

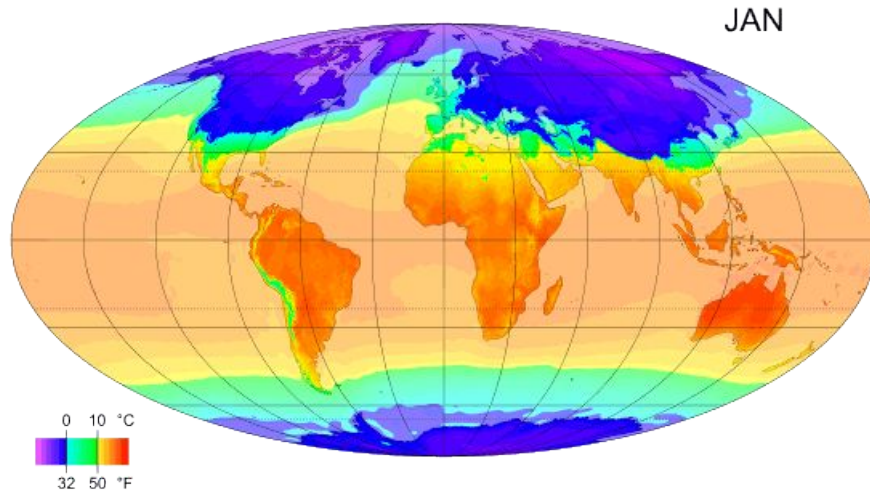
Terrestrial Temperature & Rainfall

Sloane Garelick



Climatematch
Academy —

Land and Sea Surface Temperature Variations



Seasonal variations in temperature cause changes in:

- Northern and Southern Hemisphere temperature gradients
- Land-sea temperature gradients

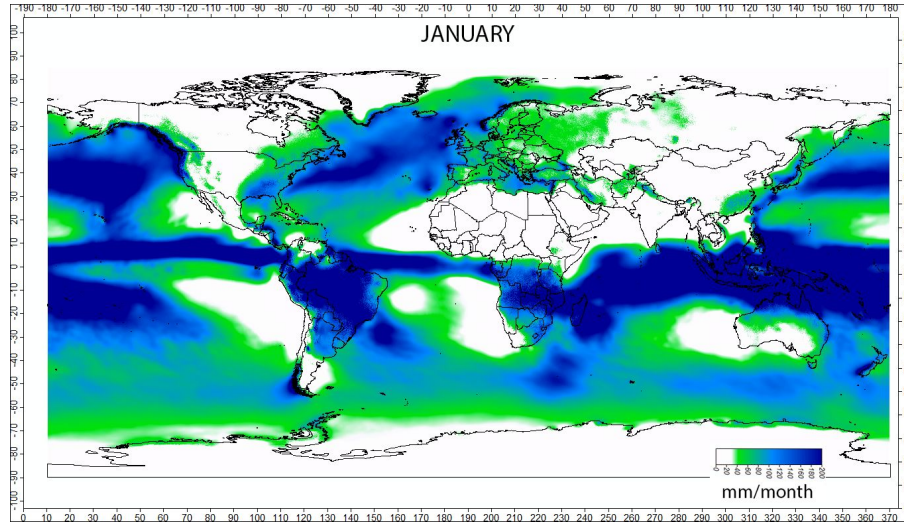
Both of these changes affect rainfall

(PZmaps, CC BY-SA 3.0)

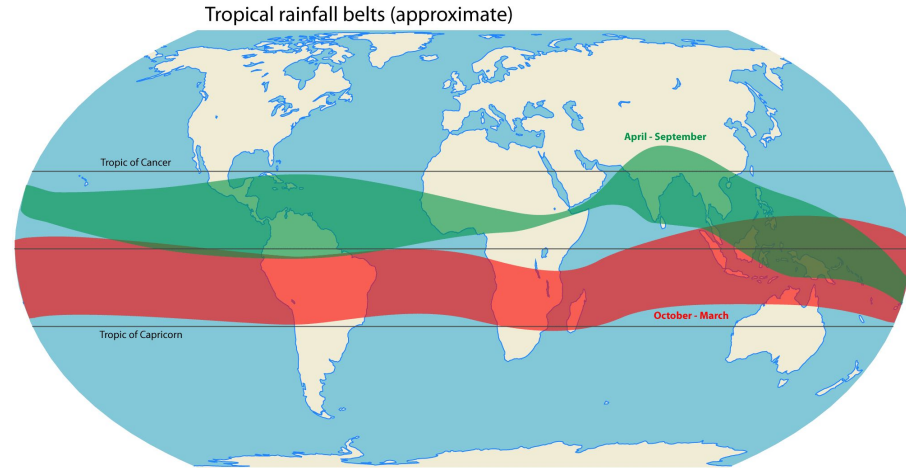


Intertropical Convergence Zone (ITCZ)

The ITCZ is a band of moist, converging air in the tropics that produces large amounts of rainfall and migrates seasonal in a north-south direction towards the warmer hemisphere

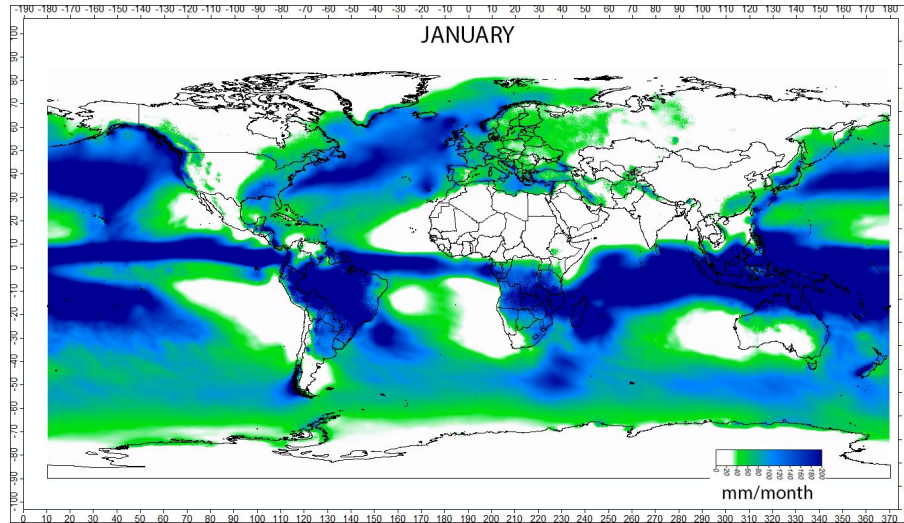


(Greenmind1980, CC BY-SA 4.0; Redgeographics, CC BY-SA 4.0)

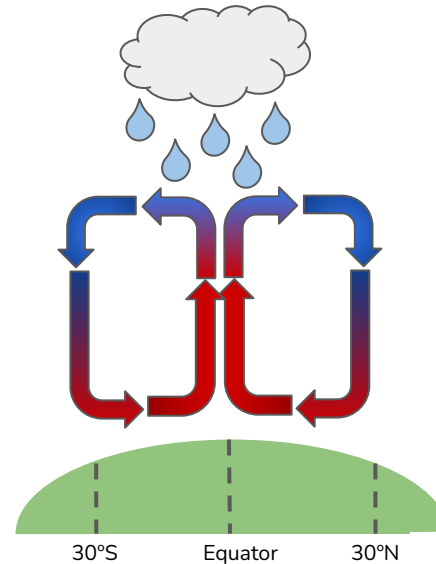


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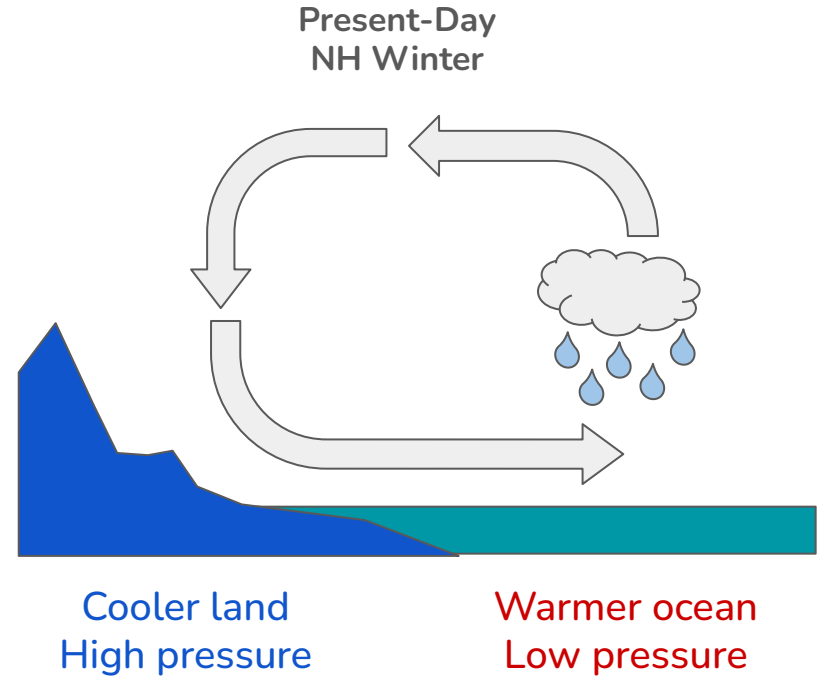
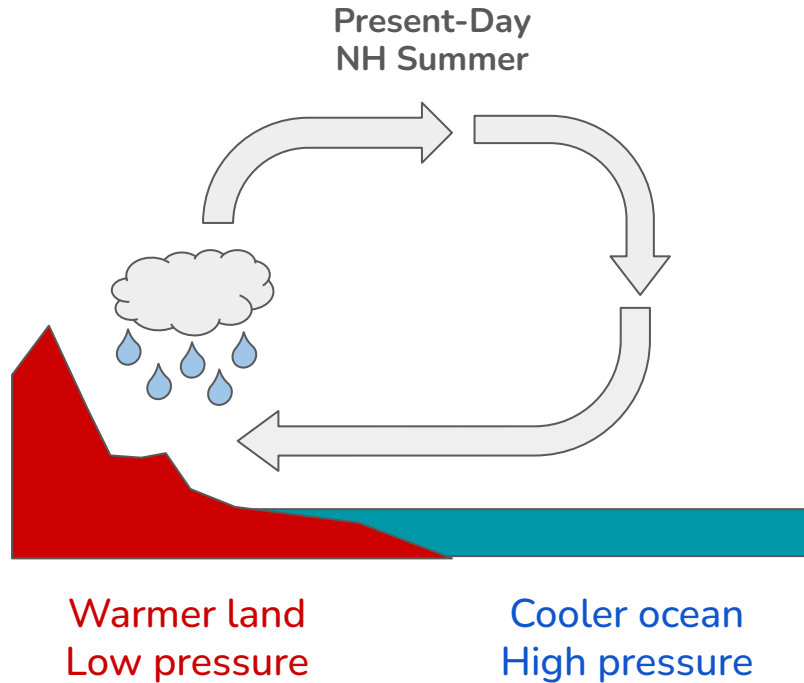


*Remember this from
Tutorial 3?*

*The ITCZ forms where
equatorial air masses
converge and rise!*

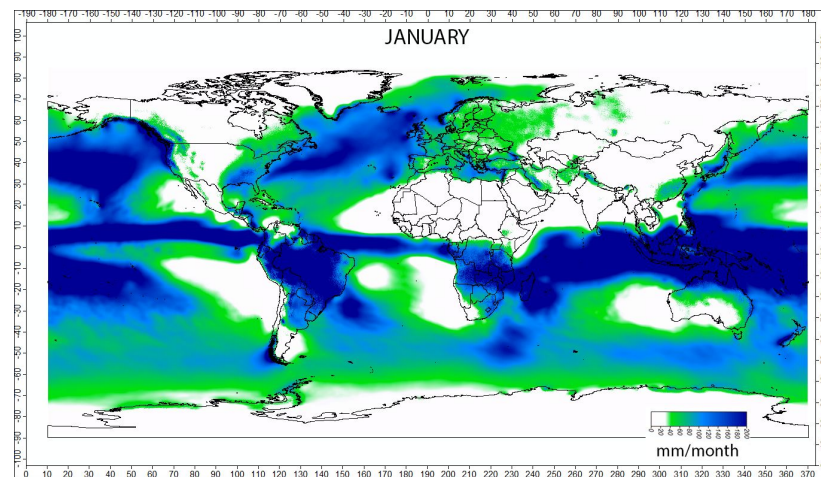


Monsoon Systems



Tutorial 5: Xarray Data Analysis and Climatology

- These changes in rainfall and temperature associated with the migration of the ITCZ and monsoon occur on seasonal timescales
- In this tutorial, we will use data analysis tools in Xarray to explore seasonal climatology in global temperature and precipitation data



(Atmospheric Infrared Sounder, CC BY 2.0)

