COVID-19 and the use of Geographical Information Systems (GIS)

This report will look to see how the world is using GIS to help stop the spread of COVID-19 and to manage the areas of high risk with more numbers of cases. Here within the UK, and specifically Wales there were a lot of areas affected by the virus significantly, when looking at the cases, and the total per 100k of population, the Valley’s areas were getting a lot of cases.

*This report will use the words covid and COVID-19 interchangeably.*

# 1 – Geographic Information Systems (GIS)

Geographic information systems are used to gather, manage, and analyse spatial data (ESRI 2021) and has been used in many ways. Here are a few examples:

* Tracking hurricane and cyclone activity.
* Analysing crime patterns within areas.
* Looking at changes to roads and city planning.
* Understanding trends within a spreadsheet.
* Can be used to perform flood warnings.

In the earlier days of GIS, getting the correct data proved to be difficult, but as of recent years information has become not only a valuable asset, but it has also become much easier to get

# X - References

Bailey, T.J. and Schick, J.B., 2009. Historical GIS: enabling the collision of history and geography. *Social Science Computer Review*, *27*(3), pp.291-296.

Coronavirus Cymru (2021) *Coronavirus (COVID-19) in Wales* Available at: <https://coronaviruscymru.wales/> (Accessed 19/04/2021)

Dong E, Du H, Gardner L. An interactive web-based dashboard to track COVID-19 in real time. Lancet Inf Dis. 20(5):533-534. doi: 10.1016/S1473-3099(20)30120-1

ESRI (2021) *What is GIS* Available at: <https://www.esri.com/en-us/what-is-gis/> (Accessed 14/04/2021)

Poggio, L. and Vrščaj, B., 2009. A GIS-based human health risk assessment for urban green space planning—An example from Grugliasco (Italy). *Science of the total environment*, *407*(23), pp.5961-5970.

WHO COVID-19 Explorer. Geneva: World Health Organization, 2020. Available online: https://worldhealthorg.shinyapps.io/covid/ (Accessed 22/04/2021)