Exercise 1. Key category analysis and double counting

In this exercise, each source of emission must be allocated to the correct chapter making sure that no emissions are counted twice.

To illustrate where these treatment options may be in your process flow diagram, we illustrate below a couple of options through a process flow diagram showing also a mass balance. Depending on the level of development of the sector, the diagram changes.

Answer the following questions using one or more of the process flow diagrams below.

Key category analysis

- Which waste management activities are most important? Which activities are likely to generate the most Greenhouse Gases?
- Which activity data will be needed to calculate the emissions from the key source categories?
- What issues of uncertainty do you identify with the activity data?
    o What data is available?
    o What data is missing?
    o Is the data representative?

Defining the scope of the Inventory: what is included – what is excluded

- From the waste management activities depicted above, list the activities that will be included in the GHG emission inventory for the waste sector

    Unmanaged solid waste disposal site – deep
    Anaerobic managed solid waste disposal site
    Energy from waste (incineration)
    Open Burning
    Composting
    Material recycling
    Other?

- For each activity choose the GHG that will be included in the inventory. Why? Please add any gases you consider relevant and are not mentioned.

  - CH_4 generated from degradation of organic material
  - CH_4 collected and flared from landfill gas extraction
  - CH_4 from degradation of municipal wastewater sludge

  - N_2O from composting
  - CO_2 from composting
  - CH_4 from composting

  - CH_4 from anaerobic digestion
  - CO_2 from energy use from methane

  - CO_2 from incineration of biomass
  - CO_2 from incineration of fossil fuel
  - CH_4 from incineration of municipal waste
  - N_2O from incineration of municipal waste

  - Black carbon from open burning
  - CO_2 from burning of fossil fuel
  - CH_4 from open burning
  - N_2O from open burning