**COVID-19 Overview**

Started Dec. 31, 2019. Wuhan City, Hubei Province of China. Tied to exposures in one seafood market in Wuhan City. Cases of pneumonia. Moved to Korea, Thailand and Japan.

: [https://data.worldbank.org/static/pages/en/products/wdi-maps/](https://slack-redir.net/link?url=https%3A%2F%2Fdata.worldbank.org%2Fstatic%2Fpages%2Fen%2Fproducts%2Fwdi-maps%2F) .

api information: [https://datahelpdesk.worldbank.org/knowledgebase/topics/125589-developer-information](https://slack-redir.net/link?url=https%3A%2F%2Fdatahelpdesk.worldbank.org%2Fknowledgebase%2Ftopics%2F125589-developer-information)

<https://www.nationalgeographic.com/science/2020/02/what-happens-to-coronavirus-covid-19-in-warmer-spring-temperatures/> - good article but no data to code against.

<https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data> - <https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data>

<https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6> map

Incidence of COVID-19 & income, economic growth, international tourism

Will warming spring temps slow the coronavirus outbreak – past coronavirus outbreaks can offer clues.

**Presentation – my part: (3 minutes)**

Next, we wanted to investigate what the socio economic background is of those affected by COVID-19 and try to determine if there is one socio economic group being infected at a higher rate than another. Our research could only find this data for developing countries, so we looked at the **101 developing countries** thatwere identified in the Multidimentional Poverty Index Report (MPI) which is produced by United Nations Development Programme.**58 of those 101 countries** are found on the ‘confirmed cases’ by the John Hopkins University study that we used.  That means **42% of developing countries have not reported ANY confirmed cases**.) Only 1 of those 58 countries (China) is in the top 20 affected countries. We chose to show this chart because it shows **Intensity of Deprivation** for those 58 countries with reported ‘confirmed cases’ - and the percentage of their population that face severe multidimensional poverty. As you can see, China has a very small percentage of multidimensional poverty compared to some of the other countries shown. Looking at a United Nations Development Report for 2018 which identified a total of 188 developed countries, that means that **53% of the developed countries compared to 42% of the developing countries** have reported confirmed cases. This analysis leads us to believe that the more developed countries are the ones that are more affected by COVID-19.

Next slide please…

These findings regarding developed countries lead us to look into the relationship between where the confirmed cases are and where the top 20 major airports are located since the major airports would be in developed countries. We created a heat map showing where the confirmed COVID-19 cases are located (red dots) and then we created an airport layer (blue dots). This map shows some possible correlation between major airports such as several around China and several around France and Germany. Most of the confirmed cases in the US, however, are on the east and west coasts versus around the major airports.

That leads us to our summary… Next slide please… Summary

As we all know this is rapidly evolving situation and it was important for us to begin with understanding the current world-wide statistics. We were surprised at the comparison between the death rate and unresolved cases for the 2 most affected countries (China and Italy)

It was interesting to find that locations with higher temperatures had significantly lower confirmed cases and transmission rates.

We found no significant difference in transmission rates and confirmed cases when considering population density.

Finally, more of the developed countries reported confirmed cases compared to the developing countries and our analysis of the top 20 airports around the world did not show a significant correlation to confirmed cases.

If we had more time and more data was available, we would have liked to explore potential risk factors for contracting the disease as well as looking into what kind of vaccines are being evaluated.

We really enjoyed this project and learned a lot. Thank you very much for your time.