

SCIS Annual Emissions Inventory Report

Reference Sheet 2021

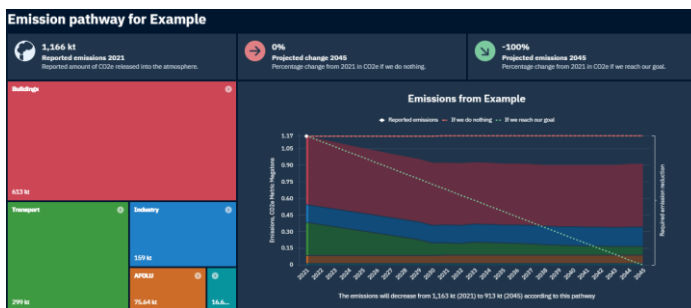
This reference sheet is intended to accompany the 2021 SCIS Annual Emissions Inventory Report. It provides key definitions for the emission types as well clarity on the terminology used throughout the report.

SCIS Area-Wide Emissions Methodology

This report is based on the annual emissions inventory of your local authority, compiled using the SCIS Area-Wide Emissions Methodology [1]. The report covers the 2021 inventory which at the time of preparation was the latest year for which full emissions datasets were available and uploaded to your local authority's official ClimateView dashboards. Emissions in the inventory are classified based on the SCIS team's division of emissions following feedback from the local authorities for what is included within the scopes of reporting, which largely follows the GPC guidelines [2].



Link to the Miro board of the SCIS
Area-Wide Methodology
Password: Partnerships



ClimateView Platform

This is a shared procured data platform where local authority annual emission inventories are uploaded. It is designed to facilitate the tracking and monitoring of progress, support capacity building, and aid in the implementation of climate action interventions over time.

Greenhouse Gas Protocol - Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC)

Inconsistency between regional inventories can make comparisons difficult, raises questions around data quality, and limits the ability to aggregate local, subnational, and national government GHG emissions data. To facilitate further collaboration, achieving greater consistency in GHG accounting and reporting was deemed crucial through multiple feedback sessions and workshops conducted with local authorities.

The Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) provides a reliable and transparent framework that enhances established methodologies for calculating and reporting area-wide GHG emissions.

Sector Classification

Emissions have been classed into 4 sectors as per the GPC categories [2]:



Transportation

Transportation encompasses all journeys by road and rail. Emissions from aviation and ferries will be incorporated in future updates as the methodology evolves and depending on data availability and decisions concerning emission scopes. GHG emissions are generated either directly from fuel combustion or indirectly through using grid-supplied electricity [2].

- Accurately collecting data for transport activities, calculating emissions, and allocating them appropriately presents significant challenges. As such, the support and cooperation of local authorities in providing insights into their specific transportation scenarios are crucial for ensuring more precise data allocation.



Stationary Energy

Stationary Energy sources are often one of the largest contributors to a local authority's area-wide GHG emissions. These emissions arise from the combustion of fuel in [2]:

- Residential buildings and facilities
- Commercial buildings and facilities
- Institutional buildings and facilities
- Manufacturing industries and construction
- Power plants to generate grid-supplied energy



Agriculture, Forestry, and Other Land Use (AFOLU)

Emissions from the AFOLU sector are produced through a variety of pathways, including livestock (enteric fermentation and manure management), land use and land use change (e.g., forested land being cleared for cropland or settlements), and aggregate sources and non-CO₂ emission sources on land (e.g., fertilizer application) [2]. Given the highly variable nature of land-use and agricultural activity across geographies, GHG emissions from AFOLU are amongst the most complex categories for GHG accounting and as such have been taken directly from the LA GHG [3].



Waste

Waste disposal and treatment produces GHG emissions through aerobic or anaerobic decomposition or incineration. GHG emissions from solid waste is calculated by disposal route, namely landfill, biological treatment, or incineration and open burning [2]. If methane is recovered from solid waste or wastewater treatment facilities as an energy source, it is reported under Stationary Energy [2]. Similarly, emissions from incineration with energy recovery are reported under Stationary Energy [2].

Categories and Types of Emissions

The four sectors are also sub-divided into GPC categories and then further into type of emissions according to their allocation in the ClimateView platform where the local authority inventories have been uploaded. Whilst the composition of most of these emissions types is clear, some can benefit from further explanation and are listed below:

Agriculture, forestry and fishing



This category includes all Stationary Energy sources within these sectors – namely fuel usage within buildings and machinery, it is therefore distinct from the AFOLU sector.

Waterborne transport



This is a holding category for all transport emissions which do not currently fit into another category e.g. airport support vehicles and inland waterways. In the next iteration of the area-wide emissions inventory these emissions will potentially be separated and more clearly defined.

Aggregate sources and non-CO₂ emission sources from land



This figure is taken from the Department of Energy Security and Net Zero figure for Agricultural soils. It includes emissions relating to urea application, liming of soils and fertiliser application to soils.

Unspecified emissions from large scale industry



This figure is taken directly from the Department of Energy Security and Net Zero data and the exact composition of emissions included is still to be established.

Industrial emissions solid fuel and gas oil



This figure is taken from the Department of Energy Security and Net Zero figure for Industrial other fuel use. It also corresponds to the *unspecified emissions from industry* category in the ClimateView platform.

References

1. *Official Scottish Area-Wide Emissions Methodology*, October 2024, Scottish Climate Intelligence Service. Available at: www.miro.com/app/board/uXjVLO5-4JA=
2. *Global Protocol for Community-Scale Greenhouse Gas mission Inventories*, 2014, Greenhouse Gas Protocol. Available at: www.ghgprotocol.org/sites/default/files/2022-12/GPC_Executive_Summary_1.pdf
3. *UK local authority and regional greenhouse gas emissions statistics*, June 2024, Department for Energy Security and Net Zero. Available at: www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics