.00	0.00	100.0%
4.E.1 Settlements remaining settlements	CO_2	0.00	0.00	100.0%
4.E.2 Land converted to settlements	CO_2	0.00	0.00	100.0%
4.F Other land	CO_2	0.00	0.00	100.0%
Total		***43,628.91***		

Approach 1 Level Assessment for 1990 using a subset (LULUCF was excluded from analysis)

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.1.a Public electricity and heat production - Liquid Fuels	***CO_2***	***6,021.25***	***0.13***	***12.8%***
1.A.1.a Public electricity and heat production - Gaseous Fuels	***CO_2***	***5,806.05***	***0.12***	***25.1%***
1.A.3.b Road transportation	***CO_2***	***5,247.15***	***0.11***	***36.2%***
3.A.1 Enteric Fermentation - Cattle	***CH_4***	***4,101.48***	***0.09***	***44.9%***
1.A.2 Manufacturing industries and construction-Liquid fuels	***CO_2***	***3,500.92***	***0.07***	***52.3%***
1.A.4 Other sectors-Solid fuels	***CO_2***	***2,760.55***	***0.06***	***58.1%***
1.A.2 Manufacturing industries and construction-Gaseous fuels	***CO_2***	***2,048.76***	***0.04***	***62.5%***
1.A.3.e Other transportation	***CO_2***	***1,764.11***	***0.04***	***66.2%***
2.A.1 Cement Production	***CO_2***	***1,668.07***	***0.04***	***69.7%***
1.A.1.b Petroleum refining - Liquid Fuels	***CO_2***	***1,503.71***	***0.03***	***72.9%***
1.A.4 Other sectors-Liquid fuels	***CO_2***	***1,429.58***	***0.03***	***76.0%***
1.A.4 Other sectors-Gaseous fuels	***CO_2***	***1,381.52***	***0.03***	***78.9%***
2.B.1 Ammonia Production	***CO_2***	***1,255.82***	***0.03***	***81.5%***
5.A Solid Waste Disposal	***CH_4***	***1,028.83***	***0.02***	***83.7%***
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	***N_2O***	***992.77***	***0.02***	***85.8%***
2.B.2 Nitric Acid Production	***N_2O***	***893.01***	***0.02***	***87.7%***
5.D Wastewater Treatment and Discharge	***CH_4***	***541.86***	***0.01***	***88.9%***
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***414.48***	***0.01***	***89.7%***
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	***N_2O***	***401.02***	***0.01***	***90.6%***
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	***N_2O***	***393.90***	***0.01***	***91.4%***
1.A.3.c Railways	***CO_2***	***349.97***	***0.01***	***92.2%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***260.55***	***0.01***	***92.7%***
3.B.1.1 Manure Management - Cattle	***CH_4***	***247.40***	***0.01***	***93.2%***
2.A.4 Other process use of carbonates	***CO_2***	***239.52***	***0.01***	***93.8%***
3.B.1.3 Manure Management - Swine	***CH_4***	***236.72***	***0.01***	***94.3%***
3.B.2 Manure Management - Indirect N_2O Emissions	***N_2O***	***227.47***	***0.00***	***94.7%***
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	***N_2O***	***223.03***	***0.00***	***95.2%***
2.A.2 Lime Production	CO_2	222.68	0.00	95.7%
3.B.2 Manure Management - Cattle	N_2O	201.63	0.00	96.1%
1.A.3.e Other transportation	N_2O	186.51	0.00	96.5%
1.A.1. Energy industries-Solid fuels	CO_2	174.05	0.00	96.9%
1.A.2 Manufacturing industries and construction-Solid fuels	CO_2	171.63	0.00	97.2%
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	N_2O	139.12	0.00	97.5%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.4 Other sectors-Solid fuels	CH_4	128.56	0.00	97.8%
3.A. Enteric Fermentation - Others	CH_4	118.06	0.00	98.1%
3.B.1 Manure Management - Other	N_2O	109.48	0.00	98.3%
2.G Other product manufacture and use	N_2O	96.05	0.00	98.5%
3.B.1 Manure Management - Other	CH_4	75.24	0.00	98.7%
1.A.4 Other sectors-Biomass	CH_4	70.28	0.00	98.8%
5.D Wastewater Treatment and Discharge	N_2O	67.21	0.00	98.9%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	0.00	99.1%
1.A.3.b Road transportation	CH_4	48.11	0.00	99.2%
1.A.3.c Railways	N_2O	40.92	0.00	99.3%
1.A.3.b Road transportation	N_2O	39.09	0.00	99.4%
3.H Urea Application	CO_2	35.68	0.00	99.4%
1.A.4 Other sectors-Peat	CO_2	27.13	0.00	99.5%
2.B.8.a Methanol	CO_2	24.35	0.00	99.5%
3.G Liming	CO_2	20.59	0.00	99.6%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	0.00	99.6%
2.C.1 Iron and Steel Production	CO_2	16.98	0.00	99.7%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	0.00	99.7%
1.A.3.d Domestic Navigation	CO_2	15.49	0.00	99.7%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	0.00	99.7%
1.A.4 Other sectors-Biomass	N_2O	12.97	0.00	99.8%
2.A.3 Glass Production	CO_2	11.70	0.00	99.8%
1.A.1. Energy industries-Peat	CO_2	11.06	0.00	99.8%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	0.00	99.8%
1.A.3.a Domestic aviation	CO_2	8.16	0.00	99.9%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.00	99.9%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.00	99.9%
2.B.8.a Methanol	CH_4	5.24	0.00	99.9%
1.A.3.e Other transportation	CH_4	4.30	0.00	99.9%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.00	99.9%
5.B Biological Treatment of Solid Waste	CH_4	4.04	0.00	99.9%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.00	99.9%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.00	99.9%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	0.00	100.0%
5.B Biological Treatment of Solid Waste	N_2O	2.89	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.00	100.0%
5.C Incineration and Open Burning of Waste	CO_2	2.66	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.00	100.0%
1.A.4 Other sectors-Peat	CH_4	1.12	0.00	100.0%
1.A.2 Manufacturing industries and construction-	N_2O	1.11	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
Gaseous fuels				
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	0.00	100.0%
1.A.1. Energy industries-Biomass	N_2O	0.63	0.00	100.0%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.00	100.0%
1.A.3.c Railways	CH_4	0.50	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	0.00	100.0%
1.A.1. Energy industries-Biomass	CH_4	0.40	0.00	100.0%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	0.00	100.0%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.00	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
2. E Electronic Industry	SF_6, NF_3	0.00	0.00	100.0%
2.F.1 Refrigeration and Air Conditioning Equipment	HFCs	0.00	0.00	100.0%
2.F.2 Foam Blowing Agents	HFCs	0.00	0.00	100.0%
2.F.3 Fire Protection	HFCs	0.00	0.00	100.0%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.00	0.00	100.0%
2.G Other product manufacture and use	SF_6	0.00	0.00	100.0%
Total		***47,199.44***		

Approach 1 Level Assessment for 2014

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
4.A.1 Forest land remaining forest land - carbon stock change in biomass	*CO_2*	*-8,447.64*	*0.21*	*21.1%*
1.A.3.b Road transportation	*CO_2*	*4,547.12*	*0.11*	*32.5%*
4.B.2 Land converted to cropland - net carbon stock change in mineral soils	*CO_2*	*3,525.13*	*0.09*	*41.3%*
4.C.2 Land converted to grassland - net carbon stock change in mineral soils	*CO_2*	*-2,830.85*	*0.07*	*48.3%*
2.B.1 Ammonia Production	*CO_2*	*1,875.12*	*0.05*	*53.0%*
3.A.1 Enteric Fermentation - Cattle	*CH_4*	*1,570.66*	*0.04*	*57.0%*
1.A.1.a Public electricity and heat production - Gaseous Fuels	*CO_2*	*1,532.96*	*0.04*	*60.8%*
4.G Harvested wood products	*CO_2*	*-1,399.35*	*0.03*	*64.3%*
1.A.1.b Petroleum refining - Liquid Fuels	*CO_2*	*1,305.06*	*0.03*	*67.5%*
4.D.1 Wetlands remaining wetlands -net carbon stock change in organic soils	*CO_2*	*875.20*	*0.02*	*69.7%*
5.A Solid Waste Disposal	*CH_4*	*834.33*	*0.02*	*71.8%*
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	*N_2O*	*721.16*	*0.02*	*73.6%*
4.A.2 Land converted to forest land - carbon stock change in biomass	*CO_2*	*-678.70*	*0.02*	*75.3%*
4.A.1 Forest land remaining forest land - net carbon stock change in dead wood	*CO_2*	*-600.29*	*0.01*	*76.8%*
1.A.2 Manufacturing industries and construction-Gaseous fuels	*CO_2*	*543.13*	*0.01*	*78.2%*
4.A.2 Land converted to forest land - net carbon stock change in litter	*CO_2*	*-516.68*	*0.01*	*79.5%*
1.A.2 Manufacturing industries and construction-Solid fuels	*CO_2*	*473.11*	*0.01*	*80.6%*
1.A.4 Other sectors-Gaseous fuels	*CO_2*	*461.17*	*0.01*	*81.8%*
4.A Forest land-4(II) organic soils	*CO_2*	*432.78*	*0.01*	*82.9%*
2.F.1 Refrigeration and Air Conditioning Equipment	*HFCs*	*427.00*	*0.01*	*83.9%*
2.A.1 Cement Production	*CO_2*	*400.83*	*0.01*	*84.9%*
4.E.2 Land converted to settlements	*CO_2*	*372.65*	*0.01*	*85.9%*
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	*N_2O*	*353.56*	*0.01*	*86.8%*
4.B.2 Land converted to cropland- carbon stock change in biomass	*CO_2*	*349.73*	*0.01*	*87.6%*
2.B.2 Nitric Acid Production	*N_2O*	*331.76*	*0.01*	*88.5%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*305.30*	*0.01*	*89.2%*
4.B Cropland	*N_2O*	*301.17*	*0.01*	*90.0%*
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	*N_2O*	*293.70*	*0.01*	*90.7%*
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	*CH_4*	*276.55*	*0.01*	*91.4%*
1.A.3.e Other transportation	*CO_2*	*236.35*	*0.01*	*92.0%*

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
5.D Wastewater Treatment and Discharge	***CH_4***	***219.90***	***0.01***	***92.5%***
1.A.4 Other sectors-Liquid fuels	***CO_2***	***182.35***	***0.00***	***93.0%***
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***178.89***	***0.00***	***93.4%***
4.B.1 Cropland remaining cropland - net carbon stock change in organic soils	***CO_2***	***174.33***	***0.00***	***93.9%***
1.A.3.c Railways	***CO_2***	***174.13***	***0.00***	***94.3%***
1.A.1.a Public electricity and heat production - Liquid Fuels	***CO_2***	***151.42***	***0.00***	***94.7%***
1.A.4 Other sectors-Biomass	***CH_4***	***150.36***	***0.00***	***95.1%***
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	N_2O	137.91	0.00	95.4%
3.B.1.1 Manure Management - Cattle	CH_4	137.58	0.00	95.8%
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	N_2O	118.24	0.00	96.1%
1.A.4 Other sectors-Peat	CO_2	109.04	0.00	96.3%
4.B.2 Land converted to cropland- net carbon stock change in organic soils	CO_2	102.05	0.00	96.6%
1.A.1. Energy industries-Other fossil fuels	CO_2	82.56	0.00	96.8%
4.C.1 Grassland remaining grassland	CO_2	81.95	0.00	97.0%
3.B.2 Manure Management - Indirect N_2O Emissions	N_2O	80.96	0.00	97.2%
3.B.2 Manure Management - Cattle	N_2O	75.65	0.00	97.4%
1.A.2 Manufacturing industries and construction-Liquid fuels	CO_2	75.49	0.00	97.6%
3.B.1.3 Manure Management - Swine	CH_4	71.18	0.00	97.7%
3.A. Enteric Fermentation - Others	CH_4	66.74	0.00	97.9%
4.C.2 Land converted to grassland- net carbon stock change in organic soils	CO_2	63.87	0.00	98.1%
2. D Non-energy products from fuels and solvent use	CO_2	62.62	0.00	98.2%
4.B.1 Cropland remaining cropland - net carbon stock change in mineral soils	CO_2	-53.90	0.00	98.4%
4.F Other land	CO_2	50.11	0.00	98.5%
5.D Wastewater Treatment and Discharge	N_2O	45.27	0.00	98.6%
2.A.2 Lime Production	CO_2	41.22	0.00	98.7%
4.A Forest land	N_2O	36.09	0.00	98.8%
1.A.3.b Road transportation	N_2O	35.36	0.00	98.9%
1.A.4 Other sectors-Biomass	N_2O	27.63	0.00	99.0%
3.B.1 Manure Management - Other	CH_4	27.10	0.00	99.0%
3.G Liming	CO_2	24.71	0.00	99.1%
1.A.1. Energy industries-Biomass	N_2O	22.95	0.00	99.1%
5.B Biological Treatment of Solid Waste	CH_4	20.44	0.00	99.2%
1.A.3.c Railways	N_2O	20.36	0.00	99.2%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.3.e Other transportation	N_2O	19.15	0.00	99.3%
1.A.1. Energy industries-Peat	CO_2	17.63	0.00	99.3%
2.A.4 Other process use of carbonates	CO_2	17.46	0.00	99.4%
3.H Urea Application	CO_2	15.72	0.00	99.4%
1.A.3.b Road transportation	CH_4	14.81	0.00	99.5%
5.B Biological Treatment of Solid Waste	N_2O	14.62	0.00	99.5%
1.A.3.d Domestic Navigation	CO_2	14.51	0.00	99.5%
1.A.1. Energy industries-Biomass	CH_4	14.44	0.00	99.6%
1.A.4 Other sectors-Solid fuels	CH_4	14.27	0.00	99.6%
2.F.2 Foam Blowing Agents	HFCs	14.14	0.00	99.6%
4.B.1 Cropland remaining cropland - carbon stock change in biomass	CO_2	-13.37	0.00	99.7%
3.B.1 Manure Management - Other	N_2O	12.34	0.00	99.7%
4.D.2 Land converted to wetlands	CO_2	12.30	0.00	99.7%
4.D Wetlands	N_2O	9.54	0.00	99.8%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	8.19	0.00	99.8%
2.A.3 Glass Production	CO_2	7.41	0.00	99.8%
1.A.2 Manufacturing industries and construction-Peat	CO_2	6.78	0.00	99.8%
1.A.1. Energy industries-Solid fuels	CO_2	6.74	0.00	99.8%
2.F.4 Aerosols/metered dose inhalers	HFCs	6.20	0.00	99.8%
4.A.1 Forest land remaining forest land	CO_2	5.37	0.00	99.9%
2.G Other product manufacture and use	N_2O	5.19	0.00	99.9%
2. E Electronic Industry	SF_6, NF_3	5.05	0.00	99.9%
1.A.4 Other sectors-Peat	CH_4	4.91	0.00	99.9%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	4.08	0.00	99.9%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	4.01	0.00	99.9%
2.C.1 Iron and Steel Production	CO_2	2.60	0.00	99.9%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	2.56	0.00	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	2.20	0.00	99.9%
2.F.3 Fire Protection	HFCs	2.15	0.00	99.9%
4.C Grassland	N_2O	2.12	0.00	99.9%
5.C Incineration and Open Burning of Waste	CO_2	1.96	0.00	99.9%
4.C Grassland	CH_4	1.95	0.00	100.0%
1.A.3.a Domestic aviation	CO_2	1.94	0.00	100.0%
1.A.1. Energy industries-Liquid fuels	N_2O	1.83	0.00	100.0%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	1.79	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.4 Other sectors-Solid fuels	N_2O	1.44	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	1.23	0.00	100.0%
2.G Other product manufacture and use	SF_6	1.22	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	1.04	0.00	100.0%
4.A Forest land	CH_4	0.95	0.00	100.0%
1.A.1. Energy industries-Liquid fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.90	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	N_2O	0.83	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	0.70	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.65	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.57	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	CH_4	0.46	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.44	0.00	100.0%
1.A.3.e Other transportation	CH_4	0.38	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	0.29	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.25	0.00	100.0%
1.A.3.c Railways	CH_4	0.25	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.25	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	0.23	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	0.14	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.12	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.08	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	0.06	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.06	0.00	100.0%
4.B Cropland	CH_4	0.05	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.03	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.03	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.03	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.02	0.00	100.0%
1.A.3.a Domestic aviation	N_2O	0.02	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.00	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.00	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%
2.B.8.a Methanol	CO_2	0.00	0.00	100.0%
2.B.8.a Methanol	CH_4	0.00	0.00	100.0%
4.E.1 Settlements remaining settlements	CO_2	0.00	0.00	100.0%
Total		***10,942.81***		

Approach 1 Level Assessment for 2014 using a subset (LULUCF was excluded from analysis)

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.3.b Road transportation	*CO_2*	*4,547.12*	*0.24*	*23.8%*
2.B.1 Ammonia Production	*CO_2*	*1,875.12*	*0.10*	*33.6%*
3.A.1 Enteric Fermentation - Cattle	*CH_4*	*1,570.66*	*0.08*	*41.9%*
1.A.1.a Public electricity and heat production - Gaseous Fuels	*CO_2*	*1,532.96*	*0.08*	*49.9%*
1.A.1.b Petroleum refining - Liquid Fuels	*CO_2*	*1,305.06*	*0.07*	*56.7%*
5.A Solid Waste Disposal	*CH_4*	*834.33*	*0.04*	*61.1%*
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	*N_2O*	*721.16*	*0.04*	*64.9%*
1.A.2 Manufacturing industries and construction-Gaseous fuels	*CO_2*	*543.13*	*0.03*	*67.7%*
1.A.2 Manufacturing industries and construction-Solid fuels	*CO_2*	*473.11*	*0.02*	*70.2%*
1.A.4 Other sectors-Gaseous fuels	*CO_2*	*461.17*	*0.02*	*72.6%*
2.F.1 Refrigeration and Air Conditioning Equipment	*HFCs*	*427.00*	*0.02*	*74.9%*
2.A.1 Cement Production	*CO_2*	*400.83*	*0.02*	*77.0%*
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	*N_2O*	*353.56*	*0.02*	*78.8%*
2.B.2 Nitric Acid Production	*N_2O*	*331.76*	*0.02*	*80.6%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*305.30*	*0.02*	*82.2%*
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	*N_2O*	*293.70*	*0.02*	*83.7%*
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	*CH_4*	*276.55*	*0.01*	*85.2%*
1.A.3.e Other transportation	*CO_2*	*236.35*	*0.01*	*86.4%*
5.D Wastewater Treatment and Discharge	*CH_4*	*219.90*	*0.01*	*87.5%*
1.A.4 Other sectors-Liquid fuels	*CO_2*	*182.35*	*0.01*	*88.5%*
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	*N_2O*	*178.89*	*0.01*	*89.4%*
1.A.3.c Railways	*CO_2*	*174.13*	*0.01*	*90.3%*
1.A.1.a Public electricity and heat production - Liquid Fuels	*CO_2*	*151.42*	*0.01*	*91.1%*
1.A.4 Other sectors-Biomass	*CH_4*	*150.36*	*0.01*	*91.9%*
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	*N_2O*	*137.91*	*0.01*	*92.7%*
3.B.1.1 Manure Management - Cattle	*CH_4*	*137.58*	*0.01*	*93.4%*
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	*N_2O*	*118.24*	*0.01*	*94.0%*
1.A.4 Other sectors-Peat	*CO_2*	*109.04*	*0.01*	*94.6%*
1.A.1. Energy industries-Other fossil fuels	*CO_2*	*82.56*	*0.00*	*95.0%*
3.B.2 Manure Management - Indirect N_2O Emissions	*N_2O*	*80.96*	*0.00*	*95.4%*
3.B.2 Manure Management - Cattle	N_2O	75.65	0.00	95.8%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Liquid fuels	CO_2	75.49	0.00	96.2%
3.B.1.3 Manure Management - Swine	CH_4	71.18	0.00	96.6%
3.A. Enteric Fermentation - Others	CH_4	66.74	0.00	96.9%
2. D Non-energy products from fuels and solvent use	CO_2	62.62	0.00	97.3%
5.D Wastewater Treatment and Discharge	N_2O	45.27	0.00	97.5%
2.A.2 Lime Production	CO_2	41.22	0.00	97.7%
1.A.3.b Road transportation	N_2O	35.36	0.00	97.9%
1.A.4 Other sectors-Biomass	N_2O	27.63	0.00	98.0%
3.B.1 Manure Management - Other	CH_4	27.10	0.00	98.2%
3.G Liming	CO_2	24.71	0.00	98.3%
1.A.1. Energy industries-Biomass	N_2O	22.95	0.00	98.4%
5.B Biological Treatment of Solid Waste	CH_4	20.44	0.00	98.5%
1.A.3.c Railways	N_2O	20.36	0.00	98.7%
1.A.3.e Other transportation	N_2O	19.15	0.00	98.8%
1.A.1. Energy industries-Peat	CO_2	17.63	0.00	98.8%
2.A.4 Other process use of carbonates	CO_2	17.46	0.00	98.9%
3.H Urea Application	CO_2	15.72	0.00	99.0%
1.A.3.b Road transportation	CH_4	14.81	0.00	99.1%
5.B Biological Treatment of Solid Waste	N_2O	14.62	0.00	99.2%
1.A.3.d Domestic Navigation	CO_2	14.51	0.00	99.2%
1.A.1. Energy industries-Biomass	CH_4	14.44	0.00	99.3%
1.A.4 Other sectors-Solid fuels	CH_4	14.27	0.00	99.4%
2.F.2 Foam Blowing Agents	HFCs	14.14	0.00	99.5%
3.B.1 Manure Management - Other	N_2O	12.34	0.00	99.5%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	8.19	0.00	99.6%
2.A.3 Glass Production	CO_2	7.41	0.00	99.6%
1.A.2 Manufacturing industries and construction-Peat	CO_2	6.78	0.00	99.7%
1.A.1. Energy industries-Solid fuels	CO_2	6.74	0.00	99.7%
2.F.4 Aerosols/metered dose inhalers	HFCs	6.20	0.00	99.7%
2.G Other product manufacture and use	N_2O	5.19	0.00	99.7%
2. E Electronic Industry	SF_6, NF_3	5.05	0.00	99.8%
1.A.4 Other sectors-Peat	CH_4	4.91	0.00	99.8%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	4.08	0.00	99.8%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	4.01	0.00	99.8%
2.C.1 Iron and Steel Production	CO_2	2.60	0.00	99.9%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Biomass	CH_4	2.56	0.00	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	2.20	0.00	99.9%
2.F.3 Fire Protection	HFCs	2.15	0.00	99.9%
5.C Incineration and Open Burning of Waste	CO_2	1.96	0.00	99.9%
1.A.3.a Domestic aviation	CO_2	1.94	0.00	99.9%
1.A.1. Energy industries-Liquid fuels	N_2O	1.83	0.00	99.9%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	1.79	0.00	99.9%
1.A.4 Other sectors-Solid fuels	N_2O	1.44	0.00	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	1.23	0.00	99.9%
2.G Other product manufacture and use	SF_6	1.22	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	1.04	0.00	100.0%
1.A.1. Energy industries-Liquid fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.90	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	N_2O	0.83	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	0.70	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.65	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.57	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	CH_4	0.46	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.44	0.00	100.0%
1.A.3.e Other transportation	CH_4	0.38	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	0.29	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.25	0.00	100.0%
1.A.3.c Railways	CH_4	0.25	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.25	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	0.23	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	0.14	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.12	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.08	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	0.06	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.06	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.03	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.03	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.03	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from	N_2O	0.02	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment*	*Cumulative total*
energy production				
1.A.3.a Domestic aviation	N_2O	0.02	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.00	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%
2.B.8.a Methanol	CO_2	0.00	0.00	100.0%
2.B.8.a Methanol	CH_4	0.00	0.00	100.0%
Total		***19,086.24***		

Approach 1 Trend Assessment for 2014

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
1.A.1.a Public electricity and heat production - Liquid Fuels	*CO_2*	*6,021.25*	*151.42*	*0.15*	*13.6%*	*13.6%*
4.A.1 Forest land remaining forest land - carbon stock change in biomass	*CO_2*	*-6,680.01*	*-8,447.64*	*0.12*	*11.6%*	*25.2%*
1.A.1.a Public electricity and heat production - Gaseous Fuels	*CO_2*	*5,806.05*	*1,532.96*	*0.09*	*8.6%*	*33.8%*
1.A.2 Manufacturing industries and construction-Liquid fuels	*CO_2*	*3,500.92*	*75.49*	*0.08*	*7.9%*	*41.8%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*2,760.55*	*305.30*	*0.06*	*5.5%*	*47.2%*
3.A.1 Enteric Fermentation - Cattle	*CH_4*	*4,101.48*	*1,570.66*	*0.05*	*4.5%*	*51.8%*
4.G Harvested wood products	*CO_2*	*-95.65*	*-1,399.35*	*0.05*	*4.3%*	*56.0%*
4.C.2 Land converted to grassland - net carbon stock change in mineral soils	*CO_2*	*-2,082.10*	*-2,830.85*	*0.05*	*4.3%*	*60.3%*
1.A.3.e Other transportation	*CO_2*	*1,764.11*	*236.35*	*0.04*	*3.4%*	*63.7%*
2.B.1 Ammonia Production	*CO_2*	*1,255.82*	*1,875.12*	*0.03*	*3.1%*	*66.8%*
1.A.2 Manufacturing industries and construction-Gaseous fuels	*CO_2*	*2,048.76*	*543.13*	*0.03*	*3.0%*	*69.8%*
1.A.4 Other sectors-Liquid fuels	*CO_2*	*1,429.58*	*182.35*	*0.03*	*2.8%*	*72.6%*
2.A.1 Cement Production	*CO_2*	*1,668.07*	*400.83*	*0.03*	*2.6%*	*75.2%*
1.A.3.b Road transportation	*CO_2*	*5,247.15*	*4,547.12*	*0.03*	*2.4%*	*77.5%*
1.A.4 Other sectors-Gaseous fuels	*CO_2*	*1,381.52*	*461.17*	*0.02*	*1.7%*	*79.3%*
4.D.1 Wetland remaining wetlands -net carbon stock change in organic soils	*CO_2*	*517.33*	*875.20*	*0.02*	*1.6%*	*80.9%*
2.F.1 Refrigeration and Air Conditioning Equipment	*HFCs*	*5.36*	*427.00*	*0.01*	*1.4%*	*82.3%*
4.E.2 Land converted to settlements	*CO_2*	*0.00*	*372.65*	*0.01*	*1.2%*	*83.5%*
1.A.2 Manufacturing industries and construction-Solid fuels	*CO_2*	*171.63*	*473.11*	*0.01*	*1.1%*	*84.6%*
2.B.2 Nitric Acid Production	*N_2O*	*893.01*	*331.76*	*0.01*	*1.0%*	*85.6%*
4.B.2 Land converted to cropland- carbon stock change in biomass	*CO_2*	*98.41*	*349.73*	*0.01*	*0.9%*	*86.5%*
4.A.1 Forest land remaining forest land - net carbon stock change in dead wood	*CO_2*	*-474.03*	*-600.29*	*0.01*	*0.8%*	*87.3%*
4.A.2 Land converted to forest land - carbon stock change in biomass	*CO_2*	*-585.97*	*-678.70*	*0.01*	*0.8%*	*88.1%*
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	*N_2O*	*139.12*	*353.56*	*0.01*	*0.8%*	*89.0%*
1.A.1.b Petroleum refining - Liquid Fuels	*CO_2*	*1,503.71*	*1,305.06*	*0.01*	*0.7%*	*89.6%*

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
4.A.2 Land converted to forest land - net carbon stock change in litter	***CO_2***	***-448.14***	***-516.68***	***0.01***	***0.6%***	***90.3%***
4.B.2 Land converted to cropland - net carbon stock change in mineral soils	***CO_2***	***4,615.45***	***3,525.13***	***0.01***	***0.6%***	***90.8%***
5.D Wastewater Treatment and Discharge	***CH_4***	***541.86***	***219.90***	***0.01***	***0.6%***	***91.4%***
2.A.4 Other process use of carbonates	***CO_2***	***239.52***	***17.46***	***0.01***	***0.5%***	***91.9%***
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	***N_2O***	***401.02***	***137.91***	***0.01***	***0.5%***	***92.4%***
4.A Forest land-4(II) organic soils	***CO_2***	***406.04***	***432.78***	***0.00***	***0.4%***	***92.8%***
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***414.48***	***178.89***	***0.00***	***0.4%***	***93.2%***
2.A.2 Lime Production	***CO_2***	***222.68***	***41.22***	***0.00***	***0.4%***	***93.6%***
1.A.1. Energy industries-Solid fuels	***CO_2***	***174.05***	***6.74***	***0.00***	***0.4%***	***94.0%***
1.A.3.e Other transportation	***N_2O***	***186.51***	***19.15***	***0.00***	***0.4%***	***94.4%***
3.B.1.3 Manure Management - Swine	***CH_4***	***236.72***	***71.18***	***0.00***	***0.3%***	***94.7%***
1.A.4 Other sectors-Biomass	***CH_4***	***70.28***	***150.36***	***0.00***	***0.3%***	***95.0%***
1.A.4 Other sectors-Peat	***CO_2***	***27.13***	***109.04***	***0.00***	***0.3%***	***95.3%***
4.B.1 Cropland remaining cropland - net carbon stock change in mineral soils	CO_2	195.63	-53.90	0.00	0.3%	95.6%
5.A Solid Waste Disposal	CH_4	1,028.83	834.33	0.00	0.3%	95.9%
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	CH_4	260.55	276.55	0.00	0.3%	96.2%
3.B.2 Manure Management - Indirect N_2O Emissions	N_2O	227.47	80.96	0.00	0.3%	96.4%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	82.56	0.00	0.3%	96.7%
1.A.3.c Railways	CO_2	349.97	174.13	0.00	0.3%	96.9%
1.A.4 Other sectors-Solid fuels	CH_4	128.56	14.27	0.00	0.3%	97.2%
3.B.2 Manure Management - Cattle	N_2O	201.63	75.65	0.00	0.2%	97.4%
3.B.1 Manure Management - Other	N_2O	109.48	12.34	0.00	0.2%	97.6%
2.G Other product manufacture and use	N_2O	96.05	5.19	0.00	0.2%	97.9%
4.F Other land	CO_2	0.00	50.11	0.00	0.2%	98.0%
4.B.1 Cropland remaining cropland - net carbon stock change in organic soils	CO_2	178.17	174.33	0.00	0.1%	98.2%
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	N_2O	223.03	118.24	0.00	0.1%	98.3%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
4.B.1 Cropland remaining cropland - carbon stock change in biomass	CO_2	77.39	-13.37	0.00	0.1%	98.4%
3.B.1.1 Manure Management - Cattle	CH_4	247.40	137.58	0.00	0.1%	98.6%
4.C.2 Land converted to grassland- net carbon stock change in organic soils	CO_2	45.06	63.87	0.00	0.1%	98.7%
3.B.1 Manure Management - Other	CH_4	75.24	27.10	0.00	0.1%	98.8%
4.C.1 Grassland remaining grassland	CO_2	80.81	81.95	0.00	0.1%	98.8%
1.A.1. Energy industries-Biomass	N_2O	0.63	22.95	0.00	0.1%	98.9%
1.A.3.b Road transportation	CH_4	48.11	14.81	0.00	0.1%	99.0%
3.A. Enteric Fermentation - Others	CH_4	118.06	66.74	0.00	0.1%	99.0%
1.A.4 Other sectors-Biomass	N_2O	12.97	27.63	0.00	0.1%	99.1%
5.B Biological Treatment of Solid Waste	CH_4	4.04	20.44	0.00	0.1%	99.1%
4.B Cropland	N_2O	392.99	301.17	0.00	0.1%	99.2%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	62.62	0.00	0.0%	99.2%
1.A.1. Energy industries-Biomass	CH_4	0.40	14.44	0.00	0.0%	99.3%
2.F.2 Foam Blowing Agents	HFCs	0.00	14.14	0.00	0.0%	99.3%
5.B Biological Treatment of Solid Waste	N_2O	2.89	14.62	0.00	0.0%	99.4%
4.D.2 Land converted to wetlands	CO_2	0.00	12.30	0.00	0.0%	99.4%
4.A Forest land	N_2O	33.55	36.09	0.00	0.0%	99.5%
3.H Urea Application	CO_2	35.68	15.72	0.00	0.0%	99.5%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	1.83	0.00	0.0%	99.5%
3.G Liming	CO_2	20.59	24.71	0.00	0.0%	99.6%
2.C.1 Iron and Steel Production	CO_2	16.98	2.60	0.00	0.0%	99.6%
1.A.1. Energy industries-Peat	CO_2	11.06	17.63	0.00	0.0%	99.6%
1.A.3.c Railways	N_2O	40.92	20.36	0.00	0.0%	99.6%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	1.44	0.00	0.0%	99.7%
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	N_2O	393.90	293.70	0.00	0.0%	99.7%
1.A.3.b Road transportation	N_2O	39.09	35.36	0.00	0.0%	99.7%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	6.78	0.00	0.0%	99.7%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.14	0.00	0.0%	99.8%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.85	6.20	0.00	0.0%	99.8%
4.B.2 Land converted to cropland- net carbon stock change in organic soils	CO_2	133.17	102.05	0.00	0.0%	99.8%
2. E Electronic Industry	SF_6, NF_3	0.00	5.05	0.00	0.0%	99.8%
1.A.4 Other sectors-Peat	CH_4	1.12	4.91	0.00	0.0%	99.8%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.93	0.00	0.0%	99.8%
1.A.3.a Domestic aviation	CO_2	8.16	1.94	0.00	0.0%	99.8%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	4.08	0.00	0.0%	99.9%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	4.01	0.00	0.0%	99.9%
5.D Wastewater Treatment and Discharge	N_2O	67.21	45.27	0.00	0.0%	99.9%
1.A.3.d Domestic Navigation	CO_2	15.49	14.51	0.00	0.0%	99.9%
1.A.3.e Other transportation	CH_4	4.30	0.38	0.00	0.0%	99.9%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.46	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.06	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	2.56	0.00	0.0%	99.9%
4.A.1 Forest land remaining forest land	CO_2	4.28	5.37	0.00	0.0%	99.9%
2.F.3 Fire Protection	HFCs	0.00	2.15	0.00	0.0%	99.9%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.23	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	2.20	0.00	0.0%	99.9%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	1.79	0.00	0.0%	100.0%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.83	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	1.04	0.00	0.0%	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.70	0.00	0.0%	100.0%
2.G Other product manufacture and use	SF_6	0.05	1.22	0.00	0.0%	100.0%
2.A.3 Glass Production	CO_2	11.70	7.41	0.00	0.0%	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.90	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	1.23	0.00	0.0%	100.0%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
4.D Wetlands	N_2O	11.92	9.54	0.00	0.0%	100.0%
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	N_2O	992.77	721.16	0.00	0.0%	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.57	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.03	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.29	0.00	0.0%	100.0%
4.C Grassland	N_2O	2.31	2.12	0.00	0.0%	100.0%
4.A Forest land	CH_4	0.71	0.95	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.25	0.00	0.0%	100.0%
4.C Grassland	CH_4	2.12	1.95	0.00	0.0%	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.44	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.25	0.00	0.0%	100.0%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	8.19	0.00	0.0%	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.65	0.00	0.0%	100.0%
1.A.3.c Railways	CH_4	0.50	0.25	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.08	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.02	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.12	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	CO_2	2.66	1.96	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.03	0.00	0.0%	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.02	0.00	0.0%	100.0%
4.B Cropland	CH_4	0.05	0.05	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.03	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.06	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	0.00	0.0%	100.0%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CO_2	24.35	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CH_4	5.24	0.00	0.00	0.0%	100.0%
4.E.1 Settlements remaining settlements	CO_2	0.00	0.00	0.00	0.0%	100.0%
Total		***43,635.17***	***10,942.81***	***1.07***	***1.00***	

Approach 1 Trend Assessment for 2014 using a subset (LULUCF was excluded from analysis)

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
1.A.3.b Road transportation	*CO_2*	*5,247.15*	*4,547.12*	*0.31*	*16.5%*	*16.5%*
1.A.1.a Public electricity and heat production - Liquid Fuels	*CO_2*	*6,021.25*	*151.42*	*0.30*	*15.5%*	*32.0%*
2.B.1 Ammonia Production	*CO_2*	*1,255.82*	*1,875.12*	*0.18*	*9.3%*	*41.3%*
1.A.2 Manufacturing industries and construction-Liquid fuels	*CO_2*	*3,500.92*	*75.49*	*0.17*	*9.1%*	*50.4%*
1.A.1.a Public electricity and heat production - Gaseous Fuels	*CO_2*	*5,806.05*	*1,532.96*	*0.11*	*5.5%*	*56.0%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*2,760.55*	*305.30*	*0.11*	*5.5%*	*61.5%*
1.A.1.b Petroleum refining - Liquid Fuels	*CO_2*	*1,503.71*	*1,305.06*	*0.09*	*4.7%*	*66.2%*
1.A.3.e Other transportation	*CO_2*	*1,764.11*	*236.35*	*0.06*	*3.2%*	*69.5%*
2.F.1 Refrigeration and Air Conditioning Equipment	*HFCs*	*5.36*	*427.00*	*0.06*	*2.9%*	*72.4%*
5.A Solid Waste Disposal	*CH_4*	*1,028.83*	*834.33*	*0.05*	*2.8%*	*75.2%*
1.A.2 Manufacturing industries and construction-Solid fuels	*CO_2*	*171.63*	*473.11*	*0.05*	*2.7%*	*78.0%*
1.A.4 Other sectors-Liquid fuels	*CO_2*	*1,429.58*	*182.35*	*0.05*	*2.7%*	*80.7%*
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	*N_2O*	*992.77*	*721.16*	*0.04*	*2.2%*	*82.8%*
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	*N_2O*	*139.12*	*353.56*	*0.04*	*2.0%*	*84.9%*
1.A.2 Manufacturing industries and construction-Gaseous fuels	*CO_2*	*2,048.76*	*543.13*	*0.04*	*1.9%*	*86.8%*
2.A.1 Cement Production	*CO_2*	*1,668.07*	*400.83*	*0.04*	*1.9%*	*88.7%*
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	*CH_4*	*260.55*	*276.55*	*0.02*	*1.2%*	*89.8%*
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	*N_2O*	*393.90*	*293.70*	*0.02*	*0.9%*	*90.7%*
1.A.4 Other sectors-Biomass	*CH_4*	*70.28*	*150.36*	*0.02*	*0.8%*	*91.6%*
1.A.4 Other sectors-Peat	*CO_2*	*27.13*	*109.04*	*0.01*	*0.7%*	*92.2%*
1.A.4 Other sectors-Gaseous fuels	*CO_2*	*1,381.52*	*461.17*	*0.01*	*0.7%*	*92.9%*
3.A.1 Enteric Fermentation - Cattle	*CH_4*	*4,101.48*	*1,570.66*	*0.01*	*0.6%*	*93.5%*

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
1.A.1. Energy industries-Other fossil fuels	***CO_2***	***0.00***	***82.56***	***0.01***	***0.6%***	***94.0%***
2.A.4 Other process use of carbonates	***CO_2***	***239.52***	***17.46***	***0.01***	***0.5%***	***94.6%***
1.A.1. Energy industries-Solid fuels	***CO_2***	***174.05***	***6.74***	***0.01***	***0.4%***	***95.0%***
1.A.3.e Other transportation	***N_2O***	***186.51***	***19.15***	***0.01***	***0.4%***	***95.4%***
2.A.2 Lime Production	CO_2	222.68	41.22	0.01	0.3%	95.7%
1.A.4 Other sectors-Solid fuels	CH_4	128.56	14.27	0.00	0.3%	96.0%
3.B.1.1 Manure Management - Cattle	CH_4	247.40	137.58	0.00	0.3%	96.2%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	62.62	0.00	0.2%	96.5%
2.G Other product manufacture and use	N_2O	96.05	5.19	0.00	0.2%	96.7%
1.A.3.c Railways	CO_2	349.97	174.13	0.00	0.2%	96.9%
3.B.1 Manure Management - Other	N_2O	109.48	12.34	0.00	0.2%	97.2%
2.B.2 Nitric Acid Production	N_2O	893.01	331.76	0.00	0.2%	97.4%
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	N_2O	223.03	118.24	0.00	0.2%	97.6%
3.B.1.3 Manure Management - Swine	CH_4	236.72	71.18	0.00	0.2%	97.7%
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	N_2O	401.02	137.91	0.00	0.2%	97.9%
1.A.1. Energy industries-Biomass	N_2O	0.63	22.95	0.00	0.2%	98.0%
1.A.4 Other sectors-Biomass	N_2O	12.97	27.63	0.00	0.2%	98.2%
1.A.3.b Road transportation	N_2O	39.09	35.36	0.00	0.1%	98.3%
3.A. Enteric Fermentation - Others	CH_4	118.06	66.74	0.00	0.1%	98.5%
5.B Biological Treatment of Solid Waste	CH_4	4.04	20.44	0.00	0.1%	98.6%
5.D Wastewater Treatment and Discharge	N_2O	67.21	45.27	0.00	0.1%	98.7%
3.G Liming	CO_2	20.59	24.71	0.00	0.1%	98.8%
1.A.1. Energy industries-Biomass	CH_4	0.40	14.44	0.00	0.1%	98.9%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
2.F.2 Foam Blowing Agents	HFCs	0.00	14.14	0.00	0.1%	99.0%
5.B Biological Treatment of Solid Waste	N_2O	2.89	14.62	0.00	0.1%	99.1%
1.A.1. Energy industries-Peat	CO_2	11.06	17.63	0.00	0.1%	99.2%
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	N_2O	414.48	178.89	0.00	0.1%	99.3%
3.B.2 Manure Management - Indirect N_2O Emissions	N_2O	227.47	80.96	0.00	0.1%	99.3%
1.A.3.d Domestic Navigation	CO_2	15.49	14.51	0.00	0.1%	99.4%
3.B.2 Manure Management - Cattle	N_2O	201.63	75.65	0.00	0.0%	99.4%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.85	6.20	0.00	0.0%	99.5%
2. E Electronic Industry	SF_6, NF_3	0.00	5.05	0.00	0.0%	99.5%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	1.83	0.00	0.0%	99.5%
1.A.3.b Road transportation	CH_4	48.11	14.81	0.00	0.0%	99.6%
1.A.4 Other sectors-Peat	CH_4	1.12	4.91	0.00	0.0%	99.6%
2.C.1 Iron and Steel Production	CO_2	16.98	2.60	0.00	0.0%	99.6%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	4.08	0.00	0.0%	99.7%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	1.44	0.00	0.0%	99.7%
1.A.3.c Railways	N_2O	40.92	20.36	0.00	0.0%	99.7%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	8.19	0.00	0.0%	99.7%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	4.01	0.00	0.0%	99.8%
3.B.1 Manure Management - Other	CH_4	75.24	27.10	0.00	0.0%	99.8%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.14	0.00	0.0%	99.8%
2.A.3 Glass Production	CO_2	11.70	7.41	0.00	0.0%	99.8%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	2.56	0.00	0.0%	99.8%
2.F.3 Fire Protection	HFCs	0.00	2.15	0.00	0.0%	99.9%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	2.20	0.00	0.0%	99.9%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.93	0.00	0.0%	99.9%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	1.79	0.00	0.0%	99.9%
1.A.3.e Other transportation	CH_4	4.30	0.38	0.00	0.0%	99.9%
1.A.3.a Domestic aviation	CO_2	8.16	1.94	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.06	0.00	0.0%	99.9%
3.H Urea Application	CO_2	35.68	15.72	0.00	0.0%	99.9%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.46	0.00	0.0%	99.9%
2.G Other product manufacture and use	SF_6	0.05	1.22	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	1.23	0.00	0.0%	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.90	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	CO_2	2.66	1.96	0.00	0.0%	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.23	0.00	0.0%	100.0%
5.D Wastewater Treatment and Discharge	CH_4	541.86	219.90	0.00	0.0%	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.57	0.00	0.0%	100.0%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.83	0.00	0.0%	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.65	0.00	0.0%	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.44	0.00	0.0%	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.70	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	6.78	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.03	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	1.04	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.29	0.00	0.0%	100.0%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment*	*% Contribution to Trend*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.25	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.12	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.08	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.25	0.00	0.0%	100.0%
1.A.3.c Railways	CH_4	0.50	0.25	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.06	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.03	0.00	0.0%	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.02	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.02	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.03	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	0.00	0.0%	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CO_2	24.35	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CH_4	5.24	0.00	0.00	0.0%	100.0%
Total		***47,205.70***	***19,086.24***	***1.91***	***1.00***	

Approach 2 Level Assessment for 1990

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
4.B.2 Land converted to cropland - net carbon stock change in mineral soils	*CO_2*	*4,615.45*	*0.22*	*21.7%*
4.A.1 Forest land remaining forest land - carbon stock change in biomass	*CO_2*	*-6,680.01*	*0.12*	*34.1%*
4.C.2 Land converted to grassland - net carbon stock change in mineral soils	*CO_2*	*-2,082.10*	*0.10*	*43.9%*
5.A Solid Waste Disposal	*CH_4*	*1,028.83*	*0.07*	*50.7%*
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	*N_2O*	*992.77*	*0.04*	*55.1%*
3.A.1 Enteric Fermentation - Cattle	*CH_4*	*4,101.48*	*0.04*	*59.5%*
3.B.2 Manure Management - Indirect N_2O Emissions	*N_2O*	*227.47*	*0.03*	*62.4%*
5.D Wastewater Treatment and Discharge	*CH_4*	*541.86*	*0.03*	*65.1%*
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	*N_2O*	*393.90*	*0.03*	*67.7%*
4.D.1 Wetlands remaining wetlands -net carbon stock change in organic soils	*CO_2*	*517.33*	*0.02*	*69.9%*
4.A Forest land-4(II) organic soils	*CO_2*	*406.04*	*0.02*	*71.8%*
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	*N_2O*	*414.48*	*0.02*	*73.7%*
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	*N_2O*	*401.02*	*0.02*	*75.5%*
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	*N_2O*	*223.03*	*0.01*	*76.9%*
4.A.2 Land converted to forest land - carbon stock change in biomass	*CO_2*	*-585.97*	*0.01*	*78.1%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*2,760.55*	*0.01*	*79.2%*
1.A.1.a Public electricity and heat production - Liquid Fuels	*CO_2*	*6,021.25*	*0.01*	*80.2%*
3.B.2 Manure Management - Cattle	*N_2O*	*201.63*	*0.01*	*81.2%*
1.A.1.a Public electricity and heat production - Gaseous Fuels	*CO_2*	*5,806.05*	*0.01*	*82.2%*
4.B.1 Cropland remaining cropland - net carbon stock change in mineral soils	*CO_2*	*195.63*	*0.01*	*83.1%*
4.A.2 Land converted to forest land - net carbon stock change in litter	*CO_2*	*-448.14*	*0.01*	*84.0%*
4.A.1 Forest land remaining forest land - net carbon stock change in dead wood	*CO_2*	*-474.03*	*0.01*	*84.9%*
4.B.1 Cropland remaining cropland - net carbon stock change in organic soils	*CO_2*	*178.17*	*0.01*	*85.7%*
1.A.3.b Road transportation	*CO_2*	*5,247.15*	*0.01*	*86.5%*

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.3.e Other transportation	***CO_2***	***1,764.11***	***0.01***	***87.3%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***260.55***	***0.01***	***88.0%***
4.B.2 Land converted to cropland- net carbon stock change in organic soils	***CO_2***	***133.17***	***0.01***	***88.6%***
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	***N_2O***	***139.12***	***0.01***	***89.2%***
1.A.2 Manufacturing industries and construction-Liquid fuels	***CO_2***	***3,500.92***	***0.01***	***89.8%***
4.B Cropland	***N_2O***	***392.99***	***0.01***	***90.4%***
1.A.4 Other sectors-Biomass	CH_4	70.28	0.01	90.9%
3.B.1 Manure Management - Other	N_2O	109.48	0.01	91.5%
1.A.3.e Other transportation	N_2O	186.51	0.00	92.0%
2.B.2 Nitric Acid Production	N_2O	893.01	0.00	92.4%
2.A.1 Cement Production	CO_2	1,668.07	0.00	92.9%
4.B.2 Land converted to cropland- carbon stock change in biomass	CO_2	98.41	0.00	93.4%
4.C.1 Grassland remaining grassland	CO_2	80.81	0.00	93.8%
4.B.1 Cropland remaining cropland - carbon stock change in biomass	CO_2	77.39	0.00	94.1%
2.A.2 Lime Production	CO_2	222.68	0.00	94.5%
3.B.1.1 Manure Management - Cattle	CH_4	247.40	0.00	94.8%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	2,048.76	0.00	95.2%
3.B.1.3 Manure Management - Swine	CH_4	236.72	0.00	95.5%
1.A.4 Other sectors-Solid fuels	CH_4	128.56	0.00	95.8%
4.G Harvested wood products	CO_2	-95.65	0.00	96.1%
4.A Forest land	N_2O	33.55	0.00	96.5%
1.A.4 Other sectors-Liquid fuels	CO_2	1,429.58	0.00	96.7%
1.A.4 Other sectors-Gaseous fuels	CO_2	1,381.52	0.00	97.0%
1.A.1.b Petroleum refining - Liquid Fuels	CO_2	1,503.71	0.00	97.3%
2.G Other product manufacture and use	N_2O	96.05	0.00	97.5%
4.C.2 Land converted to grassland- net carbon stock change in organic soils	CO_2	45.06	0.00	97.7%
2.B.1 Ammonia Production	CO_2	1,255.82	0.00	97.9%
5.D Wastewater Treatment and Discharge	N_2O	67.21	0.00	98.1%
1.A.3.b Road transportation	CH_4	48.11	0.00	98.3%
1.A.3.c Railways	N_2O	40.92	0.00	98.5%
1.A.3.c Railways	CO_2	349.97	0.00	98.6%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
3.A. Enteric Fermentation - Others	CH_4	118.06	0.00	98.7%
3.H Urea Application	CO_2	35.68	0.00	98.8%
3.B.1 Manure Management - Other	CH_4	75.24	0.00	98.9%
1.A.4 Other sectors-Biomass	N_2O	12.97	0.00	99.1%
1.A.3.b Road transportation	N_2O	39.09	0.00	99.2%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	0.00	99.3%
2.A.4 Other process use of carbonates	CO_2	239.52	0.00	99.3%
4.D Wetlands	N_2O	11.92	0.00	99.4%
1.A.1. Energy industries-Solid fuels	CO_2	174.05	0.00	99.5%
1.A.2 Manufacturing industries and construction-Solid fuels	CO_2	171.63	0.00	99.5%
3.G Liming	CO_2	20.59	0.00	99.6%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	0.00	99.6%
2.B.8.a Methanol	CO_2	24.35	0.00	99.7%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	0.00	99.7%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	0.00	99.7%
5.B Biological Treatment of Solid Waste	CH_4	4.04	0.00	99.8%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.00	99.8%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.00	99.8%
5.B Biological Treatment of Solid Waste	N_2O	2.89	0.00	99.8%
2.C.1 Iron and Steel Production	CO_2	16.98	0.00	99.8%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.00	99.8%
1.A.4 Other sectors-Peat	CO_2	27.13	0.00	99.8%
5.C Incineration and Open Burning of Waste	CO_2	2.66	0.00	99.8%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.00	99.9%
1.A.3.e Other transportation	CH_4	4.30	0.00	99.9%
4.C Grassland	N_2O	2.31	0.00	99.9%
2.B.8.a Methanol	CH_4	5.24	0.00	99.9%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.00	99.9%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	0.00	99.9%
4.A.1 Forest land remaining forest land	CO_2	4.28	0.00	99.9%
4.C Grassland	CH_4	2.12	0.00	99.9%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.00	99.9%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.00	99.9%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	0.00	99.9%
2.A.3 Glass Production	CO_2	11.70	0.00	99.9%
1.A.1. Energy industries-Biomass	N_2O	0.63	0.00	99.9%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	0.00	100.0%
1.A.3.d Domestic Navigation	CO_2	15.49	0.00	100.0%
1.A.3.a Domestic aviation	CO_2	8.16	0.00	100.0%
1.A.1. Energy industries-Peat	CO_2	11.06	0.00	100.0%
1.A.1. Energy industries-Biomass	CH_4	0.40	0.00	100.0%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	0.00	100.0%
1.A.4 Other sectors-Peat	CH_4	1.12	0.00	100.0%
4.A Forest land	CH_4	0.71	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	0.00	100.0%
1.A.3.c Railways	CH_4	0.50	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	0.00	100.0%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.00	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
4.B Cropland	CH_4	0.05	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%
2. E Electronic Industry	SF_6, NF_3	0.00	0.00	100.0%
2.F.1 Refrigeration and Air Conditioning Equipment	HFCs	0.00	0.00	100.0%
2.F.2 Foam Blowing Agents	HFCs	0.00	0.00	100.0%
2.F.3 Fire Protection	HFCs	0.00	0.00	100.0%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.00	0.00	100.0%
2.G Other product manufacture and use	SF_6	0.00	0.00	100.0%
4.D.2 Land converted to wetlands	CO_2	0.00	0.00	100.0%
4.E.1 Settlements remaining settlements	CO_2	0.00	0.00	100.0%
4.E.2 Land converted to settlements	CO_2	0.00	0.00	100.0%
4.F Other land	CO_2	0.00	0.00	100.0%
Total		***45,618.91***		

Approach 2 Level Assessment for 1990 using a subset (LULUCF was excluded from analysis)

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
5.A Solid Waste Disposal	***CH_4***	***1,028.83***	***0.15***	***15.4%***
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	***N_2O***	***992.77***	***0.10***	***25.6%***
3.A.1 Enteric Fermentation - Cattle	***CH_4***	***4,101.48***	***0.10***	***35.6%***
3.B.2 Manure Management - Indirect N_2O Emissions	***N_2O***	***227.47***	***0.07***	***42.3%***
5.D Wastewater Treatment and Discharge	***CH_4***	***541.86***	***0.06***	***48.3%***
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	***N_2O***	***393.90***	***0.06***	***54.2%***
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***414.48***	***0.04***	***58.4%***
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	***N_2O***	***401.02***	***0.04***	***62.5%***
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	***N_2O***	***223.03***	***0.03***	***65.8%***
1.A.4 Other sectors-Solid fuels	***CO_2***	***2,760.55***	***0.02***	***68.3%***
1.A.1.a Public electricity and heat production - Liquid Fuels	***CO_2***	***6,021.25***	***0.02***	***70.6%***
3.B.2 Manure Management - Cattle	***N_2O***	***201.63***	***0.02***	***72.8%***
1.A.1.a Public electricity and heat production - Gaseous Fuels	***CO_2***	***5,806.05***	***0.02***	***75.0%***
1.A.3.b Road transportation	***CO_2***	***5,247.15***	***0.02***	***76.8%***
1.A.3.e Other transportation	***CO_2***	***1,764.11***	***0.02***	***78.6%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***260.55***	***0.02***	***80.1%***
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	***N_2O***	***139.12***	***0.01***	***81.5%***
1.A.2 Manufacturing industries and construction-Liquid fuels	***CO_2***	***3,500.92***	***0.01***	***82.9%***
1.A.4 Other sectors-Biomass	***CH_4***	***70.28***	***0.01***	***84.2%***
3.B.1 Manure Management - Other	***N_2O***	***109.48***	***0.01***	***85.4%***
1.A.3.e Other transportation	***N_2O***	***186.51***	***0.01***	***86.5%***
2.B.2 Nitric Acid Production	***N_2O***	***893.01***	***0.01***	***87.6%***
2.A.1 Cement Production	***CO_2***	***1,668.07***	***0.01***	***88.7%***
2.A.2 Lime Production	***CO_2***	***222.68***	***0.01***	***89.5%***
3.B.1.1 Manure Management - Cattle	***CH_4***	***247.40***	***0.01***	***90.3%***
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	2,048.76	0.01	91.1%
3.B.1.3 Manure Management - Swine	CH_4	236.72	0.01	91.9%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.4 Other sectors-Solid fuels	CH_4	128.56	0.01	92.6%
1.A.4 Other sectors-Liquid fuels	CO_2	1,429.58	0.01	93.3%
1.A.4 Other sectors-Gaseous fuels	CO_2	1,381.52	0.01	93.9%
1.A.1.b Petroleum refining - Liquid Fuels	CO_2	1,503.71	0.01	94.5%
2.G Other product manufacture and use	N_2O	96.05	0.00	95.0%
2.B.1 Ammonia Production	CO_2	1,255.82	0.00	95.5%
5.D Wastewater Treatment and Discharge	N_2O	67.21	0.00	95.9%
1.A.3.b Road transportation	CH_4	48.11	0.00	96.4%
1.A.3.c Railways	N_2O	40.92	0.00	96.7%
1.A.3.c Railways	CO_2	349.97	0.00	97.0%
3.A. Enteric Fermentation - Others	CH_4	118.06	0.00	97.3%
3.H Urea Application	CO_2	35.68	0.00	97.6%
3.B.1 Manure Management - Other	CH_4	75.24	0.00	97.8%
1.A.4 Other sectors-Biomass	N_2O	12.97	0.00	98.1%
1.A.3.b Road transportation	N_2O	39.09	0.00	98.3%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	0.00	98.5%
2.A.4 Other process use of carbonates	CO_2	239.52	0.00	98.7%
1.A.1. Energy industries-Solid fuels	CO_2	174.05	0.00	98.8%
1.A.2 Manufacturing industries and construction-Solid fuels	CO_2	171.63	0.00	99.0%
3.G Liming	CO_2	20.59	0.00	99.1%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	0.00	99.2%
2.B.8.a Methanol	CO_2	24.35	0.00	99.3%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	0.00	99.4%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	0.00	99.4%
5.B Biological Treatment of Solid Waste	CH_4	4.04	0.00	99.5%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.00	99.5%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.00	99.6%
5.B Biological Treatment of Solid Waste	N_2O	2.89	0.00	99.6%
2.C.1 Iron and Steel Production	CO_2	16.98	0.00	99.6%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.00	99.7%
1.A.4 Other sectors-Peat	CO_2	27.13	0.00	99.7%
5.C Incineration and Open Burning of Waste	CO_2	2.66	0.00	99.7%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.00	99.7%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.3.e Other transportation	CH_4	4.30	0.00	99.8%
2.B.8.a Methanol	CH_4	5.24	0.00	99.8%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.00	99.8%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	0.00	99.8%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.00	99.8%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.00	99.8%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	0.00	99.9%
2.A.3 Glass Production	CO_2	11.70	0.00	99.9%
1.A.1. Energy industries-Biomass	N_2O	0.63	0.00	99.9%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	0.00	99.9%
1.A.3.d Domestic Navigation	CO_2	15.49	0.00	99.9%
1.A.3.a Domestic aviation	CO_2	8.16	0.00	99.9%
1.A.1. Energy industries-Peat	CO_2	11.06	0.00	99.9%
1.A.1. Energy industries-Biomass	CH_4	0.40	0.00	99.9%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	0.00	99.9%
1.A.4 Other sectors-Peat	CH_4	1.12	0.00	99.9%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	0.00	100.0%
1.A.3.c Railways	CH_4	0.50	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	0.00	100.0%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.00	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%
2. E Electronic Industry	SF_6, NF_3	0.00	0.00	100.0%
2.F.1 Refrigeration and Air Conditioning Equipment	HFCs	0.00	0.00	100.0%
2.F.2 Foam Blowing Agents	HFCs	0.00	0.00	100.0%
2.F.3 Fire Protection	HFCs	0.00	0.00	100.0%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.00	0.00	100.0%
2.G Other product manufacture and use	SF_6	0.00	0.00	100.0%
Total		***47,199.44***		

Approach 2 Level Assessment for 2014

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
4.B.2 Land converted to cropland - net carbon stock change in mineral soils	***CO_2***	***3,525.13***	***0.18***	***18.0%***
4.A.1 Forest land remaining forest land - carbon stock change in biomass	***CO_2***	***-8,447.64***	***0.17***	***35.1%***
4.C.2 Land converted to grassland - net carbon stock change in mineral soils	***CO_2***	***-2,830.85***	***0.14***	***49.6%***
5.A Solid Waste Disposal	***CH_4***	***834.33***	***0.06***	***55.5%***
4.G Harvested wood products	***CO_2***	***-1,399.35***	***0.05***	***60.4%***
4.D.1 Wetlands remaining wetlands -net carbon stock change in organic soils	***CO_2***	***875.20***	***0.04***	***64.5%***
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	***N_2O***	***721.16***	***0.04***	***68.0%***
4.A Forest land-4(II) organic soils	***CO_2***	***432.78***	***0.02***	***70.2%***
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	***N_2O***	***293.70***	***0.02***	***72.3%***
3.A.1 Enteric Fermentation - Cattle	***CH_4***	***1,570.66***	***0.02***	***74.1%***
4.B.2 Land converted to cropland- carbon stock change in biomass	***CO_2***	***349.73***	***0.02***	***75.9%***
4.E.2 Land converted to settlements	***CO_2***	***372.65***	***0.02***	***77.7%***
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	***N_2O***	***353.56***	***0.02***	***79.4%***
4.A.2 Land converted to forest land - carbon stock change in biomass	***CO_2***	***-678.70***	***0.02***	***80.9%***
1.A.4 Other sectors-Biomass	***CH_4***	***150.36***	***0.01***	***82.2%***
4.A.1 Forest land remaining forest land - net carbon stock change in dead wood	***CO_2***	***-600.29***	***0.01***	***83.4%***
5.D Wastewater Treatment and Discharge	***CH_4***	***219.90***	***0.01***	***84.6%***
4.A.2 Land converted to forest land - net carbon stock change in litter	***CO_2***	***-516.68***	***0.01***	***85.8%***
3.B.2 Manure Management - Indirect N_2O Emissions	***N_2O***	***80.96***	***0.01***	***86.9%***
4.B.1 Cropland remaining cropland - net carbon stock change in organic soils	***CO_2***	***174.33***	***0.01***	***87.8%***
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***178.89***	***0.01***	***88.7%***
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	***N_2O***	***118.24***	***0.01***	***89.5%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***276.55***	***0.01***	***90.3%***
1.A.3.b Road transportation	CO_2	4,547.12	0.01	91.0%
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	N_2O	137.91	0.01	91.7%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
2.F.1 Refrigeration and Air Conditioning Equipment	HFCs	427.00	0.01	92.4%
4.B.2 Land converted to cropland- net carbon stock change in organic soils	CO_2	102.05	0.01	92.9%
4.B Cropland	N_2O	301.17	0.00	93.4%
4.C.1 Grassland remaining grassland	CO_2	81.95	0.00	93.8%
3.B.2 Manure Management - Cattle	N_2O	75.65	0.00	94.2%
4.A Forest land	N_2O	36.09	0.00	94.5%
2.B.1 Ammonia Production	CO_2	1,875.12	0.00	94.9%
4.C.2 Land converted to grassland- net carbon stock change in organic soils	CO_2	63.87	0.00	95.2%
1.A.1.a Public electricity and heat production - Gaseous Fuels	CO_2	1,532.96	0.00	95.5%
4.B.1 Cropland remaining cropland - net carbon stock change in mineral soils	CO_2	-53.90	0.00	95.7%
4.F Other land	CO_2	50.11	0.00	96.0%
1.A.4 Other sectors-Biomass	N_2O	27.63	0.00	96.3%
1.A.1.b Petroleum refining - Liquid Fuels	CO_2	1,305.06	0.00	96.5%
3.B.1.1 Manure Management - Cattle	CH_4	137.58	0.00	96.7%
1.A.1. Energy industries-Biomass	N_2O	22.95	0.00	96.9%
1.A.2 Manufacturing industries and construction-Solid fuels	CO_2	473.11	0.00	97.1%
2.B.2 Nitric Acid Production	N_2O	331.76	0.00	97.3%
5.D Wastewater Treatment and Discharge	N_2O	45.27	0.00	97.4%
1.A.4 Other sectors-Solid fuels	CO_2	305.30	0.00	97.6%
1.A.1. Energy industries-Biomass	CH_4	14.44	0.00	97.7%
5.B Biological Treatment of Solid Waste	CH_4	20.44	0.00	97.8%
2.A.1 Cement Production	CO_2	400.83	0.00	97.9%
1.A.3.e Other transportation	CO_2	236.35	0.00	98.1%
3.B.1.3 Manure Management - Swine	CH_4	71.18	0.00	98.2%
2. D Non-energy products from fuels and solvent use	CO_2	62.62	0.00	98.3%
1.A.4 Other sectors-Gaseous fuels	CO_2	461.17	0.00	98.4%
1.A.3.b Road transportation	N_2O	35.36	0.00	98.5%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	543.13	0.00	98.6%
5.B Biological Treatment of Solid Waste	N_2O	14.62	0.00	98.7%
1.A.3.c Railways	N_2O	20.36	0.00	98.7%
3.A. Enteric Fermentation - Others	CH_4	66.74	0.00	98.8%
2.A.2 Lime Production	CO_2	41.22	0.00	98.9%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
3.G Liming	CO_2	24.71	0.00	99.0%
1.A.3.c Railways	CO_2	174.13	0.00	99.0%
4.B.1 Cropland remaining cropland - carbon stock change in biomass	CO_2	-13.37	0.00	99.1%
1.A.3.b Road transportation	CH_4	14.81	0.00	99.2%
3.B.1 Manure Management - Other	N_2O	12.34	0.00	99.2%
4.D Wetlands	N_2O	9.54	0.00	99.3%
4.D.2 Land converted to wetlands	CO_2	12.30	0.00	99.4%
1.A.3.e Other transportation	N_2O	19.15	0.00	99.4%
3.H Urea Application	CO_2	15.72	0.00	99.5%
1.A.4 Other sectors-Peat	CO_2	109.04	0.00	99.5%
3.B.1 Manure Management - Other	CH_4	27.10	0.00	99.6%
1.A.4 Other sectors-Solid fuels	CH_4	14.27	0.00	99.6%
1.A.4 Other sectors-Liquid fuels	CO_2	182.35	0.00	99.6%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	4.08	0.00	99.7%
2.F.2 Foam Blowing Agents	HFCs	14.14	0.00	99.7%
1.A.1. Energy industries-Other fossil fuels	CO_2	82.56	0.00	99.7%
1.A.1.a Public electricity and heat production - Liquid Fuels	CO_2	151.42	0.00	99.8%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	8.19	0.00	99.8%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	2.56	0.00	99.8%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	4.01	0.00	99.8%
1.A.4 Other sectors-Peat	CH_4	4.91	0.00	99.8%
1.A.2 Manufacturing industries and construction-Liquid fuels	CO_2	75.49	0.00	99.9%
2.G Other product manufacture and use	N_2O	5.19	0.00	99.9%
4.A.1 Forest land remaining forest land	CO_2	5.37	0.00	99.9%
4.C Grassland	N_2O	2.12	0.00	99.9%
5.C Incineration and Open Burning of Waste	CO_2	1.96	0.00	99.9%
4.C Grassland	CH_4	1.95	0.00	99.9%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	1.79	0.00	99.9%
1.A.1. Energy industries-Peat	CO_2	17.63	0.00	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	2.20	0.00	99.9%
2.A.4 Other process use of carbonates	CO_2	17.46	0.00	99.9%
1.A.1. Energy industries-Liquid fuels	N_2O	1.83	0.00	99.9%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.3.d Domestic Navigation	CO_2	14.51	0.00	99.9%
4.A Forest land	CH_4	0.95	0.00	99.9%
1.A.4 Other sectors-Solid fuels	N_2O	1.44	0.00	99.9%
2.A.3 Glass Production	CO_2	7.41	0.00	100.0%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	1.23	0.00	100.0%
2.F.3 Fire Protection	HFCs	2.15	0.00	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.65	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	1.04	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CO_2	6.78	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CO_2	6.74	0.00	100.0%
1.A.1. Energy industries-Liquid fuels	CH_4	0.93	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.90	0.00	100.0%
2.F.4 Aerosols/metered dose inhalers	HFCs	6.20	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	N_2O	0.83	0.00	100.0%
2.C.1 Iron and Steel Production	CO_2	2.60	0.00	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	0.70	0.00	100.0%
2. E Electronic Industry	SF_6, NF_3	5.05	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.57	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	CH_4	0.46	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.44	0.00	100.0%
1.A.3.a Domestic aviation	CO_2	1.94	0.00	100.0%
1.A.3.c Railways	CH_4	0.25	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	0.29	0.00	100.0%
1.A.3.e Other transportation	CH_4	0.38	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.25	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.25	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	0.23	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.12	0.00	100.0%
2.G Other product manufacture and use	SF_6	1.22	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	0.14	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.06	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.08	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid	CH_4	0.06	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
fuels				
1.A.3.a Domestic aviation	N_2O	0.02	0.00	100.0%
1.A.3.d Domestic Navigation	CH_4	0.03	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.03	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.03	0.00	100.0%
4.B Cropland	CH_4	0.05	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.02	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%
2.B.8.a Methanol	CO_2	0.00	0.00	100.0%
2.B.8.a Methanol	CH_4	0.00	0.00	100.0%
4.E.1 Settlements remaining settlements	CO_2	0.00	0.00	100.0%
Total		***10,942.81***		

Approach 2 Level Assessment for 2014 using a subset (LULUCF was excluded from analysis)

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
5.A Solid Waste Disposal	***CH_4***	***834.33***	***0.21***	***21.2%***
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	***N_2O***	***721.16***	***0.12***	***33.7%***
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	***N_2O***	***293.70***	***0.07***	***41.2%***
3.A.1 Enteric Fermentation - Cattle	***CH_4***	***1,570.66***	***0.07***	***47.7%***
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	***N_2O***	***353.56***	***0.06***	***53.8%***
1.A.4 Other sectors-Biomass	***CH_4***	***150.36***	***0.05***	***58.6%***
5.D Wastewater Treatment and Discharge	***CH_4***	***219.90***	***0.04***	***62.7%***
3.B.2 Manure Management - Indirect N_2O Emissions	***N_2O***	***80.96***	***0.04***	***66.7%***
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***178.89***	***0.03***	***69.8%***
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	***N_2O***	***118.24***	***0.03***	***72.8%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***276.55***	***0.03***	***75.6%***
1.A.3.b Road transportation	***CO_2***	***4,547.12***	***0.03***	***78.2%***
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	***N_2O***	***137.91***	***0.02***	***80.6%***
2.F.1 Refrigeration and Air Conditioning Equipment	***HFCs***	***427.00***	***0.02***	***83.0%***
3.B.2 Manure Management - Cattle	***N_2O***	***75.65***	***0.01***	***84.4%***
2.B.1 Ammonia Production	***CO_2***	***1,875.12***	***0.01***	***85.6%***
1.A.1.a Public electricity and heat production - Gaseous Fuels	***CO_2***	***1,532.96***	***0.01***	***86.6%***
1.A.4 Other sectors-Biomass	***N_2O***	***27.63***	***0.01***	***87.5%***
1.A.1.b Petroleum refining - Liquid Fuels	***CO_2***	***1,305.06***	***0.01***	***88.3%***
3.B.1.1 Manure Management - Cattle	***CH_4***	***137.58***	***0.01***	***89.1%***
1.A.1. Energy industries-Biomass	***N_2O***	***22.95***	***0.01***	***89.8%***
1.A.2 Manufacturing industries and construction-Solid fuels	***CO_2***	***473.11***	***0.01***	***90.5%***
2.B.2 Nitric Acid Production	N_2O	331.76	0.01	91.1%
5.D Wastewater Treatment and Discharge	N_2O	45.27	0.01	91.7%
1.A.4 Other sectors-Solid fuels	CO_2	305.30	0.00	92.1%
1.A.1. Energy industries-Biomass	CH_4	14.44	0.00	92.6%
5.B Biological Treatment of Solid Waste	CH_4	20.44	0.00	93.0%
2.A.1 Cement Production	CO_2	400.83	0.00	93.5%
1.A.3.e Other transportation	CO_2	236.35	0.00	93.9%
3.B.1.3 Manure Management - Swine	CH_4	71.18	0.00	94.3%
2. D Non-energy products from fuels and solvent use	CO_2	62.62	0.00	94.6%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.4 Other sectors-Gaseous fuels	CO_2	461.17	0.00	95.0%
1.A.3.b Road transportation	N_2O	35.36	0.00	95.4%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	543.13	0.00	95.7%
5.B Biological Treatment of Solid Waste	N_2O	14.62	0.00	96.0%
1.A.3.c Railways	N_2O	20.36	0.00	96.3%
3.A. Enteric Fermentation - Others	CH_4	66.74	0.00	96.6%
2.A.2 Lime Production	CO_2	41.22	0.00	96.9%
3.G Liming	CO_2	24.71	0.00	97.1%
1.A.3.c Railways	CO_2	174.13	0.00	97.4%
1.A.3.b Road transportation	CH_4	14.81	0.00	97.6%
3.B.1 Manure Management - Other	N_2O	12.34	0.00	97.8%
1.A.3.e Other transportation	N_2O	19.15	0.00	98.0%
3.H Urea Application	CO_2	15.72	0.00	98.2%
1.A.4 Other sectors-Peat	CO_2	109.04	0.00	98.4%
3.B.1 Manure Management - Other	CH_4	27.10	0.00	98.5%
1.A.4 Other sectors-Solid fuels	CH_4	14.27	0.00	98.7%
1.A.4 Other sectors-Liquid fuels	CO_2	182.35	0.00	98.8%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	4.08	0.00	98.9%
2.F.2 Foam Blowing Agents	HFCs	14.14	0.00	99.1%
1.A.1. Energy industries-Other fossil fuels	CO_2	82.56	0.00	99.2%
1.A.1.a Public electricity and heat production - Liquid Fuels	CO_2	151.42	0.00	99.3%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	8.19	0.00	99.4%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	2.56	0.00	99.4%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	4.01	0.00	99.5%
1.A.4 Other sectors-Peat	CH_4	4.91	0.00	99.6%
1.A.2 Manufacturing industries and construction-Liquid fuels	CO_2	75.49	0.00	99.6%
2.G Other product manufacture and use	N_2O	5.19	0.00	99.6%
5.C Incineration and Open Burning of Waste	CO_2	1.96	0.00	99.7%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	1.79	0.00	99.7%
1.A.1. Energy industries-Peat	CO_2	17.63	0.00	99.7%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	2.20	0.00	99.7%
2.A.4 Other process use of carbonates	CO_2	17.46	0.00	99.8%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.1. Energy industries-Liquid fuels	N_2O	1.83	0.00	99.8%
1.A.3.d Domestic Navigation	CO_2	14.51	0.00	99.8%
1.A.4 Other sectors-Solid fuels	N_2O	1.44	0.00	99.8%
2.A.3 Glass Production	CO_2	7.41	0.00	99.8%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	1.23	0.00	99.8%
2.F.3 Fire Protection	HFCs	2.15	0.00	99.9%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.65	0.00	99.9%
1.A.4 Other sectors-Gaseous fuels	CH_4	1.04	0.00	99.9%
1.A.2 Manufacturing industries and construction-Peat	CO_2	6.78	0.00	99.9%
1.A.1. Energy industries-Solid fuels	CO_2	6.74	0.00	99.9%
1.A.1. Energy industries-Liquid fuels	CH_4	0.93	0.00	99.9%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.90	0.00	99.9%
2.F.4 Aerosols/metered dose inhalers	HFCs	6.20	0.00	99.9%
1.A.1. Energy industries-Gaseous fuels	N_2O	0.83	0.00	99.9%
2.C.1 Iron and Steel Production	CO_2	2.60	0.00	99.9%
1.A.1. Energy industries-Gaseous fuels	CH_4	0.70	0.00	99.9%
2. E Electronic Industry	SF_6, NF_3	5.05	0.00	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.57	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	CH_4	0.46	0.00	100.0%
1.A.4 Other sectors-Peat	N_2O	0.44	0.00	100.0%
1.A.3.a Domestic aviation	CO_2	1.94	0.00	100.0%
1.A.3.c Railways	CH_4	0.25	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	0.29	0.00	100.0%
1.A.3.e Other transportation	CH_4	0.38	0.00	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.25	0.00	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.25	0.00	100.0%
1.A.4 Other sectors-Liquid fuels	N_2O	0.23	0.00	100.0%
1.A.3.d Domestic Navigation	N_2O	0.12	0.00	100.0%
2.G Other product manufacture and use	SF_6	1.22	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	0.14	0.00	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.06	0.00	100.0%
1.A.1. Energy industries-Peat	N_2O	0.08	0.00	100.0%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	0.06	0.00	100.0%
1.A.3.a Domestic aviation	N_2O	0.02	0.00	100.0%

IPCC Category	*Greenhouse gas*	*GHG emissions, kt CO_2 eqv.*	*Level assessment with uncertainty*	*Cumulative total*
1.A.3.d Domestic Navigation	CH_4	0.03	0.00	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.03	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.03	0.00	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.02	0.00	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.00	0.00	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	100.0%
2.B.8.a Methanol	CO_2	0.00	0.00	100.0%
2.B.8.a Methanol	CH_4	0.00	0.00	100.0%
Total		***19,086.24***		

Approach 2 Trend Assessment for 2014

IPCC Category	Greenhouse gas	1990 kt CO_2 eqv.	2014 kt CO_2 eqv.	Trend assessment with uncertainty	% Contribution to Trend	Cumulative total
4.A.1 Forest land remaining forest land - carbon stock change in biomass	*CO_2*	*-6,680.01*	*-8,447.64*	*0.06*	*17.1%*	*17.1%*
4.C.2 Land converted to grassland - net carbon stock change in mineral soils	*CO_2*	*-2,082.10*	*-2,830.85*	*0.06*	*15.5%*	*32.6%*
4.G Harvested wood products	*CO_2*	*-95.65*	*-1,399.35*	*0.03*	*9.1%*	*41.7%*
4.B.2 Land converted to cropland - net carbon stock change in mineral soils	*CO_2*	*4,615.45*	*3,525.13*	*0.02*	*6.6%*	*48.3%*
4.D.1 Wetlands remaining wetlands -net carbon stock change in organic soils	*CO_2*	*517.33*	*875.20*	*0.02*	*5.1%*	*53.4%*
4.E.2 Land converted to settlements	*CO_2*	*0.00*	*372.65*	*0.01*	*3.4%*	*56.8%*
4.B.2 Land converted to cropland- carbon stock change in biomass	*CO_2*	*98.41*	*349.73*	*0.01*	*2.9%*	*59.7%*
5.A Solid Waste Disposal	*CH_4*	*1,028.83*	*834.33*	*0.01*	*2.7%*	*62.5%*
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	*N_2O*	*139.12*	*353.56*	*0.01*	*2.6%*	*65.1%*
3.A.1 Enteric Fermentation - Cattle	*CH_4*	*4,101.48*	*1,570.66*	*0.01*	*2.3%*	*67.3%*
1.A.4 Other sectors-Biomass	*CH_4*	*70.28*	*150.36*	*0.01*	*1.9%*	*69.2%*
4.A Forest land-4(II) organic soils	*CO_2*	*406.04*	*432.78*	*0.01*	*1.8%*	*71.0%*
3.B.2 Manure Management - Indirect N_2O Emissions	*N_2O*	*227.47*	*80.96*	*0.01*	*1.7%*	*72.7%*
4.A.2 Land converted to forest land - carbon stock change in biomass	*CO_2*	*-585.97*	*-678.70*	*0.00*	*1.4%*	*74.1%*
2.F.1 Refrigeration and Air Conditioning Equipment	*HFCs*	*5.36*	*427.00*	*0.00*	*1.3%*	*75.4%*
1.A.1.a Public electricity and heat production - Liquid Fuels	*CO_2*	*6,021.25*	*151.42*	*0.00*	*1.3%*	*76.7%*
5.D Wastewater Treatment and Discharge	*CH_4*	*541.86*	*219.90*	*0.00*	*1.2%*	*77.9%*
4.A.1 Forest land remaining forest land - net carbon stock change in dead wood	*CO_2*	*-474.03*	*-600.29*	*0.00*	*1.2%*	*79.1%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*2,760.55*	*305.30*	*0.00*	*1.2%*	*80.3%*
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	*N_2O*	*401.02*	*137.91*	*0.00*	*1.1%*	*81.4%*
4.A.2 Land converted to forest land - net carbon stock change in litter	*CO_2*	*-448.14*	*-516.68*	*0.00*	*1.0%*	*82.4%*
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	*N_2O*	*992.77*	*721.16*	*0.00*	*1.0%*	*83.4%*
1.A.3.e Other transportation	*CO_2*	*1,764.11*	*236.35*	*0.00*	*0.8%*	*84.2%*

IPCC Category	Greenhouse gas	1990 kt CO_2 eqv.	2014 kt CO_2 eqv.	Trend assessment with uncertainty	% Contribution to Trend	Cumulative total
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	***N_2O***	***414.48***	***178.89***	***0.00***	***0.8%***	***85.0%***
1.A.2 Manufacturing industries and construction-Liquid fuels	***CO_2***	***3,500.92***	***75.49***	***0.00***	***0.8%***	***85.7%***
1.A.1.a Public electricity and heat production - Gaseous Fuels	***CO_2***	***5,806.05***	***1,532.96***	***0.00***	***0.7%***	***86.5%***
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	***N_2O***	***393.90***	***293.70***	***0.00***	***0.7%***	***87.1%***
4.B.1 Cropland remaining cropland - net carbon stock change in mineral soils	***CO_2***	***195.63***	***-53.90***	***0.00***	***0.7%***	***87.8%***
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	***CH_4***	***260.55***	***276.55***	***0.00***	***0.6%***	***88.5%***
4.B.1 Cropland remaining cropland - net carbon stock change in organic soils	***CO_2***	***178.17***	***174.33***	***0.00***	***0.6%***	***89.1%***
3.B.1 Manure Management - Other	***N_2O***	***109.48***	***12.34***	***0.00***	***0.6%***	***89.7%***
1.A.3.e Other transportation	***N_2O***	***186.51***	***19.15***	***0.00***	***0.6%***	***90.2%***
3.B.2 Manure Management - Cattle	N_2O	201.63	75.65	0.00	0.5%	90.8%
4.F Other land	CO_2	0.00	50.11	0.00	0.5%	91.3%
1.A.3.b Road transportation	CO_2	5,247.15	4,547.12	0.00	0.4%	91.7%
2.B.1 Ammonia Production	CO_2	1,255.82	1,875.12	0.00	0.4%	92.1%
1.A.1. Energy industries-Biomass	N_2O	0.63	22.95	0.00	0.4%	92.4%
2.A.1 Cement Production	CO_2	1,668.07	400.83	0.00	0.4%	92.8%
1.A.4 Other sectors-Solid fuels	CH_4	128.56	14.27	0.00	0.4%	93.2%
4.C.2 Land converted to grassland- net carbon stock change in organic soils	CO_2	45.06	63.87	0.00	0.4%	93.6%
4.B.1 Cropland remaining cropland - carbon stock change in biomass	CO_2	77.39	-13.37	0.00	0.3%	93.9%
1.A.4 Other sectors-Biomass	N_2O	12.97	27.63	0.00	0.3%	94.3%
2.A.2 Lime Production	CO_2	222.68	41.22	0.00	0.3%	94.6%
4.C.1 Grassland remaining grassland	CO_2	80.81	81.95	0.00	0.3%	94.9%
1.A.4 Other sectors-Liquid fuels	CO_2	1,429.58	182.35	0.00	0.3%	95.2%

IPCC Category	Greenhouse gas	1990 kt CO_2 eqv.	2014 kt CO_2 eqv.	Trend assessment with uncertainty	% Contribution to Trend	Cumulative total
1.A.2 Manufacturing industries and construction-Solid fuels	CO_2	171.63	473.11	0.00	0.3%	95.5%
4.A Forest land	N_2O	33.55	36.09	0.00	0.3%	95.8%
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	N_2O	223.03	118.24	0.00	0.3%	96.1%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	2,048.76	543.13	0.00	0.3%	96.4%
2.G Other product manufacture and use	N_2O	96.05	5.19	0.00	0.3%	96.6%
2.B.2 Nitric Acid Production	N_2O	893.01	331.76	0.00	0.3%	96.9%
1.A.1. Energy industries-Biomass	CH_4	0.40	14.44	0.00	0.2%	97.1%
3.B.1.3 Manure Management - Swine	CH_4	236.72	71.18	0.00	0.2%	97.3%
5.B Biological Treatment of Solid Waste	CH_4	4.04	20.44	0.00	0.2%	97.6%
4.B.2 Land converted to cropland- net carbon stock change in organic soils	CO_2	133.17	102.05	0.00	0.2%	97.8%
4.B Cropland	N_2O	392.99	301.17	0.00	0.2%	97.9%
1.A.4 Other sectors-Gaseous fuels	CO_2	1,381.52	461.17	0.00	0.2%	98.1%
5.B Biological Treatment of Solid Waste	N_2O	2.89	14.62	0.00	0.2%	98.3%
1.A.3.b Road transportation	CH_4	48.11	14.81	0.00	0.1%	98.4%
1.A.1.b Petroleum refining - Liquid Fuels	CO_2	1,503.71	1,305.06	0.00	0.1%	98.5%
4.D.2 Land converted to wetlands	CO_2	0.00	12.30	0.00	0.1%	98.6%
2.A.4 Other process use of carbonates	CO_2	239.52	17.46	0.00	0.1%	98.7%
1.A.1. Energy industries-Solid fuels	CO_2	174.05	6.74	0.00	0.1%	98.8%
1.A.4 Other sectors-Peat	CO_2	27.13	109.04	0.00	0.1%	98.9%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	62.62	0.00	0.1%	99.0%
3.G Liming	CO_2	20.59	24.71	0.00	0.1%	99.0%
2.F.2 Foam Blowing Agents	HFCs	0.00	14.14	0.00	0.1%	99.1%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	82.56	0.00	0.1%	99.2%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	4.08	0.00	0.1%	99.2%

IPCC Category	Greenhouse gas	1990 kt CO_2 eqv.	2014 kt CO_2 eqv.	Trend assessment with uncertainty	% Contribution to Trend	Cumulative total
1.A.3.b Road transportation	N_2O	39.09	35.36	0.00	0.1%	99.3%
3.B.1 Manure Management - Other	CH_4	75.24	27.10	0.00	0.1%	99.4%
3.B.1.1 Manure Management - Cattle	CH_4	247.40	137.58	0.00	0.0%	99.4%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	1.83	0.00	0.0%	99.4%
1.A.3.c Railways	N_2O	40.92	20.36	0.00	0.0%	99.5%
3.H Urea Application	CO_2	35.68	15.72	0.00	0.0%	99.5%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	2.56	0.00	0.0%	99.6%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	1.44	0.00	0.0%	99.6%
1.A.3.c Railways	CO_2	349.97	174.13	0.00	0.0%	99.6%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	4.01	0.00	0.0%	99.7%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.14	0.00	0.0%	99.7%
4.D Wetlands	N_2O	11.92	9.54	0.00	0.0%	99.7%
1.A.4 Other sectors-Peat	CH_4	1.12	4.91	0.00	0.0%	99.8%
5.D Wastewater Treatment and Discharge	N_2O	67.21	45.27	0.00	0.0%	99.8%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.93	0.00	0.0%	99.8%
3.A. Enteric Fermentation - Others	CH_4	118.06	66.74	0.00	0.0%	99.8%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	1.79	0.00	0.0%	99.8%
2.C.1 Iron and Steel Production	CO_2	16.98	2.60	0.00	0.0%	99.8%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.46	0.00	0.0%	99.8%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.06	0.00	0.0%	99.9%
4.A.1 Forest land remaining forest land	CO_2	4.28	5.37	0.00	0.0%	99.9%
1.A.3.e Other transportation	CH_4	4.30	0.38	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	2.20	0.00	0.0%	99.9%
1.A.1. Energy industries-Peat	CO_2	11.06	17.63	0.00	0.0%	99.9%

IPCC Category	Greenhouse gas	1990 kt CO_2 eqv.	2014 kt CO_2 eqv.	Trend assessment with uncertainty	% Contribution to Trend	Cumulative total
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.23	0.00	0.0%	99.9%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	8.19	0.00	0.0%	99.9%
2.F.3 Fire Protection	HFCs	0.00	2.15	0.00	0.0%	99.9%
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.83	0.00	0.0%	99.9%
4.C Grassland	N_2O	2.31	2.12	0.00	0.0%	99.9%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	1.23	0.00	0.0%	99.9%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.70	0.00	0.0%	99.9%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	1.04	0.00	0.0%	99.9%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.90	0.00	0.0%	100.0%
4.C Grassland	CH_4	2.12	1.95	0.00	0.0%	100.0%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.85	6.20	0.00	0.0%	100.0%
4.A Forest land	CH_4	0.71	0.95	0.00	0.0%	100.0%
2. E Electronic Industry	SF_6, NF_3	0.00	5.05	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	CO_2	8.16	1.94	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	6.78	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	CO_2	15.49	14.51	0.00	0.0%	100.0%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.57	0.00	0.0%	100.0%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.65	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.03	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	CO_2	2.66	1.96	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.29	0.00	0.0%	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.44	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.25	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.25	0.00	0.0%	100.0%

IPCC Category	Greenhouse gas	1990 kt CO_2 eqv.	2014 kt CO_2 eqv.	Trend assessment with uncertainty	% Contribution to Trend	Cumulative total
2.G Other product manufacture and use	SF_6	0.05	1.22	0.00	0.0%	100.0%
1.A.3.c Railways	CH_4	0.50	0.25	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.12	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.02	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.08	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	0.00	0.0%	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.02	0.00	0.0%	100.0%
2.A.3 Glass Production	CO_2	11.70	7.41	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.03	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.06	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.03	0.00	0.0%	100.0%
4.B Cropland	CH_4	0.05	0.05	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CO_2	24.35	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CH_4	5.24	0.00	0.00	0.0%	100.0%
4.E.1 Settlements remaining settlements	CO_2	0.00	0.00	0.00	0.0%	100.0%
Total		***43,635.17***	***10,942.81***	***0.36***	***1.00***	

Approach 2 Trend Assessment for 2014 using a subset (LULUCF was excluded from analysis)

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment with uncertainty*	*% Contribution to Trend*	*Cumulative total*
5.A Solid Waste Disposal	*CH_4*	*1,028.83*	*834.33*	*0.07*	*20.6%*	*20.6%*
3.D.1.1 Direct N_2O Emissions From Managed Soils - Inorganic N Fertilizers	*N_2O*	*992.77*	*721.16*	*0.04*	*10.7%*	*31.3%*
3.D.1.4 Direct N_2O Emissions From Managed Soils - Crop Residues	*N_2O*	*139.12*	*353.56*	*0.03*	*9.9%*	*41.3%*
1.A.4 Other sectors-Biomass	*CH_4*	*70.28*	*150.36*	*0.02*	*7.5%*	*48.8%*
3.D.2.2 Indirect N_2O Emissions From Managed Soils - Nitrogen leaching and run-off	*N_2O*	*393.90*	*293.70*	*0.02*	*6.6%*	*55.4%*
2.F.1 Refrigeration and Air Conditioning Equipment	*HFCs*	*5.36*	*427.00*	*0.02*	*4.6%*	*60.0%*
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	*CH_4*	*260.55*	*276.55*	*0.01*	*3.4%*	*63.3%*
1.A.1.a Public electricity and heat production - Liquid Fuels	*CO_2*	*6,021.25*	*151.42*	*0.01*	*2.9%*	*66.2%*
1.A.3.b Road transportation	*CO_2*	*5,247.15*	*4,547.12*	*0.01*	*2.7%*	*68.9%*
1.A.4 Other sectors-Solid fuels	*CO_2*	*2,760.55*	*305.30*	*0.01*	*2.4%*	*71.3%*
2.B.1 Ammonia Production	*CO_2*	*1,255.82*	*1,875.12*	*0.01*	*1.7%*	*73.0%*
1.A.2 Manufacturing industries and construction-Liquid fuels	*CO_2*	*3,500.92*	*75.49*	*0.01*	*1.7%*	*74.7%*
1.A.3.e Other transportation	*CO_2*	*1,764.11*	*236.35*	*0.01*	*1.6%*	*76.2%*
1.A.4 Other sectors-Biomass	*N_2O*	*12.97*	*27.63*	*0.00*	*1.4%*	*77.6%*
3.D.2.1 Indirect N_2O Emissions From Managed Soils - Atmospheric deposition	*N_2O*	*223.03*	*118.24*	*0.00*	*1.4%*	*79.0%*
1.A.1. Energy industries-Biomass	*N_2O*	*0.63*	*22.95*	*0.00*	*1.4%*	*80.4%*
3.B.1 Manure Management - Other	*N_2O*	*109.48*	*12.34*	*0.00*	*1.2%*	*81.5%*
1.A.2 Manufacturing industries and construction-Solid fuels	*CO_2*	*171.63*	*473.11*	*0.00*	*1.1%*	*82.7%*
1.A.3.e Other transportation	*N_2O*	*186.51*	*19.15*	*0.00*	*1.1%*	*83.8%*
3.B.2 Manure Management - Indirect N_2O Emissions	*N_2O*	*227.47*	*80.96*	*0.00*	*1.1%*	*84.8%*

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment with uncertainty*	*% Contribution to Trend*	*Cumulative total*
1.A.1.a Public electricity and heat production - Gaseous Fuels	***CO_2***	***5,806.05***	***1,532.96***	***0.00***	***1.0%***	***85.9%***
1.A.1.b Petroleum refining - Liquid Fuels	***CO_2***	***1,503.71***	***1,305.06***	***0.00***	***0.9%***	***86.7%***
1.A.1. Energy industries-Biomass	***CH_4***	***0.40***	***14.44***	***0.00***	***0.9%***	***87.6%***
3.D.1.2 Direct N_2O Emissions From Managed Soils - Organic N Fertilizers	***N_2O***	***401.02***	***137.91***	***0.00***	***0.8%***	***88.4%***
5.B Biological Treatment of Solid Waste	***CH_4***	***4.04***	***20.44***	***0.00***	***0.8%***	***89.2%***
1.A.4 Other sectors-Solid fuels	***CH_4***	***128.56***	***14.27***	***0.00***	***0.7%***	***89.9%***
3.A.1 Enteric Fermentation - Cattle	**CH_4**	**4,101.48**	**1,570.66**	**0.00**	**0.7%**	**90.6%**
1.A.4 Other sectors-Liquid fuels	CO_2	1,429.58	182.35	0.00	0.6%	91.2%
2.A.2 Lime Production	CO_2	222.68	41.22	0.00	0.6%	91.8%
2.A.1 Cement Production	CO_2	1,668.07	400.83	0.00	0.6%	92.4%
5.B Biological Treatment of Solid Waste	N_2O	2.89	14.62	0.00	0.6%	93.0%
2.G Other product manufacture and use	N_2O	96.05	5.19	0.00	0.6%	93.5%
2. D Non-energy products from fuels and solvent use	CO_2	65.87	62.62	0.00	0.4%	93.9%
5.D Wastewater Treatment and Discharge	N_2O	67.21	45.27	0.00	0.4%	94.3%
3.B.1.1 Manure Management - Cattle	CH_4	247.40	137.58	0.00	0.4%	94.7%
1.A.3.b Road transportation	N_2O	39.09	35.36	0.00	0.4%	95.1%
3.D.1.3 Direct N_2O Emissions From Managed Soils - Urine and dung deposited by grazing animals	N_2O	414.48	178.89	0.00	0.4%	95.5%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CO_2	2,048.76	543.13	0.00	0.4%	95.9%
3.G Liming	CO_2	20.59	24.71	0.00	0.3%	96.2%
1.A.4 Other sectors-Peat	CO_2	27.13	109.04	0.00	0.3%	96.5%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment with uncertainty*	*% Contribution to Trend*	*Cumulative total*
3.B.1.3 Manure Management - Swine	CH_4	236.72	71.18	0.00	0.3%	96.7%
2.F.2 Foam Blowing Agents	HFCs	0.00	14.14	0.00	0.2%	97.0%
1.A.2 Manufacturing industries and construction-Biomass	N_2O	0.60	4.08	0.00	0.2%	97.2%
1.A.1. Energy industries-Other fossil fuels	CO_2	0.00	82.56	0.00	0.2%	97.4%
3.B.2 Manure Management - Cattle	N_2O	201.63	75.65	0.00	0.2%	97.6%
2.A.4 Other process use of carbonates	CO_2	239.52	17.46	0.00	0.2%	97.8%
1.A.1. Energy industries-Solid fuels	CO_2	174.05	6.74	0.00	0.2%	98.0%
3.A. Enteric Fermentation - Others	CH_4	118.06	66.74	0.00	0.2%	98.2%
1.A.4 Other sectors-Gaseous fuels	CO_2	1,381.52	461.17	0.00	0.1%	98.3%
1.A.2 Manufacturing industries and construction-Biomass	CH_4	0.38	2.56	0.00	0.1%	98.5%
1.A.3.b Road transportation	CH_4	48.11	14.81	0.00	0.1%	98.6%
2.B.2 Nitric Acid Production	N_2O	893.01	331.76	0.00	0.1%	98.7%
1.A.3.c Railways	N_2O	40.92	20.36	0.00	0.1%	98.8%
1.B.2 Oil, natural gas and other emissions from energy production	CO_2	0.63	4.01	0.00	0.1%	98.9%
1.A.1. Energy industries-Liquid fuels	N_2O	16.11	1.83	0.00	0.1%	99.0%
1.A.3.c Railways	CO_2	349.97	174.13	0.00	0.1%	99.1%
1.A.4 Other sectors-Peat	CH_4	1.12	4.91	0.00	0.1%	99.2%
1.A.4 Other sectors-Solid fuels	N_2O	13.00	1.44	0.00	0.1%	99.3%
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	8.19	0.00	0.1%	99.3%
1.A.2 Manufacturing industries and construction-Liquid fuels	N_2O	8.06	0.14	0.00	0.1%	99.4%
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	1.79	0.00	0.0%	99.5%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment with uncertainty*	*% Contribution to Trend*	*Cumulative total*
1.A.1. Energy industries-Peat	CO_2	11.06	17.63	0.00	0.0%	99.5%
1.A.2 Manufacturing industries and construction-Solid fuels	N_2O	0.81	2.20	0.00	0.0%	99.5%
1.A.1. Energy industries-Liquid fuels	CH_4	6.90	0.93	0.00	0.0%	99.6%
3.B.1 Manure Management - Other	CH_4	75.24	27.10	0.00	0.0%	99.6%
5.D Wastewater Treatment and Discharge	CH_4	541.86	219.90	0.00	0.0%	99.6%
3.H Urea Application	CO_2	35.68	15.72	0.00	0.0%	99.7%
1.A.2 Manufacturing industries and construction-Liquid fuels	CH_4	3.38	0.06	0.00	0.0%	99.7%
5.C Incineration and Open Burning of Waste	CO_2	2.66	1.96	0.00	0.0%	99.7%
1.A.4 Other sectors-Liquid fuels	CH_4	4.17	0.46	0.00	0.0%	99.7%
2.F.3 Fire Protection	HFCs	0.00	2.15	0.00	0.0%	99.8%
2.C.1 Iron and Steel Production	CO_2	16.98	2.60	0.00	0.0%	99.8%
1.A.2 Manufacturing industries and construction-Solid fuels	CH_4	0.45	1.23	0.00	0.0%	99.8%
1.A.3.e Other transportation	CH_4	4.30	0.38	0.00	0.0%	99.8%
1.A.3.d Domestic Navigation	CO_2	15.49	14.51	0.00	0.0%	99.8%
1.A.1. Energy industries-Other fossil fuels	N_2O	0.00	0.90	0.00	0.0%	99.9%
1.A.4 Other sectors-Liquid fuels	N_2O	2.67	0.23	0.00	0.0%	99.9%
2.F.4 Aerosols/metered dose inhalers	HFCs	0.85	6.20	0.00	0.0%	99.9%
3.D.1.6 Direct N_2O Emissions From Managed Soils - Cultivation of organic soils	N_2O	0.58	0.65	0.00	0.0%	99.9%
2. E Electronic Industry	SF_6, NF_3	0.00	5.05	0.00	0.0%	99.9%
1.A.1. Energy industries-Other fossil fuels	CH_4	0.00	0.57	0.00	0.0%	99.9%
2.A.3 Glass Production	CO_2	11.70	7.41	0.00	0.0%	99.9%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment with uncertainty*	*% Contribution to Trend*	*Cumulative total*
1.A.1. Energy industries-Gaseous fuels	N_2O	3.13	0.83	0.00	0.0%	100.0%
1.A.4 Other sectors-Peat	N_2O	0.11	0.44	0.00	0.0%	100.0%
1.A.1. Energy industries-Gaseous fuels	CH_4	2.63	0.70	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	N_2O	0.82	0.03	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	CO_2	8.16	1.94	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	CH_4	3.13	1.04	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	N_2O	1.11	0.29	0.00	0.0%	100.0%
2.G Other product manufacture and use	SF_6	0.05	1.22	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Gaseous fuels	CH_4	0.93	0.25	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	N_2O	0.13	0.12	0.00	0.0%	100.0%
1.A.3.c Railways	CH_4	0.50	0.25	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	N_2O	0.05	0.08	0.00	0.0%	100.0%
1.A.4 Other sectors-Gaseous fuels	N_2O	0.75	0.25	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CO_2	17.53	6.78	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.06	0.00	0.0%	100.0%
1.B.2 Oil, natural gas and other emissions from energy production	N_2O	0.00	0.02	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	N_2O	0.07	0.02	0.00	0.0%	100.0%
1.A.3.d Domestic Navigation	CH_4	0.04	0.03	0.00	0.0%	100.0%
1.A.1. Energy industries-Solid fuels	CH_4	0.05	0.00	0.00	0.0%	100.0%
1.A.1. Energy industries-Peat	CH_4	0.00	0.00	0.00	0.0%	100.0%
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	0.00	0.0%	100.0%

IPCC Category	*Greenhouse gas*	*1990 kt CO_2 eqv.*	*2014 kt CO_2 eqv.*	*Trend assessment with uncertainty*	*% Contribution to Trend*	*Cumulative total*
1.A.2 Manufacturing industries and construction-Peat	N_2O	0.08	0.03	0.00	0.0%	100.0%
1.A.3.a Domestic aviation	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Peat	CH_4	0.01	0.00	0.00	0.0%	100.0%
1.A.1. Energy industries-Biomass	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CO_2	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	CH_4	0.00	0.00	0.00	0.0%	100.0%
1.A.2 Manufacturing industries and construction-Other fossil fuels	N_2O	0.00	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CO_2	24.35	0.00	0.00	0.0%	100.0%
2.B.8.a Methanol	CH_4	5.24	0.00	0.00	0.0%	100.0%
Total		***47,205.7***	***19,086.2***	***0.33***	***1.00***	

ANNEX II. Tier 1 Uncertainty assessment

Table 1a. Uncertainty evaluation including LULUCF

IPCC Source category	Gas	Base year (1990) emissions*	Emissions in 2014	Activity data uncertainty	Emission factor uncertainty	Combined uncertainty	Combined uncertainty as % of total national emissions in 2012	Type A sensitivity	Type B sensitivity	Uncertainty in trend in national emissions introduced by emission factor uncertainty	Uncertainty in trend in national emissions introduced by activity data uncertainty	Uncertainty introduced into the trend in total national emissions
		kt CO_2 eqv.	*kt CO_2 eqv.*	*%*	*%*	*%*	*%*	*%*	*%*	*%*	*%*	*%*
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CO_2	7,534.30	1,470.68	2%	3%	3%	0.000	0.010	0.034	0.000	0.001	0.000
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CH_4	6.90	0.93	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	N_2O	16.11	1.83	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CO_2	174.05	6.74	2%	7%	7%	0.000	0.001	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CH_4	0.05	0.00	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	N_2O	0.82	0.03	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CO_2	5,806.05	1,536.17	2%	3%	3%	0.000	0.002	0.035	0.000	0.001	0.000
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CH_4	2.63	0.70	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	N_2O	3.13	0.83	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CO_2	0.00	82.56	2%	7%	7%	0.000	0.002	0.002	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CH_4	0.00	0.57	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	N_2O	0.00	0.90	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Peat	CO_2	11.06	17.63	2%	7%	7%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Peat	CH_4	0.00	0.00	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000

1.A.1 Fuel combustion - Energy Industries - Peat	N_2O	0.05	0.08	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Biomass	CO_2			30%	50%	58%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Biomass	CH_4	0.40	14.44	30%	150%	153%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Biomass	N_2O	0.63	22.95	30%	150%	153%	0.000	0.001	0.001	0.001	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Liquid Fuels	CO_2	3,500.92	75.49	2%	3%	3%	0.000	0.018	0.002	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Liquid Fuels	CH_4	3.38	0.06	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Liquid Fuels	N_2O	8.06	0.14	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Solid Fuels	CO_2	171.63	473.11	2%	7%	7%	0.000	0.010	0.011	0.001	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Solid Fuels	CH_4	0.45	1.23	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Solid Fuels	N_2O	0.81	2.20	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Gaseous Fuels	CO_2	2,048.76	543.13	2%	3%	3%	0.000	0.001	0.012	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Gaseous Fuels	CH_4	0.93	0.25	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Gaseous Fuels	N_2O	1.11	0.29	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Peat	CO_2	17.53	6.78	2%	7%	7%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Peat	CH_4	0.01	0.00	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Peat	N_2O	0.08	0.03	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Biomass	CO_2			30%	50%	58%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Biomass	CH_4	0.38	2.56	30%	150%	153%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Biomass	N_2O	0.60	4.08	30%	150%	153%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.a Domestic Aviation	CO_2	8.16	1.94	10%	2%	10%	0.000	0.000	0.000	0.000	0.000	0.000

1.A.3.a Domestic Aviation	CH_4	0.00	0.00	10%	79%	79%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.a Domestic Aviation	N_2O	0.07	0.02	10%	110%	110%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.b Road Transportation	CO_2	5,247.15	4,547.12	2%	2%	3%	0.000	0.074	0.104	0.001	0.003	0.000
1.A.3.b Road Transportation	CH_4	48.11	14.81	2%	40%	40%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.b Road Transportation	N_2O	39.09	35.36	2%	50%	50%	0.000	0.001	0.001	0.000	0.000	0.000
1.A.3.c Railways	CO_2	349.97	174.13	5%	5%	7%	0.000	0.002	0.004	0.000	0.000	0.000
1.A.3.c Railways	CH_4	0.50	0.25	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.c Railways	N_2O	40.92	20.36	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.d Domestic Navigation - Liquid Fuels	CO_2	15.49	14.51	5%	3%	6%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.d Domestic Navigation - Liquid Fuels	CH_4	0.04	0.03	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.d Domestic Navigation - Liquid Fuels	N_2O	0.13	0.12	5%	90%	90%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.i Other Transportation - Pipeline Transportation	CO_2	85.50	68.04	5%	7%	9%	0.000	0.001	0.002	0.000	0.000	0.000
1.A.3.e.i Other Transportation - Pipeline Transportation	CH_4	0.04	0.03	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.i Other Transportation - Pipeline Transportation	N_2O	0.05	0.04	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.ii Other Transportation - Off-road transport	CO_2	1,678.61	168.31	10%	5%	11%	0.000	0.006	0.004	0.000	0.001	0.000
1.A.3.e.ii Other Transportation - Off-road transport	CH_4	4.26	0.35	10%	40%	41%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.ii Other Transportation - Off-road transport	N_2O	186.51	19.12	10%	50%	51%	0.000	0.001	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Liquid Fuels	CO_2	1,429.58	182.35	3%	3%	4%	0.000	0.004	0.004	0.000	0.000	0.000
1.A.4 Other Sectors - Liquid Fuels	CH_4	4.17	0.46	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Liquid Fuels	N_2O	2.67	0.23	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Solid Fuels	CO_2	2,760.55	305.30	3%	7%	8%	0.000	0.009	0.007	0.001	0.000	0.000
1.A.4 Other Sectors - Solid Fuels	CH_4	128.56	14.27	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Solid Fuels	N_2O	13.00	1.44	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Gaseous Fuels	CO_2	1,381.52	461.17	3%	3%	4%	0.000	0.003	0.011	0.000	0.000	0.000
1.A.4 Other Sectors - Gaseous Fuels	CH_4	3.13	1.04	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Gaseous Fuels	N_2O	0.75	0.25	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Peat	CO_2	27.13	109.04	3%	7%	8%	0.000	0.002	0.002	0.000	0.000	0.000
1.A.4 Other Sectors - Peat	CH_4	1.12	4.91	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Peat	N_2O	0.11	0.44	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors- Biomass	CO_2			50%	50%	71%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors- Biomass	CH_4	70.28	150.36	50%	150%	158%	0.000	0.003	0.003	0.005	0.002	0.000

1.A.4 Other Sectors- Biomass	N_2O	12.97	27.63	50%	150%	158%	0.000	0.001	0.001	0.001	0.000	0.000
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CO_2	0.05	0.04	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CH_4	10.94	8.19	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	N_2O	0.00	0.00	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	CO_2	0.01	0.01	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	CH_4	260.55	276.55	5%	50%	50%	0.000	0.005	0.006	0.002	0.000	0.000
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CO_2	0.58	3.96	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	1.79	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	N_2O	0.00	0.02	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
2.A.1 Cement Production	CO_2	1,668.07	400.83	2%	5%	5%	0.000	0.000	0.009	0.000	0.000	0.000
2.A.2 Lime Production	CO_2	222.68	41.22	5%	30%	31%	0.000	0.000	0.001	0.000	0.000	0.000
2.A.3 Glass Production	CO_2	11.70	7.41	7%	5%	9%	0.000	0.000	0.000	0.000	0.000	0.000
2.A.4.a Ceramics	CO_2	227.92	5.23	5%	5%	7%	0.000	0.001	0.000	0.000	0.000	0.000
2.A.4.b Other use of soda ash	CO_2	5.32	0.96	15%	5%	16%	0.000	0.000	0.000	0.000	0.000	0.000
2.A.4.d Mineral wool production	CO_2	6.28	11.27	7%	5%	9%	0.000	0.000	0.000	0.000	0.000	0.000
2.B.1 Ammonia Production	CO_2	1,255.82	1,875.12	2%	3%	3%	0.000	0.036	0.043	0.001	0.001	0.000
2.B.2 Nitric Acid Production	N_2O	893.01	331.76	2%	10%	10%	0.000	0.002	0.008	0.000	0.000	0.000
2.B.8.a Methanol	CO_2	24.35	0.00	5%	30%	30%	0.000	0.000	0.000	0.000	0.000	0.000
2.B.8.a Methanol	CH_4	5.24	0.00	5%	30%	30%	0.000	0.000	0.000	0.000	0.000	0.000
2.C.1 Iron and Steel Production	CO_2	16.98	2.60	10%	10%	14%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.1 Lubricant use	CO_2	6.06	11.84	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.2 Parafin wax use	CO_2	0.00	2.17	5%	100%	100%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.3 Solvent use	CO_2	59.79	47.42	30%	20%	36%	0.000	0.001	0.001	0.000	0.000	0.000
2.D.3 Asphalt roofing	CO_2	0.02	0.01	5%	25%	25%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.3 Road paving with asphalt	CO_2	0.00	0.00	20%	50%	54%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.3 Urea-based catalyst	CO_2	0.00	1.18	10%	2%	10%	0.000	0.000	0.000	0.000	0.000	0.000
2.E.1 Semiconductor	SF_6	0.00	4.75	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.E.3 Photovoltaics	NF_3	0.00	0.29	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.1.a Domestic Refrigeration	HFCs	0.24	1.48	20%	50%	54%	0.000	0.000	0.000	0.000	0.000	0.000

2.F.1.a Commercial Refrigeration	HFCs	3.77	156.51	20%	50%	54%	0.000	0.004	0.004	0.002	0.001	0.000
2.F.1.a Transport Refrigeration	HFCs	0.14	84.19	20%	50%	54%	0.000	0.002	0.002	0.001	0.001	0.000
2.F.1.a Industrial Refrigeration	HFCs	0.95	58.40	20%	50%	54%	0.000	0.001	0.001	0.001	0.000	0.000
2.F.1.a Stationary Air-Conditioning	HFCs	0.15	15.09	20%	50%	54%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.1.b Mobile Air-Conditioning	HFCs	0.12	111.32	20%	50%	54%	0.000	0.003	0.003	0.001	0.001	0.000
2.F.2 Foam Blowing Agents	HFCs	0.00	14.14	30%	30%	42%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.3 Fire Protection	HFCs	0.00	2.15	20%	20%	28%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.4 Aerosols/metered dose inhalers	HFCs	0.85	6.20	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.1 Manufacture of electrical equipments	SF_6	0.05	1.06	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.2.b Accelerators	SF_6	0.00	0.16	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.3.a Medical applications	N_2O	93.35	3.05	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.3.b Propellant for pressure and aerosol products	N_2O	2.70	2.14	20%	100%	102%	0.000	0.000	0.000	0.000	0.000	0.000
3.A Enteric Fermentation	CH_4	4,219.54	1,637.40	5%	20%	21%	0.001	0.013	0.038	0.003	0.003	0.000
3.B Manure Management	CH_4	559.35	235.86	19%	20%	27%	0.000	0.002	0.005	0.000	0.001	0.000
3.B Manure Management	N_2O	538.57	168.95	39%	123%	129%	0.000	0.001	0.004	0.001	0.002	0.000
3.D.1 Direct N_2O Emissions From Managed Soils	N_2O	1,947.98	1,392.18	8%	85%	86%	0.012	0.021	0.032	0.018	0.004	0.000
3.D.2 Indirect N_2O Emissions From Managed Soils	N_2O	616.93	411.93	14%	125%	126%	0.002	0.006	0.009	0.007	0.002	0.000
3.G Liming	CO_2	20.59	24.71	10%	50%	51%	0.000	0.000	0.001	0.000	0.000	0.000
3.H Urea Application	CO_2	35.68	15.72	30%	50%	58%	0.000	0.000	0.000	0.000	0.000	0.000
4.A.1 Forest Land Remaining Forest Land	CO_2	-7,149.77	-9,042.56	4%	36%	36%	0.086	0.166	0.207	0.059	0.010	0.004
4.A.1 Forest Land Remaining Forest Land	CH_4	0.68	0.90	35%	70%	78%	0.000	0.000	0.000	0.000	0.000	0.000
4.A.1 Forest Land Remaining Forest Land	N_2O	0.45	0.60	11%	172%	172%	0.000	0.000	0.000	0.000	0.000	0.000
4.A.2 Land Converted to Forest Land	CO_2	-1,033.89	-1,195.08	17%	35%	39%	0.002	0.021	0.027	0.008	0.007	0.000
4.A.2 Land Converted to Forest Land	CH_4	0.04	0.05	35%	70%	78%	0.000	0.000	0.000	0.000	0.000	0.000
4.A.2 Land Converted to Forest Land	N_2O	0.02	0.03	11%	172%	172%	0.000	0.000	0.000	0.000	0.000	0.000
4(II) Emissions and removals from drainage and rewetting and other management of organic and mineral soils	CO_2	406.04	432.78	11%	90%	91%	0.001	0.008	0.010	0.007	0.002	0.000
4(II) Emissions and removals from drainage and rewetting and other management of organic and mineral soils	N_2O	33.08	35.46	11%	173%	173%	0.000	0.001	0.001	0.001	0.000	0.000
4.B Cropland	CO_2	5,298.23	4,083.97	2%	90%	90%	0.112	0.063	0.094	0.057	0.003	0.003

4.B Cropland	CH_4	0.05	0.05	20%	20%	28%	0.000	0.000	0.000	0.000	0.000	0.000
4.B Cropland	N_2O	392.99	301.17	20%	20%	28%	0.000	0.005	0.007	0.001	0.002	0.000
4.C Grassland	CO_2	-1,956.23	-2,688.54	1%	90%	90%	0.048	0.050	0.062	0.045	0.001	0.002
4.C Grassland	CH_4	2.12	1.95	50%	50%	71%	0.000	0.000	0.000	0.000	0.000	0.000
4.C Grassland	N_2O	2.31	2.12	50%	50%	71%	0.000	0.000	0.000	0.000	0.000	0.000
4.D Wetlands	CO_2	517.33	887.50	80%	20%	82%	0.004	0.017	0.020	0.003	0.023	0.001
4.D Wetlands	N_2O	11.92	9.54	50%	100%	112%	0.000	0.000	0.000	0.000	0.000	0.000
4.E Settlements	CO_2	0.00	372.65	80%	20%	82%	0.001	0.009	0.009	0.002	0.010	0.000
4.E Settlements	N_2O	0.00	29.45	50%	50%	71%	0.000	0.001	0.001	0.000	0.000	0.000
4.F Other Land	CO_2	0.00	50.11	50%	75%	90%	0.000	0.001	0.001	0.001	0.001	0.000
4.F Other Land	N_2O	0.00	8.23	50%	50%	71%	0.000	0.000	0.000	0.000	0.000	0.000
4.G Harvested Wood Products	CO_2	-95.65	-1,399.35	15%	59%	61%	0.006	0.032	0.032	0.019	0.007	0.000
5.A Solid Waste Disposal	CH_4	1,028.83	834.33	30%	123%	126%	0.009	0.013	0.019	0.016	0.008	0.000
5.B Biological Treatment of Solid Waste	CH_4	4.04	20.44	40%	100%	108%	0.000	0.000	0.000	0.000	0.000	0.000
5.B Biological Treatment of Solid Waste	N_2O	2.89	14.62	40%	100%	108%	0.000	0.000	0.000	0.000	0.000	0.000
5.C Incineration and Open Burning of Waste	CO_2	2.66	1.96	40%	60%	72%	0.000	0.000	0.000	0.000	0.000	0.000
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	40%	60%	72%	0.000	0.000	0.000	0.000	0.000	0.000
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.06	40%	60%	72%	0.000	0.000	0.000	0.000	0.000	0.000
5.D Wastewater Treatment and Discharge	CH_4	541.86	219.90	59%	73%	93%	0.000	0.002	0.005	0.001	0.004	0.000
5.D Wastewater Treatment and Discharge	N_2O	67.21	45.27	30%	50%	58%	0.000	0.001	0.001	0.000	0.000	0.000
Total emission		**43,644.79**	**10,994.71**	**Overall uncertainty (%)**			**53.5**	**Trend uncertainty (%)**				**10.4**

* Base year for F-gases is 1995

Table 1b. Uncertainty evaluation excluding LULUCF

IPCC Source category	Gas	Base year (1990) emissions*	Emissions in 2014	Activity data uncertainty	Emission factor uncertainty	Combined uncertainty	Combined uncertainty as % of total national emissions in 2012	Type A sensitivity	Type B sensitivity	Uncertainty in trend in national emissions introduced by emission factor uncertainty	Uncertainty in trend in national emissions introduced by activity data uncertainty	Uncertainty introduced into the trend in total national emissions
		kt CO_2 *eqv.*	*kt* CO_2 *eqv.*	*%*	*%*	*%*	*%*	*%*	*%*	*%*	*%*	*%*
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CO_2	7,534.30	1,470.68	2%	3%	3%	0.000	0.033	0.031	0.001	0.001	0.000
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CH_4	6.90	0.93	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	N_2O	16.11	1.83	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CO_2	174.05	6.74	2%	7%	7%	0.000	0.001	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CH_4	0.05	0.00	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	N_2O	0.82	0.03	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CO_2	5,806.05	1,536.17	2%	3%	3%	0.000	0.017	0.033	0.000	0.001	0.000
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CH_4	2.63	0.70	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	N_2O	3.13	0.83	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CO_2	0.00	82.56	2%	7%	7%	0.000	0.002	0.002	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CH_4	0.00	0.57	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	N_2O	0.00	0.90	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Peat	CO_2	11.06	17.63	2%	7%	7%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Peat	CH_4	0.00	0.00	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Peat	N_2O	0.05	0.08	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000

1.A.1 Fuel combustion - Energy Industries - Biomass	CO_2			30%	50%	58%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Biomass	CH_4	0.40	14.44	30%	150%	153%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.1 Fuel combustion - Energy Industries - Biomass	N_2O	0.63	22.95	30%	150%	153%	0.000	0.000	0.000	0.001	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Liquid Fuels	CO_2	3,500.92	75.49	2%	3%	3%	0.000	0.028	0.002	0.001	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Liquid Fuels	CH_4	3.38	0.06	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Liquid Fuels	N_2O	8.06	0.14	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Solid Fuels	CO_2	171.63	473.11	2%	7%	7%	0.000	0.009	0.010	0.001	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Solid Fuels	CH_4	0.45	1.23	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Solid Fuels	N_2O	0.81	2.20	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Gaseous Fuels	CO_2	2,048.76	543.13	2%	3%	3%	0.000	0.006	0.012	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Gaseous Fuels	CH_4	0.93	0.25	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Gaseous Fuels	N_2O	1.11	0.29	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Peat	CO_2	17.53	6.78	2%	7%	7%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Peat	CH_4	0.01	0.00	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Peat	N_2O	0.08	0.03	2%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Biomass	CO_2			30%	50%	58%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Biomass	CH_4	0.38	2.56	30%	150%	153%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.2 Fuel combustion - Manufacturing Industries and Construction - Biomass	N_2O	0.60	4.08	30%	150%	153%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.a Domestic Aviation	CO_2	8.16	1.94	10%	2%	10%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.a Domestic Aviation	CH_4	0.00	0.00	10%	79%	79%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.a Domestic Aviation	N_2O	0.07	0.02	10%	110%	110%	0.000	0.000	0.000	0.000	0.000	0.000

1.A.3.b Road Transportation	CO_2	5,247.15	4,547.12	2%	2%	3%	0.000	0.051	0.096	0.001	0.003	0.000
1.A.3.b Road Transportation	CH_4	48.11	14.81	2%	40%	40%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.b Road Transportation	N_2O	39.09	35.36	2%	50%	50%	0.000	0.000	0.001	0.000	0.000	0.000
1.A.3.c Railways	CO_2	349.97	174.13	5%	5%	7%	0.000	0.001	0.004	0.000	0.000	0.000
1.A.3.c Railways	CH_4	0.50	0.25	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.c Railways	N_2O	40.92	20.36	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.d Domestic Navigation - Liquid Fuels	CO_2	15.49	14.51	5%	3%	6%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.d Domestic Navigation - Liquid Fuels	CH_4	0.04	0.03	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.d Domestic Navigation - Liquid Fuels	N_2O	0.13	0.12	5%	90%	90%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.i Other Transportation - Pipeline Transportation	CO_2	85.50	68.04	5%	7%	9%	0.000	0.001	0.001	0.000	0.000	0.000
1.A.3.e.i Other Transportation - Pipeline Transportation	CH_4	0.04	0.03	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.i Other Transportation - Pipeline Transportation	N_2O	0.05	0.04	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.ii Other Transportation - Off-road transport	CO_2	1,678.61	168.31	10%	5%	11%	0.000	0.011	0.004	0.001	0.001	0.000
1.A.3.e.ii Other Transportation - Off-road transport	CH_4	4.26	0.35	10%	40%	41%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.3.e.ii Other Transportation - Off-road transport	N_2O	186.51	19.12	10%	50%	51%	0.000	0.001	0.000	0.001	0.000	0.000
1.A.4 Other Sectors - Liquid Fuels	CO_2	1,429.58	182.35	3%	3%	4%	0.000	0.008	0.004	0.000	0.000	0.000
1.A.4 Other Sectors - Liquid Fuels	CH_4	4.17	0.46	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Liquid Fuels	N_2O	2.67	0.23	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Solid Fuels	CO_2	2,760.55	305.30	3%	7%	8%	0.000	0.017	0.006	0.001	0.000	0.000
1.A.4 Other Sectors - Solid Fuels	CH_4	128.56	14.27	3%	50%	50%	0.000	0.001	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Solid Fuels	N_2O	13.00	1.44	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Gaseous Fuels	CO_2	1,381.52	461.17	3%	3%	4%	0.000	0.002	0.010	0.000	0.000	0.000
1.A.4 Other Sectors - Gaseous Fuels	CH_4	3.13	1.04	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Gaseous Fuels	N_2O	0.75	0.25	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Peat	CO_2	27.13	109.04	3%	7%	8%	0.000	0.002	0.002	0.000	0.000	0.000
1.A.4 Other Sectors - Peat	CH_4	1.12	4.91	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors - Peat	N_2O	0.11	0.44	3%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors- Biomass	CO_2			50%	50%	71%	0.000	0.000	0.000	0.000	0.000	0.000
1.A.4 Other Sectors- Biomass	CH_4	70.28	150.36	50%	150%	158%	0.000	0.003	0.003	0.004	0.002	0.000
1.A.4 Other Sectors- Biomass	N_2O	12.97	27.63	50%	150%	158%	0.000	0.000	0.001	0.001	0.000	0.000
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	CO_2	0.05	0.04	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.a Fugitive Emissions from Fuels - Oil	CH_4	10.94	8.19	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000

and Natural Gas - Oil												
1.B.2.a Fugitive Emissions from Fuels - Oil and Natural Gas - Oil	N_2O	0.00	0.00	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	CO_2	0.01	0.01	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.b Fugitive Emissions from Fuels - Oil and Natural Gas - Natural Gas	CH_4	260.55	276.55	5%	50%	50%	0.000	0.004	0.006	0.002	0.000	0.000
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CO_2	0.58	3.96	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	CH_4	0.26	1.79	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
1.B.2.c Fugitive Emissions from Fuels - Venting and flaring	N_2O	0.00	0.02	5%	75%	75%	0.000	0.000	0.000	0.000	0.000	0.000
2.A.1 Cement Production	CO_2	1,668.07	400.83	2%	5%	5%	0.000	0.006	0.008	0.000	0.000	0.000
2.A.2 Lime Production	CO_2	222.68	41.22	5%	30%	31%	0.000	0.001	0.001	0.000	0.000	0.000
2.A.3 Glass Production	CO_2	11.70	7.41	7%	5%	9%	0.000	0.000	0.000	0.000	0.000	0.000
2.A.4.a Ceramics	CO_2	227.92	5.23	5%	5%	7%	0.000	0.002	0.000	0.000	0.000	0.000
2.A.4.b Other use of soda ash	CO_2	5.32	0.96	15%	5%	16%	0.000	0.000	0.000	0.000	0.000	0.000
2.A.4.d Mineral wool production	CO_2	6.28	11.27	7%	5%	9%	0.000	0.000	0.000	0.000	0.000	0.000
2.B.1 Ammonia Production	CO_2	1,255.82	1,875.12	2%	3%	3%	0.000	0.029	0.040	0.001	0.001	0.000
2.B.2 Nitric Acid Production	N_2O	893.01	331.76	2%	10%	10%	0.000	0.001	0.007	0.000	0.000	0.000
2.B.8.a Methanol	CO_2	24.35	0.00	5%	30%	30%	0.000	0.000	0.000	0.000	0.000	0.000
2.B.8.a Methanol	CH_4	5.24	0.00	5%	30%	30%	0.000	0.000	0.000	0.000	0.000	0.000
2.C.1 Iron and Steel Production	CO_2	16.98	2.60	10%	10%	14%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.1 Lubricant use	CO_2	6.06	11.84	5%	50%	50%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.2 Parafin wax use	CO_2	0.00	2.17	5%	100%	100%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.3 Solvent use	CO_2	59.79	47.42	30%	20%	36%	0.000	0.000	0.001	0.000	0.000	0.000
2.D.3 Asphalt roofing	CO_2	0.02	0.01	5%	25%	25%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.3 Road paving with asphalt	CO_2	0.00	0.00	20%	50%	54%	0.000	0.000	0.000	0.000	0.000	0.000
2.D.3 Urea-based catalyst	CO_2	0.00	1.18	10%	2%	10%	0.000	0.000	0.000	0.000	0.000	0.000
2.E.1 Semiconductor	SF_6	0.00	4.75	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.E.3 Photovoltaics	NF_3	0.00	0.29	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.1.a Domestic Refrigeration	HFCs	0.24	1.48	20%	50%	54%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.1.a Commercial Refrigeration	HFCs	3.77	156.51	20%	50%	54%	0.000	0.003	0.003	0.002	0.001	0.000
2.F.1.a Transport Refrigeration	HFCs	0.14	84.19	20%	50%	54%	0.000	0.002	0.002	0.001	0.001	0.000
2.F.1.a Industrial Refrigeration	HFCs	0.95	58.40	20%	50%	54%	0.000	0.001	0.001	0.001	0.000	0.000
2.F.1.a Stationary Air-Conditioning	HFCs	0.15	15.09	20%	50%	54%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.1.b Mobile Air-Conditioning	HFCs	0.12	111.32	20%	50%	54%	0.000	0.002	0.002	0.001	0.001	0.000
2.F.2 Foam Blowing Agents	HFCs	0.00	14.14	30%	30%	42%	0.000	0.000	0.000	0.000	0.000	0.000

2.F.3 Fire Protection	HFCs	0.00	2.15	20%	20%	28%	0.000	0.000	0.000	0.000	0.000	0.000
2.F.4 Aerosols/metered dose inhalers	HFCs	0.85	6.20	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.1 Manufacture of electrical equipments	SF_6	0.05	1.06	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.2.b Accelerators	SF_6	0.00	0.16	5%	5%	7%	0.000	0.000	0.000	0.000	0.000	0.000
2.G.3.a Medical applications	N_2O	93.35	3.05	5%	5%	7%	0.000	0.001	0.000	0.000	0.000	0.000
2.G.3.b Propellant for pressure and aerosol products	N_2O	2.70	2.14	20%	100%	102%	0.000	0.000	0.000	0.000	0.000	0.000
3.A Enteric Fermentation	CH_4	4,219.54	1,637.40	5%	20%	21%	0.000	0.001	0.035	0.000	0.002	0.000
3.B Manure Management	CH_4	559.35	235.86	19%	20%	27%	0.000	0.000	0.005	0.000	0.001	0.000
3.B Manure Management	N_2O	538.57	168.95	39%	123%	129%	0.000	0.001	0.004	0.001	0.002	0.000
3.D.1 Direct N_2O Emissions From Managed Soils	N_2O	1,947.98	1,392.18	8%	85%	86%	0.004	0.013	0.029	0.011	0.003	0.000
3.D.2 Indirect N_2O Emissions From Managed Soils	N_2O	616.93	411.93	14%	125%	126%	0.001	0.003	0.009	0.004	0.002	0.000
3.G Liming	CO_2	20.59	24.71	10%	50%	51%	0.000	0.000	0.001	0.000	0.000	0.000
3.H Urea Application	CO_2	35.68	15.72	30%	50%	58%	0.000	0.000	0.000	0.000	0.000	0.000
5.A Solid Waste Disposal	CH_4	1,028.83	834.33	30%	123%	126%	0.003	0.009	0.018	0.011	0.007	0.000
5.B Biological Treatment of Solid Waste	CH_4	4.04	20.44	40%	100%	108%	0.000	0.000	0.000	0.000	0.000	0.000
5.B Biological Treatment of Solid Waste	N_2O	2.89	14.62	40%	100%	108%	0.000	0.000	0.000	0.000	0.000	0.000
5.C Incineration and Open Burning of Waste	CO_2	2.66	1.96	40%	60%	72%	0.000	0.000	0.000	0.000	0.000	0.000
5.C Incineration and Open Burning of Waste	CH_4	0.00	0.00	40%	60%	72%	0.000	0.000	0.000	0.000	0.000	0.000
5.C Incineration and Open Burning of Waste	N_2O	0.08	0.06	40%	60%	72%	0.000	0.000	0.000	0.000	0.000	0.000
5.D Wastewater Treatment and Discharge	CH_4	541.86	219.90	59%	73%	93%	0.000	0.000	0.005	0.000	0.004	0.000
5.D Wastewater Treatment and Discharge	N_2O	67.21	45.27	30%	50%	58%	0.000	0.000	0.001	0.000	0.000	0.000
Total emission		**47,215.10**	**19,103.66**	**Overall uncertainty (%)**			**9.3**				**Trend uncertainty (%)**	**2.0**

* Base year for F-gases is 1995

ANNEX III. Lithuanian energy balance by fuel type

Table 3-1. Balance of crude oil, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	502	5 358	13 491	9 217	7 718	6 595	5 465	4 918	4 909	4 892	4 379	3 560	3 514
Biofuel blended													
Import	396 707	131 189	199 709	380 035	349 532	203 786	390 555	358 659	385 276	382 015	364 146	383 408	319 455
Export		335	13 254	6 312	4 907	6 649	5 512	4 831	4 736	3 438	3 408	2 863	2 677
International marine bunkers													
Changes in stocks	2 093	-4 730	-1 169	9 169	-10 033	-890	4 826	904	-1 081	1 857	-90	1 345	439
Gross inland consumption	**399 302**	**131 482**	**198 777**	**392 109**	**342 310**	**202 842**	**395 334**	**359 650**	**384 368**	**385 326**	**365 027**	**385 450**	**320 731**
Statistical difference		-42											
Transformed in power, heat and other plants:	399 302	131 440	198 777	392 101	342 307	202 835	395 334	359 631	384 357	385 326	365 019	385 450	320 731
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant	84	167	99										
- in geothermal plants													
- in other industries	399 218	131 273	198 678	392 101	342 307	202 835	395 334	359 631	384 357	385 326	365 019	385 450	320 731
Consumed in energy sector, total:				3	3	3							
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries				3	3	3							
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses				5		4		19	11		8		
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-2. Balance of motor gasoline, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	87 988	37 709	68 838	112 699	98 505	72 271	123 381	119 393	123 626	124 021	115 648	116 610	96 781
Biofuel blended				26	220	483	714	655	445	610	528	433	343
Import	220	14 328	736	1 115	3 836	365	303	405	2 616	1 141	996	667	1 004
Export	42 104	23 601	50 765	95 698	89 376	54 162	104 168	105 355	114 237	114 611	105 566	110 591	89 539
International marine bunkers													
Changes in stocks	-2 725	-1 758	-2 012	-3 193	2 699	275	-1 087	982	506	151	-1 479	1 999	353
Gross inland consumption	**43 379**	**26 678**	**16 797**	**14 949**	**15 884**	**19 232**	**19 143**	**16 080**	**12 956**	**11 312**	**10 127**	**9 118**	**8 942**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:			15	5	3						3	3	4
- in peat extraction enterprises				1	1								
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises			15	4	2						3	3	4
Non-energy use													
Distribution and transmission losses	308	176	68	61	71	33	29	27	22	17	17	10	8
Final consumption:	**43 071**	**26 502**	**16 714**	**14 883**	**15 810**	**19 199**	**19 114**	**16 053**	**12 934**	**11 295**	**10 107**	**9 105**	**8 930**
- in industry	44	88	48	31	30	21	28	18	15	17	14	13	13
- in construction	439	176	101	69	56	47	50	34	28	29	24	17	16
- in transport	41 840	25 887	16 337	14 711	15 652	19 059	18 965	15 948	12 841	11 201	10 025	9 033	8 859
- in agriculture	440	307	170	53	59	62	52	41	43	38	33	32	35
- in fishing													
- in commercial / public services	308	44	58	19	13	10	19	12	7	10	11	10	7
- in households													

Table 3-3. Balance of aviation gasoline, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import			14	20	20	22	23	17	18	18	18	16	19
Export													
International marine bunkers													
Changes in stocks								1					
Gross inland consumption			**14**	**20**	**20**	**22**	**23**	**18**	**18**	**18**	**18**	**16**	**19**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:			**14**	**20**	**20**	**22**	**23**	**18**	**18**	**18**	**18**	**16**	**19**
- in industry													
- in construction													
- in transport			14	20	20	22	23	18	18	18	18	16	19
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-4. Balance of gasoline type jet fuel, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production						-36	-14						
Biofuel blended													
Import			65	3	22	26	5						
Export								5					
International marine bunkers													
Changes in stocks			-65		-22	10	9	5					
Gross inland consumption				**3**									
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:				**3**									
- in industry													
- in construction													
- in transport				3									
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-5. Balance of kerosene type jet fuel, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	28 125	9 088	18 566	24 705	23 467	6 495	20 850	9 668	10 352	11 862	10 874	12 168	9 267
Biofuel blended													
Import	387	948	846		584	669		5	837	303	7 263	2 078	1 255
Export	22 956	8 442	16 673	21 406	22 091	4 669	17 443	8 090	9 062	9 882	14 527	11 876	6 587
International marine bunkers													
Changes in stocks	86	129	-1 651	-1 185	419	502	-11	117	115	222	-846	799	-203
Gross inland consumption	**5 642**	**1 723**	**1 088**	**2 114**	**2 379**	**2 997**	**3 396**	**1 700**	**2 242**	**2 505**	**2 764**	**3 169**	**3 732**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses				14	14	4	12	4	5	9			
Final consumption:	**5 642**	**1 723**	**1 088**	**2 100**	**2 365**	**2 993**	**3 384**	**1 696**	**2 237**	**2 496**	**2 764**	**3 169**	**3 732**
- in industry													
- in construction													
- in transport	5 642	1 723	1 080	2 100	2 365	2 993	3 384	1 696	2 237	2 496	2 764	3 169	3 732
- in agriculture													
- in fishing													
- in commercial / public services			5										
- in households			3										

Table 3-6. Balance of transport diesel, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	107 712	42 490	56 232	127 985	103 670	78 465	135 302	134 283	150 168	156 497	150 528	161 248	136 670
Biofuel blended				119	589	1 761	2 127	1 597	1 478	1 600	2 142	2 174	2 383
Import	8 923	9 475	1 670	2 840	3 113	11 840	7 336	5 127	7 882	15 451	19 016	31 433	42 930
Export	49 416	27 364	28 516	92 877	69 973	43 871	94 200	103 262	116 251	128 505	128 727	146 569	129 039
International marine bunkers			942										
Changes in stocks	-1 997	1 573	-4 819	-2 586	724	-1 773	-2 979	661	31	178	1 961	-2 156	217
Gross inland consumption	**65 222**	**26 174**	**23 625**	**35 481**	**38 123**	**46 422**	**47 586**	**38 406**	**43 308**	**45 221**	**44 920**	**46 130**	**53 161**
Statistical difference		213	853										
Transformed in power, heat and other plants:	7 521	1 742	36										
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant	7 521	1 615	28										
-in public heat plant		127	8										
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:	128	43	136	194	174	127	140	167	144	150	133	181	192
- in peat extraction enterprises	128	43	60	125	110	93	110	131	109	107	99	144	156
- in crude oil extraction enterprises			22	49	44	24	20	25	23	27	23	25	21
- in refineries			5		2	2							4
- in electricity, gas, steam and air conditioning enterprises			49	20	18	8	10	11	12	16	11	12	11
Non-energy use			6										
Distribution and transmission losses	297	128	55	122	89	74	80	69	73	81	70	28	19
Final consumption:	**57 276**	**24 474**	**24 245**	**35 165**	**37 860**	**46 221**	**47 366**	**38 170**	**43 091**	**44 990**	**44 717**	**45 921**	**52 950**
- in industry	2 124	1 827	510	499	453	378	263	196	190	191	174	223	237
- in construction	2 507	935	613	589	601	615	670	367	382	425	472	406	390
- in transport	34 289	14 489	21 476	32 515	35 362	43 721	44 808	36 197	41 030	42 814	42 412	43 719	50 702
- in agriculture	14 277	4 207	1 327	1 362	1 325	1 429	1 487	1 354	1 444	1 472	1 587	1 503	1 562
- in fishing				14	7	4	4	7	5	9	10	10	10
- in commercial / public services	2 889	2 804	319	186	112	74	134	52	40	79	62	60	49
- in households	1 190	212											

Table 3-7. Balance of heating and other gasoil, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				2 125	1 824	1 033	1 155	932	1 130	1 216	4 020	3 397	3 930
Biofuel blended								3	2		104	89	98
Import		717		915	818	660	585	617	854	934	874	674	538
Export				985	1 075	192	108	9		6			90
International marine bunkers				770	637	617	617	693	756	867	850	577	347
Changes in stocks		-717	65	-225	-17	-48	-45	28	-7	-59	-150	79	-119
Gross inland consumption			**65**	**1 060**	**913**	**836**	**970**	**878**	**1 223**	**1 218**	**3 998**	**3 662**	**4 010**
Statistical difference													
Transformed in power, heat and other plants:			22	102	26	33	31	33	55	40	51	58	38
- in public CHP plant									1		9		
- in auto-producer heat plant													
- in auto-producer CHP plant			22	64	20	30	27	29	52	38	41	56	37
-in public heat plant				38	6	3	4	4	2	2	1	2	1
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:									5	3	3	3	
- in peat extraction enterprises									5	3	3	3	3
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses					8								
Final consumption:			**43**	**958**	**879**	**803**	**940**	**845**	**1 163**	**1 175**	**3 944**	**3 601**	**3 969**
- in industry			7	405	240	198	233	188	220	214	240	200	286
- in construction			7	25	22	31	33	26	47	49	63	60	80
- in transport				226	247	235	251	214	235	179	2 686	2 478	2 588
- in agriculture			23	137	122	153	174	167	230	237	287	268	346
- in fishing				59	157	108	101	79	73	65	72	73	78
- in commercial / public services			6	55	53	58	77	57	69	72	87	97	118
- in households				51	38	20	71	111	289	359	509	425	473

Table 3-8. Balance of liquefied petroleum gases (LPG), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	12 006	7 636	11 026	21 046	18 812	13 254	18 439	12 679	12 720	11 507	10 235	11 742	10 116
Biofuel blended													
Import	2 208	1 056	3 972	3 110	4 182	5 621	3 725	4 008	5 024	5 202	5 208	4 927	5 184
Export	7 038	4 646	5 793	11 596	10 235	6 928	11 363	7 183	8 114	7 526	6 647	8 303	7 256
International marine bunkers													
Changes in stocks	46	230	-420	163	-59	-44	-74	231	-111	-27	100	-34	-47
Gross inland consumption	**7 222**	**4 276**	**8 785**	**12 723**	**12 700**	**11 903**	**10 727**	**9 735**	**9 519**	**9 156**	**8 896**	**8 332**	**7 997**
Statistical difference													
Transformed in power, heat and other plants:	46		51	90	101	80	78	88	90	79	80	79	75
- in public CHP plant								1	3			2	
- in auto-producer heat plant													
- in auto-producer CHP plant			21	19	19	17	16	17	18	30	31	30	27
-in public heat plant	46		31	71	82	63	62	70	69	49	49	47	48
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:	552	138	36	4	2	3							
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries	552	138	22			2							
- in electricity, gas, steam and air conditioning enterprises			14	4	2	1							
Non-energy use													
Distribution and transmission losses	322	92	103	47	47	38	32	39	26	15	21	17	16
Final consumption:	**6 302**	**4 046**	**8 595**	**12 580**	**12 550**	**11 782**	**10 617**	**9 608**	**9 403**	**9 062**	**8 795**	**8 236**	**7 906**
- in industry			201	229	292	324	292	250	273	259	320	325	269
- in construction	92	46	74	77	93	94	133	98	122	48	32	35	43
- in transport	920	1 058	5 032	9 593	9 810	9 708	8 615	7 681	7 275	6 790	6 400	6 147	5 966
- in agriculture	230	46	19	38	41	43	43	46	41	63	68	65	105
- in fishing													
- in commercial / public services	460	92	62	23	22	22	16	8	6	25	14	23	26
- in households	4 600	2 804	3 207	2 620	2 292	1 591	1 518	1 525	1 686	1 877	1 961	1 641	1 497

Table 3-9. Balance of fuel oil – high sulphur (>1%), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	133 867	33 356	39 422	71 994	77 669	55 306	72 632	61 764	65 373	67 961	66 546	72 862	57 935
Biofuel blended													
Import	293 464	47 887	4 110	5 056	4 860	3 748	3 059	6 288	7 883	1 707	813	315	167
Export	277 769	8 148	16 608	56 627	66 524	44 361	68 981	56 675	60 139	64 685	63 173	68 752	56 058
International marine bunkers	3 894	5 780	2 857	4 712	4 471	3 622	2 878	4 017	2 801	1 281	812	46	
Changes in stocks	-8 951	-11 159	-4 689	-1 824	2 202	159	3 576	994	-3 450	1 270	5 997	543	1 420
Gross inland consumption	**136 717**	**56 156**	**19 378**	**13 887**	**13 736**	**11 230**	**7 408**	**8 354**	**6 866**	**4 972**	**9 371**	**4 922**	**3 464**
Statistical difference		40	5 592										
Transformed in power, heat and other plants:	70 406	39 377	14 650	5 536	6 668	3 439	2 954	4 742	4 648	1 564	5 811	1 938	857
- in public CHP plant	44 195	20 511	7 233	3 837	5 201	666	2 383	4 160	4 157	942	5 284	1 349	346
- in auto-producer heat plant	642	201	27		2	1 400				405	279	418	383
- in auto-producer CHP plant	20 190	16 618	6 813	1 659	1 429	1 314	542	581	491	217	248	171	128
-in public heat plant	5 379	2 047	577	40	36	59	29	1					
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:	8 068	3 693	4 899	6 716	5 746	7 474	4 136	3 468	2 005	3 255	3 396	2 865	2 512
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries	8 068	3 693	4 899	6 716	5 746	7 474	4 136	3 468	2 005	3 255	3 392	2 865	2 508
- in electricity, gas, steam and air conditioning enterprises											4		4
Non-energy use													
Distribution and transmission losses	361			38	3	2	4				3	3	1
Final consumption:	**57 882**	**13 126**	**5 421**	**1 597**	**1 319**	**315**	**314**	**144**	**213**	**153**	**161**	**116**	**94**
- in industry	43 993	11 520	5 202	1 486	1 238	241	245	140	148	79	155	115	91
- in construction	1 044	201	11	17	14	9	9						
- in transport			3	4	10	6	4	4					
- in agriculture	1 084	201	114	80	50	44	35		41	40			
- in fishing													
- in commercial / public services	11 641	1 204	91	10	7	15	21		24	34	6	1	3
- in households	120												

Table 3-10. Balance of fuel oil – low sulphur (<1%), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production						183	4 838	5 028	4 306	2 413	1 563	382	343
Biofuel blended													
Import			1 407	1 191	1 105	1 634	1 821	1 123	2 779	4 630	5 339	3 589	333
Export				23		2		6	40	46	55	15	15
International marine bunkers			29	451	573	705	227	575	2 224	3 735	3 344	3 003	130
Changes in stocks			56	-60	23	-449	-585	447	-308	-338	-1 515	637	685
Gross inland consumption			**1 434**	**657**	**555**	**661**	**5 847**	**6 017**	**4 513**	**2 924**	**1 988**	**1 590**	**1 216**
Statistical difference													
Transformed in power, heat and other plants:			755	328	468	296	1 547	2 090	1 232	818	727	1 040	920
- in public CHP plant							292	377	18		262	819	624
- in auto-producer heat plant							987	1 426	1 017	602	181	37	
- in auto-producer CHP plant			713	318	468	274	268	263	197	213	282	183	296
-in public heat plant			42	10		22		24		3	2	1	
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:							4 022	3 697	3 042	1 787	948	280	
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries							4 022	3 697	3 042	1 787	948	280	
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses						5							
Final consumption:			**679**	**329**	**87**	**360**	**278**	**231**	**239**	**319**	**313**	**270**	**296**
- in industry			363	220	40	241	162	153	147	210	237	213	244
- in construction			47	93	38	87	100	54	75	72	35	37	31
- in transport					4	3	4	7					
- in agriculture			15	2	2	13	5	4	5	22	19	15	18
- in fishing				9									
- in commercial / public services			254	5	3	16	7	13	12	15	22	5	3
- in households													

Table 3-11. Balance of refinery gas (not liquefied), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	11 032	5 318	8 253	15 250	12 884	9 409	14 029	13 418	14 127	13 324	13 300	14 875	13 065
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks													
Gross inland consumption	**11 032**	**5 318**	**8 253**	**15 250**	**12 884**	**9 409**	**14 029**	**13 418**	**14 127**	**13 324**	**13 300**	**14 875**	**13 065**
Statistical difference													
Transformed in power, heat and other plants:						71	92	88	109	101	172	121	99
- in public CHP plant													
- in auto-producer heat plant											172	121	99
- in auto-producer CHP plant													
-in public heat plant						71	92	88	109	101			
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:	11 032	5 318	8 253	15 250	12 884	9 338	13 937	13 330	14 018	13 223	13 128	14 754	12 966
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries	11 032	5 318	8 253	15 250	12 884	9 338	13 937	13 330	14 018	13 223	13 128	14 754	12 966
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-12. Balance of bitumen, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	9 534	1 108	3 117	6 804	6 421	3 957	5 829	4 576	4 938	5 158	4 288	4 904	3 555
Biofuel blended													
Import	40	791	474	1 150	1 836	3 965	3 321	828	1 814	2 208	1 623	1 792	1 567
Export	1 662	356	839	2 587	2 746	1 729	2 884	2 359	2 896	3 736	2 757	3 444	2 164
International marine bunkers													
Changes in stocks	40	39	71	28	-35	-155	176	110	-165	162	-286	164	40
Gross inland consumption	**7 952**	**1 582**	**2 823**	**5 395**	**5 476**	**6 038**	**6 442**	**3 155**	**3 691**	**3 792**	**2 868**	**3 416**	**2 998**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use	7 952	1 582	2 823	5 395	5 476	6 038	6 442	3 155	3 691	3 792	2 868	3 416	2 998
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-13. Balance of lubricants, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production			1 226	847	931	1 093	1 218	1 257	1 504	1 675	1 790	1 755	1 886
Biofuel blended													
Import	413	620	602	1 121	1 296	1 252	1 175	1 150	1 709	2 181	2 891	1 641	1 268
Export			924	843	1 113	1 352	1 444	1 711	2 350	2 950	3 795	2 555	2 358
International marine bunkers					12								
Changes in stocks			129	-14	-53	16	39	58	-17	-34	-53	33	11
Gross inland consumption	**413**	**620**	**1 033**	**1 111**	**1 049**	**1 009**	**988**	**754**	**846**	**872**	**833**	**874**	**807**
Statistical difference			-84										
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use	413	620	949	1 111	1 049	1 009	988	754	846	872	833	874	807
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-14. Balance of petroleum coke, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	1 962	1 393	2 740	3 940	3 345	3 199	4 113	3 892	3 856	3 883	3 433	3 738	3 528
Biofuel blended													
Import				1 100			1 006		9		13		
Export													
International marine bunkers													
Changes in stocks				-1 054	325	793	-788	685	102				
Gross inland consumption	**1 962**	**1 393**	**2 740**	**3 986**	**3 670**	**3 992**	**4 331**	**4 577**	**3 967**	**3 883**	**3 446**	**3 738**	**3 528**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:	1 962	1 393	2 740	3 940	3 345	3 199	4 113	3 892	3 856	3 883	3 433	3 737	3 528
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries	1 962	1 393	2 740	3 940	3 345	3 199	4 113	3 892	3 856	3 883	3 433	3 737	3 528
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:				**46**	**325**	**793**	**218**	**685**	**111**		**13**	**1**	
- in industry				46	325	793	218	685	111		13	1	
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-15. Balance of refinery feedstock, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production		8 513	418	1 827	1 108	34	370	126				365	
Biofuel blended													
Import	1 304	17 209	13 934	3 568	13 464	44 038	13 120	12 327	12 171	18 931	23 087	25 134	22 010
Export											9	6	11
International marine bunkers													
Changes in stocks	-1 220	-8 470	213	-1 121	-1 335	663	152	670	614	673	-352	-434	709
Gross inland consumption	**84**	**17 252**	**14 565**	**4 274**	**13 237**	**44 735**	**13 642**	**13 123**	**12 785**	**19 604**	**22 726**	**25 059**	**22 708**
Statistical difference		-43											
Transformed in power, heat and other plants:	84	17 209	14 565	4 274	13 237	44 735	13 642	13 123	12 785	19 604	22 726	25 059	22 708
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries	84	17 209	14 565	4 274	13 237	44 735	13 642	13 123	12 785	19 604	22 726	25 059	22 708
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-16. Balance of naphtha, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				3 477	2 436	2 071	1 890	2 031					
Biofuel blended													
Import													
Export				3 257	2 656	2 071	1 890	2 031					
International marine bunkers													
Changes in stocks				-220	220								
Gross inland consumption													
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-17. Balance of orimulsion, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import		729	1 383	1 681	1 655								
Export													
International marine bunkers													
Changes in stocks			-734	700	-461	1 508	40						
Gross inland consumption		**729**	**649**	**2 381**	**1 194**	**1 508**	**40**						
Statistical difference													
Transformed in power, heat and other plants:		729	649	2 381	1 194	1 508	40						
- in public CHP plant		729	649	2 381	1 194	1 508	40						
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-18. Balance of shale oil, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import				73	90	81	172	103	19				
Export							77	36	18				
International marine bunkers													
Changes in stocks				-7	-2	-7	-9	-7	31				
Gross inland consumption				**66**	**88**	**73**	**86**	**60**	**32**				
Statistical difference													
Transformed in power, heat and other plants:				9	29	18	8	9	10				
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant				9	8	8		1	1				
-in public heat plant					21	10	8	8	9				
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:							7						
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises							7						
Non-energy use													
Distribution and transmission losses													
Final consumption:				**57**	**59**	**55**	**71**	**51**	**22**				
- in industry				13	40	22	27						
- in construction													
- in transport													
- in agriculture				23		4	8	15	4				
- in fishing													
- in commercial / public services				21	19	29	36	36	18				
- in households													

Table 3-19. Balance of coking coal, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import	31 752	6 506	176	53	176	25	728	2 167	4 343	8 929	8 010	10 427	8 326
Export		50						27	438	464	575	865	817
International marine bunkers													
Changes in stocks	980	2 889							-275	-970	-4	-730	178
Gross inland consumption	**32 732**	**9 345**	**176**	**53**	**176**	**25**	**728**	**2 140**	**3 630**	**7 495**	**7 431**	**8 832**	**7 687**
Statistical difference													
Transformed in power, heat and other plants:	1 834	452	25	53	50	25	50	58	55	51	71	81	67
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant	904	126	25	53	50	25	50	58	32	44	71	81	67
-in public heat plant	930	326							23	7			
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use		25											
Distribution and transmission losses		25							0	8	9	10	5
Final consumption:	**30 898**	**8 843**	**151**		**126**		**678**	**2 082**	**3 575**	**7 436**	**7 351**	**8 741**	**7 615**
- in industry	1 583	703	137		126		301	1 240	2 860	3 750	4 353	5 083	4418
- in construction	226	25	14						0	11	7	7	4
- in transport													
- in agriculture	1 557	50							3	23	16	35	80
- in fishing													
- in commercial / public services	12 359	6 632					176	566	406	2 105	1 302	1 583	1 352
- in households	15 173	1 433					201	276	305	1 547	1 673	2 033	1 761

Table 3-20. Balance of anthracite, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import			100				75	396	90	21	33	62	18
Export									1	1	5	5	8
International marine bunkers													
Changes in stocks									-74	71	-4	-15	16
Gross inland consumption			**100**				**75**	**396**	**15**	**91**	**24**	**42**	**26**
Statistical difference													
Transformed in power, heat and other plants:			100					24					
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant			100										
-in public heat plant								24					
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:							**75**	**372**	**15**	**91**	**24**	**42**	**26**
- in industry							75	372	5	91	24	42	22
- in construction									2				
- in transport													
- in agriculture									3				2
- in fishing													
- in commercial / public services									4				
- in households									1				2

Table 3-21. Balance of sub-bituminous coal, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import			2 698	6 618	8 781	8 193	7 960	2 567	3 248	857	24	58	30
Export				37	71	181	195	359	406	127		2	31
International marine bunkers													
Changes in stocks			11	-168	115	579	-1 133	1 009	672	-46	346	10	21
Gross inland consumption			**2 709**	**6 413**	**8 825**	**8 591**	**6 632**	**3 217**	**3 514**	**684**	**370**	**66**	**20**
Statistical difference													
Transformed in power, heat and other plants:			150	207	205	200	141	52	100	85	49	27	4
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant			81	147	141	133	92	36	66	85	49	27	4
-in public heat plant			69	60	64	67	49	16	34				
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:			4										
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises			4										
Non-energy use			7	3									
Distribution and transmission losses			11	6	17	12	7	10	8				
Final consumption:			**2 537**	**6 197**	**8 603**	**8 379**	**6 484**	**3 155**	**3 406**	**599**	**321**	**39**	**16**
- in industry			5	3 059	4 316	4 610	3 736	688	207	16	19	4	3
- in construction				18	23	17	11	5	2	1	1		
- in transport													
- in agriculture			14	36	50	19	15	14	8	3	2		
- in fishing													
- in commercial / public services			1 867	2 036	2 762	2 053	1 290	1 257	1 417	22	6	5	2
- in households			651	1 048	1 452	1 680	1 432	1 191	1 772	557	293	30	11

Table 3-22. Balance of coke, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import			445	440	786	712	456	294	466	517	543	551	499
Export													
International marine bunkers													
Changes in stocks			-52	96	-69	-2	31	27	7	5	11	10	-21
Gross inland consumption			**393**	**536**	**717**	**710**	**487**	**321**	**473**	**522**	**554**	**561**	**478**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use			47	2									
Distribution and transmission losses													
Final consumption:			**346**	**534**	**717**	**710**	**487**	**321**	**473**	**522**	**554**	**561**	**478**
- in industry			346	534	717	710	487	321	473	522	554	561	478
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-23. Balance of lignite, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import			15	40	36		1		14	22		22	13
Export													
International marine bunkers													
Changes in stocks			1	2	4	3			-6	-10	2	1	-7
Gross inland consumption			**16**	**42**	**40**	**3**	**1**		**8**	**12**	**2**	**23**	**6**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:			**16**	**42**	**40**	**3**	**1**		**8**	**12**	**2**	**23**	**6**
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services			16	25	28	2	1			4		6	5
- in households				17	12	1			8	8	2	17	1

Table 3-24. Balance of peat, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	580	600	494	825	640	616	790	616	364	492	709	985	1 181
Biofuel blended													
Import					6					2			
Export			76	1	36	14	59	81	104	142	153	137	109
International marine bunkers													
Changes in stocks	116	222	51	-235	-60	182	-282	-159	94	140	-68	-44	-565
Gross inland consumption	**696**	**822**	**469**	**589**	**550**	**784**	**449**	**376**	**354**	**492**	**488**	**804**	**507**
Statistical difference													
Transformed in power, heat and other plants:	445	357	258	299	380	688	345	285	202	248	188	551	163
- in public CHP plant					22	302	6	1			4		36
- in auto-producer heat plant													
- in auto-producer CHP plant	67	96	80	128	133	149	111	135	102	132	99	438	127
-in public heat plant	39	10	14			40				3			
- in geothermal plants													
- in other industries	339	251	163	171	225	197	228	149	100	113	85	113	96
Consumed in energy sector, total:		126	36	11	7	3				13	25	6	6
- in peat extraction enterprises			20	11	5	3						6	6
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises		126	15		2					13	25		
Non-energy use													
Distribution and transmission losses	9	10	5	7		24							
Final consumption:	**242**	**329**	**170**	**272**	**163**	**69**	**104**	**91**	**152**	**231**	**275**	**247**	**242**
- in industry	155	174	43	7	3	5	6	5	9	37	40	40	38
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services	87	58		21	15	10	26	24	44	85	112	99	97
- in households		97	127	244	145	54	72	62	99	109	123	108	107

Table 3-25. Balance of peat briquettes and peat pellets, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	239	186	138	147	191	176	201	128	84	101	73	96	81
Biofuel blended													
Import		119	2	143	192	314	466	532	696	899	1 009	1 150	762
Export					5	2	1	1		22	168	116	159
International marine bunkers													
Changes in stocks	-53	-13	-1	-35	5	-2	-16	37	-44	-160	64	-120	184
Gross inland consumption	**186**	**292**	**139**	**255**	**383**	**486**	**650**	**696**	**736**	**818**	**978**	**1 010**	**868**
Statistical difference													
Transformed in power, heat and other plants:				9	2		5	13	3		3	3	
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant				2	1		3	3	1		2	3	
-in public heat plant				7	1		2	10	2		1		
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:			2										
- in peat extraction enterprises			2										
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses					1								
Final consumption:	**186**	**293**	**137**	**246**	**380**	**486**	**645**	**683**	**733**	**818**	**975**	**1 007**	**868**
- in industry	13	53		8	11	19	16	7	27	27	34	28	27
- in construction						1							
- in transport													
- in agriculture				3	3	11	7	4	16	17	18	21	19
- in fishing													
- in commercial / public services	27	53	1	28	39	113	156	185	193	238	295	325	307
- in households	146	186	136	207	327	343	466	487	497	536	628	633	515

Table 3-26. Balance of paraffin and waxes, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import				176	151	165	249	295	520	857	1 139	1 264	1 328
Export				106	101	79	153	204	384	647	906	1 161	1 167
International marine bunkers													
Changes in stocks					4	-1		2	3	-46	-61	38	-13
Gross inland consumption				**70**	**54**	**85**	**96**	**93**	**139**	**164**	**172**	**141**	**148**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use				70	54	85	96	93	139	164	172	141	148
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-27. Balance of natural gas, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production													
Biofuel blended													
Import	201 957	84 929	86 453	104 363	103 830	124 570	104 651	91 655	104 017	114 115	111 200	90 670	89 759
Export	6 102												13
International marine bunkers													
Changes in stocks			-37	-671	-1 081	-3 501	4 022	-326	304	-298	-68	-62	-3 296
Gross inland consumption	**195 855**	**84 929**	**86 416**	**103 692**	**102 749**	**121 069**	**108 673**	**91 329**	**104 321**	**113 817**	**111 132**	**90 608**	**86 450**
Statistical difference													
Transformed in power, heat and other plants:	105 124	41 480	47 241	57 134	53 699	50 067	45 905	45 311	58 186	48 005	43 280	35 499	27 756
- in public CHP plant	62 825	17 664	29 650	42 536	39 866	36 504	34 538	34 377	45 755	37 219	31 684	26 622	19 871
- in auto-producer heat plant	1 787	473	324	1 160	1 053	940	256	990	1 003	954	1 881	1 045	1 896
- in auto-producer CHP plant	34 248	21 952	16 272	11 414	11 391	11 918	10 034	8 818	10 525	8 994	8 977	7 317	5 473
-in public heat plant	6 265	1 391	688	667	578	590	746	521	558	568	470	391	372
- in geothermal plants				819	420	90	30	503	345	270	268	124	144
- in other industries			307	538	391	25	301	102					
Consumed in energy sector, total:			140	130	100	99	98	72	65	199	130	72	58
- in peat extraction enterprises													
- in crude oil extraction enterprises			3	3	3	3	2	2	3	3	3	2	3
- in refineries			28	28	5	5	1	6	4	2	19	20	18
- in electricity, gas, steam and air conditioning enterprises			109	99	92	91	95	64	58	194	108	50	37
Non-energy use	26 934	20 167	22 716	24 288	25 024	46 416	39 254	24 153	22 309	43 370	44 773	34 355	39 220
Distribution and transmission losses	1 688	1 935	1 119	420	69	30		4	5	4	3		
Final consumption:	**62 109**	**21 347**	**15 200**	**21 720**	**23 857**	**24 457**	**23 416**	**21 789**	**23 756**	**22 239**	**22 946**	**20 682**	**19 416**
- in industry	36 065	8 916	8 285	11 620	12 455	11 819	11 326	10 540	11 500	11 055	11 648	10 053	9 377
- in construction	1 030	219	266	513	611	655	677	424	501	459	490	509	457
- in transport				647	1 092	1 145	1 004	1 015	1 028	862	1 330	1 250	1 232
- in agriculture	2 946	1 197	991	1 192	1 581	1 653	1 431	1 132	1 309	1 273	1 156	1 058	869
- in fishing													
- in commercial / public services	12 831	3 319	1 302	2 118	2 254	3 020	2 874	2 603	2 793	2 520	2 652	2 656	2 452
- in households	9 237	7 696	4 356	5 630	5 864	6 165	6 104	6 075	6 625	6 070	5 670	5 156	5 029

Table 3-28. Balance of charcoal, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				18	19	13	13	9	24	19	19	19	28
Biofuel blended													
Import				14	25	38	70	69	61	58	43	58	126
Export				15	16	16	18	43	38	36	34	36	93
International marine bunkers													
Changes in stocks				3	-4	1	-2	5	1			-3	-17
Gross inland consumption				**20**	**24**	**36**	**63**	**40**	**48**	**41**	**28**	**38**	**44**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:				**20**	**24**	**36**	**63**	**40**	**48**	**41**	**28**	**38**	**44**
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services				20	24	36	63	40	48	41	28	38	44
- in households													

Table 3-29. Balance of wood and wood waste, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	11 930	19 632	27 324	35 293	37 650	36 839	39 022	41 787	41 734	40 955	41 291	43 355	46 292
Biofuel blended													
Import		61	4	727	1 003	957	1 227	1 972	2 008	4 603	4 623	4 949	5 185
Export			255	710	1 695	1 923	2 224	4 705	5 102	5 431	4 871	5 427	5 761
International marine bunkers													
Changes in stocks	-14	-381	-54	-498	-503	15	-113	123	444	-2 044	722	-188	-530
Gross inland consumption	**11 916**	**19 312**	**27 019**	**34 812**	**36 455**	**35 888**	**37 912**	**39 177**	**39 084**	**38 083**	**41 765**	**42 689**	**45 186**
Statistical difference				457	225								
Transformed in power, heat and other plants:	527	558	1 640	6 273	7 272	7 552	8 899	10 375	10 408	9 792	12 952	14 797	18 646
- in public CHP plant				191	784	1 597	1 864	2 331	2 472	2 359	3 785	6 073	6 058
- in auto-producer heat plant													
- in auto-producer CHP plant	274	156	1 060	4 906	5 501	4 927	6 195	7 349	7 121	6 691	7 976	7 679	9 961
-in public heat plant	253	402	580	1 128	939	992	813	680	772	706	1 149	1 002	2 627
- in geothermal plants													
- in other industries				48	48	36	27	15	43	36	42	43	44
Consumed in energy sector, total:			25	13	16	6	2	4	19	12	11	6	9
- in peat extraction enterprises				13	9	4		0	4	4	6	3	9
- in crude oil extraction enterprises													
- in refineries					4	1	1	1	1	2	4	3	
- in electricity, gas, steam and air conditioning enterprises			25		3	1	1	3	14	6	1		
Non-energy use													
Distribution and transmission losses			12	4	17								
Final consumption:	**11 389**	**18 754**	**25 342**	**28 979**	**29 375**	**28 330**	**29 011**	**28 798**	**28 657**	**28 279**	**28 802**	**27 886**	**26 487**
- in industry	453	756	1 218	4 007	3 586	3 480	3 273	2 631	2 920	3 027	3 400	3 380	3 313
- in construction	51	105	100	185	232	217	177	125	143	145	157	125	99
- in transport													
- in agriculture	187	211	272	253	264	320	371	400	399	463	437	400	436
- in fishing													
- in commercial / public services	1 699	1 104	1 703	1 278	1 256	1 189	1 197	1 185	1 178	1 276	1 344	1 390	1 358
- in households	8 999	16 578	22 049	23 256	24 037	23 124	23 993	24 457	24 017	23 368	23 464	22 591	21 281

Table 3-30. Balance of agricultural waste, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				96	104	150	174	184	228	212	242	238	457
Biofuel blended													
Import													8
Export													269
International marine bunkers													
Changes in stocks				16	-31	33	-39	-9	11	-9	-34	24	6
Gross inland consumption				**112**	**73**	**183**	**135**	**175**	**239**	**203**	**208**	**262**	**202**
Statistical difference													
Transformed in power, heat and other plants:				64	60	63	88	109	144	113	112	99	105
- in public CHP plant											1	2	2
- in auto-producer heat plant													
- in auto-producer CHP plant				55	43	52	77	94	131	100	101	97	103
-in public heat plant				9	17	11	11	15	13	13	10		
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:					1			7	3	1			
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries								7					
- in electricity, gas, steam and air conditioning enterprises					1				3	1			
Non-energy use													
Distribution and transmission losses													
Final consumption:				**48**	**12**	**120**	**47**	**59**	**92**	**89**	**96**	**163**	**97**
- in industry				41	10	76	19	8	11	7	6	13	5
- in construction													
- in transport													
- in agriculture				2		44	28	51	56	56	59	88	63
- in fishing													
- in commercial / public services									18	25	28	58	29
- in households				5	2				7	1	3	4	

Table 3-31. Balance of bioethanol, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				195	268	402	463	661	1 060	565	656	730	407
Biofuel blended													
Import					70	116	250	94	106	234	286	214	32
Export				162	115	8	66	106	649	320	483	562	120
International marine bunkers													
Changes in stocks				-7	2	-16	9	-46	-3	-14	6	19	41
Gross inland consumption				**26**	**225**	**494**	**656**	**603**	**514**	**465**	**465**	**401**	**360**
Statistical difference													
Transformed in power, heat and other plants:					153	294	311	1					
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries					153	294	311	1					
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use							11	18	78	68	100	117	78
Distribution and transmission losses													
Final consumption:				**26**	**72**	**200**	**334**	**584**	**436**	**397**	**365**	**284**	**282**
- in industry													
- in construction													
- in transport				26	72	200	334	584	436	397	365	284	282
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-32. Balance of biodiesel, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				260	383	917	2 390	3 873	3 299	2 956	3 948	4 340	4 429
Biofuel blended													
Import					227	1 156	1 639	1 222	527	1 273	1 413	1 406	1 502
Export				168		235	1 955	3 434	2 538	2 726	3 131	3 571	3 434
International marine bunkers													
Changes in stocks				27	-21	-76	-158	-80	166	-22	-62	-2	-88
Gross inland consumption				**119**	**589**	**1 762**	**1 916**	**1 581**	**1 454**	**1 481**	**2 168**	**2 173**	**2 409**
Statistical difference													
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:				**119**	**589**	**1 762**	**1 916**	**1 581**	**1 454**	**1 481**	**2 168**	**2 173**	**2 409**
- in industry													
- in construction													
- in transport				119	589	1 762	1 916	1 581	1 454	1 481	2 168	2 173	2 409
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-33. Balance of sludge biogas, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				57	62	69	70	89	125	129	130	150	290
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks													
Gross inland consumption				**57**	**62**	**69**	**70**	**89**	**125**	**129**	**130**	**150**	**290**
Statistical difference													
Transformed in power, heat and other plants:				36	36	39	35	37	55	56	52	67	105
- in public CHP plant				17	30	33	21	9	8	13	10	14	16
- in auto-producer heat plant				3	6	6	14	28	47	43	42	53	89
- in auto-producer CHP plant				16									
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:				**21**	**26**	**30**	**35**	**52**	**70**	**73**	**78**	**83**	**185**
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services				21	26	30	35	52	70	73	78	83	185
- in households													

Table 3-34. Balance of landfill biogas, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production							17	56	83	245	257	299	323
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks													
Gross inland consumption							**17**	**56**	**83**	**245**	**257**	**299**	**323**
Statistical difference													
Transformed in power, heat and other plants:							17	56	83	237	256	292	320
- in public CHP plant									35	152	124	226	187
- in auto-producer heat plant							17	56	48	85	132	66	133
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:									**0**	**8**	**1**	**7**	**3**
- in industry												2	1
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services									0	8	1	5	2
- in households													

Table 3-35. Balance of other biogas from agricultural waste, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production				20	21	34	38	50	210	89	97	200	263
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks													
Gross inland consumption				**20**	**21**	**34**	**38**	**50**	**210**	**89**	**97**	**200**	**263**
Statistical difference													
Transformed in power, heat and other plants:				7	6	9	14	15	91	42	45	114	178
- in public CHP plant													
- in auto-producer heat plant				7	6	9	14	15	91	42	45	114	178
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:				**13**	**15**	**25**	**24**	**35**	**119**	**47**	**52**	**86**	**85**
- in industry					6	13	10	18	104	41	52	86	85
- in construction													
- in transport													
- in agriculture				13	9	12	14	17	15	6			
- in fishing													
- in commercial / public services													
- in households													

Table 3-36. Balance of emulsified vacuum residue, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production							557			19		40	
Biofuel blended													
Import													
Export										19		40	
International marine bunkers													
Changes in stocks													
Gross inland consumption							**557**						
Statistical difference													
Transformed in power, heat and other plants:							557						
- in public CHP plant							557						
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-37. Balance of sulphur (from oil), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	960	400	1 228	2 971	2 445	1 705	2 956	2 789	2 939	3 068	2 922	3 258	3 064
Biofuel blended													
Import													
Export			14	154			38	561	49		19		1 456
International marine bunkers													
Changes in stocks		-280	-101	-75	78	-90	102	11	6	3	-65	87	11
Gross inland consumption	**960**	**120**	**1 113**	**2 742**	**2 523**	**1 615**	**3 020**	**2 239**	**2 896**	**3 071**	**2 838**	**3 345**	**1 619**
Statistical difference		280											
Transformed in power, heat and other plants:													
- in public CHP plant													
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use	960	400	1 113	2 742	2 523	1 615	3 020	2 239	2 896	3 071	2 838	3 345	1 619
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-38. Balance of industrial waste, TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production												155	258
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks													
Gross inland consumption												**155**	**258**
Statistical difference													
Transformed in power, heat and other plants:												155	258
- in public CHP plant												155	258
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-39. Balance of municipal waste (non-biomass fraction), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production												475	495
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks												-7	3
Gross inland consumption												**468**	**498**
Statistical difference													
Transformed in power, heat and other plants:												468	498
- in public CHP plant												468	498
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

Table 3-40. Balance of municipal waste (biomass fraction), TJ

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production												468	475
Biofuel blended													
Import													
Export													
International marine bunkers													
Changes in stocks												-7	2
Gross inland consumption												**461**	**477**
Statistical difference													
Transformed in power, heat and other plants:												461	477
- in public CHP plant												461	477
- in auto-producer heat plant													
- in auto-producer CHP plant													
-in public heat plant													
- in geothermal plants													
- in other industries													
Consumed in energy sector, total:													
- in peat extraction enterprises													
- in crude oil extraction enterprises													
- in refineries													
- in electricity, gas, steam and air conditioning enterprises													
Non-energy use													
Distribution and transmission losses													
Final consumption:													
- in industry													
- in construction													
- in transport													
- in agriculture													
- in fishing													
- in commercial / public services													
- in households													

ANNEX IV. Summary of the study "Determination of national GHG emission factors for energy sector", performed by Lithuanian Energy Institute (2012)

During combustion a great share of carbon is removed immediately as CO_2, therefore conditions of combustion process practically have not influence on CO_2 emission factors. CO_2 emission factors depend on type of fuel, i.e. on the amount of carbon content in this fuel. After the summarization of performed comparative analysis of applied emission factors in other EU countries, summarization of data provided by the operators under the EU ETS system and aggregation of results provided by the accredited research laboratories, in this chapter of the study determined country specific CO_2 emission factors for energy sector (fuel combustion). Recommended values of country specific CO_2 emission factors are set considering to the results of analysis performed. Besides, determined values of emission factors have to assure low as possible uncertainty of emission factors.

CH_4 and N_2O emission factors are influenced by type of technology, operating conditions, age of equipment and other combustion conditions, therefore values of these emission factors significantly differ between the individual technologies. Seeking to precisely set country specific CH_4 and N_2O emission factors of energy technologies used in Lithuania, it is essential to perform comprehensive and multiplex measurements of emissions by differencing in accordance to the group of equipment and fuel type. However, the measurements have to be long-lasting, therefore in this study recommended values of CH_4 and N_2O emission factors are based in accordance to the results of analysis performed and default IPCC (1996) values.

Recommended CO_2, CH_4 and N_2O emission factors for energy sector are provided in Table 4-1.

Recommended country specific CO_2 emission factor for natural gas is determined considering to the chemical composition of natural gas that was provided by Central Calibration and Test Laboratory of JSC “Lietuvos dujos”, and considering the carbon content in natural gas.

Values of national CO_2 emission factors for coking coal, residual fuel oil, petroleum coke, orimulsion, non liquefied petroleum gas and coke are set on the basis of data provided by the operators under EU ETS and considering to the Tier 3 reliability that ensures the lowest uncertainty of emission factor. Sustaining to data base of EU ETS, in the some cases it is possible to apply emission factors set at the plant-specific level. For example, this can be applied for orimulsion combusted in Lithuania Thermal Power Plant or residual fuel oil combusted in CHP of the JSC “ORLEN Lietuva”. For the national GHG inventory preparation it is essential to consider the possibility to apply plant-specific emission factors, because the application of these emission factors enables to use higher Tiers in national GHG inventory.

Values of national CO_2 emission factors for gasoline, diesel, gasoil, jet kerosene and liquefied petroleum gas are determined on the basis of measurement performed by accredited Laboratory of Quality Research Centre of JSC „ORLEN Lietuva“.

Value of CO_2 emission factor for shale oil is based on national Estonian emission factor considering to the fact that shale oil is imported to Lithuania from Estonia.

Country specific CO_2 emission factors for crude oil, waste oil and peat are determined taking into consideration results of performed measurements and calculations provided in various national studies.

Country specific CO_2 emission factor for wood and wood waste is specified by performed measurements in Laboratory of Heat Equipment Research and Testing (Lithuanian Energy Institute).

Recommended value of CO_2 emission factor for biogas is chosen in accordance to the results of analysis on applied emission factors in other EU countries and considering to the results of long-lasting research analysis performed in other countries. However, seeking to ensure low uncertainty of emission factor for biogas, it is essential to perform long-lasting measurements for different types of biogas in Lithuania.

Table 4-1. **Recommended GHG emission factors for energy industries**

1.AA.1 Energy industries sector	**CO_2, *t/TJ***	**CH_4, *t/TJ***	**N_2O, *t/TJ***
Waste oil	77,11	0,003	0,0006
Gasoline	72,97	0,003	0,0006
Diesel	72,89	0,003	0,0006
Gasoil	72,89	0,003	0,0006
Residual fuel oil	77,60	0,003	0,0006
Petroleum coke	94,06	0,003	0,0006
Non liquefied petroleum gas	55,82	0,003	0,0006
Orimulsion	81,74	0,003	0,0006
Shale oil	77,40	0,003	0,0006
Liquefied petroleum gas	65,42	0,003	0,0006
Crude oil	77,74	0,003	0,0006
Coking coal	94,90	0,001	0,0014
Peat	104,34	0,001	0,0015
Natural gas	55,23	0,001	0,0001
Biogas	58,45	0,001	0,0001
Wood and wood waste	109,90	0,03	0,004

The reliabilities of recommended national CO_2 emission factors are assessed considering to the default IPCC (1996) emission factors and results of the comparative analysis of emission factors applied in other EU countries. The comparison of recommended national CO_2 emission factors with default IPCC (1996) emission factors is presented in Figure 4-1.

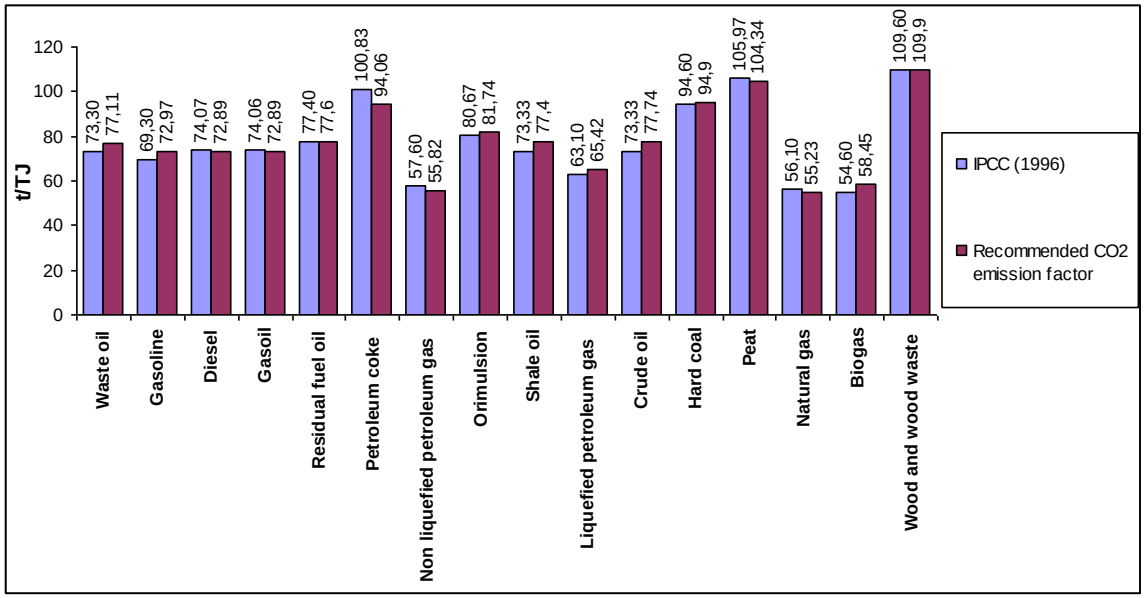

Figure 4-1. Comparison of recommended national **CO_2** emission factors and default IPCC (1996) emission factors: energy industries

As it is seen from Figure 4-1, recommended values of national CO_2 emission factors are higher than default IPCC (1996) for many types of fuels. Recommended values of national CO_2 emission factors for diesel, gasoil, petroleum coke, non liquefied petroleum gas, peat and natural gas are lower than default IPCC (1996) values. Recommended national CO_2 emission factors of petroleum coke and non liquefied petroleum gas are lower than default values by 6,71% and 3,09%, respectively.

CO_2 emission factors for manufacturing industries and construction are recommended the same as for energy industries sector (Table 4-2). CH_4 and N_2O emission factors are selected considering to the results of analysis performed and default IPCC (1996) values.

Table 4-2. **Recommended GHG emission factors for manufacturing industries and construction**

1.AA.2 Manufacturing industries and construction	**CO_2, *t/TJ***	**CH_4, *t/TJ***	**N_2O, *t/TJ***
Gasoil	72,89	0,002	0,0006
Residual fuel oil	77,60	0,002	0,0006
Petroleum coke	94,06	0,002	0,0006
Shale oil	77,40	0,002	0,0006
Liquefied petroleum gas	65,42	0,002	0,0006
Jet kerosene	72,24	0,002	0,0006
Coking coal	94,90	0,01	0,0015
Peat	104,34	0,002	0,0015
Coke	109,11	0,01	0,0015
Natural gas	55,23	0,005	0,0001
Biogas	58,45	0,001	0,0001
Wood and wood waste	109,9	0,03	0,004

Recommended values of CO_2, CH_4 and N_2O emission factors for transport sector are presented in Table 4-3. CO_2 emission factors of fuels (except aviation gasoline) used in transport sector are determined on the basis of measurement performed by accredited Laboratory of Quality Research Centre of JSC „ORLEN Lietuva“. Aviation gasoline is not produced in Lithuania. Minor volume of this fuel is imported from Sweden and other EU countries, therefore it is

recommended for aviation gasoline to apply average value of emission factors applied in EU countries.

Table 4-3. **Recommended GHG emission factors for transport sector**

1.AA.3 Transport	CO_2, *t/TJ*	CH_4, *t/TJ*	N_2O, *t/TJ*
Aviation gasoline	71,62	0,0005	0,002
Gasoline	72,97	0,02	0,0006
Diesel	72,89	0,005	0,0006
Residual fuel oil	77,60	0,005	0,0006
Liquefied petroleum gas	65,42	0,005	0,0006
Jet kerosene	72,24	0,0005	0,002

The comparison of recommended national CO_2 emission factors with default IPCC (1996) emission factors are presented in Figure 4-2.

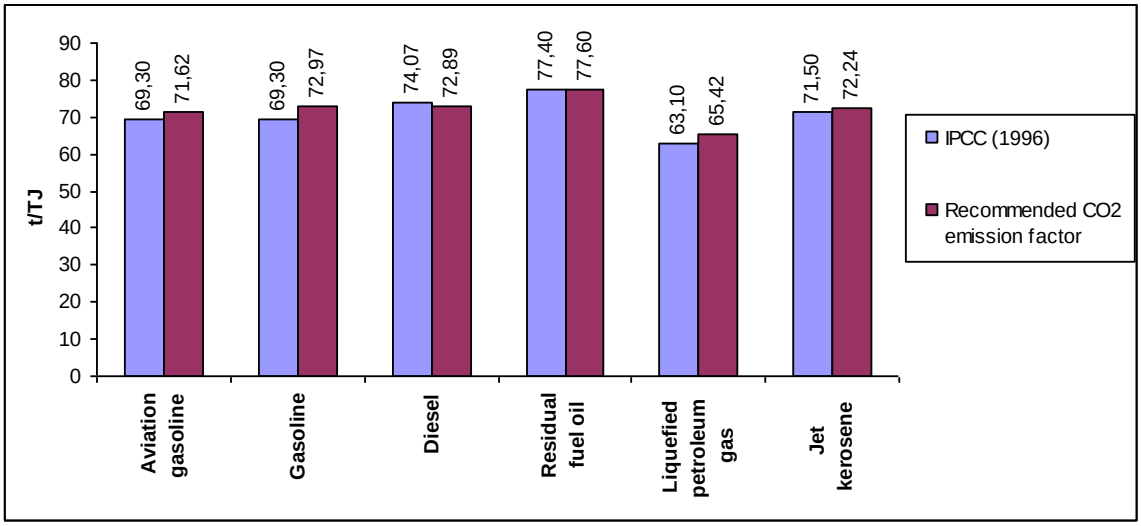

Figure 4-2. Comparison of recommended national **CO_2** emission factors with default IPCC (1996) emission factors: transport sector

As it is seen from Figure 4-2, only in the case of diesel, recommended value of national CO_2 emission factor is lower than the default value (by 1,59%). In all other cases, recommended values of national CO_2 emission factors exceed default IPCC (1996) values by 0,26% (residual fuel oil) – 5,30% (gasoline).

Recommended values of CO_2, CH_4 and N_2O emission factors for service, household, agriculture and fishing sector are presented in Table 4-4.

Table 4-4. **Recommended GHG emission factors for commercial/institutional, household, agriculture and fishing sectors**

1.AA.3 Other sectors	*Fuel type*	CO_2, *t/TJ*	CH_4, *t/TJ*	N_2O, *t/TJ*
Commercial/ institutional sector	Coking coal	94,9	0,01	0,0014
	Biogas	58,45	0,005	0,0001
	Peat	104,34	0,01	0,0014
	Natural gas	55,23	0,005	0,0001
	Gasoil	72,89	0,01	0,0006
	Lignite	101,2	0,01	0,0014
	Wood and wood waste	109,9	0,3	0,004
	Residual fuel oil	77,6	0,01	0,0006
	Charcoal	109,9	0,2	0,001
	Shale oil	77,4	0,01	0,0006
	Liquefied petroleum gas	65,42	0,01	0,0006
Household sector	Coking coal	94,9	0,3	0,0014
	Peat	104,34	0,3	0,0014
	Natural gas	55,23	0,005	0,0001
	Gasoil	72,89	0,01	0,0006
	Lignite	101,2	0,3	0,0014
	Wood and wood waste	109,9	0,3	0,004
	Residual fuel oil	77,6	0,01	0,0006
	Liquefied petroleum gas	65,42	0,01	0,0006
Agriculture and fishing sector	Coking coal	94,9	0,3	0,0014
	Biogas	58,45	0,005	0,0001
	Peat	104,34	0,3	0,0014
	Natural gas	55,23	0,005	0,0001
	Gasoil	72,89	0,01	0,0006
	Wood and wood waste	109,9	0,3	0,004
	Residual fuel oil	77,6	0,01	0,0006
	Shale oil	77,4	0,01	0,0006
	Liquefied petroleum gas	65,42	0,01	0,0006

Recommended CO_2 emission factors for the main types of fuel are the same as for energy industries sector. Only in the case of lignite it is recommended to apply the default IPCC (1996) value.

Preparing the national GHG inventory, it is essential to evaluate the overall inventory uncertainty. For this purpose it is needed to have uncertainty estimates of emission factors, therefore in this study expert valuations of determined national emission factors uncertainties are performed.

Considering to international practice, uncertainty assessment of CO_2, N_2O and CH_4 emission factors is performed at aggregated sector-specific and fuel type-specific (liquid, solid, gaseous fuel and biomass) levels. Uncertainty estimations of recommended GHG emission factors are presented in Table 4-5.

Table 4-5. Uncertainties of recommended GHG emission factors

IPCC source category	*Fuel type*	CO_2	CH_4	N_2O
1.A.1 Energy industries	Liquid fuel	± 2,5%	± 50%	± 50%
	Solid fuel	± 7%	± 50%	± 50%
	Natural gas	± 2,5%	± 50%	± 50%
	Biomass	± 50%	± 150%	± 150%
1.A.2 Manufacturing industry and construction	Liquid fuel	± 2,5%	± 50%	± 50%
	Solid fuel	± 7%	± 50%	± 50%
	Natural gas	± 2,5%	± 50%	± 50%
	Biomass	± 50%	± 150%	± 150%
1.A.3 Transport	Liquid fuel	± 2,5%	± 100%	± 150%
1.A.4 Other sectors: commercial/institutional, household, agriculture and fishing	Liquid fuel	± 2,5%	± 50%	± 50%
	Solid fuel	± 7%	± 50%	± 50%
	Natural gas	± 2,5%	± 50%	± 50%
	Biomass	± 50%	± 150%	± 150%

Assessment of uncertainty of CO_2 emission factors is performed considering to the fact that carbon share of some types of fuels is relatively stable (for example, in the case of natural gas). Therefore uncertainties of CO_2 emission factors of these type of fuels are fairly small (±2,5%). Emission factors for liquid fuels mainly are identified at the accredited laboratory that satisfies the requirements of LST EN ISO/IEC 17025:2005 standard or are based on data provided by EU ETS applying the Tier 3. This has an influence on low uncertainties of emission factors for liquid fuel (±2,5%). Uncertainties of emission factors for solid fuel are remarkably higher, because, for example, carbon share in peat is variable, therefore uncertainties of emission factors for solid fuels are estimated considering to the recommendations provided in IPCC methodology. Uncertainty of CO_2 emission factor for biomass is the highest and reaches ±50%.

Uncertainties of aggregated CH_4 and N_2O emission factors are very high, since these emission factors highly depend on type of combustion technologies. Assessment of uncertainties of these emission factors are performed considering 2006 IPCC Guidelines.

ANNEX V. CO_2 emissions from the installations registered in the National GHG registry, 2014

Table 5-1. CO_2 emissions from the installations registered in the GHG Emission Allowance Registry, 2014

No	Company	Name of the installation	EUA Allocations	Verified emissions, t CO_2	Corresponding CRF Sector (Fuel combustion)
1.	AB Akmenės cementas	Boiler house, cement production furnace	637652	806637	1.A.2.F Non-Metallic Minerals
2.	AB Naujasis kalcitas	Whitewash production furnace	46153	49527	1.A.2.F Non-Metallic Minerals
3.	UAB Švenčionėlių keramika	Furnace for ceramics	5482	1177	1.A.2.F Non-Metallic Minerals
4.	UAB Rokų keramika	Ceramics combustion furnace	8331	1796	1.A.2.F Non-Metallic Minerals
5.	AB Palemono keramika	Ceramics combustion furnace	8440	3124	1.A.2.F Non-Metallic Minerals
6.	AB Dvarčionių keramika	Ceramics combustion furnace	12053	106	1.A.2.F Non-Metallic Minerals
7.	AB Alytaus keramika	Ceramics combustion furnace	1559	291	1.A.2.F Non-Metallic Minerals
8.	UAB Kauno stiklas	Glass melting furnace	5805	14255	1.A.2.F Non-Metallic Minerals
9.	AB Kar Glass Lietuva	Glass melting furnace	11251	22884	1.A.2.F Non-Metallic Minerals
10.	AB ORLEN Lietuva	Oil refining factory	1410726	1631285	1.A.1.B Petroleum Refining / 1.A.1.A Public electricity and heat production
11.	AB Klaipėdos kartonas	Boiler house	24672	15076	1.A.2. D Pulp, Paper and Print
12.	AB Grigiškės	Boiler house	38074	175	1.A.2. D Pulp, Paper and Print
13.	AB Simega	Boiler house	4003	0	1.A.2.J Wood and Wood Products
14.	AB Achema	Boiler house	2066309	2716077	1.A.2.C Chemicals / 1.A.1.A Public electricity and heat production
15.	AB Nordic Sugar Kėdainiai	Boiler house, oilcake desiccation	29533	30196	1.A.2.E Food processing, Beverages and Tobacco
16.	AB Anykščių vynas	Boiler house	0	439	1.A.2.E Food processing, Beverages and Tobacco
17.	AB Lifosa	Boiler house	175295	326	1.A.2.C Chemicals
18.	AB Klaipėdos nafta	Boiler house	19123	16582	1.A.1.A Public electricity and heat production
19.	UAB ARVI cukrus	Boiler house	13095	18443	1.A.2.E Food processing, Beverages and Tobacco
20.	AB Įmonių grupė "Alita"	Boiler house, desiccation of apple oilcake	1080	1394	1.A.2.E Food processing, Beverages and Tobacco
21.	UAB Idavag Pasodėlė	Boiler house	1879	0	1.A.4.C Agriculture/ Forestry/ Fisheries
22.	AB Klaipėdos mediena	Boiler house	15057	4554	1.A.2.J Wood and Wood Products
23.	UAB Matuizų plytinė	Boiler house	6539	0	1.A.1.A Public electricity and heat production
24.	AB Jonavos šilumos tinklai	Jonava boiler house	22814	7898	1.A.1.A Public electricity and heat production
25.	AB Jonavos šilumos tinklai	Girele boiler house	5362	63	1.A.1.A Public electricity and heat production
26.	UAB Mažeikių šilumos tinklai	Mazeikiai boiler house	24261	1075	1.A1.A Public electricity and heat production

No	Company	Name of the installation	EUA Allocations	Verified emissions, t CO_2	Corresponding CRF Sector (Fuel combustion)
27.	UAB Raseinių šilumos tinklai	Raseiniai boiler house No 4	6129	1732	1.A.1.A Public electricity and heat production
28.	UAB Molėtų šiluma	Moletai boiler house	4234	40	1.A.1.A Public electricity and heat production
29.	UAB Šilutės šilumos tinklai	Šilute boiler house	11640	14	1.A.1.A Public electricity and heat production
30.	UAB Vilniaus energija	Vilnius power plant No 2 (E-2)	310808	257041	1.A.1.A Public electricity and heat production
31.	UAB Vilniaus energija	Vilnius power plant No 3 (E-3)	173281	207438	1.A.1.A Public electricity and heat production
32.	UAB Vilniaus energija	Vilnius boiler house No 2	13438	5820	1.A.1.A Public electricity and heat production
33.	UAB Vilniaus energija	Vilnius boiler house No 8	1021	4312	1.A.1.A Public electricity and heat production
34.	UAB Širvintų šiluma	Širvintu boiler house No 3	4594	42	1.A.1.A Public electricity and heat production
35.	AB Šiaulių energija	Šiauliai southern boiler house	78368	34238	1.A.1.A Public electricity and heat production
36.	AB Klaipėdos energija	Power plant	59060	26749	1.A.1.A Public electricity and heat production
37.	UAB Radviliškio šiluma	Radviliškis city boiler house	9517	1197	1.A.1.A Public electricity and heat production
38.	UAB Utenos šilumos tinklai	Utena boiler house	28097	3605	1.A.1.A Public electricity and heat production
39.	UAB Tauragės šilumos tinklai	Taurage - Berže boiler house	9260	482	1.A.1.A Public electricity and heat production
40.	UAB Šalčininkų šilumos tinklai	Šalcininkai boiler house	3945	3277	1.A.1.A Public electricity and heat production
41.	VI Pravieniškių 2-ieji pataisos namai	Katiline	2956	3904	1.A.1.A Public electricity and heat production
42.	UAB Varėnos šiluma	Varena boiler house	7832	0	1.A.1.A Public electricity and heat production
43.	AB Panevėžio energija	Panevežys boiler house No 2	32779	10633	1.A.1.A Public electricity and heat production
44.	AB Panevėžio energija	Rokiškis region boiler house	18575	2280	1.A.1.A Public electricity and heat production
45.	AB Panevėžio energija	Panevežys region boiler house No 1	36675	29391	1.A.1.A Public electricity and heat production
46.	AB Panevėžio energija	Pasvalys region boiler house	5495	891	1.A.1.A Public electricity and heat production
47.	AB Panevėžio energija	Zarasai boiler house No 4	5048	275	1.A.1.A Public electricity and heat production
48.	UAB Geoterma	Klaipeda geothermal PP	21752	8074	1.A.1.A Public electricity and heat production
49.	AB Kauno energija	Petrašiunai PP	5457	10810	1.A.1.A Public electricity and heat production
50.	AB Kauno energija	Pergale boiler house	1183	10285	1.A.1.A Public electricity and heat production
51.	AB Kauno energija	Šilkas boiler house	2308	3297	1.A.1.A Public electricity and heat production
52.	AB Kauno energija	Noreikiškes region boiler house	4305	953	1.A.1.A Public electricity and heat production
53.	AB Kauno energija	Garliava region boiler house	4899	299	1.A.1.A Public electricity and heat production
54.	AB Kauno energija	Jurbarkas region boiler house	8035	7067	1.A.1.A Public electricity and heat production
55.	UAB Plungės šilumos tinklai	Plunge boiler house No 1	9108	414	1.A.1.A Public electricity and heat production
56.	UAB Birštono šiluma	Birštonas region boiler house	3429	826	1.A.1.A Public electricity and heat production

No	Company	Name of the installation	EUA Allocations	Verified emissions, t CO_2	Corresponding CRF Sector (Fuel combustion)
57.	UAB Litesko filialas "Druskininkų šiluma"	Druskininkai industry boiler house	20495	10291	1.A.1.A Public electricity and heat production
58.	UAB Litesko filialas "Biržų siluma"	Boiler house of Biržai city hall	2056	1229	1.A.1.A Public electricity and heat production
59.	UAB Litesko filialas "Vilkaviškio šiluma"	Vilkaviškis boiler house	5402	3277	1.A.1.A Public electricity and heat production
60.	UAB Litesko filialas "Telšų šiluma"	Luoke boiler house	8456	5061	1.A.1.A Public electricity and heat production
61.	UAB Litesko filialas "Kelmės šiluma"	Mackevicius boiler house	3876	454	1.A.1.A Public electricity and heat production
62.	UAB Litesko filialas "Palangos šiluma"	Palanga boiler house	13266	5658	1.A.1.A Public electricity and heat production
63.	UAB Litesko filialas "Marijampolės šiluma"	Kazlu Ruda boiler house	3209	613	1.A.1.A Public electricity and heat production
64.	UAB Litesko filialas "Marijampolės šiluma"	Marijampole region boiler house	29403	15818	1.A.1.A Public electricity and heat production
65.	UAB Litesko filialas "Alytaus energija"	Alytus region boiler house	53954	9995	1.A.1.A Public electricity and heat production
66.	AB Lietuvos elektrinė	Lietuvos PP	290837	400596	1.A.1.A Public electricity and heat production
67.	UAB Kauno termofikacijos elektrinė	Kaunas PP	256394	199758	1.A.1.A Public electricity and heat production
68.	UAB Kaišiadorių šiluma	Kaišiadoriai boiler house	6355	55	1.A.1.A Public electricity and heat production
69.	UAB Kretingos šilumos tinklai	Kretinga boiler house No 2	5883	0	1.A.1.A Public electricity and heat production
70.	AB Klaipėdos energija	Klaipeda region boiler house	51693	17047	1.A.1.A Public electricity and heat production
71.	AB Klaipėdos energija	Lypkiai regiopn boiler house	29554	11518	1.A.1.A Public electricity and heat production
72.	AB Pagirių šiltnamiai	Boiler house	13340	0	1.A.1.A Public electricity and heat production
73.	UAB Pramonės energija	CHP-1	14739	0	1.A.1.A Public electricity and heat production
74.	VI Ignalinos atominė elektrinė	Boiler house	6243	5017	1.A.1.A Public electricity and heat production
75.	UAB Prienų energija	Lentvaris boiler house	2299	214	1.A.1.A Public electricity and heat production
76.	UAB Gargždų plytų gamykla	Boiler house	2400	0	1.A.2.F Non-Metallic Minerals
77.	UAB Akmenės energija	Zalgiris boiler house	5619	1446	1.A.1.A Public electricity and heat production
78.	AB Panevėžio energija	Panevežys thermal PP	28614	35991	1.A.1.A Public electricity and heat production
79.	UAB IKEA Industry Lietuva	Fuel combustion plants	40520	10484	1.A.2.J Wood and wood products
80.	UAB NEO GROUP	Boiler house	35205	39122	1.A.2.C Chemicals
81.	AB Panevėžio energija	Kėdainiai region boiler house	107	428	1.A.1.A Public electricity and heat production
82.	UAB Paroc	Plants producing stone-wool	34759	56553	1.A.2.F Non-Metallic Minerals
83.	AB Vilniaus gelžbetoninių konstrukcijų gamykla Nr. 3	Boiler house	1034	334	1.A.2.F Non-Metallic Minerals
84.	UAB Vilniaus energija	Region boiler house No 7	1	61	1.A.1.A Public electricity and heat production
85.	UAB Agro Neveronys	Boiler house	5499	0	1.A.4.C Agriculture/ Forestry/ Fisheries
86.	UAB Pramonės energija	Boiler house	15726	356	1.A.1.A Public electricity and heat production

No	Company	Name of the installation	EUA Allocations	Verified emissions, t CO_2	Corresponding CRF Sector (Fuel combustion)
87.	VĮ "Visagino energija"	Thermal boiler house	66727	35565	1.A.1.A Public electricity and heat production
88.	AB Amilina	Boiler house and driers	28554	6741	1.A.2.E Food processing, Beverages and Tobacco
89.	UAB Lignoterma	Boiler house	673	15	1.A.1.A Public electricity and heat production
90.	AB Amber Grid	Jauniūnų gas compressor station	0	580	1.A.1.A Public electricity and heat production
91.	UAB Hoegh LNG Klaipėda	LNG ship	0	11191	1.A.1.A Public electricity and heat production
		Total:	**6560668**	**6864234**	

ANNEX VI. LULUCF area matrices, resulted from studies presented in NIR Chapter 6.1.1

1990

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,054,182	399	3,994	2,396	399	0	**2,061,370**	7,188
Cropland	0	2,403,666	22,367	0	0	0	**2,426,033**	-39,541
Grassland	0	61,110	1246568	0	0	0	**1,307,678**	42,339
Wetlands	0	0	0	363066	0	0	**363,066**	-5,193
Settlements	0	0	0	0	**324323**	0	**324,323**	1,198
Other land	0	0	0	0	0	47530	**47,530**	-5,991
Initial	***2,054,182***	***2,465,574***	***1,265,339***	***368,259***	***323,125***	***53,521***	***6,530,000***	0

1991

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,061,370	399	3,994	2,396	399	0	**2,068,559**	7,189
Cropland	0	2,362,926	22,367	0	799	399	**2,386,492**	-39,541
Grassland	0	61,110	1,279,719	3,595	799	4,793	**1,350,015**	42,337
Wetlands	0	399	399	357,075	0	0	**357,874**	-5,192
Settlements	0	1,198	1,198	0	322,326	799	**325,521**	1,198
Other land	0	0	0	0	0	41,539	**41,539**	-5,991
Initial	***2,061,370***	***2,426,033***	***1,307,678***	***363,066***	***324,323***	***47,530***	***6,530,000***	0

1992

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,068,559	399	3,195	1,997	0	399	**2,074,550**	5,991
Cropland	0	2320,189	25,562	0	0	799	**2,346,550**	-39,942
Grassland	0	62,308	1,320,858	2,396	1,598	4,793	**1,391,954**	41,939
Wetlands	0	399	0	353,480	0	2,396	**356,276**	-1,598
Settlements	0	2,396	399	0	323,924	399	**327,119**	1,598
Other land	0	799	0	0	0	32,752	**33,551**	-7,988
Initial	***2,068,559***	***2386492***	***1,350,015***	***357,874***	***325,521***	***41,539***	***6,530,000***	0

1993

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,074,550	1,198	3,994	0	0	0	**2,079,742**	5,192
Cropland	0	2,283,842	23,565	1,198	799	1,598	**2,311,003**	-35,547
Grassland	0	59,513	1,363,595	1,598	1,598	5,192	**1,431,496**	39,542
Wetlands	0	399	399	353,480	0	399	**354,679**	-1,597
Settlements	0	799	399	0	324,723	0	**325,921**	-1,198
Other land	0	799	0	0	0	26,361	**27,160**	-6,391
Initial	***2,074,550***	***2,346,550***	***1,391,954***	***356,276***	***327,119***	***33,551***	***6,530,000***	0

1994

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,079,343	0	2,396	399	399	0	**2,082,538**	2,796
Cropland	0	2,239,508	29,157	0	0	799	**2,269,464**	-41,539
Grassland	0	67,501	1,398,344	799	799	5,592	**1,473,034**	41,538
Wetlands	0	799	0	353,480	0	399	**354,679**	0
Settlements	0	2,796	1,598	0	324,723	0	**329,116**	3,195
Other land	399	399	0	0	0	20,370	**21,169**	-5,991
Initial	***2,079,742***	***2,311,003***	***1,431,496***	***354,679***	***325,921***	***27,160***	***6,530,000***	0

1995

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,082,538	0	1,598	799	0	0	**2,084,935**	2,397
Cropland	0	2,206,756	25,962	0	0	399	**2,233,117**	-36,347
Grassland	0	59,513	1,444,277	2,396	2,796	4,394	**1,513,375**	40,341
Wetlands	0	799	1,198	351,483	0	1,198	**354,679**	0
Settlements	0	1,997	0	0	326,320	399	**328,717**	-399
Other land	0	399	0	0	0	14,778	**15,178**	-5,991
Initial	***2,082,538***	***2,269,464***	***1,473,034***	***354,679***	***329,116***	***21,169***	***6,530,000***	0

1996

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,084,935	399	3,195	1,598	0	0	**2,090,127**	5,192
Cropland	0	2,207,555	8,388	0	0	0	**2,215,942**	-17,175
Grassland	0	25,163	1,501,792	399	0	0	**1,527,355**	13,980
Wetlands	0	0	0	352,682	0	0	**352,682**	-1,997
Settlements	0	0	0	0	328,717	0	**328,717**	0
Other land	0	0	0	0	0	15,178	**15,178**	0
Initial	***2,084,935***	***2,233,117***	***1,513,375***	***354,679***	***328,717***	***15,178***	***6,530,000***	0

1997

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,090,127	799	2,396	399	0	0	**2,093,722**	3,595
Cropland	0	2,163,619	19,571	0	0	399	**2,183,590**	-32,352
Grassland	0	51,125	1,504,588	0	0	0	**1,555,713**	28,358
Wetlands	0	0	399	352,282	0	0	**352,682**	0
Settlements	0	399	399	0	328,317	0	**329,116**	399
Other land	0	0	0	0	399	14,778	**15,178**	0
Initial	***2,090,127***	***2,215,942***	***1,527,355***	***352,682***	***328,717***	***15,178***	***6,530,000***	0

1998

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,093,722	0	3,195	0	0	399	**2,097,317**	3,595
Cropland	0	2,096,518	37,944	0	0	0	**2,134,462**	-49,128
Grassland	0	86,273	1,514,174	0	0	0	**1,600,447**	44,734
Wetlands	0	0	0	352,282	0	0	**352,282**	-400
Settlements	0	399	399	399	32,9116	0	**330,314**	1,198
Other land	0	399	0	0	0	14,778	**15,178**	0
Initial	***2,093,722***	***2,183,590***	***1,555,713***	***352,682***	***32,9116***	***15,178***	***6,530,000***	0

1999

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,096,917	399	1,598	1,198	0	0	**2,100,113**	2,796
Cropland	0	2,036,606	51,924	0	0	0	**2,088,530**	-45,932
Grassland	0	97,057	1,546,127	0	0	0	**1,643,184**	42,737
Wetlands	399	0	0	351,084	0	0	**351,483**	-799
Settlements	0	399	799	0	330,314	0	**331,513**	1,199
Other land	0	0	0	0	0	15,178	**15,178**	0
Initial	***2,097,317***	***2,134,462***	***1,600,447***	***352,282***	***330,314***	***15,178***	***6,530,000***	0

2000

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,100,113	399	2,396	2,396	0	399	**2,105,704**	5,591
Cropland	0	1,978,292	51,125	0	0	0	**2,029,416**	-59,114
Grassland	0	107,841	1,588,465	399	399	0	**1,697,105**	53,921
Wetlands	0	0	0	348,687	0	0	**348,687**	-2,796
Settlements	0	1,997	1,198	0	331,113	0	**334,309**	2,796
Other land	0	0	0	0	0	14,778	**14,778**	-400
Initial	***2,100,113***	***2,088,530***	***1,643,184***	***351,483***	***331,513***	***15,178***	***6,530,000***	0

2001

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,105,704	799	2,396	0	0	0	**2,108,900**	3,196
Cropland	0	1,925,170	42,338	0	0	0	**1,967,507**	-61,909
Grassland	0	103,049	1,651,572	399	399	399	**1,755,819**	58,714
Wetlands	0	0	0	348,288	0	0	**348,288**	-399
Settlements	0	399	399	0	333,909	399	**335,107**	798
Other land	0	0	399	0	0	13,979	**14,379**	-399
Initial	***2,105,704***	***2,029,416***	***1,697,105***	***348,687***	***334,309***	***14,778***	***6,530,000***	0

2002

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,108,900	0	3,994	399	0	0	**2,113,293**	4,393
Cropland	0	1,878,438	40,341	0	0	0	**1,918,779**	-48,728
Grassland	0	8,8270	1,711,084	0	0	0	**1,799,355**	43,536
Wetlands	0	0	399	347,889	0	799	**349,087**	799
Settlements	0	799	0	0	335,107	0	**335,906**	799
Other land	0	0	0	0	0	13,580	**13,580**	-799
Initial	***2,108,900***	***1,967,507***	***1,755,819***	***348,288***	***335,107***	***14,379***	***6,530,000***	0

2003

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,112,894	799	3,595	1,198	399	0	**2,118,885**	5,592
Cropland	0	1,853,275	23,565	0	0	0	**1,876,841**	-41,938
Grassland	0	64,705	1,771,396	0	0	399	**1,836,500**	37,145
Wetlands	399	0	0	347,889	0	0	**348,288**	-799
Settlements	0	0	399	0	335,507	0	**335,906**	0
Other land	0	0	399	0	0	13,181	**13,580**	0
Initial	***2,113,293***	***1,918,779***	***1,799,355***	***349,087***	***335,906***	***13,580***	***6,530,000***	0

2004

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2118486	399	6391	1598	0	0	**2126873**	7988
Cropland	0	1825716	29157	0	0	0	**1854873**	-21968
Grassland	0	50326	1800154	399	0	0	**1850879**	14379
Wetlands	399	0	799	346291	0	399	**347889**	-399
Settlements	0	399	0	0	335906	0	**336306**	400
Other land	0	0	0	0	0	13181	**13181**	-399
Initial	***2118885***	***1876841***	***1836500***	***348288***	***335906***	***13580***	***6530000***	0

2005

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,126,474	799	5,592	1,598	0	399	**2,134,861**	7,988
Cropland	0	1,815,331	19,971	0	0	0	**1,835,302**	-19,571
Grassland	0	37,545	1,824,917	0	0	0	**1,862,462**	11,583
Wetlands	0	0	399	346,291	0	399	**347,090**	-799
Settlements	399	1,198	0	0	336,306	0	**337,903**	1,597
Other land	0	0	0	0	0	12,382	**12,382**	-799
Initial	***2,126,873***	***1,854,873***	***1,850,879***	***347,889***	***336,306***	***13,181***	***6,530,000***	0

2006

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,134,063	799	5,592	1,598	0	0	**2,142,051**	7,190
Cropland	0	1,802,949	90,267	0	0	0	**1,893,217**	57,915
Grassland	0	31,154	1,764,206	799	0	0	**1,796,159**	-66,303
Wetlands	0	399	399	344,693	0	0	**345,492**	-1,598
Settlements	399	0	1,598	0	337,903	0	**339,900**	1,997
Other land	399	0	399	0	0	12,382	**13,181**	799
Initial	***2,134,861***	***1,835,302***	***1,862,462***	***347,090***	***337,903***	***12,382***	***6,530,000***	0

2007

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,142,051	2,796	3,195	1,997	0	399	**2,150,439**	8,388
Cropland	0	1,866,057	86,673	0	0	0	**1,952,729**	59,512
Grassland	0	24,364	1,705,093	0	0	0	**1,729,457**	-66,702
Wetlands	0	0	399	343,495	0	0	**343,894**	-1,598
Settlements	0	0	799	0	339,900	0	**340,699**	799
Other land	0	0	0	0	0	12,781	**12,781**	-400
Initial	***2,142,051***	***1,893,217***	***1,796,159***	***345,492***	***339,900***	***13,181***	***6,530,000***	0

2008

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2150439	1598	4793	399	0	0	**2,157,229**	6,790
Cropland	0	1925969	100253	0	399	0	**2,026,621**	73,892
Grassland	0	24764	1622015	399	0	0	**1,647,178**	-82,279
Wetlands	0	0	799	343096	0	0	**343,894**	0
Settlements	0	399	799	0	340300	0	**341,498**	799
Other land	0	0	799	0	0	12781	**13,580**	799
Initial	***2150439***	***1952729***	***1729457***	***343894***	***340699***	***12781***	***6,530,000***	0

2009

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	Net change
Forest land	2,156,829	0	3,195	0	0	0	**2,160,024**	2,795
Cropland	0	2,009,046	71,495	0	0	0	**2,080,541**	53,920
Grassland	0	17,175	1,570,891	0	799	399	**1,589,264**	-57,914
Wetlands	399	0	399	343,894	0	0	**344,693**	799
Settlements	0	399	799	0	340,699	0	**341,897**	399
Other land	0	0	399	0	0	13,181	**13,580**	0
Initial	***2,157,229***	***2,026,621***	***1,647,178***	***343,894***	***341,498***	***13,580***	***6,530,000***	0

2010

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,160,024	399	5,592	399	0	0	**2,166,415**	6,391
Cropland	0	2,078,944	5,991	0	0	0	**2,084,935**	4,394
Grassland	0	1,198	1,577,681	799	0	0	**1,579,678**	-9,586
Wetlands	0	0	0	343,495	0	0	**343,495**	-1,198
Settlements	0	0	0	0	341,897	0	**341,897**	0
Other land	0	0	0	0	0	13,580	**13,580**	0
Initial	***2,160,024***	***2,080,541***	***1,589,264***	***344,693***	***341,897***	***13,580***	***6,530,000***	0

2011

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,166,415	1,997	4,793	0	0	0	2,173,205	6,790
Cropland	0	2,076,547	13,979	0	0	0	2,090,527	5,592
Grassland	0	6,391	1,560,905	399	0	0	1,567,695	-11,983
Wetlands	0	0	0	343,096	0	0	343,096	-399
Settlements	0	0	0	0	341,897	0	341,897	0
Other land	0	0	0	0	0	13,580	13,580	0
Initial	***2,166,415***	***2,084,935***	***1,579,678***	***343,495***	***341,897***	***13,580***	***6,530,000***	***0***

2012

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,173,205	1,997	8,787	799	0	0	2,184,788	11,583
Cropland	0	2,083,337	30,355	0	0	0	2,104,107	23,166
Grassland	0	5,192	1,527,355	0	0	0	1,542,133	-35,148
Wetlands	0	0	0	342,297	0	0	342,297	-799
Settlements	0	0	799	0	341,897	0	342,696	799
Other land	0	0	399	0	0	13,580	13,979	399
Initial	***2,173,205***	***2,090,527***	***1,567,695***	***343,096***	***341,897***	***13,580***	***6,530,000***	***0***

2013

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	218,4788	799	3,595	0	0	0	2,189,182	4,394
Cropland	0	2,073,352	57,915	0	0	0	2,131,267	17,574
Grassland	0	39,142	1,467,043	399	399	0	1,506,985	-25,562
Wetlands	0	0	399	341,897	0	0	342,297	0
Settlements	0	399	3,595	0	342,297	0	346,291	3,595
Other land	0	0	0	0	0	13,979	13,979	0
Initial	***2,184,788***	***2,113,693***	***1,532,547***	***342,297***	***342,696***	***13,979***	***6,530,000***	***0***

2014

Land category	Forest land	Cropland	Grassland	Wetlands	Settlements	Other land	**Final**	**Net change**
Forest land	2,189,182	1,997	3,595	2,396	0	0	**2,197,170**	7,988
Cropland	0	2,075,349	79,483	0	0	0	**2,154,832**	23,565
Grassland	0	52,723	1,415,918	1,198	399	799	**1,471,037**	-35,948
Wetlands	0	0	2,796	338,702	0	399	**341,897**	-399
Settlements	0	1,198	4,794	0	345,891	0	**351,883**	5,593
Other land	0	0	399	0	0	12,782	**13,185**	-799
Initial	***2,189,182***	***2,131,267***	***1,506,985***	***342,296***	***346,290***	***13,980***	***6,530,000***	***0***

ANNEX VII. Recalculations made in Agriculture sector

Table A. 5-1. Changes in dairy cattle population, milk yield, gross energy, methane emission factor per cow and methane emission in the period of 1990-2014, per cent (1990=100%)

Year	Population of dairy cattle	Milk production	Gross energy	Emission Factor	Emission
1990	100	100	100	100	100
1991	99	93	97	97	96
1992	88	82	93	93	81
1993	81	78	91	91	73
1994	73	78	91	91	66
1995	70	81	92	92	64
1996	70	83	93	93	65
1997	69	86	94	94	65
1998	64	91	96	96	61
1999	59	87	94	94	55
2000	52	99	99	99	52
2001	52	104	102	102	53
2002	53	107	103	103	54
2003	53	108	103	103	55
2004	52	112	105	105	54
2005	49	116	106	106	53
2006	47	120	109	108	51
2007	48	127	112	111	53
2008	47	129	113	112	53
2009	44	130	113	113	50
2010	43	133	114	114	49
2011	42	136	116	115	48
2012	39	142	119	118	46
2013	37	145	120	119	45
2014	37	154	125	124	46

Table A. 5-2. Reported in previous submission and recalculated methane emission factor (kg CH_4/head/year) and methane emission (kt) from manure management for dairy cattle

Year	2015 submission		2016 submission		Relative difference, %	
	CH_4 EF (kg CH_4/head/year)	CH_4 emission (kt)	CH_4 EF (kg CH_4/head/year)	CH_4 emission (kt)	CH_4 EF	CH_4 emission
1990	6.08	5.12	5.98	5.03	-1.6	-1.8
1991	6.01	5.00	5.87	4.88	-2.3	-2.4
1992	5.82	4.29	5.67	4.19	-2.6	-2.3
1993	5.79	3.93	5.62	3.81	-2.9	-3.1
1994	5.86	3.60	5.70	3.51	-2.7	-2.5
1995	5.99	3.51	5.83	3.42	-2.7	-2.6
1996	6.12	3.61	5.94	3.51	-2.9	-2.8
1997	6.27	3.65	6.10	3.55	-2.7	-2.7
1998	6.46	3.47	6.30	3.39	-2.5	-2.3
1999	6.43	3.18	6.26	3.09	-2.6	-2.8
2000	6.81	2.98	6.66	2.92	-2.2	-2.0
2001	7.03	3.10	6.90	3.05	-1.8	-1.6

2002	7.14	3.17	7.04	3.12	-1.4	-1.6
2003	7.26	3.25	7.14	3.20	-1.7	-1.5
2004	7.47	3.24	7.36	3.19	-1.5	-1.5
2005	7.63	3.18	7.53	3.14	-1.3	-1.3
2006	7.84	3.13	7.76	3.09	-1.0	-1.3
2007	8.12	3.29	8.06	3.26	-0.7	-0.9
2008	8.26	3.26	8.22	3.24	-0.5	-0.6
2009	8.39	3.14	8.33	3.12	-0.7	-0.6
2010	8.55	3.08	8.50	3.06	-0.6	-0.6
2011	8.74	3.06	8.70	3.04	-0.5	-0.7
2012	9.04	2.99	9.02	2.99	-0.2	0.0
2013	9.21	2.91	9.20	2.90	-0,1	-0.3

Table A. 5-3. Reported in previous submission and recalculated methane emission factor (kg CH_4/head/year) and methane emission (kt) from manure management for non-dairy cattle

Year	2015 submission		2016 submission		Relative difference, %	
	CH_4 EF (kg CH_4/head/year)	**CH_4 emission (kt)**	**CH_4 EF (kg CH_4/head/year)**	**CH_4 emission (kt)**	**CH_4 EF**	**CH_4 emission**
1990	3.43	5.08	3.29	4.86	-4.1	-4.3
1991	3.49	4.77	3.34	4.56	-4.3	-4.4
1992	3.55	3.42	3.40	3.28	-4.2	-4.1
1993	3.61	2.55	3.46	2.44	-4.2	-4.3
1994	3.67	1.97	3.52	1.89	-4.1	-4.1
1995	3.73	1.79	3.57	1.71	-4.3	-4.5
1996	3.79	1.76	3.63	1.68	-4.2	-4.5
1997	3.85	1.67	3.69	1.60	-4.2	-4.2
1998	3.57	1.39	3.60	1.41	0.8	1.4

Table A. 5-4. Reported in previous submission and recalculated methane emission factor (kg CH_4/head/year) and methane emission (kt) from manure management for swine

Year	2015 submission		2016 submission		Relative difference, %	
	CH_4 EF (kg CH_4/head/year)	**CH_4 emission (kt)**	**CH_4 EF (kg CH_4/head/year)**	**CH_4 emission (kt)**	**CH_4 EF**	**CH_4 emission**
1990	5.83	14.20	3.89	9.47	-33.3	-33.3
1991	5.85	12.76	3.90	8.50	-33.3	-33.3
1992	5.87	7.99	3.92	5.33	-33.3	-33.3
1993	5.90	7.05	3.93	4.70	-33.3	-33.3
1994	5.92	7.46	3.95	4.97	-33.3	-33.3
1995	5.94	7.54	3.96	5.03	-33.3	-33.3
1996	5.96	6.72	3.97	4.48	-33.3	-33.3
1997	6.04	7.24	4.02	4.83	-33.3	-33.3
1998	5.94	6.88	3.96	4.59	-33.3	-33.3
1999	6.05	5.67	4.04	3.78	-33.3	-33.3
2000	6.03	5.23	4.02	3.49	-33.3	-33.3
2001	6.07	6.14	4.05	4.09	-33.3	-33.3
2002	6.09	6.46	4.06	4.31	-33.3	-33.3
2003	6.10	6.45	4.07	4.30	-33.3	-33.3
2004	5.89	6.32	3.93	4.22	-33.3	-33.3

2005	5.88	6.55	3.92	4.37	-33.3	-33.3
2006	5.82	6.56	3.88	4.37	-33.3	-33.3
2007	5.82	5.38	3.88	3.58	-33.3	-33.3
2008	5.92	5.32	3.95	3.54	-33.3	-33.3
2009	5.76	5.35	3.84	3.57	-33.3	-33.3
2010	5.97	5.55	3.98	3.70	-33.3	-33.3
2011	6.20	4.90	4.13	3.26	-33.3	-33.3
2012	6.31	5.09	4.21	3.40	-33.3	-33.3
2013	6.34	4.78	4.22	3.19	-33.3	-33.3

Table A. 5-5. Reported in previous submission and recalculated N excretion of cattle, kt

Year	2015 submission		2016 submission		Relative difference, %	
	Dairy cattle	Non-dairy cattle	Dairy cattle	Non-dairy cattle	Dairy cattle	Non-dairy cattle
1990	82.28	41.13	79.87	41.13	-2.9	0.0
1991	79.67	41.12	76.33	41.11	-4.2	0.0
1992	74.87	41.11	71.37	41.09	-4.7	0.0
1993	73.30	41.11	69.02	41.08	-5.8	-0.1
1994	73.22	41.10	69.44	41.07	-5.2	-0.1
1995	74.25	41.09	70.63	41.05	-4.9	-0.1
1996	75.30	41.08	71.29	41.03	-5.3	-0.1
1997	76.68	41.08	72.90	41.02	-4.9	-0.1
1998	78.67	38.22	75.20	38.16	-4.4	-0.2
1999	77.00	38.85	73.27	38.78	-4.8	-0.2
2000	82.04	38.17	79.04	38.09	-3.7	-0.2
2001	84.40	38.00	81.75	37.91	-3.1	-0.2
2002	84.90	38.09	82.98	38.00	-2.3	-0.2
2003	85.71	38.04	83.39	37.93	-2.7	-0.3
2004	87.75	37.65	85.88	37.53	-2.1	-0.3
2005	89.08	37.91	87.52	37.79	-1.8	-0.3
2006	91.10	38.75	89.98	38.61	-1.2	-0.4
2007	93.74	39.32	93.24	39.17	-0.5	-0.4
2008	94.34	39.38	94.58	39.22	0.3	-0.4
2009	95.13	39.67	94.95	39.50	-0.2	-0.4
2010	96.13	40.39	96.16	40.21	0.0	-0.4
2011	97.43	38.76	97.85	38.58	0.4	-0.5
2012	100.20	39.40	101.44	39.20	1.2	-0.5
2013	101.17	40.71	102.72	40.52	1.5	-0.5