

# Climate and Weather of Southeast Asia

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# Opening Question

- Take a few minutes to evaluate your map from yesterday.
  - What aspects of your map do you find helpful?
  - What aspects of your map do you think might need to be improved?
  - Explain how you think this map might help you understand the physical geography of this region better than traditional notes.
  
- Write your answers on the back of your map.



# Factors Affecting Climate

Latitude	distance from equator
Air masses	polar air is cold, air on the equator is warm
Continentality	distance from water
Elevation	distance above sea level; temperature drops as you climb
Mountain barriers	mountains block precipitation
Ocean currents	warm currents warm the air above them and provide moisture; cool currents have dry, cooler air above them
Pressure and Prevailing Winds	high pressure is heavy, sinking air; low pressure is light, rising air
Storms	



On the back of your map, list each of the factors and explain how each one affects this region.



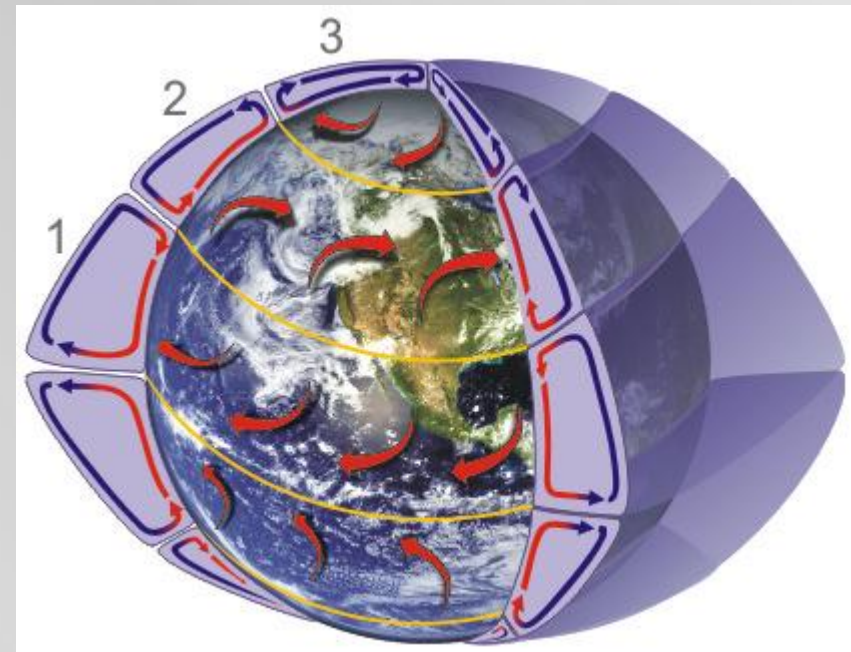
# Climate Zones - Tropical

- Most of this region lies within the tropics, so warm, moist conditions dominate all year
- Seasonal variations are mostly due to wind patterns called **monsoons**.
- **Monsoons** are not storms like hurricanes. They are wind patterns which shift with the seasons.



# Wind Patterns

- Warm air at the equator rises and begins to flow away from the equator – creating a **low pressure** band around the equator.

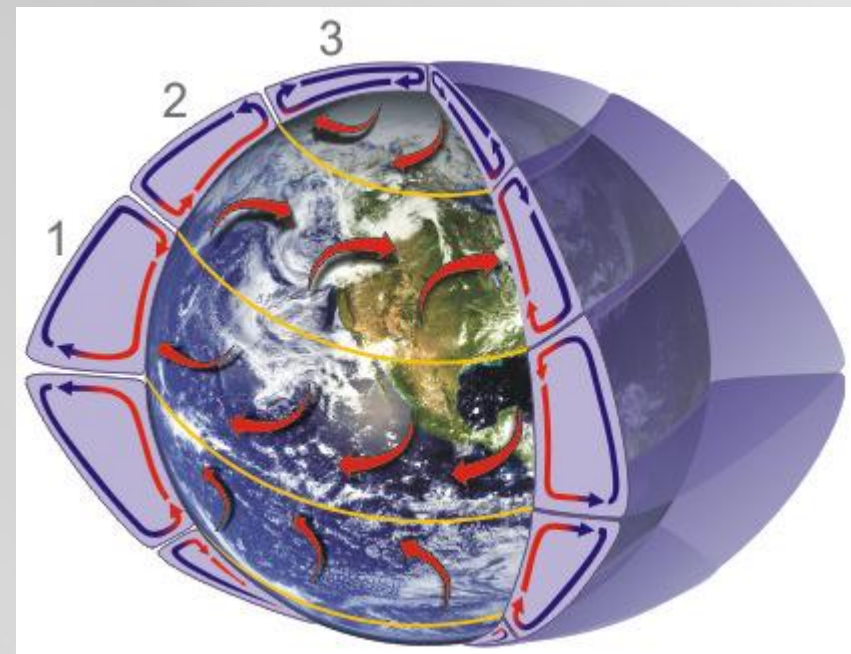






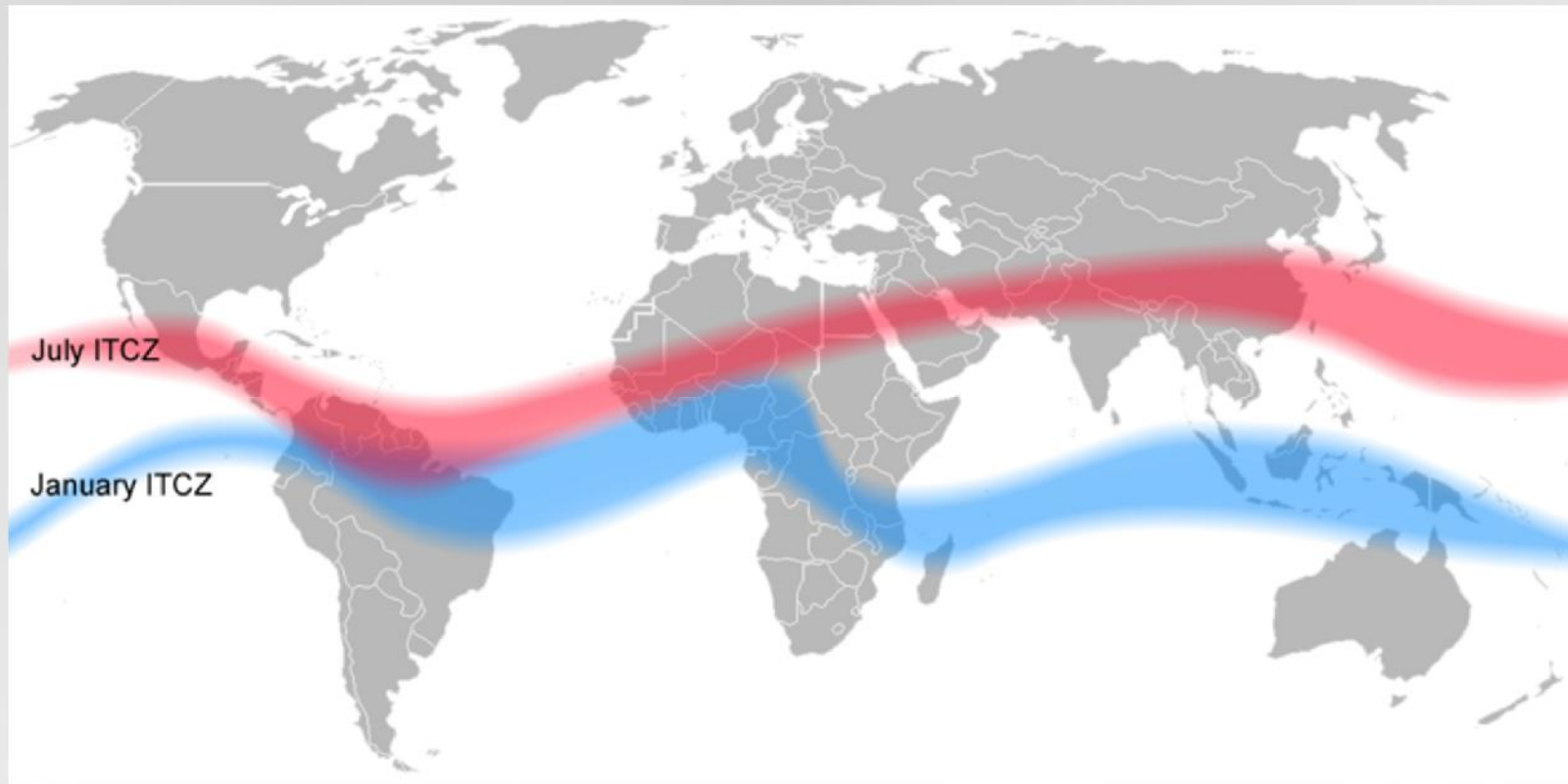
# Wind Patterns

- This low pressure band is called the **Intertropical Convergence Zone**.
- Its location varies during the year as the sun's direct rays move north or south of the equator.





# ITCZ







# Monsoons

- Winds blow towards low pressure band at ITCZ
  - In January,
    - the band is further south over Indonesia.
    - This pulls cool, dry air across the region, creating a dry season.
  - In July,
    - the band moves north of the region.
    - This pulls warm, moist air from the warm bodies of water south of the region and creates a wet season.



On your map, draw the ITCZ bands and shade them in lightly

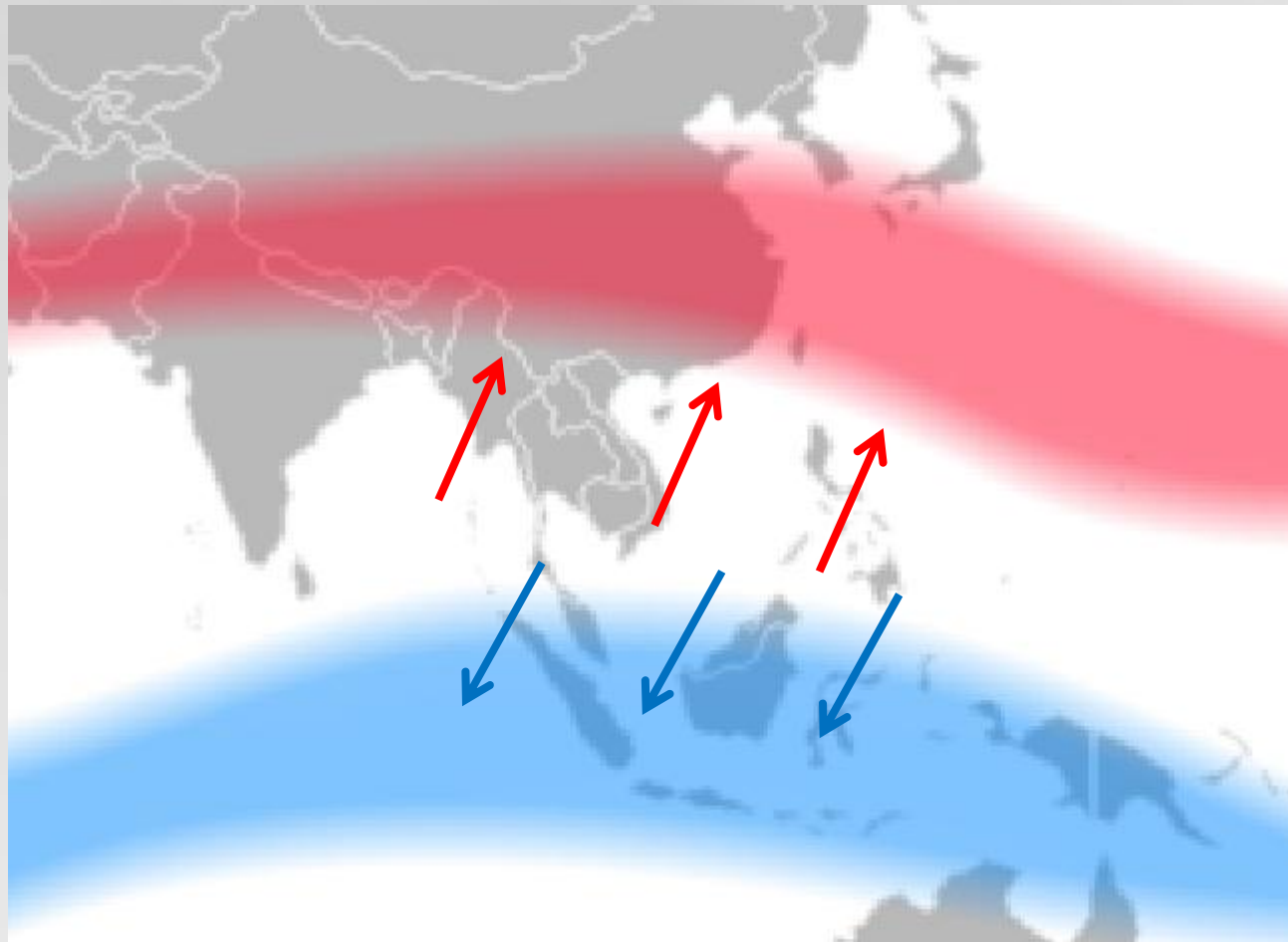
- Draw January's band in **blue**.
  - Draw **blue** arrows blowing towards the ITCZ to indicate the wind patterns in January
- Draw July's band in **red**.
  - Draw **red** arrows blowing towards the ITCZ to indicate the wind patterns in July.



# ITCZ

July

January



# Guiding Question

*What processes are responsible for the creation and distribution of the landforms and climates found in Southeast Asia?*



# Summary

- Write a short (2 to 3 paragraphs) answer to the guiding question.
- Your answer should include the following:
  - List and describe the major climate influences of the region.
  - Explain how factors affecting climate are mediated by the physical geography of the region.
  - Explain how the interactions between physical features and climate factors may affect people in this region.



# Notes & Credits

- Slide 4
  - Latitude – this region lies almost completely within the tropics so temperatures will be higher. Air masses – most of the air masses moving into this region will be warm, equatorial air due to its latitude. Continentality – as a system of peninsulas and islands – most of this region is very close to water – temperatures will change slowly and will not vary as much between the seasons. Elevation – the mountainous regions will have much cooler climates. Mountain barriers – some of the mountains may block precipitation bearing systems, creating rain shadows in some areas. Ocean currents – this region lies near warm ocean currents, which will heat the air above them and provide moisture for rain. Prevailing winds – these have perhaps the greatest affect in the varying of the weather and climate during the year – the monsoon winds bring warm, moist air and lots of rain during the wet season, drier air during the dry season. Storms – this area is at risk for cyclones which would bring large amounts of rain.
- Slide 6 & 7
  - Graphic courtesy of NOAA
- Slide 8
  - This graphic is in the public domain – provided by Wikicommons.
- Slide 12
  - This graphic is in the public domain – provided by Wikicommons.