

# **DSC 465**

## **GROUP 3**

### **Missing Migrants**

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# INTRODUCTION





The data is part of a specific project called the Missing Migrants Project which tracks deaths of migrants, including refugees, who have gone missing along mixed migration routes worldwide. This data has been compiled from a variety of sources. Furthermore, these sources vary depending on the region and broadly include data from national authorities, such as Coast Guards and Medical Examiners; media reports; NGOs; and interviews with survivors of shipwrecks. The data set records incidents of missing persons and deaths of migrants.

The dataset has 2420 observation and 12 variables, 5 numerical, 6 categorical and 1 ordinal variable, where numerical variables are ID, Missing Persons, Dead, Longitude, Latitude and categorical variables are Cause of Death, Region of Origin, Nationality, Incident Region, Source, Source Reliability and Date is the Ordinal variable.

We have then cleaned the data, by choosing appropriate names for the cause of deaths, region of origin and nationality. We filled in the NA values with 0 for missing migrants and for dead migrants, we filled in with mode based on regions as less data was missing compared to the “missing” migrants count.

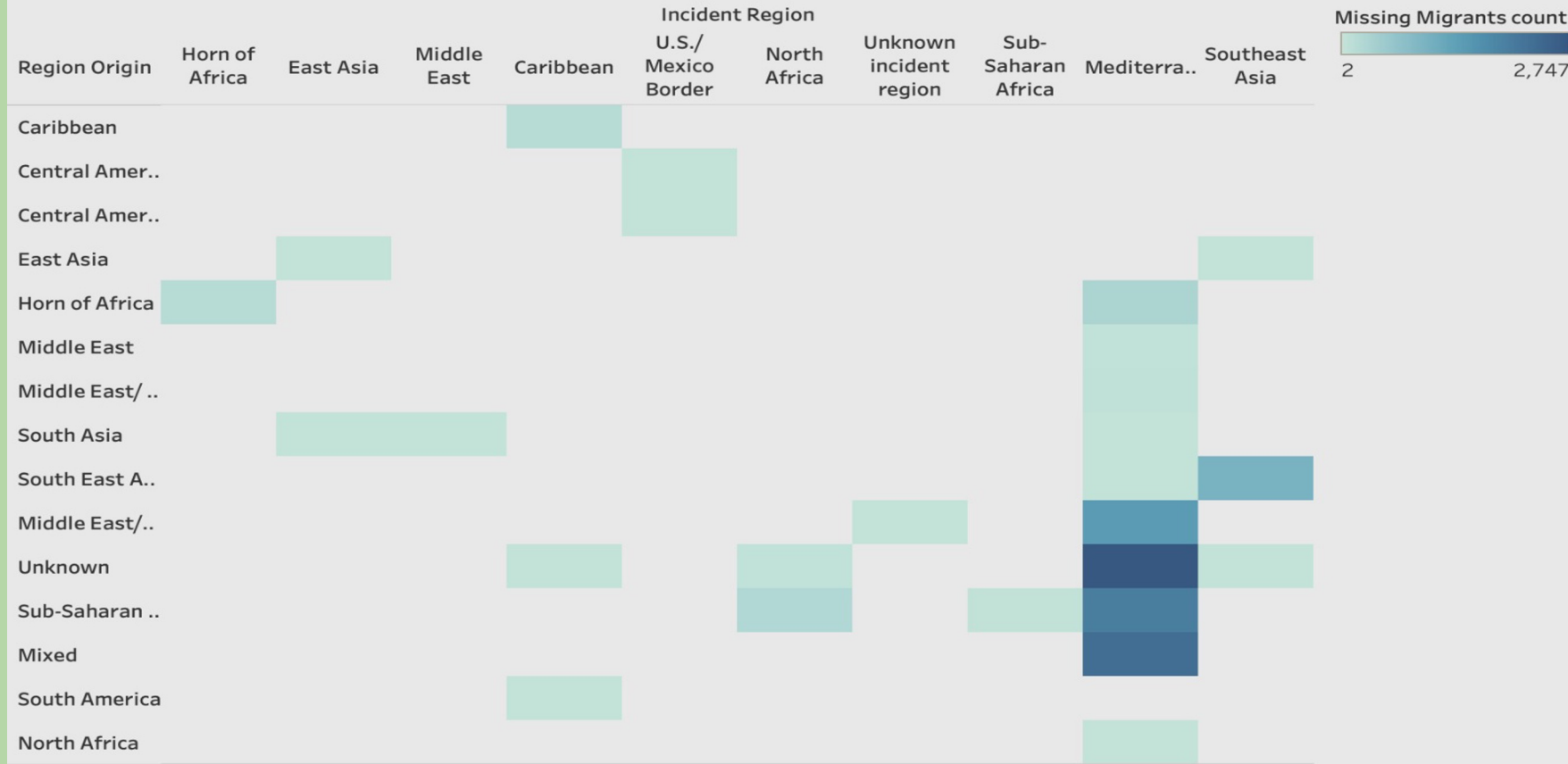
# MISSING MIGRANTS



**Heat map showing  
number of missing  
migrants.**



# Heat map showing the Number of Missing Migrants



Sum of Missing (color) broken down by Incident Region vs. Region Origin. The view is filtered on sum of Missing, which ranges from 1 to 2,747.



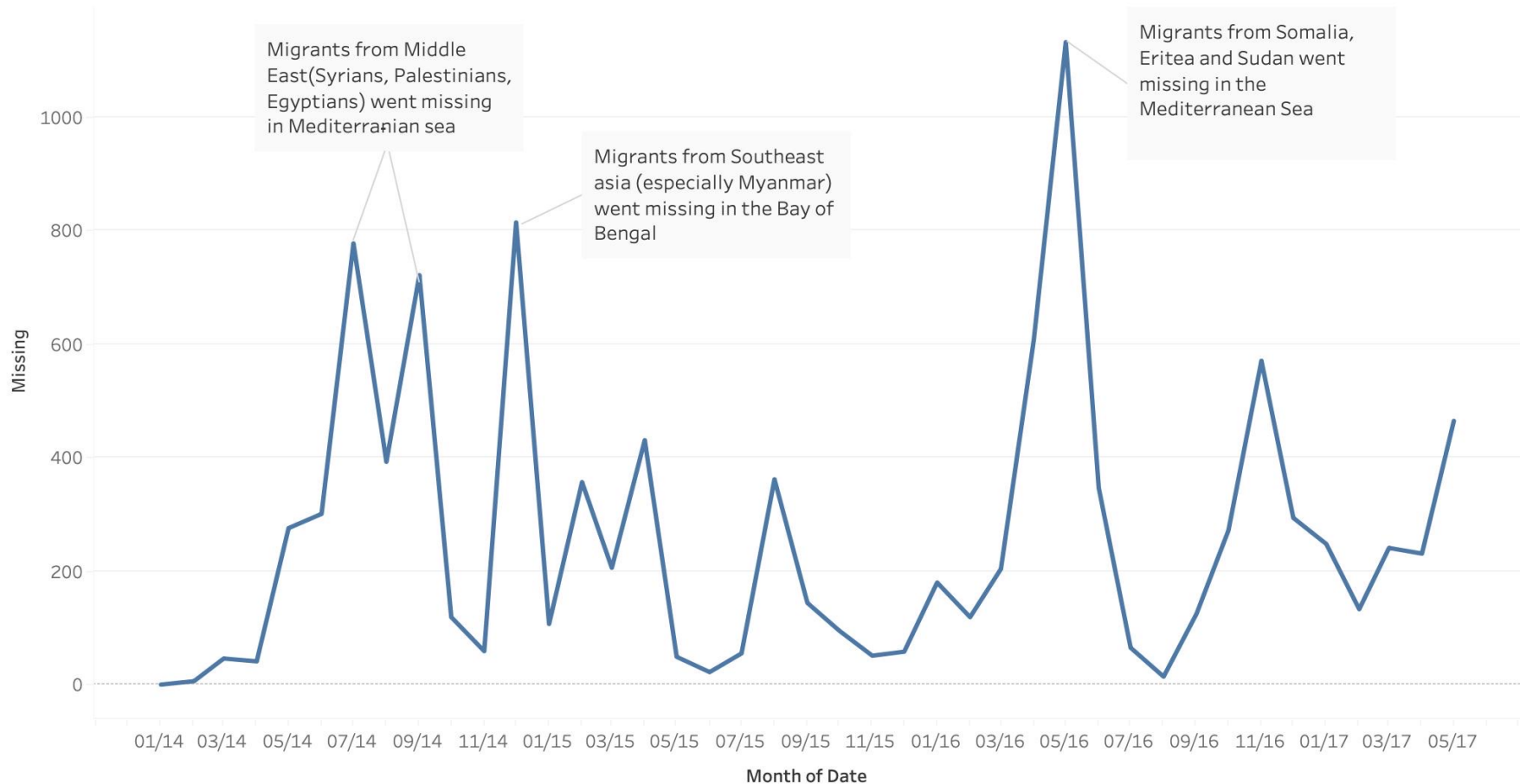
In the heat map, we can see that the highest trend with the count of 2747 for the incident region is from a place that is unknown shown using the darkest shade, meaning the missing migrants could be from any unstated origin region. The least number of missing migrants with the least count of 2 is from many origins few of them being, middle east, central America, north Africa and so on is shown using the lightest shade of color.

# Missing Migrant count over the years using Line graph





## Missing Migrants over the years



The trend of sum of Missing for Date Month.



There are peaks in the number of missing migrants during certain months over the years – July 2014, September 2014, December 2014 and May 2016

This dataset is not exhaustive. There are more missing and dead migrants than mentioned here. Keeping that in mind, these peaks correspond to some events that took place over the years.

July 2014 and September 2014 in this dataset are migrants originating from Middle east went missing in the Mediterranean sea. Also, migrants from Sub-Saharan Africa went missing here as well.

December 2014 , migrants from Southeast Asia went missing in the Bay of Bengal.

May 2016, migrants from mixed regions went missing in the Mediterranean sea.

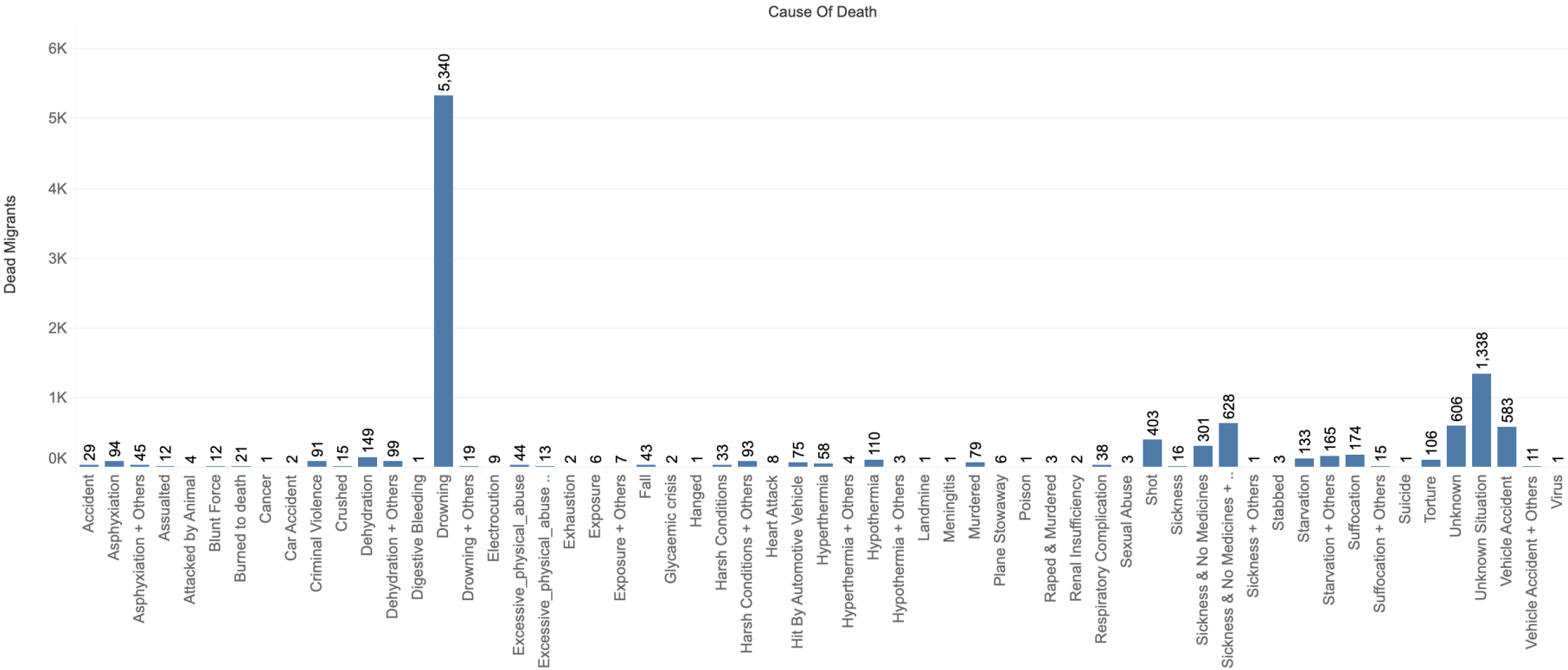
# DEAD MIGRANTS



**Bar plot to show  
the frequent causes  
of death of  
migrants**



Barplot for Cause of Death



Sum of Dead Migrants for each Cause Of Death. The marks are labeled by sum of Dead Migrants.



This is a bar plot which illustrates the cause of death of the dead migrants and this is mostly caused due to drowning followed by an unknown situation where the death has been caused. To further explain why the number is particularly high in terms of drowning it could be due to a variety of factors, or even including simple bad luck. A number of experts have noted that smugglers, responding to higher demand from potential migrants and refugees, appear to be using extremely unsafe boats in a bid to maximize their profit, which leads to a higher number of deaths among migrants.

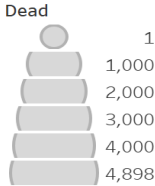
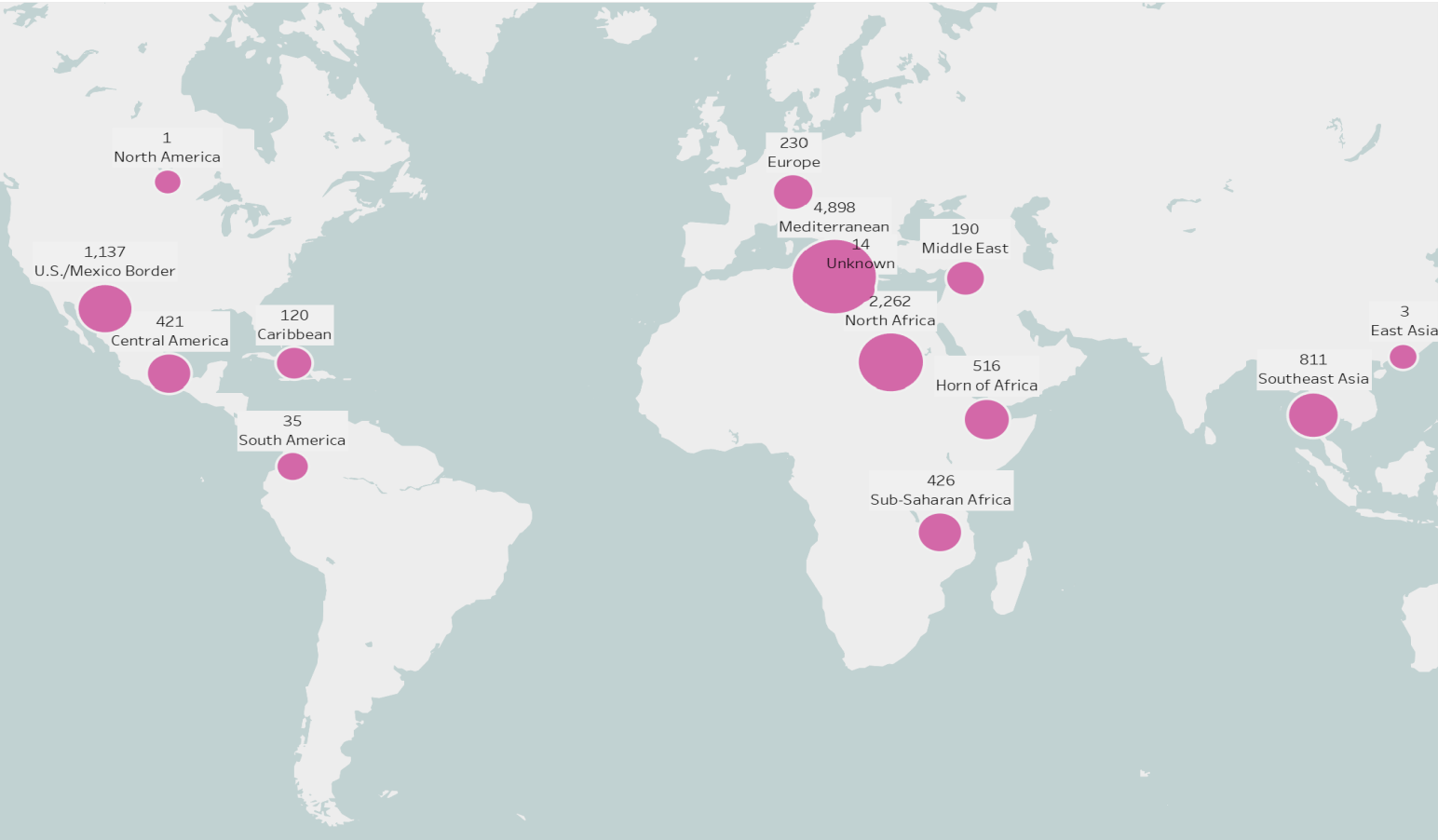
Now, coming to the second highest cause of death among migrants, the “unknown situation” here could be due to many reasons, for example it could be due to some communicable diseases, some kind of disorder, maternity issues or might even be due to some extreme weather conditions among different other possibilities of death. We do not have enough information to know the exact cause.

The other causes are not as significant as these two.

**Glyph map using  
size to represent  
dead migrants**



Dead Migrants





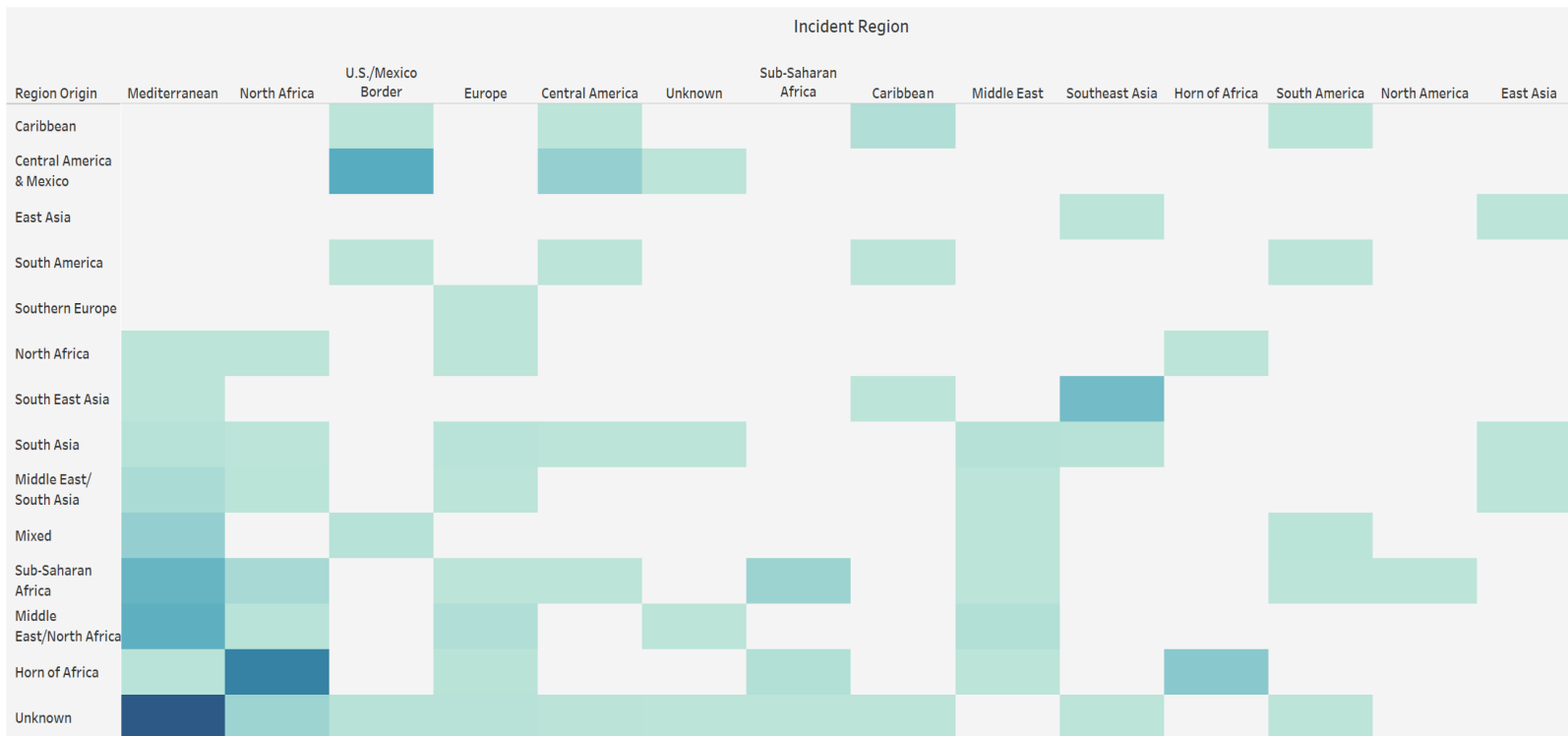
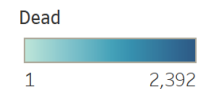


The number of deceased migrants recorded in the incident regions is depicted on this geographic map. The Mediterranean region has reported the highest number of deceased migrants, followed by North Africa, with North America and East Asia having the lowest. The number of deceased are represented by size.

**Heat map showing  
number of dead  
migrants.**



### Heat Map Showing the Number of Dead Migrants



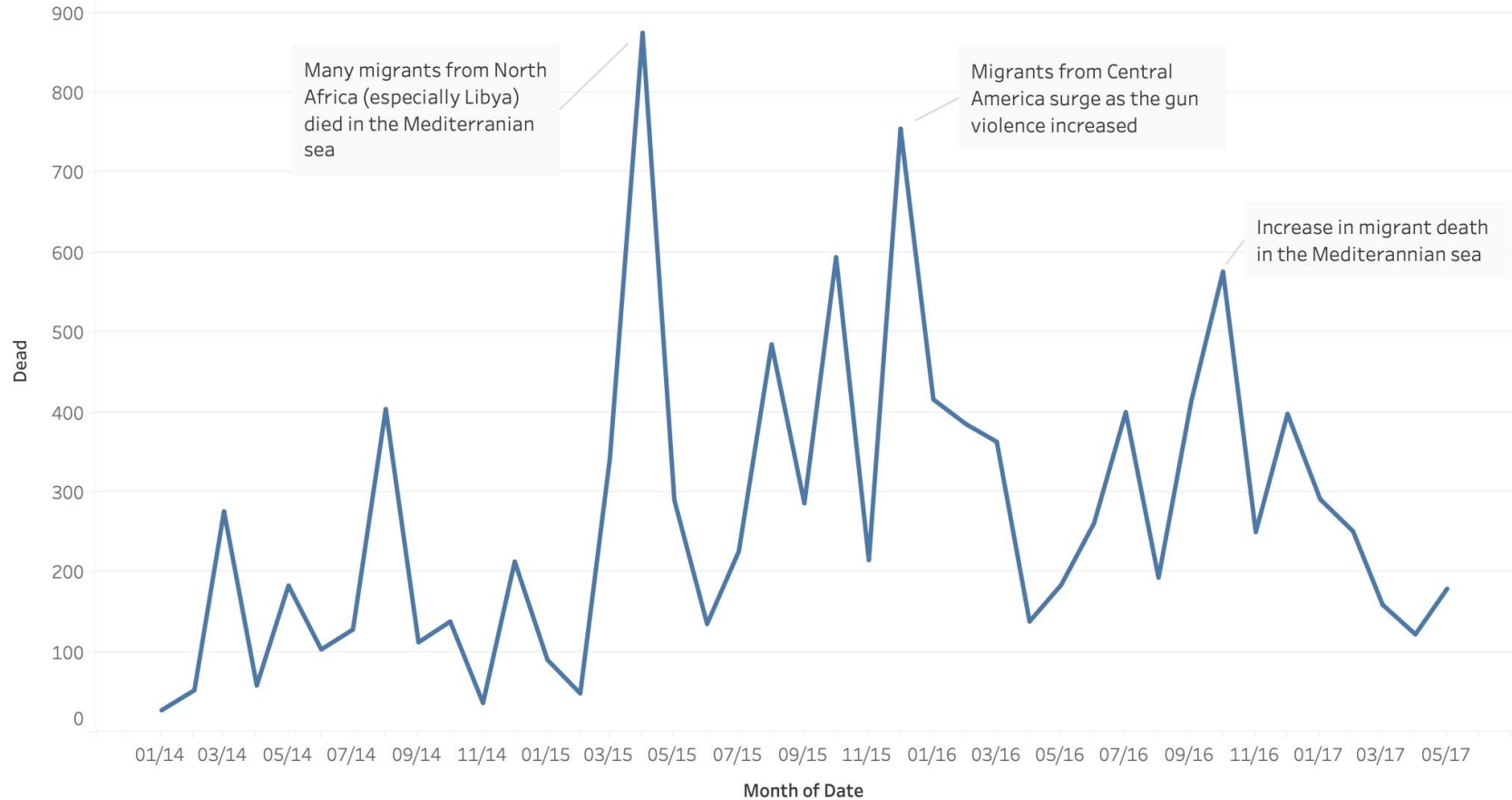


This heat map depicts the number of dead migrants, their region of origin, and the regions where the incidents have been recorded. We can observe that majority of migrants discovered deceased had an unknown place of origin (represented in warmer shade) with Mediterranean region as the Incident region, followed by the Horn of Africa as second highest with North Africa as incident region and the lowest in lighter shades. The Mediterranean region is known as the deadliest migration route in the world as nearly 4898 deaths have been recorded from the year 2014 to 2017.

# Dead Migrant count over the years using Line graph



## Dead migrants over the years



The trend of sum of Dead for Date Month.



There are peaks in the number of dead migrants during certain months over the years – April 2015, December 2015 and October 2016.

In April 2015, migrants from North Africa died in the Mediterranean sea.

In December 2015, migrants from Central America died at the US/Mexico border. There were migrants from Horn of Africa who died in North Africa.

In October 2016, migrants from various regions died at the Mediterranean sea (like Sub-Saharan Africa)



# REFERENCES

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- <https://www.amnesty.org/en/latest/news/2015/05/why-are-the-rohingya-fleeing-myanmar/>
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