

# Supporting document for COVID-19

## Methodology:

- Shape-files of M.P. state districts and sub-districts were added from Mapathon database in resources.
- Hospitals location file (.csv) was added as delimited text layer and suitable labels were added.
- The shortest paths between hospitals are created using QNEAT3 plugin.
- Major COVID-19 hospitals are linked to AIIMS Bhopal using shortest path.
- For COVID-20, UK return travellers and International airport files (.csv) were added.

## Data sets:

1. Hospitals data from National Health Mission, M.P. website.  
[https:// www.nhmmp.gov.in](https://www.nhmmp.gov.in)
2. Road network raster referenced from [bharatmaps.gov.in](http://bharatmaps.gov.in)
3. MP district and sub-district shape-file from mapathon database in resources.
4. UK return travellers in the month of Dec 2020 in M.P. state from National Health Mission, M.P. website. [https:// www.nhmmp.gov.in](https://www.nhmmp.gov.in)
5. Airport locations obtained from Airport Authority of India (AAI) website.

## Complexities:

1. A Python error occurred while executing ORS plugin.
2. Some irregularities in data arose during the completion of project.

## Applications and uses:

- Providing treatment and vaccines via shortest possible paths and connecting major COVID-19 hospitals with Naxal hit areas and also connected the other division hospitals with AIIMS Bhopal for emergency situations.
- This may be handy for the government to control the new emerging clusters of COVID-20.