



## Exercise 4a.1: Terminology of material flow analysis

### Task

Please read the cloze text passage below and place the appropriate word in the gap from the choices below.

Material Flow Analysis (MFA) is the study of physical **flows** or **fluxes** of **materials** into, through and out of a given **system**. It is based on methodically organised accounts in physical units, and uses the **principle of mass balancing** to analyse the relationships between material flows (including energy), human activities and environmental changes. Material flows can be analysed at various **temporal** and **spatial** scales depending on the issue of concern and on the objects of interest of the study. The analysis can be applied to the global or the national economy, an industry, an enterprise, a city or a river basin.

An MFA gives a complete and consistent set of information about all **flows** and **stocks** of a particular **material** within a **system**. It connects the sources, the pathways and the intermediate and final sink of a material. Through balancing **inputs** and **outputs**, the flows of wastes and environmental loadings become visible, and their **sources** can be identified. The **depletion** or **accumulation** of material stocks is identified to either take countermeasures or to promote further **utilization**.

