**Carbon footprint of a Public University campus in Mexico City**

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**Table 1S.** Activities and emission factors considered in the GHG inventory of the UAM-C in 2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **Source/Activity** | **Emission factor** | **Units** | **Reference** |
| Fixed sources | LP gas combustion | 5.61E­5  1.00E­6  1.00E­7 | ton CO2/MJ  ton CH4/MJ  ton N2O/MJ | DOF, 2015 |
| Mobile sources | Gasoline combustion | 6.93E-5  2.5E-5  8.0E-9 | ton CO2/MJ  ton CH4/MJ  ton N2O/MJ | DOF, 2015 |
| Diesel combustion | 7.41E-5  3.90E-6  3.90E-6 | ton CO2/MJ  ton CH4/MJ  ton N2O/MJ | DOF, 2015 |
| Diesel combustion | 1.07E-3 | Ton CO2/km | DOF, 2015 |
| Fugitive emissions | R-134A  R-404A  R-290 | 1430  3922  3 | ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton | US-EPA, 2014 |
| Electricity | Electric Energy | 0.458 | ton CO2 eq/ MWh | RENE, 2016 |
| Resources consumption | Water | 3.44E-4 | ton CO2 eq/m3 | UK emission factors, 2016 |
| Paper sheets  Recycled paper | 1.08  1.28 | ton CO2 eq/ton  ton CO2 eq/ton | AU-EPA, 2013 |
| Meat consumption (dining hall) | | | |
| Chicken  Pork  Beef  Fish | 2.36  4.62  15.3  3.2 | ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton | EWG, 2011 |
| Gases (research activities) | | | |
| Carbon dioxide Methane | 1  21 | ton CO2/ton  ton CO2 eq/ton | US-EPA, 2014 |
| Solvents (research and teaching activities) | | | |
| Acetone  Chloroform  Ethanol  Hexane  Petroleum ether  Methanol  Ethyl acetate  Acetonitrile  2-methyl-2 butanol  Phenol  Spray paint  Xylene  Dichloromethane  Mixtures | 2.31  3.61  1.89  0.317  0.812  0.603  2.65  0.546  3.15  4.53  0.812  1.76  3.47  0.812 | ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton | EcoInvent 3.3 |
| Cleaning | | | |
| Liquid soap  Detergent powder  Bleach | 0.988  6.31  0.988 | ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton | EcoInvent 3.3 |
|  | Recycling | | | |
| Municipal waste management | Paper sheets  Paperboard  PET  TETRAPACK  Glass  Iron  Aluminum  Mixed plastics  Organic fraction from the dining room (animal feed) | -0.459  -0.122  -2.192  -0.452  -0.314  -0.459  -8.143  -1.24  0 | ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton | Turner at al., 2015 |
|  | Landfill | | | |
|  | Not recoverable | 0.459 | ton CO2 eq/ton | UK emission factors, 2016 |
| Hazardous waste management | Thermal oxidation | | | |
| Organic solvents  Aqueous solutions Halogenate solutions  Glass  Empty containers  Solids | 0.0158  0.0108  0.0158  0.080  0.00418  0.003 | ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton  ton CO2 eq/ton | UVA, 2014 |
| Wastewater management | Chemical oxygen demand (COD) | 0.075 | ton CO2 eq/ton | DOF, 2015 |
| Commuting | Private: Automobile | 2.374E-4 | ton CO2 eq/km | GHGP, 2017 |
| Public:  Metro  Urban bus  Collective transport  Interurban bus | 0.0731  0.1080  0.0004  0.0496 | ton CO2 eq/persone km  ton CO2 eq/persone km  ton CO2 eq/persone km  ton CO2 eq/persone km | GHGP, 2017 |
| Work trips: lodging and transport | Attendance to scientific meetings:  Air transport (km):  distance<482.8 km  300 <distance<3701  distance>3701  Bus  Automobile  Lodging | 1.56E-4  2.43E-6  4.971E-9  8.88E-4  0  2.92E-9  1.0E-4  2.423E-6  3.48E-9  3.418E-5  3.728E-7  3.107E-10  2.206E-4  1.305E-5  9.321E-3  0.033 | ton CO2/km  ton CH4/km  ton N2O/km  ton CO2/km  ton CH4/km  ton N2O/km  ton CO2/km  ton CH4/km  ton N2O/km  ton CO2/km  ton CH4/km  ton N2O/km  ton CO2/km  ton CH4/km  ton N2O/km  ton CO2/day | US-EPA, 2015  UK emission factors, 2016 |

**Table 2S**. **Characteristics of the fleet**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Brand** | **Model** | **Year** | **# vehicles** | **Combustible** | **# passengers** |
| Camioneta | Chevrolet | Express | 2006 | 3 | Gasoline | 14 |
| Sedan | Chevrolet | Chevy C2 | 2008 | 2 | Gasoline | 4 |
| Sedan | Chevrolet | Chevy C2 | 2007 | 1 | Gasoline | 4 |
| Sedan | Suzuky | SX4-over | 2010 | 1 | Gasoline | 4 |
| Sedan | Volkswagen | Vento | 2017 | 2 | Gasoline | 4 |
| NP 300 carga | Nissan | Estaquitas | 2011 | 1 | Gasoline | 2 |
| Camioneta | Toyota | Hiace | 2011 | 1 | Gasoline | 12 |
| **Total** |  |  |  | **11** |  |  |