

Deforestation fronts

Lesson Map: <http://esriaustralia.com.au/education/SpatialActivity15>

Engage

What is deforestation and where does it occur?

- Click on the Lesson Map URL above to open the map.
- ? What is a deforestation? *[land clearing, or removal of forest cover by humans]*
- The WWF estimates that more than 80% of deforestation that will occur between 2010 and 2030 is likely to happen in 11 'deforestation fronts'
- This layer shows the location of these 11 deforestation fronts.

Explore

Where is the largest deforestation front predicted to occur?

- Click on the title of this layer to reveal additional icons. Select the Show Table icon.
- A data table about this layer will appear.
- In the table, click the heading 'area_km2' and sort in descending order.
- ? Between 2010 and 2030, where will the most deforestation occur? What is the predicted size of the deforested area? *[Eastern Australia – 1 096 577km2]*
- ? Scroll across the data table to find the heading "top_cause". What is the top cause of deforestation in Eastern Australia? *[Pasture for livestock]*
- Close the data table.

Explain

What is the relationship between biomes and deforestation?

- Add the layer Global Biomes.
- Open the Bookmark to view the 3 African Deforestation Fronts.

Download student worksheet [here](#).

Time
15 minutes

Activity

Investigate the causes of deforestation, including environmental conditions which occur in susceptible biomes.

Learning Outcome

Students will be able to:

- Understand the location of deforestation fronts predicted by the WWF between 2010 and 2030.
- Observe the relationship between biomes, temperature, and rainfall.
- Understand the cause of deforestation, between developed and developing countries.

ACARA Curriculum Link

[Year 8 Geography – Unit 1: Landforms and landscapes](#)

[ACHGK051](#) | [ACHGS057](#) | [ACHGS058](#)

[Year 10 Geography – Unit 1: Biomes and food security](#)

[ACHGK060](#) | [ACHGK061](#) | [ACHGK063](#)
| [ACHGS065](#) | [ACHGS066](#)

[Senior secondary Curriculum – Geography. Unit 3: Land cover transformations](#)

[ACHGE065](#) | [ACHGE067](#) | [ACHGE071](#)
| [ACHGE072](#) | [ACHGE073](#) |
[ACHGE074](#) | [ACHGE075](#) | [ACHGE076](#)
| [ACHGE077](#) | [ACHGE079](#)

- ? In which biome do these 3 deforestation fronts occur? *[Tropical Moist Forest]*
- Tick the checkbox to turn on the layer Total Annual Precipitation. Switch between this layer, and the Global Biomes layer.
- ? What is the relationship between Total Annual Precipitation and Tropical Moist Forest biomes in Africa? *[Areas of high annual precipitation experience tropical moist forest biomes]*
- Tick the checkbox to turn on the later Temp. and Rainfall graph. Click on the green box that occurs, to reveal a pop up window. Click to enlarge the graph within this window.
- ? Based on what this graph shows, what alternate name is given to Tropical Moist Forest biomes? *[Tropical rain forest]*
- ? Based on the graph, what can we assume about the temperature in the three deforestation fronts in Africa?? *[It is warm – between 22 and 30°C]*
- ? Why is this biome susceptible to deforestation? *[Environmental conditions promote high density rainforest, which could be ideal farming land given climate and rainfall]*

Extend

How many injuries were experienced per incident?

- ? In the Asia Pacific, which biome is most likely to be cleared due to deforestation? *[Tropical Moist Forest]*
- Turn the Global Biomes layer off again, but leave the Deforestation Fronts layer switched on.
- Click on the zones of predicted deforestation in the Asia Pacific Region to open an additional data window.
- ? What are some of the main causes of deforestation in this region? *[Answers will vary]*
- OPTIONAL: You may further investigate reason for, and impacts of deforestation for reasons such as palm oil, rubber, or unsustainable logging.

Teacher Feedback:

To share your feedback on this, or any Spatial Activity, please contact education@esriaustralia.com.au

Next Steps:

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