

# Exercise:

## Asset accounts for forest and timber resources

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### Part A. Accounts for forest land

Your group has been asked to produce a simplified asset account for the country's forested land for the previous year. Use the data sources described below to create to fill in in the asset account table below.

#### Data sources:

- The Department of Land Management and Natural Resources recorded a total of 400 hectares of forested land at the beginning of the accounting period, classified as follows:
  - 20 hectares of **primary forest**,
  - 100 hectares of **other naturally regenerated forest**,
  - 150 hectares of **planted forest**, and
  - 130 hectares of **other wooded land**.
- During the year, the Department of Natural Resources calculated an expansion of planted forest by 7 hectares through an afforestation effort by volunteer planters in land previously classified as grassland. An additional 3 hectares of land classified as Other naturally regenerated forest were also added to the land cover database due to natural expansion of trees into areas no longer being used for economic purposes.
- However, the Department also reported that 2 hectares of primary forest, 10 hectares of Other naturally regenerated forest and 5 hectares of Other wooded land were deforested during the period in order to clear land for agriculture. An additional 3 hectares of Other wooded land were lost due to natural-causes (forest fires).

## Part B. Timber resources asset account

Using the information on the areas of forest land, you have also been asked to complete an asset account for the associated timber resources. The following additional information and assumptions are available:

- Cultivated timber resources are sourced only from planted forests
- Natural timber resources available for wood supply are from Other naturally regenerated forest and Other wooded land. Timber in primary forest is, in general, not available for wood supply on an ongoing basis, but the clearing of primary forest is recorded as removals of timber resources.
- Availability of timber resources averages 56m<sup>3</sup> per hectare in planted forests, 70m<sup>3</sup> per hectare in primary forest and 35m<sup>3</sup> per hectare elsewhere. Changes in the volume of timber resources due to changes in area of forest land are assessed at the same rates.
- Natural growth of stock held at the beginning of the period is 15% over the full year (except in primary forest where the forest is assumed to be mature and natural growth equals natural losses). Natural losses are 2% of opening stock. There are no catastrophic losses during the year.
- Total fellings (i.e. removals plus felling residues) are known to be 1092m<sup>3</sup> from cultivated timber resources and 1572m<sup>3</sup> from natural timber resources available for wood supply (including fellings due to deforestation). Felling residues are 15% of total fellings. It is assumed that all fellings are removed in the same period.

### Asset account for forest lands (hectares)

	Primary forest	Other naturally regenerated forest	Planted forest	Other wooded land	Total
Opening stock					
Additions to stock:					
Reductions to stock:					
Closing stock					

### Asset account for timber resources (cubic metres, m3)

	Cultivated timber resources	Natural timber resources	
		Available for wood supply	Not available for wood supply
<b>Opening stock</b>			
<b>Additions to stock</b>			
<i>Total additions</i>			
<b>Reductions in stock</b>			
<i>Total reductions</i>			
<b>Closing stock</b>			