



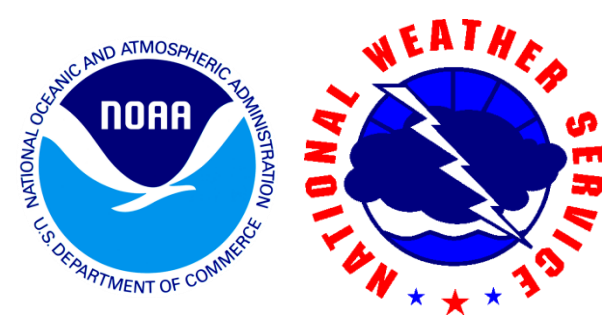
Rate of Change Observable in Rainfall Measurements

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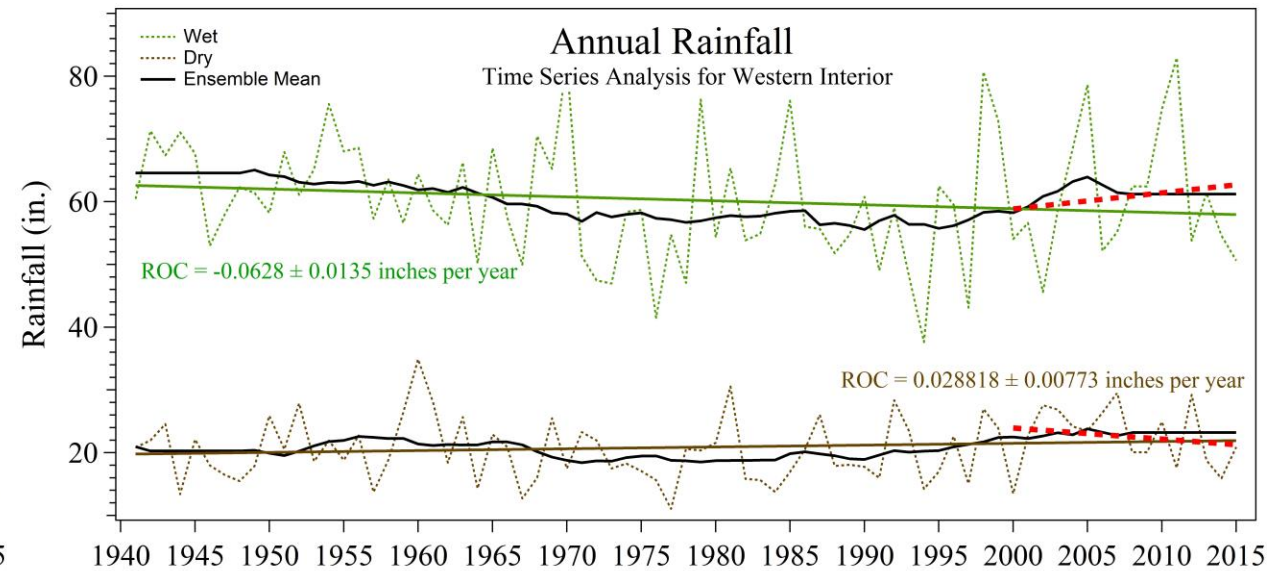
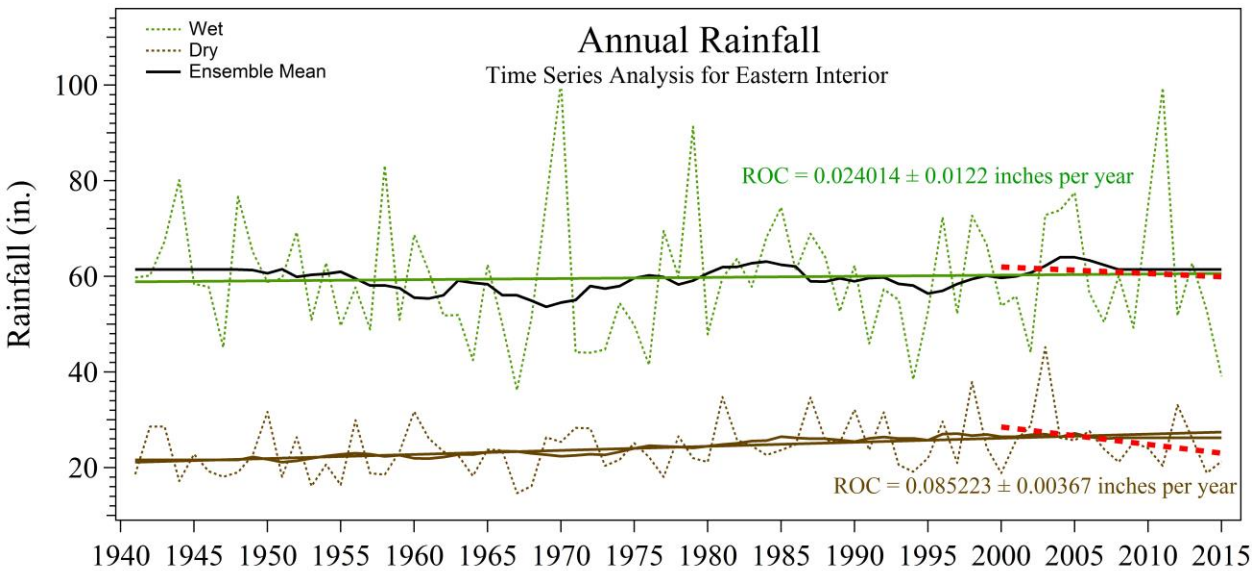
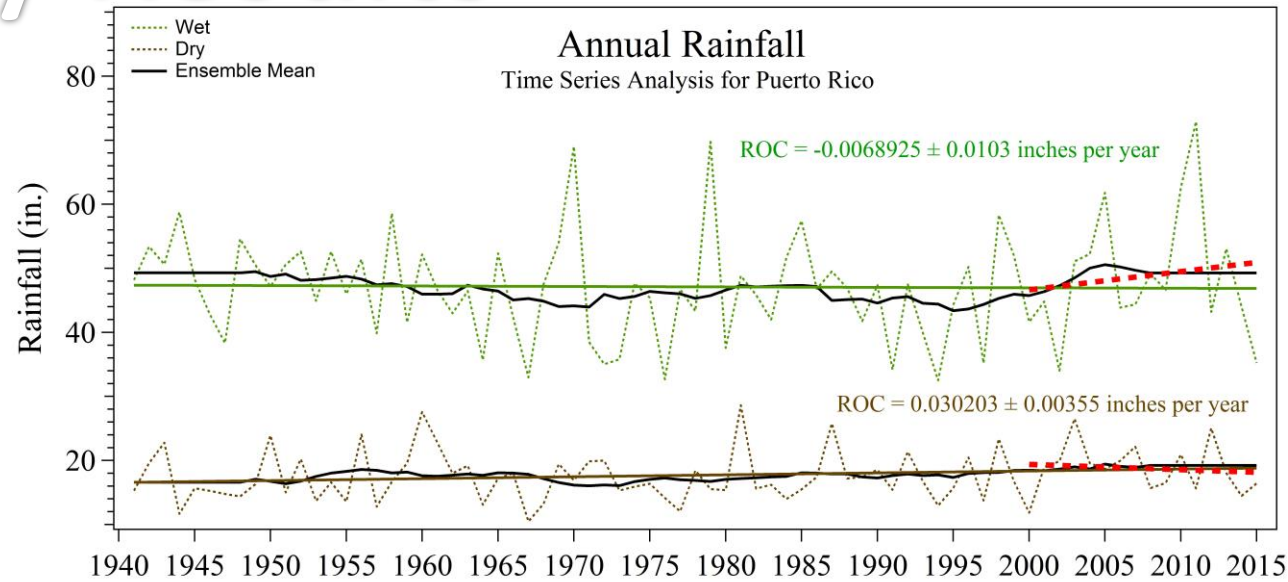
UPRRP Environmental Sciences PhD Student

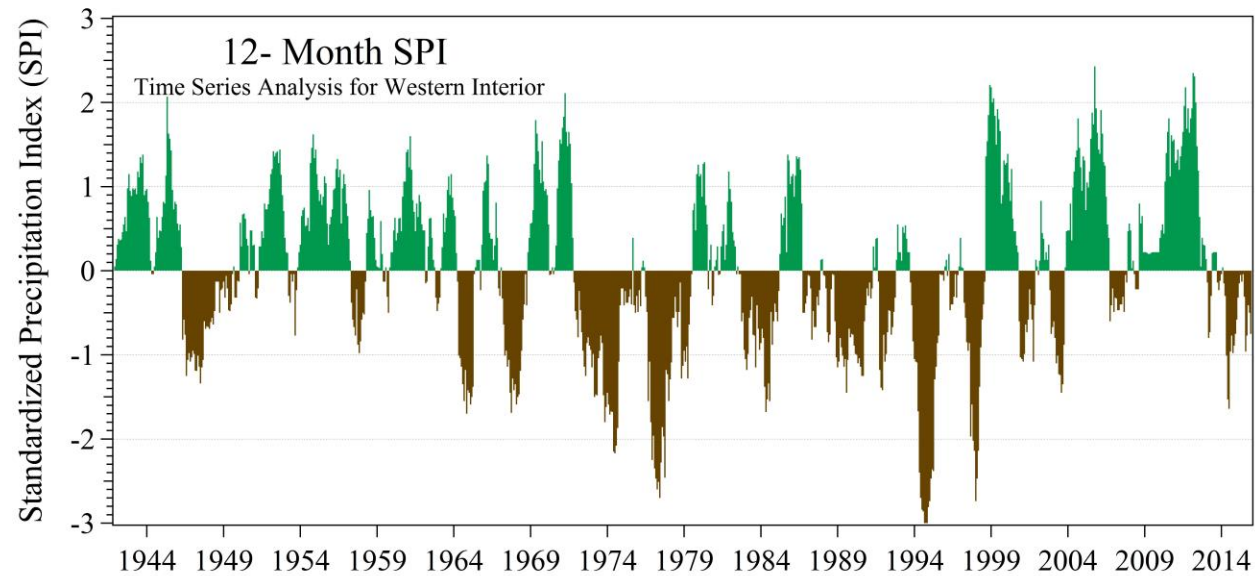
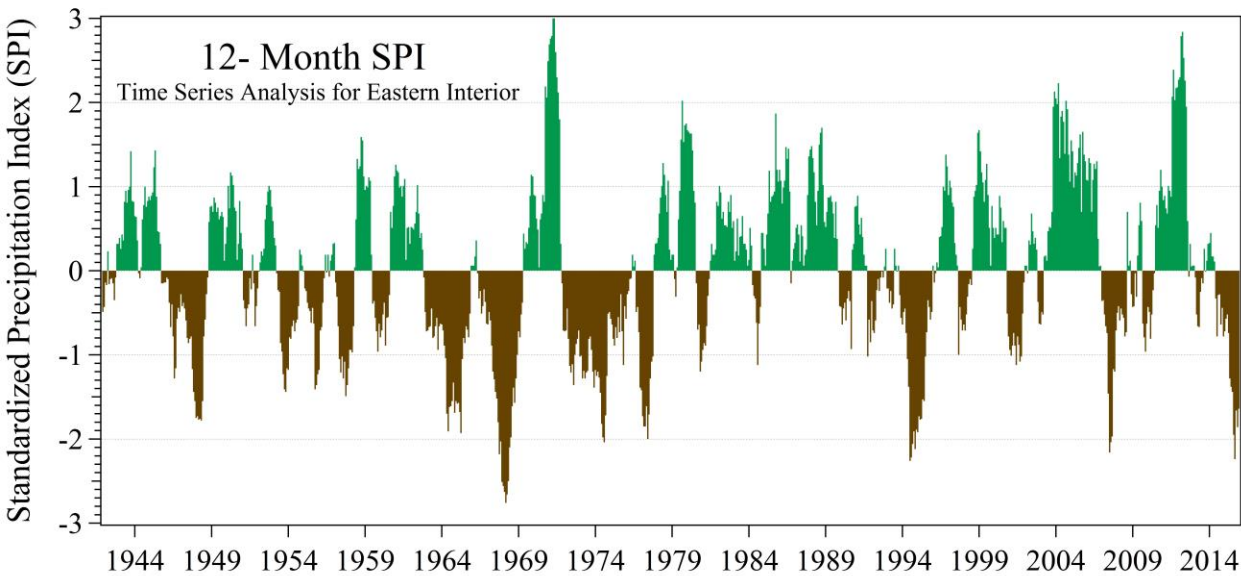
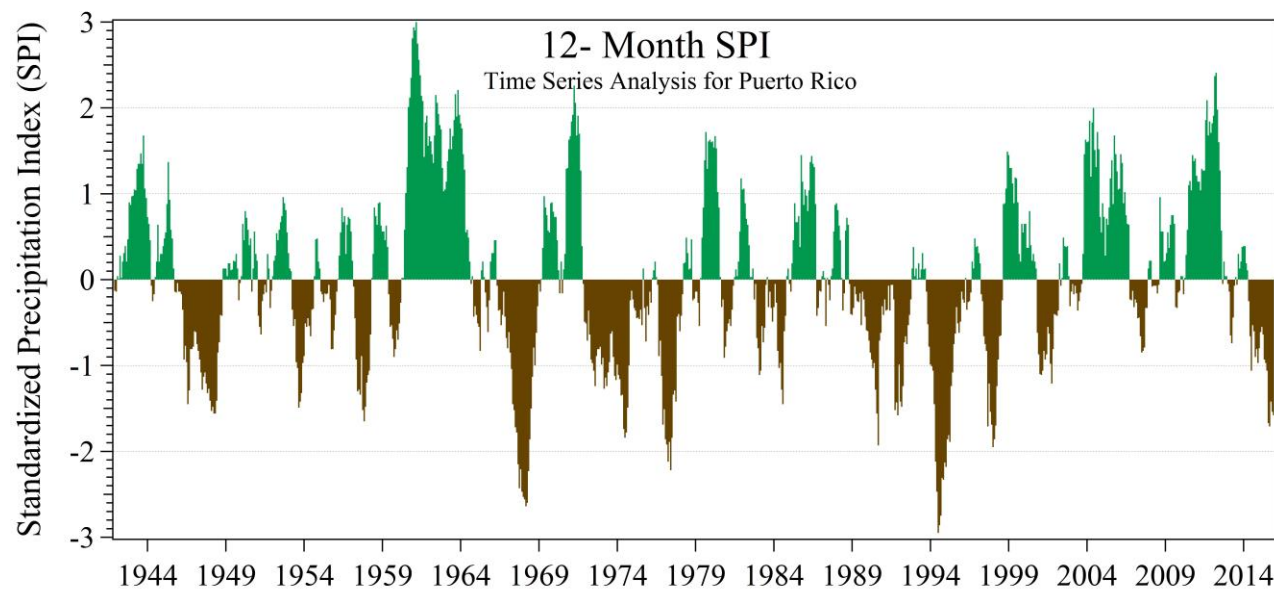
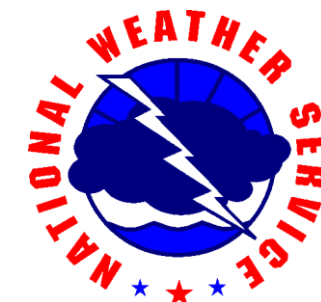
Introduction



- **Climate Prediction Center Optimum Climate Normals (CPC OCN)** and **Exponentially Weighted Moving Average (EWMA)**.
- **Rate of Change (ROC)** : ROC explains speed of change. The higher the value of ROC, the faster the change occurs; positive/negative values indicate increased/decreased rainfall.
- The **Standardized Precipitation Index (SPI)** calculation for any location is based on the long-term precipitation record for a desired period. This long-term record is fitted to a probability distribution, which is then transformed into a normal distribution so that the mean SPI for the location and desired period is zero.

Preliminary Results







Summary

- These results **cannot be interpreted as the expected or most likely value** during the climate change conditions.
- There are indications that the island as a whole has experienced **negative trends during the wet season and positive during the dry season.**
- The higher the value of ROC, the faster the change occurs. Islandwide, the **change has been faster during the dry season.**
- There is **a lot of uncertainty in the magnitude of rainfall changes** across the area, though most of global climate models show **future decreases in rainfall.**