

## Classification: Group Exercise 1: Classify Land Cover into SEEA Classes

### SEEA Land Cover Classification

01 Artificial surfaces (including urban and associated areas)	The class is composed of any type of areas with a predominant artificial surface. Any urban or related feature is included in this class, for example, urban parks (parks, parkland and laws). The class also includes industrial areas, and waste dump deposit and extraction sites.
02 Herbaceous crops	The class is composed of a main layer of cultivated herbaceous plants (graminoids or forbs). It includes herbaceous crops used for hay. All the non-perennial crops that do not last for more than two growing seasons and crops like sugar cane, where the upper part of the plant is regularly harvested while the root system can remain for more than one year in the field, are included in this class.
03 Woody crops	The class is composed of a main layer of permanent crops (trees or shrub crops) and includes all types of orchards and plantations (fruit trees, coffee and tea plantation, oil palms, rubber plantation, Christmas trees, etc.).
04 Multiple or layered crops	This class combine two different land cover situations: Two layers of different crops. A common case is the presence of one layer of woody crops (trees or shrubs) and another layer of herbaceous crop, e.g., wheat fields with olive trees in the Mediterranean area and intense horticulture, or oasis or typical coastal agriculture in Africa, where herbaceous fields are covered by palm trees. Presence of one important layer of natural vegetation (mainly trees) that covers one layer of cultivated crops. Coffee plantations shadowed by natural trees in the equatorial area of Africa are a typical example.
05 Grassland	This class includes any geographical area dominated by natural herbaceous plants (grasslands, prairies, steppes and savannahs) with a cover of 10 per cent or more, irrespective of different human and/or animal activities, such as grazing or selective fire management. Woody plants (trees and/or shrubs) can be present, assuming their cover is less than 10 per cent.
06 Tree-covered areas	This class includes any geographical area dominated by natural tree plants with a cover of 10 per cent or more. Other types of plants (shrubs and/or herbs) can be present, even with a density higher than that of trees. Areas planted with trees for afforestation purposes and forest plantations are included in this class. This class includes areas seasonally or permanently flooded with freshwater. It excludes coastal mangroves (→07).
07 Mangroves	This class includes any geographical area dominated by woody vegetation (trees and/or shrubs) with a cover of 10 per cent or more that is permanently or regularly flooded by salt and/or brackish water located in the coastal areas or in the deltas of rivers.
08 Shrub-covered areas	This class includes any geographical area dominated by natural shrubs having a cover of 10 per cent or more. Trees can be present in scattered form if their cover is less than 10 per cent. Herbaceous plants can also be present at any density. The class includes shrub-covered areas permanently or regularly flooded by inland fresh water. It excludes shrubs flooded by salt or brackish water in coastal areas (→07).

09 Shrubs and/or herbaceous vegetation, aquatic or regularly flooded	This class includes any geographical area dominated by natural herbaceous vegetation (cover of 10 per cent or more) that is permanently or regularly flooded by fresh or brackish water (swamps, marsh areas, etc.). Flooding must persist for at least two months per year to be considered regular. Woody vegetation (trees and/or shrubs) can be present if their cover is less than 10 per cent.
10 Sparsely natural vegetated areas	This class includes any geographical areas where the cover of natural vegetation is between 2 per cent and 10 per cent. This includes permanently or regularly flooded areas.
11 Terrestrial barren land	This class includes any geographical area dominated by natural abiotic surfaces (bare soil, sand, rocks, etc.) where the natural vegetation is absent or almost absent (covers less than 2 per cent). The class includes areas regularly flooded by inland water (lake shores, river banks, salt flats, etc.). It excludes coastal areas affected by the tidal movement of saltwater (→14).
12 Permanent snow and glaciers	This class includes any geographical area covered by snow or glaciers persistently for 10 months or more.
13 Inland water bodies	This class includes any geographical area covered for most of the year by inland water bodies. In some cases, the water can be frozen for part of the year (less than 10 months). Because the geographical extent of water bodies can change, boundaries must be set consistently with those set by class 11, according to the dominant situation during the year and/or across multiple years.
14 Coastal water bodies and intertidal areas	The class is defined on the basis of geographical features of the land in relation to the sea (coastal water bodies, i.e., lagoons and estuaries) and abiotic surfaces subject to water persistence (intertidal areas, i.e., coastal flats and coral reefs).

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**Land Cover Database**

Land Cover	Area (ha)	SEEA Land Cover Class
Urban residential	32	
Urban commercial	15	
Urban park - football fields	8	
Roads	4	
Woodland	23	
Coniferous forest	40	
Deciduous forest	45	
Crops - wheat	30	
Crops - apples	20	
Shrubland - dry	12	
Swamp	5	
Peatland	13	
River	23	
Estuary	30	
Coral reef	20	
Crops - apples and hay	12	
Mineral excavation area	12	
Rocky shore	5	
Desert (sand)	16	
Lake	24	
<b>Total</b>	<b>389</b>	

SEEA Land Cover Class	Area (ha)
01 Artificial surfaces (including urban and associated areas)	
02 Herbaceous crops	
03 Woody crops	
04 Multiple or layered crops	
05 Grassland	
06 Tree-covered areas	
07 Mangroves	
08 Shrub-covered areas	
09 Shrubs and/or herbaceous vegetation, aquatic or regularly flooded	
10 Sparsely natural vegetated areas	
11 Terrestrial barren land	
12 Permanent snow and glaciers	
13 Inland water bodies	
14 Coastal water bodies and intertidal areas	
<b>Total</b>	

**Instructions: Step 1: Classify National land cover database items according to SEEA Land Cover Classification. Record SEEA Land Cover Class**

**Step 2: Add areas with the same SEEA classes and record totals in SEEA Land Cover Class table**