



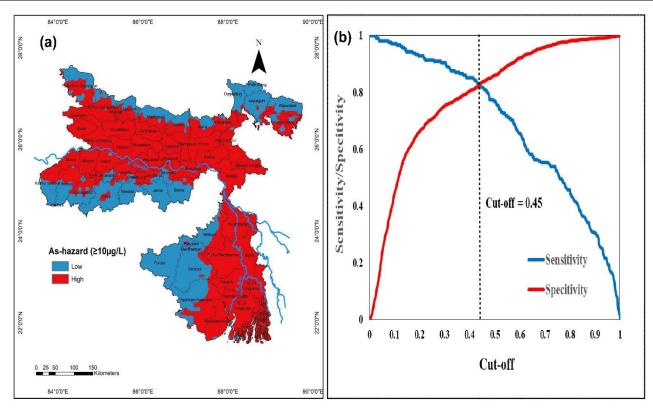
## **Supplementary Information**

Table S1. Sampling locations showing three different land use patterns across middle and lower reaches of Ganges river.

|               | Places                 | Land use                |
|---------------|------------------------|-------------------------|
| Middle Reach  | Gai Ghat               | Urban                   |
|               | Gulbi Ghat             | <b>Urban-industrial</b> |
|               | Jail Ghat Buxar        | Urban                   |
|               | Kachchi Dargah         | Urban                   |
|               | Kurji Diggha           | Urban                   |
|               | NIT                    | Urban                   |
|               | Ramrekha Ghat Buxar    | Urban-industrial        |
|               | Kewalaghat             | Urban                   |
|               | Triveni Ghat Fathua    | Urban                   |
|               | Buxar Bridge           | Urban                   |
|               | Chausa Buxar           | Peri-urban-rural        |
|               | Begusarai Simaria Ghat | Peri-urban-rural        |
|               | Danapur Pipapul        | Urban                   |
|               | Garden Reach           | Urban-industrial        |
|               | Kalyani                | Urban                   |
| I assau Dan d | Palta                  | Urban-industrial        |
| Lower Reach   | Sreerampore            | Urban-industrial        |
|               | Berhampore             | Urban                   |
|               | Diamond Harbour        | Peri-urban-rural        |

**Table S2.** Summary of observations for the changes of water quality parameters in comparison of lockdown months (April-May 2020) to pre-and-post lockdown periods of 2020.

| Parameters      | Middle Reach              | Lower Reach                     |
|-----------------|---------------------------|---------------------------------|
| Faecal Coliform | Decreased - (28.6±1.2%)   | Decreased - (3.5 ±0.25%)        |
| BOD             | Decreased - (32 (± 1.01%) | Decreased - $(58.1 \pm 0.03\%)$ |
| COD             | Decreased - (9.2 ±0.3%)   | Decreased $-(55.7 \pm 0.04\%)$  |
| рН              |                           | Increased                       |
| TDS             | Similar                   | Decreased                       |
| Sulphate        | No data                   | Increased + (14 ±1.02%)         |
| Phosphate       | No data                   | Increased (2.03 ±0.3%)          |
| Nitrate         | No data                   | Similar                         |



**Figure S1.** (a) Binary risk map showing areas with high and low risk of groundwater As prepared using the RF predicted probabilities and cut-off 0.45. (b) RF model sensitivity and specificity vs. cut-off (adopted from Mukherjee et al., 2020).