

# Case study: Jakarta

Lesson Map: <http://esriaustralia.com.au/education/SpatialActivity62>

## Engage

### *An overview of Jakarta*

- Click on the URL above to open the Story Map (with built-in interactive maps). A topographic map focused on Indonesia is displayed. This Story Map is a case study of Jakarta, and the challenges it faces as a megacity. Read the overview of Jakarta and its surrounding area in the first section.
- Zoom in on Jakarta's location to see the locations of Bogor, Depok, Tangerang and Bekasi.
- ? In a brief statement, compare Jabodetabek's population with Australia's. *[The population of Jakarta's extended agglomeration, Jabodetabek, is larger than the entire population of Australia.]*

## Explore

### *Flooding in Jakarta and the city's plan to overcome it*

- Scroll down the next section of the Story Map, titled 'Flooding'. Read the text. Take notes if required. Stop to discuss as necessary.
- ? The 2007 flood resulted in 450,000 people becoming homeless. In addition to homelessness, what other problems may this have created? *[The creation of new slums; loss of livelihood and employment; increased pressure on resources e.g. road infrastructure etc.]*
- Continue to the next section titled 'Why does Jakarta face a flooding challenge?' Read the text. Take notes if required. Stop to discuss as necessary.
- ? 40% of Jakarta's population obtain their drinking water from groundwater below the surface and this is contributing to the city sinking. What other water sources could Jakarta potentially explore? What issues may exist with these alternative water sources? *[Answers will vary but may include: (1) Sourcing water from the rivers that are in close proximity to the city. The issue with this is that the rivers may be polluted due to burst riverbanks/waste. (2) Desalination from the nearby Java Sea. The issue with this is that mass-scale desalination is a very expensive option.]*

Download student worksheet [here](#).

### Time

45 minutes

### Activity

Investigate Jakarta's response to environmental, economic and social challenges.

### Learning Outcome

Students will be able to:

- Identify key characteristics of the city of Jakarta
- Understand the key environmental, economic and social challenges that Jakarta faces
- Examine and analyse Jakarta's proposed solutions to overcoming the challenges it faces

### ACARA Curriculum Link

[Year 11 Geography | Planning sustainable places: Managing challenges facing a megacity](#)

### Teacher Feedback:

To share your feedback on this, or any Spatial Activity, please contact [education@esriaustralia.com.au](mailto:education@esriaustralia.com.au)

### Acknowledgements:

Data was sourced from [Our World in Data](#) and [World Bank](#).

- Continue to the next section titled 'Jakarta's plan to combat flooding challenges.'  
Read the text. Take notes if required. Stop to discuss as necessary.
- Explore the map to the right by viewing the legend. Note: The Great Garuda (bird-shaped icon) isn't completely accurate but has been created as a reference.
- ? Identify the pros and cons of the project (artificial islands and sea wall) by populating the table below:

Economic positives	Environmental positives	Social positives
New retail opportunities; new residential properties; Port is still accessible; likely increase in tourism industry	Reduction of city flooding; protection from sea-level rise	Additional housing for a growing population; additional social and recreational activities and services
Economic negatives	Environmental negatives	Social negatives
Project costs \$40bn and doesn't directly solve issue; Ongoing maintenance costs	Water in lagoon / bay area may become septic, polluted and stagnant; impact on existing marine ecosystems	Poorer demographics in Jakarta (e.g. traditional fishing communities) have been removed from their housing along the north of Jakarta; poses ongoing problems for their livelihood / income.

## Explain

### *Air pollution and traffic congestion in Jakarta*

- Continue to the next section titled 'Air pollution.' Read the text. Take notes if required. Stop to discuss as necessary.
- Explore the map to by viewing the legend to see the percentage of a country's population that is exposed to air pollution above W.H.O's guidelines. You can reposition the map by clicking and dragging and by zooming in or out.

- ? Why do you think higher proportions of the population in Asian and African countries are exposed to air pollution levels above W.H.O's guidelines? *[These countries often produce more raw materials and act as the world's factories.]*
- Continue to the next section titled 'Overcoming traffic congestion to reduce air pollution.' Read the text. Take notes if required. Stop to discuss as necessary.
- After you have read the text, watch the video to the right. The video touches on Jakarta's traffic congestion and the MRT.
- ? The first phase of the MRT took 5 years to build. The second phase will be finished in 2024. What problems does this present to the Indonesian government? *[As each phase takes a significant time to complete, the government will need to be planning additional solutions so that they are able to continue to combat traffic congestion.]*

## Extend

### *Jakarta's housing shortages and domestic waste issues*

- Continue to the next section titled 'Housing shortages and domestic waste.' Read the text. Take notes if required. Stop to discuss as necessary.
- ? Considering that the National Slum Upgrading Program extends to addressing slums in over 100 Indonesian cities, do you think the investments will go far enough? *[Most likely not. Although some improvements will be made to slum areas across Indonesia, a program of this scope requires more money and time to be truly effective.]*
- ? Jakarta is Indonesia's capital and seems to be facing a host of difficult challenges that will require more than money and time to fix. No potential solution is off the table. Briefly pose a solution, however radical, and justify why this may be needed moving forward. *[Answers will vary. E.g. One radical solution that the Indonesian government may need to consider is whether they need to create a new capital city, in a new and suitable location, in Indonesia. By doing so, they will create a new economic and social hub, which will relieve considerable stresses on the existing city of Jakarta. This would also allow them to implement effective urban planning from the beginning of the establishment of a new capital city so that problems similar to what Jakarta is facing now are addressed promptly. Whilst this will take time, it may result in a decrease in Jakarta's populations as people relocate to the new capital.]*

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## Next Steps:

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