Assessing the 2020 St. Himark Earthquake Damage

The data story illustrates the trends of the aftermath of the 2020 St. Himark earthquake damages and intensity throughout the neighbourhoods, and the radiation measurement readings during the month of April.

The damages and intensity values are between 0 and 10 which indicates how bad the damages are and how violent the shaking was. Where 0 is the lowest and to is the highest.

**Overall: Average Damage Rate**

In the month of April 2020 between the 8th and 10th there has been a gradual average increase of the number of damages reported for, **Buildings**, **Medical**, **Roads and Bridges** and **Sewer and Water**. This indicates that more services and resources are to be allocated to reduce the effects.

The average building damage reporting’s are relatively lower than the other categories in total across all regions and do not require a large amount of resources to attend to the matter across all regions.

There has been an increase in the average medical request reported between the first date to the last date of the data set. This will require larger amount of resources to attend to the matter across all regions. On the 11th the average medical reported is at the maximum amount, 10/10 meaning the emergency services are at a 100 percent capacity in a particular neighbourhood and may have limited resources available in that region.

There has been an increase in the average power damage reported between the 6th and the 10th of April, however on the 11th of April there was a dramatic decrease compared to the day before. This may have required larger amount of resources during the high spikes to attend to the matter across all regions and may have resolved many of the issues.

There has been an increase in the average roads and bridges damages reported between the 6th and the 10th of April, however on the 11th of April there was a decrease compared to the day before. This may have required larger amount of resources during the high spikes to attend to the matter across all regions and may have resolved many of the issues.

There has been an increase in the average power damage reported between the 6th and the 10th of April, however on the 11th of April there was a dramatic decrease compared to the day before. This may have required larger amount of resources during the high spikes to attend to the matter across all regions and may have resolved many of the issues.

There has been an increase in the average Sewer and Water damages reported between the 6th and the 10th of April, however on the 11th of April there was a decrease compared to the day before. This may have required larger amount of resources during the high spikes to attend to the matter across all regions and may have resolved many of the issues.

In the month of April 2020 between 6th and 8th there has been a gradual average increase of the shake intensity. Thereafter on the 11th there was 0 reporting's of the shake intensity which indicates the earthquake aftermaths of the shake intensity has ended.

**Count of All Neighbourhood Building Damages Rate Reported per Day**

The next report will illustrate the count of building damages rate reported per day across all neighbourhoods.

In the month of April 2020 between the 6th and the 10th of April the number of reporting’s per day stayed consistent at 11 reporting’s per day, however on the 11th of April there was only 5 reporting's which had an average building report at 5 out of 10 meaning the resources allocated to attend to the building damages is at half capacity. This is higher than the first day of building reporting’s which was an average building report of 3.69 out of 10.

**Count of All Neighbourhood Medical Request Rate Reported per Day**

The next report will illustrate the count of medical request rate reported per day across all neighbourhoods.

Between the 6th of April and the 10th of April the number of reporting’s per day stayed consistent at 11 reporting’s per day, however on the 11th of April there was only 1 report which had the highest average building report at 10 out of 10 meaning all resources should be allocated to the matter to that particular matter.

**Count of All Neighbourhood Power Damages Rate Reported per Day**

The next report will illustrate the count of power damages rate reported per day across all neighbourhoods.

Between the 6th of April and the 10th of April, the number of reporting’s per day stayed consistent at 11 reporting’s per day, however on the 11th of April there was only 1 report which had an average building report at 4.83 out of 10. This is higher than the first day of power damage reporting’s which was an average building report of 2.83 out of 10.

**Count of All Neighbourhood Roads and Bridges damages Rate Reported per Day**

The next report will illustrate the count of roads and bridges damages rate reported per day across all neighbourhoods.

In the month of April 2020 between the 6th and the 10th of April the number of reporting’s per day stayed consistent at 11 reporting’s per day, however on the 11th of April there was only 5 reporting's which had an average building report at 5.66 out of 10 meaning the resources allocated to attend to the building damages is slightly over half capacity. This is higher than the first day of building reporting’s which was an average roads and bridges damages report of 3.23 out of 10.

**Count of All Neighbourhood Sewer and Water Damages Rate Reported per Day**

The next report will illustrate the count of sewer and water damages rate reported per day across all neighbourhoods.

In the month of April 2020 between the 6th and the 10th of April the number of reporting’s per day stayed consistent at 11 reporting’s per day, however on the 11th of April there was only 3 reporting's which had an average building report at 5.55 out of 10. This is higher than the first day of building reporting’s which was an average sewer and water damages report of 2.95 out of 10.

**Count of All Neighbourhood Shake Intensity Rate Reported per Day**

The next report will illustrate the count of shake and intensity rate reported per day across all neighbourhoods.

In the month of April 2020 between the 6th and the 10th of April the number of reporting’s per day had different values every day. The highest count was on the 8th of April with 10 records reported and the lowest count was on the 11th with 1 record reported which had an average shake intensity of 0 out of 10. This may indicate that the intensity shaking of the earthquake may have ended.

**Count of Reported Shake Intensity Rate by Time per Neighbourhood**

The next report will illustrate the count of shake intensity rate reported per neighbourhood between 6th and 11th of April 2020.

There have not been a high number of neighbourhood reports recorded across the date periods.

However, On the 8th of April from the morning at around 8:35am of there was an increase in Neighbourhood reporting’s until the late afternoon at around 17:30pm. On the 9th of April in the mid afternoon from 15:00pm there was an increase in Neighbourhood reporting’s until late in the evening at around 21:45pm.

**Count of Reported Building Damages Rate by Time per Neighbourhood**

The next report will illustrate the count of building damages rate reported per neighbourhood between 6th and 11th of April 2020.

**Static Sensors: Average Radiation Measurement per Day**

The next report will illustrate the average static sensors readings of the Radiation Measurement trend between 6th and 11th of April 2020.

In the month of April 2020, the average Radiation Measurement through static sensor readings has increased everyday between the 6th and 11th, from 14,63 to 18,42 units.

With an increase of Radiation Measurement per day there may be a potential risk of radiation exposure from the Nuclear power plant because of the earthquake according to where the radiation monitors are set up.

If the spike does not decrease, there should be respondents ready to fix and maintain the damages caused on the Nuclear power stations.

**Mobile Sensors: Average Radiation Measurements by User per Day**

The next report will illustrate the average mobile static sensors readings of the Radiation Measurements per User with the sensors attached their vehicles.

In the month of April 2020, the average Radiation Measurement through mobile sensor readings indicates that the changes are not high increases or low decreases between the 6th and 7th for each driver with the expectation of Bob and TestUnit.

Bob’s measurement shows a decrease from 21,27 to 8,22 units. TestUnit shows an increase from 0,00 to 25,00 units.

The mobile sensors indicating for many of the users that the averages are higher than static sensors on the 6th and 7th of each day. Static sensors readings for the 6th is 14,63 units and for the 7th is 14,68. Only 9 of the 44 data points are less than the static sensors readings for the mobile sensor readings. If the spike does not decrease, there should be respondents ready to fix and maintain the damages caused on the Nuclear power stations.