



# South Korea's Climate Changes during 1970-2020

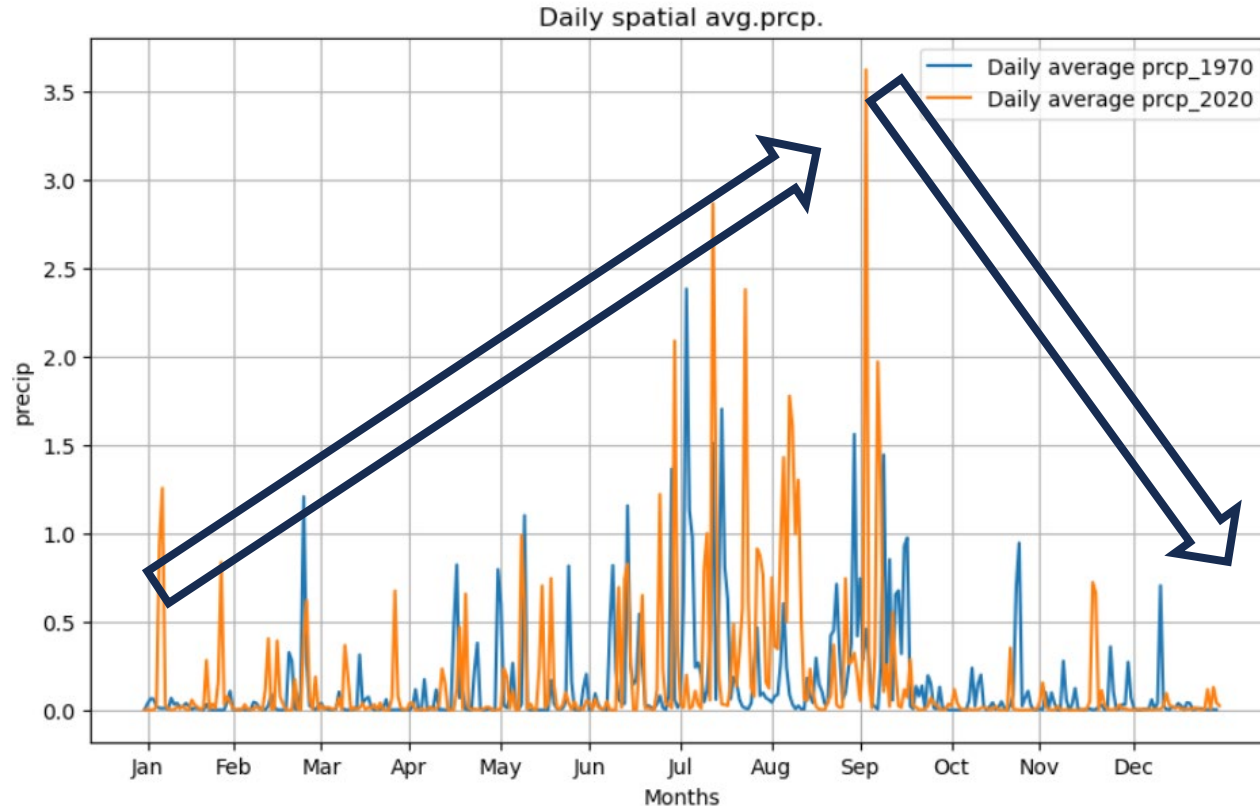
**Seoul National Univ. Mechanical Engineering**

**Taejin Kim**



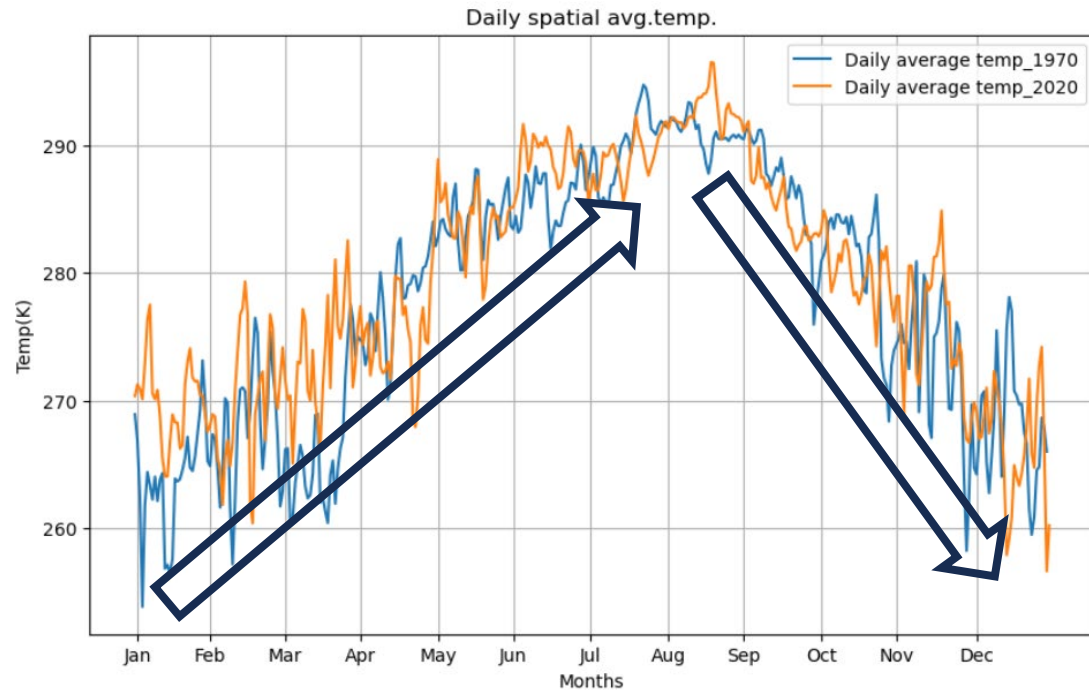
Compare climate 1970 vs 2020

# 1. precipitation



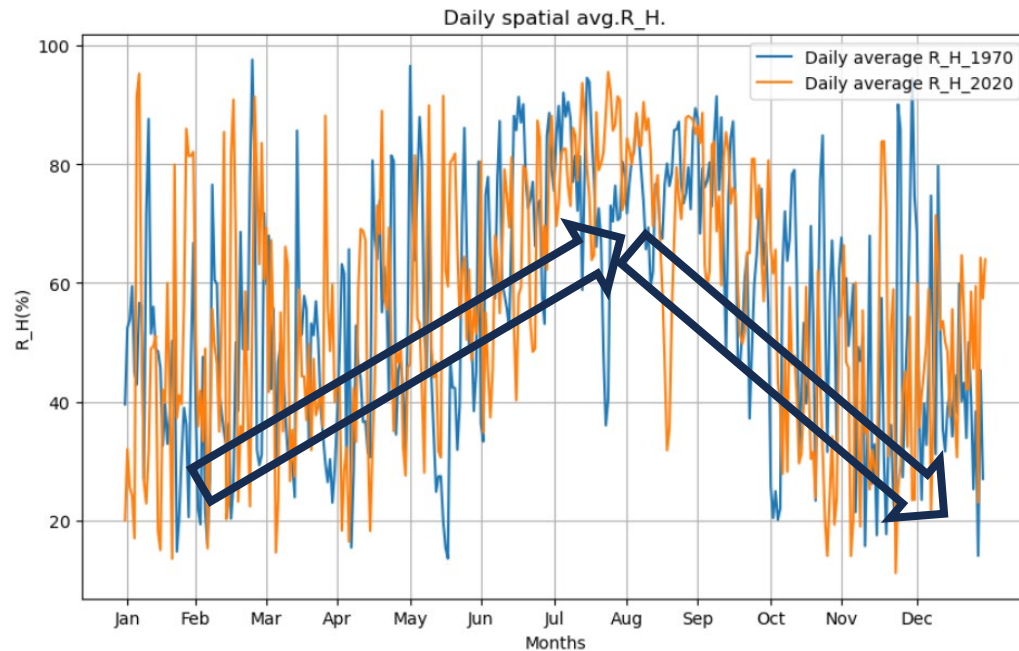
1. Increase in Summer
2. Decrease in Winter
3. Avg precipitation  
 $2020 > 1970$

## 2. Temperature



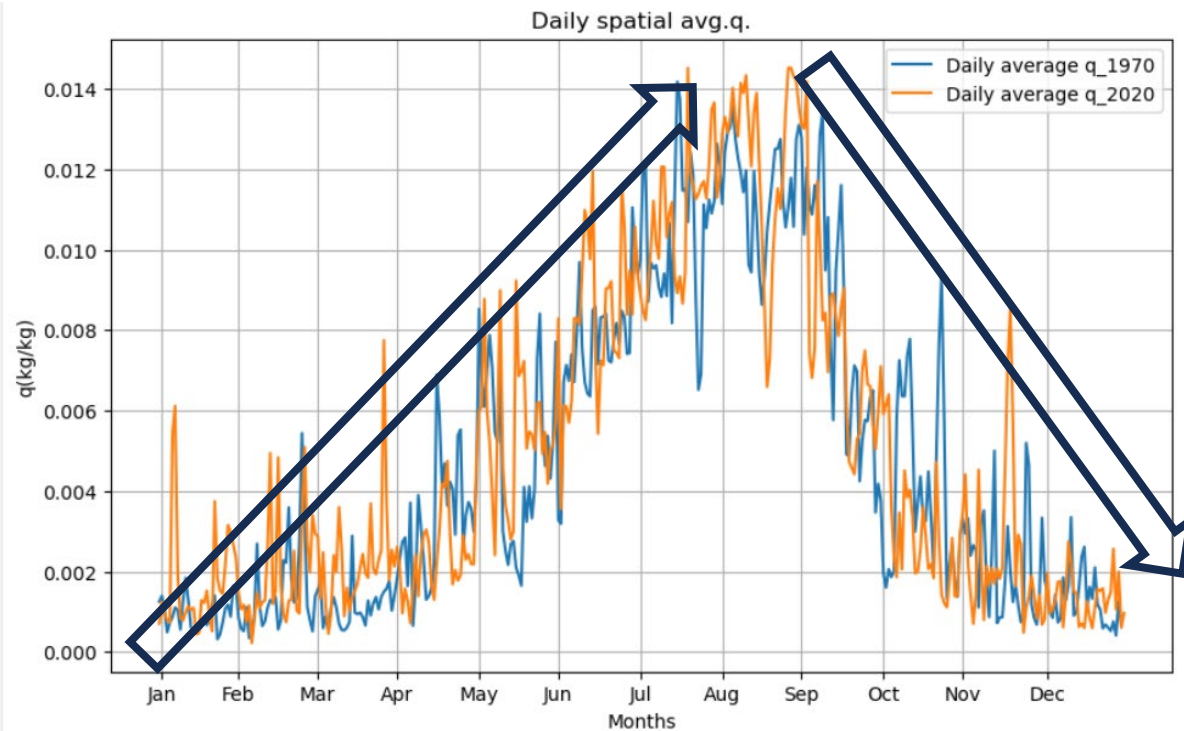
1. Increase in Summer
2. Decrease in Winter
3. Maximum in Aug to Sep

# 3.R\_H



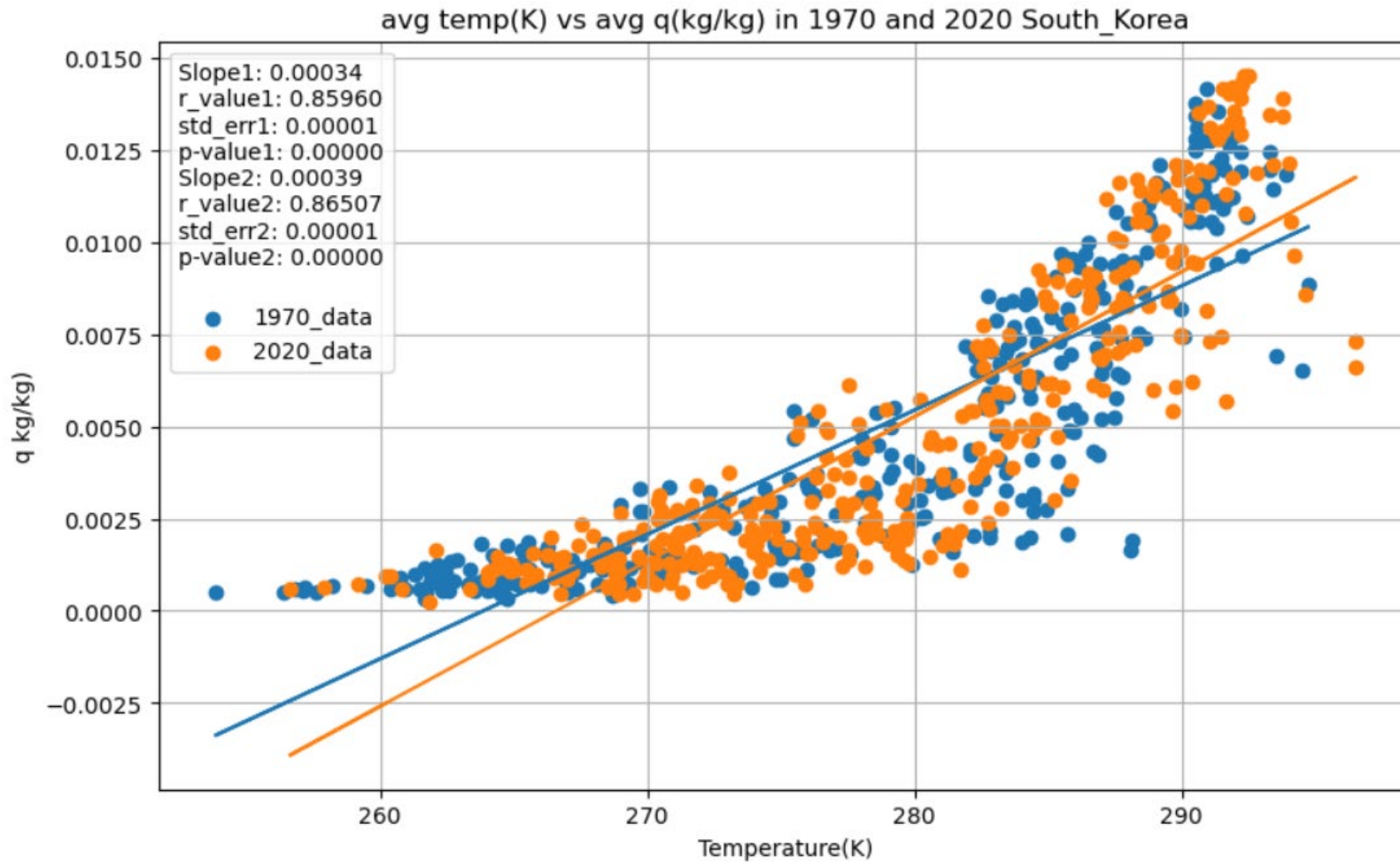
1. Slightly increase in Summer
2. A bit of decrease in Winter
3. Vibrate near total average

# 4. q



1. Increase in Summer
  2. Decrease in Winter
  3. Maximum in Aug to Sep
- (Similar with temp)

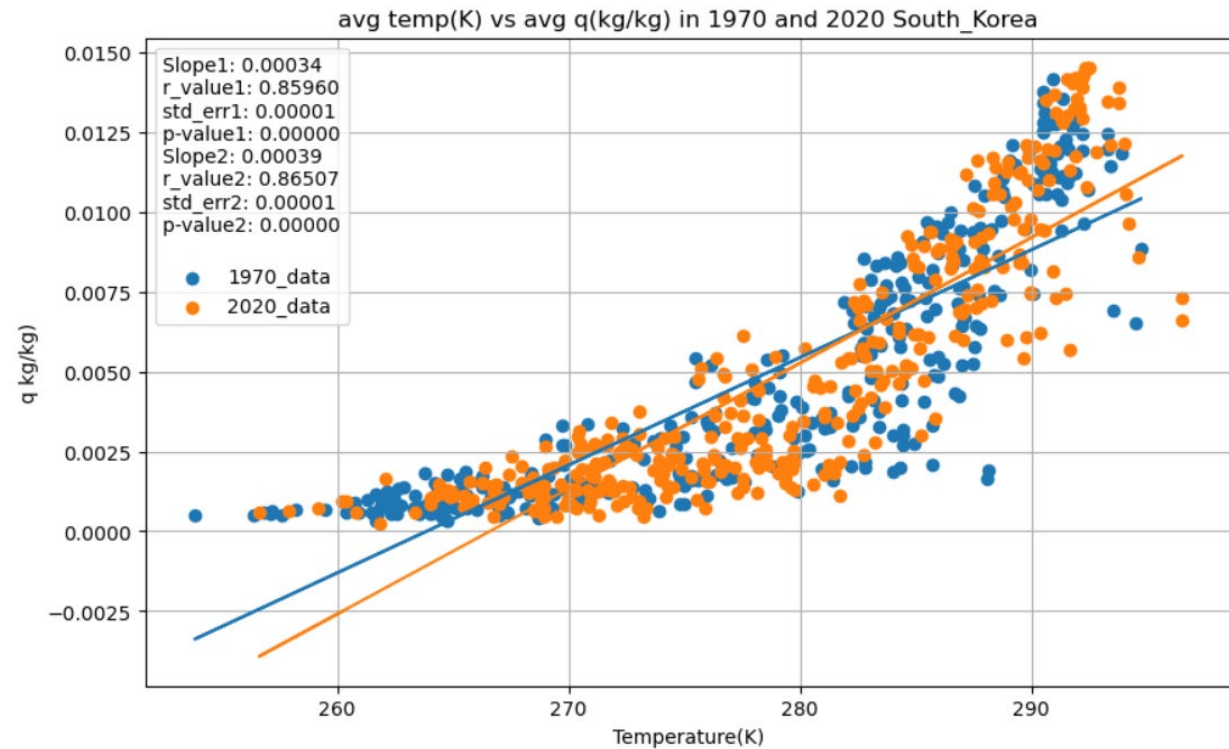
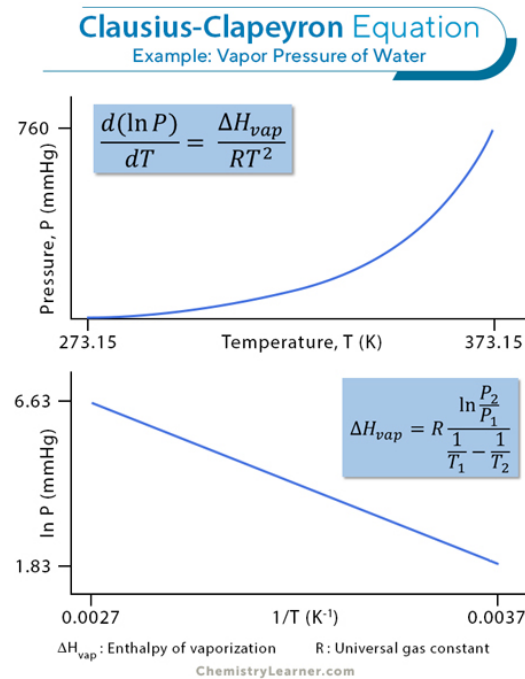
# Some correlation between temp & q



Maybe  
Linear or exponential



# Some correlation between temp & q

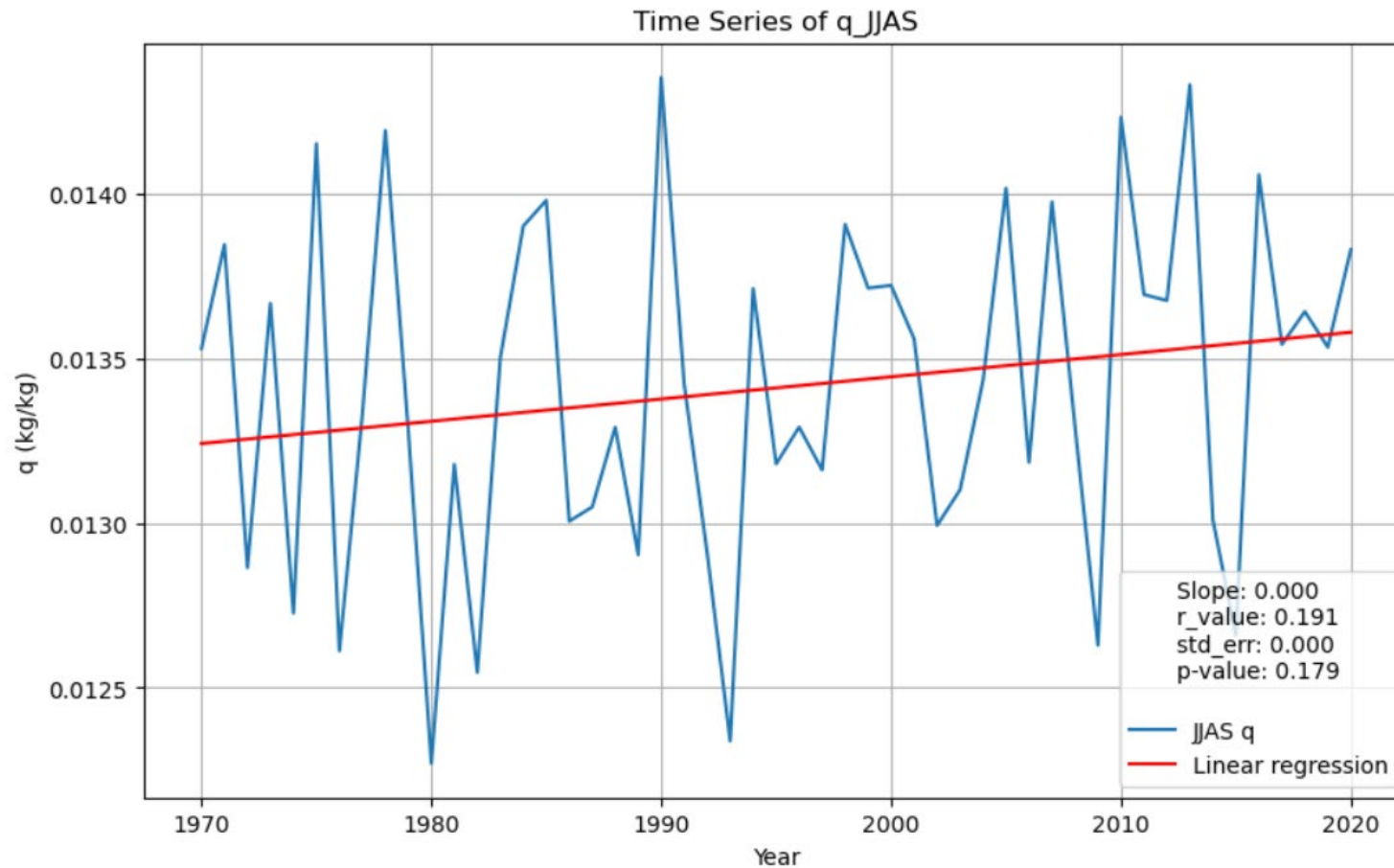






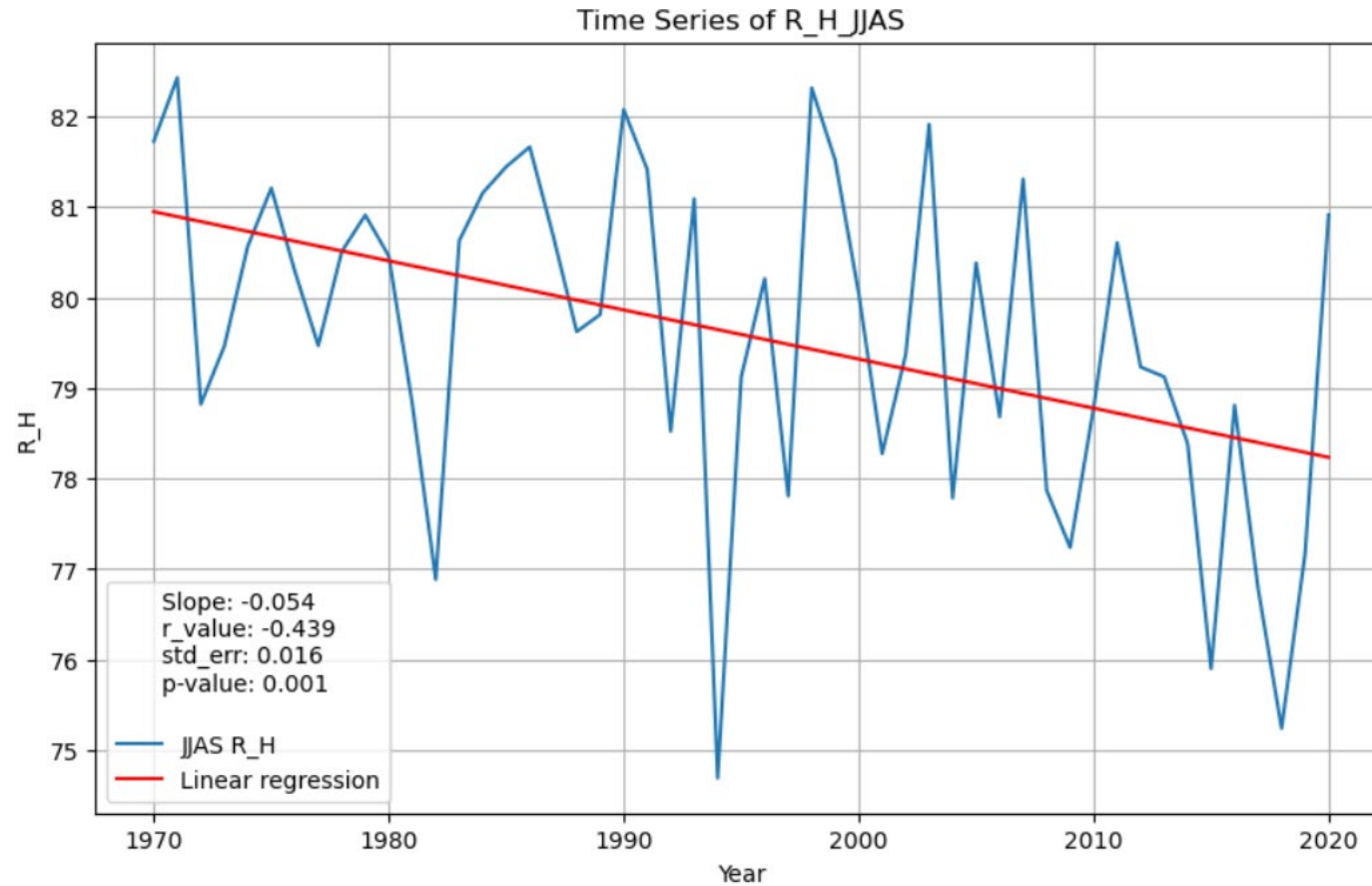
# Time series 1970 to 2020

# 1. Time series for $q$



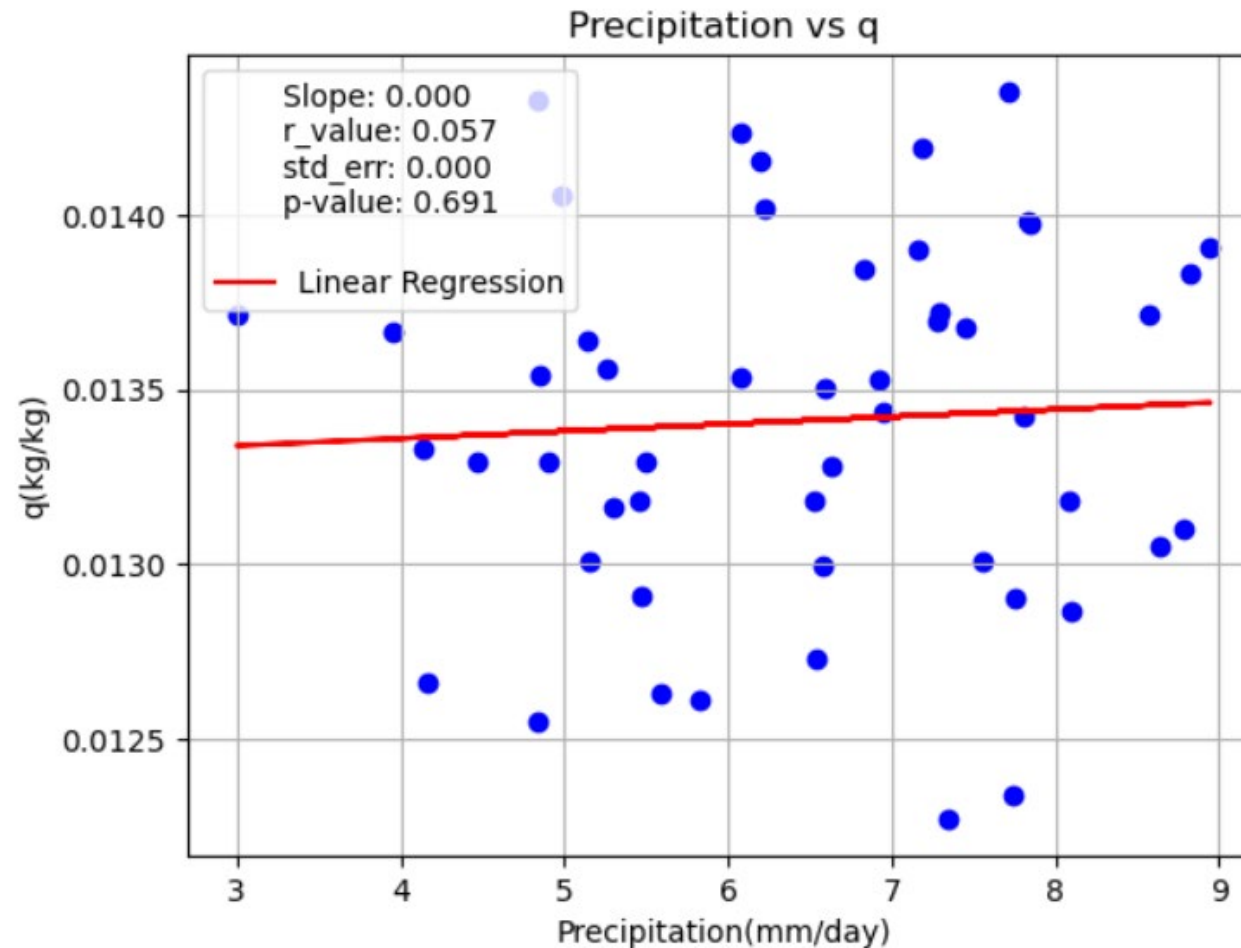
**Slightly decrease in Specific Humidity**

## 2. Time series for R\_H



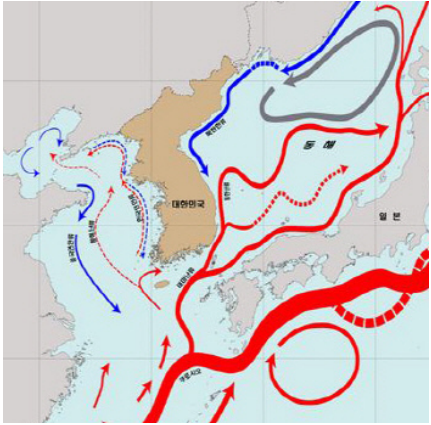
**Slightly decrease in Relative Humidity**

### 3. Precipitation vs q (scatter)



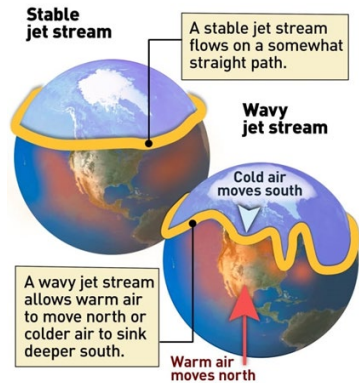
**Little Correlation in q and Precipitation**

# 4. Spatial data in precipitation



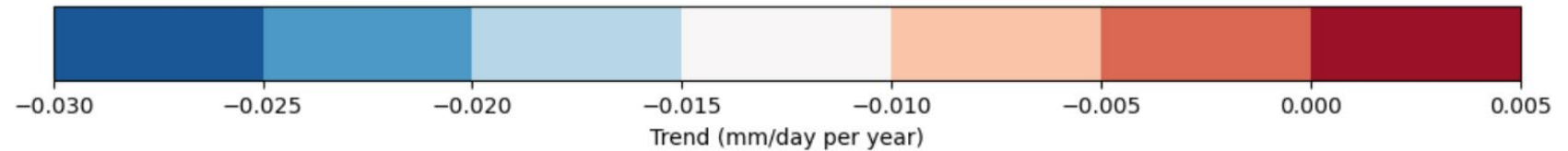
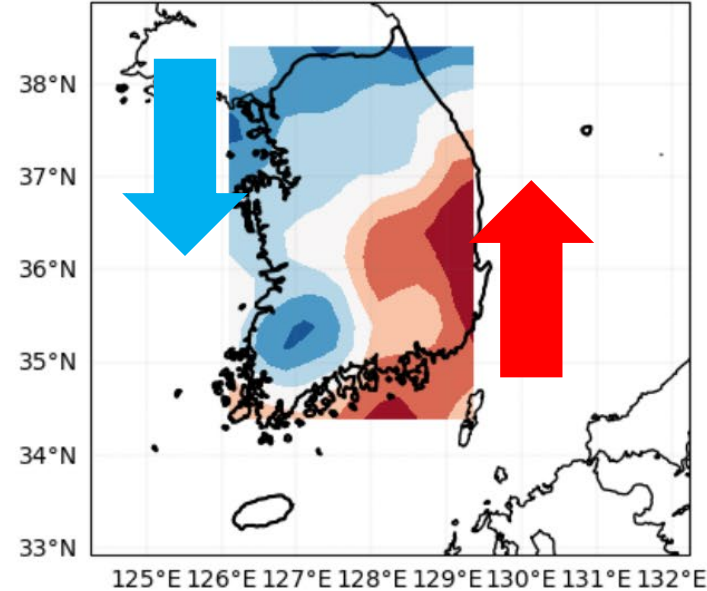
Ocean current

## The Changing Jet Stream



Wind current

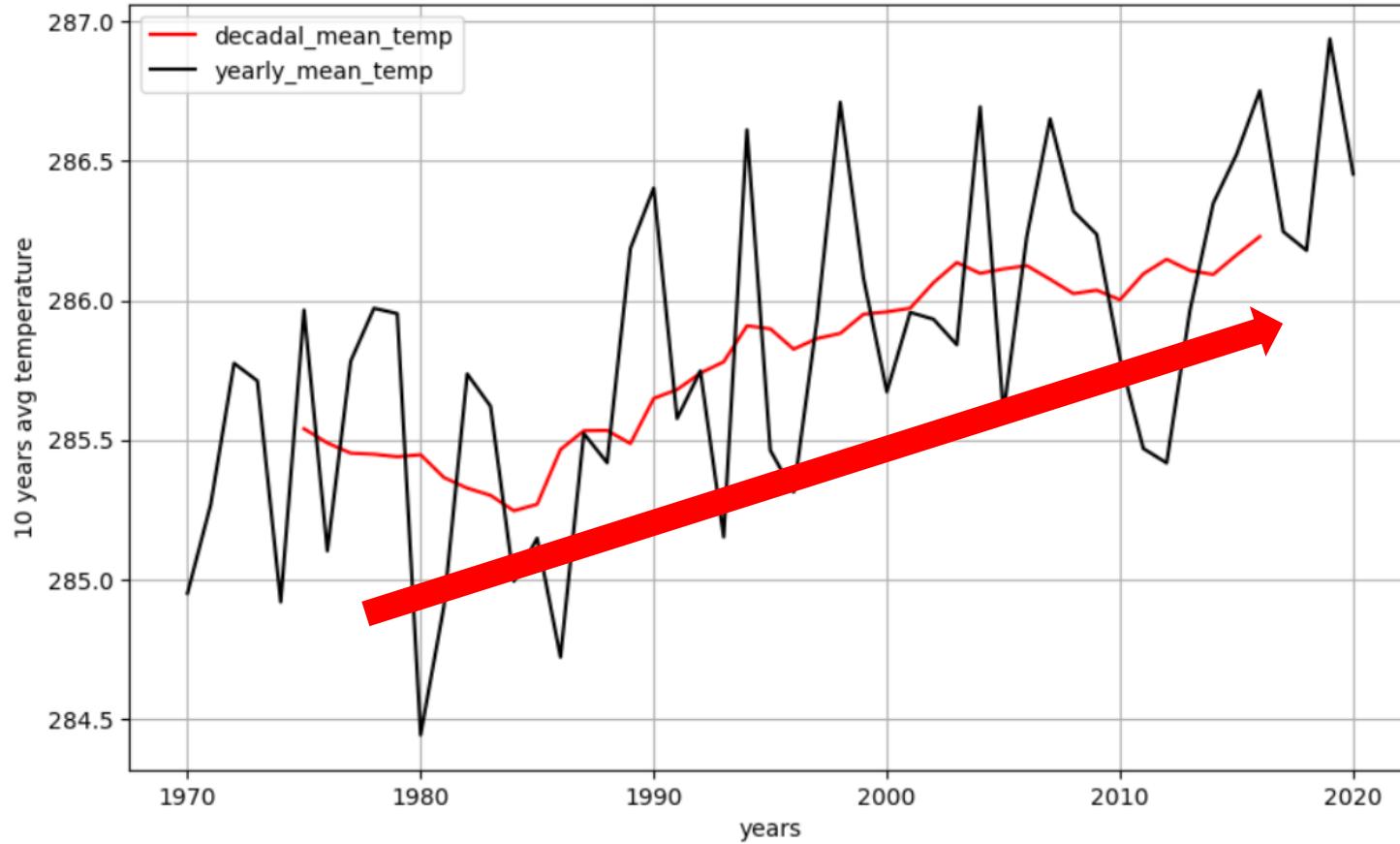
Trend in Precipitation during Monsoon (1970-2020) for South Korea





10 years moving avg 1970 to 2020

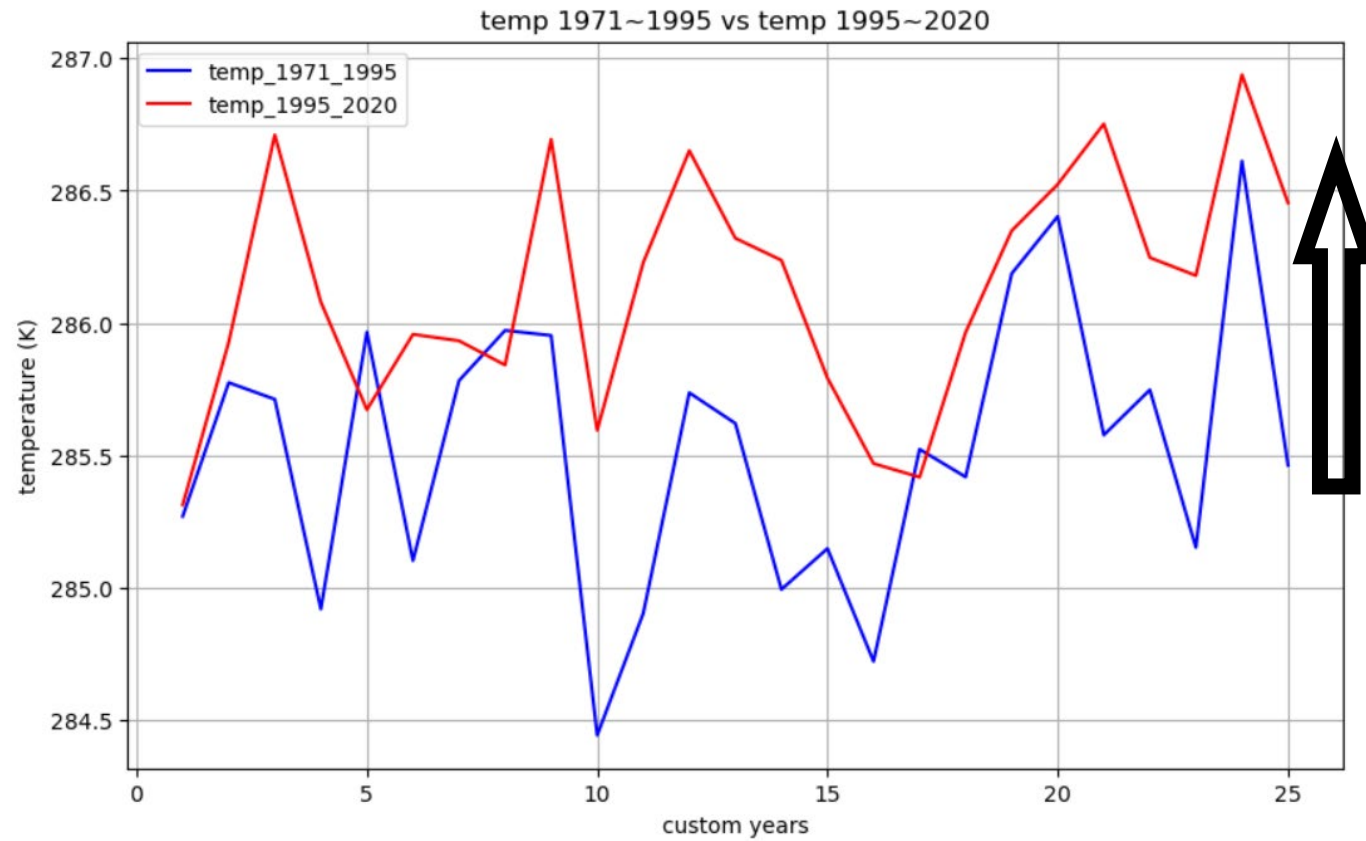
# 1. Temperature moving avg



**Temperature Higher**



## 2. Compare 1971-1995 & 1995-2020



**Temperature Higher**