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# ENVIRONMENTAL AND CLIMATIC IMPACT ON DEATH RATE OF COVID-19

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***Abstract***

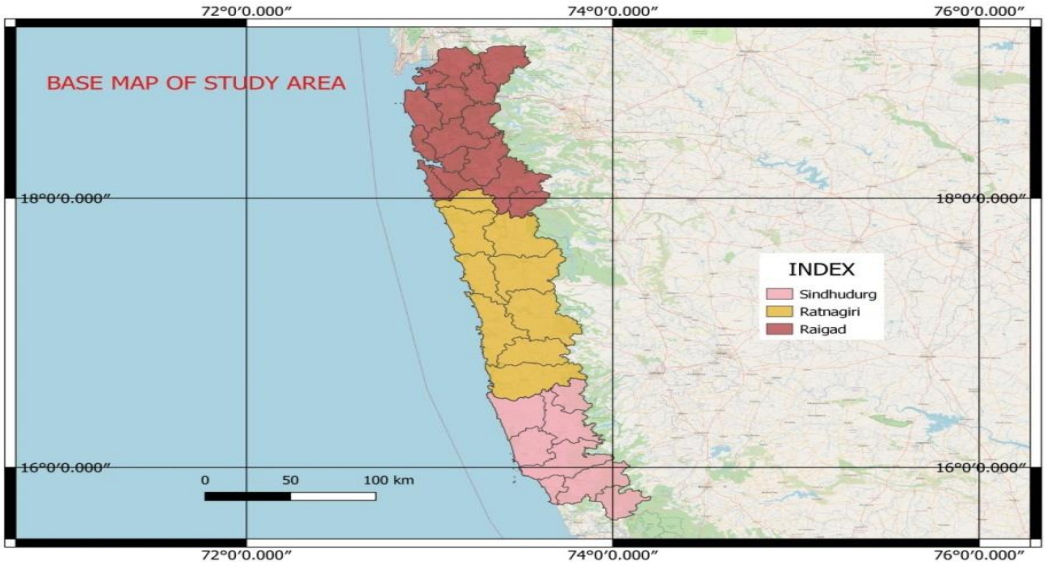
*The Pandemic creates havoc around the world crossing all barriers and boundaries, disrupting normal life and imposing a series of lockdowns. India is also badly afected due the crisis of Covid19. The pandemic also gives birth to the 'New Normal'. Covid warriors – doctors, nurses, health workers, police, government officials and employees, NGOs, along with humanitarians joined hands united to create an army against the invisible enemy.*

*Kokan region which is situated in the Western Bank of Maharashtra which is connected Mumbai and Pune Metropolitan cities so we know that the corona virus which start from Mumbai in our Maharashtra. So when it started too spared up in Maharashtra its impact on kokan is a specific area to study because of Climate and environment. Most impact of covid-19 is that the death rate. Here I want to make ratio between kokan environment and kokan climatic condition and the death rate. For the study area as a kokan, I just selected, Raigad, Ratnagiri, and Sindhudurg district.*



## Geographical background of Study area

Generally the climate of kokan region is hot and humid. The region witness all climatic seasonal changes i.e. monsoon, winter and summer. Monsoon, from June to September, generally Konkan received rainfall between 300 mm up to 900 mm. July and August are quite rainy and typically the wettest months of the year, but by September the rainfall has weakened. During monsoon period the region looks attractive due to greenery around. Sometimes due to heavy rain, the region may observe flood. Winter, October to February, the temperatures are a bit milder with less humid conditions. Day temperatures are moderate and cool nights (15°C); average temperatures between 20 to 25 degrees.Summer, March to June, hot and humid climate. Hottest month is usually April. Average temperatures for the summer season are between 32 to 40 degrees.Summer 2010 was recorded as the hottest in the history, the maximum temperature recorded was 46 degrees; may be due to sign of climate change.



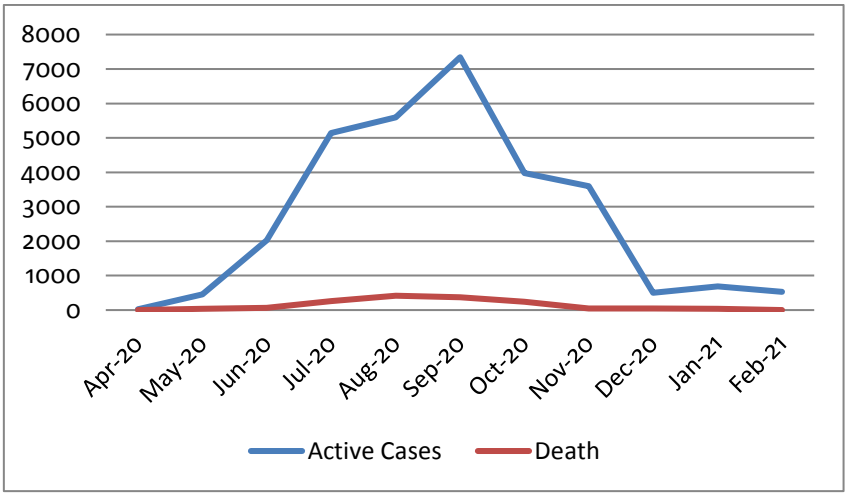

**Introduction**

The COVID-19 is a highly transferable viral disease brought about by severe acute respiratory condition coronavirus 2 (SARS-CoV-2), which was first reported in Wuhan, China (Huang et al. 2020). The infection has spread to more than 212 nations and regions around the world, with a total number of affirmed cases being 7.11 million (including 0.406 million deaths) as on 8 June 2020. To On 31 January 2020, the World Health Organization (WHO) has proclaimed COVID-19, a general public health emergency of worldwide concern just the 6th time the organization has recognized a crisis of this scale. It denotes the seriousness and potency of the COVID-19 pandemic. The sudden onset of this disease has raised many questions, in particular about its rapid spread across the globe The COVID-19 has spread across international borders reaching same as in Maharashtra and in our study area i.e. Raigad, Ratnagiri and sindhudurg .

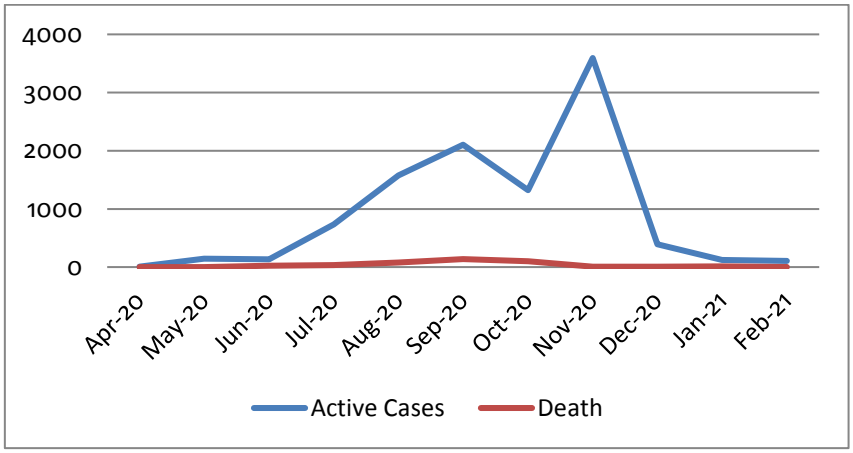
Weather patterns and human behaviour (such as human-to-human contact and population mobility) can be used to foresee the spread of the COVID-19 The climatic predictors such as humidity, sunlight, temperature, and wind speed can influence the stability of a droplet in the environment, or influence endurance of infections as temperature, and thus influence COVID-19 transmission, A significant number of studies on the impacts of climatic predictors on COVID-19 transmission have been conducted in China (Liu et al. 2020), the United States, and Europe. Recent studies have shown that the weather factors, for example, humidity and air temperature, may drive the pace of the COVID-19 infections. The conclusions concerning the relationship between weather and COVID −19 are still not conclusive.

From the first week of March (2020) in Kokan region cases have been increasing dramatically in Raigad district total death is 1531 in palghar

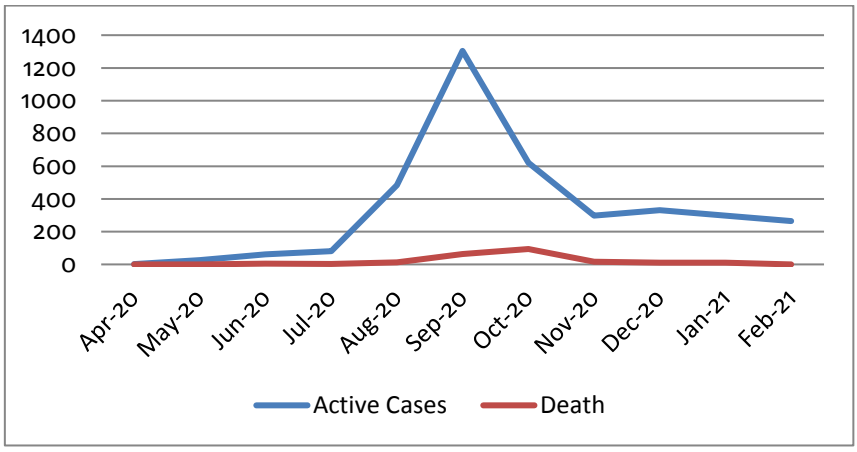
**Raigad district death ratio**




**Ratnagiri district death ratio**




**Shindhudurg district death ratio**




Now a days the death rate in the study area is going to decrees but if we see the graphical view we get the ideal of death rate. Most of Covid patient have to travel from

Mumbai to kokan region and the study area is humid climate The humid continental climate dominates the study area with an exception of Kokan which have the sub-arctic environment. As humid continental climate conditions dominate over the study area, exploring the relationship between weather and the spread of COVID −19 can bring essential recommendations for disease control measures.

The present study hypothesizes that there is a significant association between climatic factors and the intensity of the COVID-19. The study investigates the relationship between climatic factors such as air temperature, relative humidity, wind speed, sunshine, diurnal temperature change, and temperature seasonality and the COVID-19 spread in the geographical regions in Kokan The findings of the study are expected to enrich the ongoing discussion on the effect of weather on the COVID-19 spread and translate into essential recommendations for disease control measures.

Conclusions

We investigated the regional level COVID-19 community transmission based on important climatic, bioclimatic variables using near about 10 thousand cases from April 30 to 30 Feb. 2021. As to the best of our knowledge, it is the first attempt to examine the implications of climatic variables on the intensity of COVID-19 cases across the major climatic regions in study area. The model (RF) provided good predictions for all the climatic regions of study area. The study explained the number of COVID-19 cases based on temperature-related micro variables across the kokan regions. In the humid continental region, temperature seasonality is the primary influencing variable to explain the intensity of COVID-19 transmission, whereas the mean temperature diurnal range is the primary influencing factor in the sub-arctic region. A better understanding of COVID-19 transmission related climate predictor ties and climatologically suitable areas, which would help to develop climate-based early warning systems to allow rapid response to the increasing COVID-19 cases and deaths. Improved understanding of these relationships is critical for controlling fast-growing cases and deaths through better climate-responsive interventions, a fundamental element to control and prevent the COVID-19 pandemic.

**References**

*J. S. Brennen, F. Simon, P. N. Howard, and R. K. Nielsen, \Types, sources,and claims of covid-19 misinformation," Reuters Institute, vol. 7, pp. 3{1,2020.*

*T. Li, H. Lu, and W. Zhang, \Clinical observation and management of covid-19 patients," Emerging microbes & infections, vol. 9, no. 1, pp. 687{690, 2020.*

*R. Q. Cron and W. W. Chatham, \The rheumatologist's role in covid-19," 2020.*

*A. M. South, D. I. Diz, and M. C. Chappell, \Covid-19, ace2, and the cardiovascular consequences," American Journal of Physiology-Heart and Circulatory Physiology, 2020.*

*T. T. Le, Z. Andreadakis, A. Kumar, R. G. Rom_an, S. Tollefsen, M. Saville,*

*S. Mayhew et al., \The covid-19 vaccine development landscape," Nat Rev Drug Discov, vol. 19, no. 5, pp. 305{306, 2020.*

*B. S. Graham, \Rapid covid-19 vaccine development," Science, vol. 368, no. 6494, pp. 945{946, 2020.K. H. Stopsack, L. A. Mucci, E. S. Antonarakis, P. S. Nelson, and P. W. Kanto_, \Tmprss2 and covid-19: Serendipity or opportunity for intervention?" Cancer discovery, vol. 10, no. 6, pp. 779{782, 2020.*

*T. I. COVID, R. Reiner, R. Barber, and J. Collins, \Modeling covid-19 scenarios for the united states." Nature medicine, 2020.*

*S. K. Saxena, Coronavirus disease 2019 (COVID-19): Epidemiology, patho- genesis, diagnosis, and therapeutics. Springer Nature, 2020.*

*H. V. Nguyen, H. X. Tran, L. Van Huy, X. N. Nguyen, M. T. Do, and N. Nguyen, \Online book shopping in vietnam: The impact of the covid-19 pandemic situation," Publishing Research Quarterly, vol. 36, pp. 437{445, 2020.*

*A. V. Somawati, K. S. Adnyana, I. P. A. Darmawan, N. P. D. U. Dewi, I. M.G. S. Untara, I. B. P. E. Suadnyana, I. B. G. Paramita, M. S. SS, M. Gede Yoga Satriya Wibawa, I. W. T. Gunawijaya et al., Bali vs COVID-19: Book Chapters. Nilacakra, 2020.*

*D. Hudson, COVID-19 and Travel. Oxford: Goodfellow Publishers http://dx. doi. org/10.23912/9781911635703-4387, 2020.*

*L. Morawska, J. W. Tang, W. Bahneth, P. M. Bluyssen, A. Boerstra, G. Buonanno, J. Cao, S. Dancer, A. Floto, F. Franchimon et al., \How can airborne transmission of covid-19 indoors be minimised?" Environment international, vol. 142, p. 105832, 2020.5*

*R. D. Manzanedo and P. Manning, \Covid-19: Lessons for the climate change emergency," Science of the Total Environment, vol. 742, p. 140563, 2020.*

*M. E. El Zowalaty, S. G. Young, and J. D. J• arhult, \Environmental impactof the covid-19 pandemic{a lesson for the future," 2020.*

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