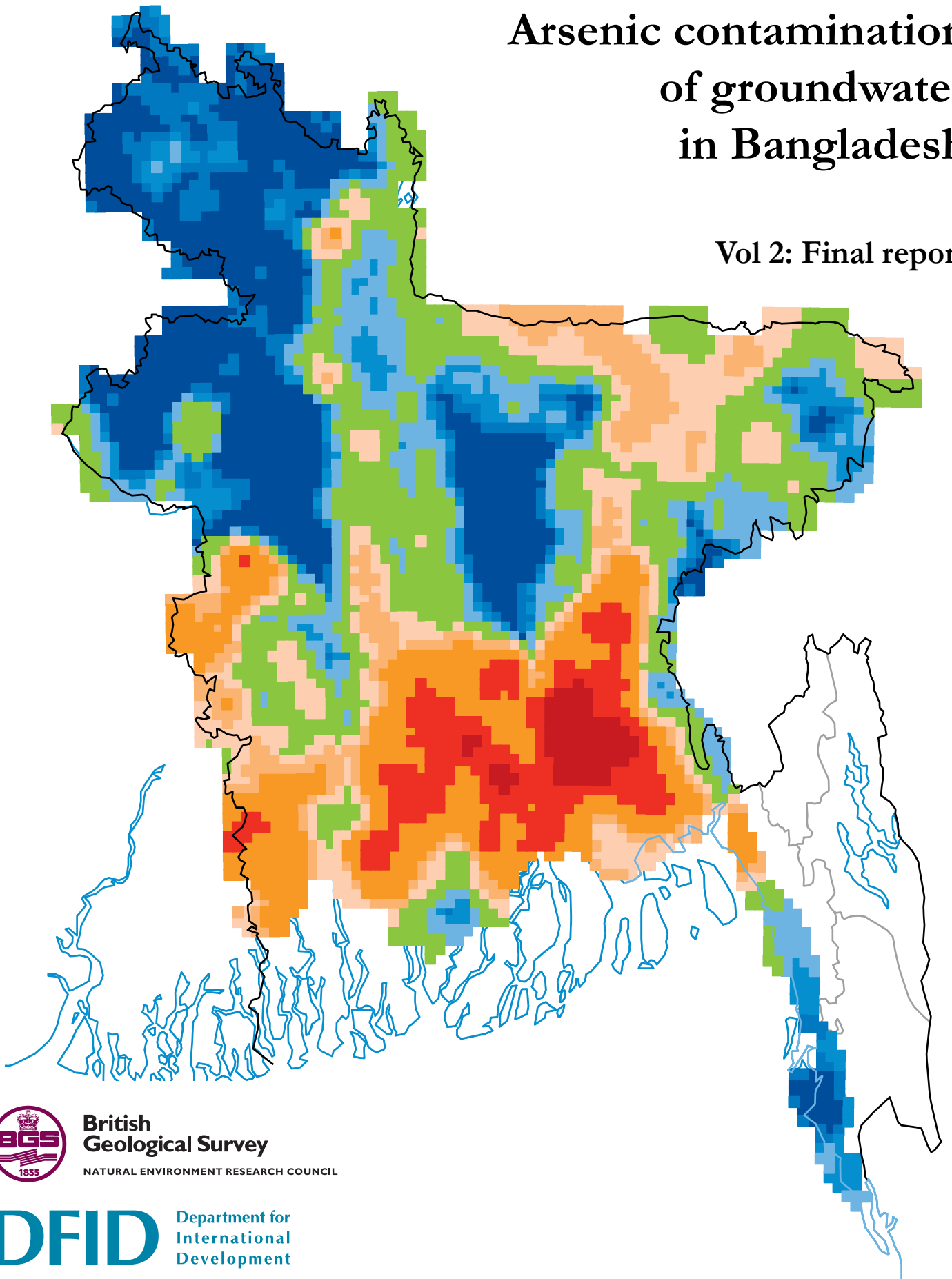


Arsenic contamination of groundwater in Bangladesh

Vol 2: Final report



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

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Vol 2: Final Report

D G Kinniburgh and P L Smedley (Editors)

February 2001

The full report comprises four volumes:

- Volume 1. Summary
- Volume 2. Final report
- Volume 3. Hydrochemical atlas
- Volume 4. Data compilation

Further information can also be viewed and downloaded from our website at www.bgs.ac.uk/arsenic/Bangladesh

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Cover Illustration

Map of Bangladesh showing the regional distribution of arsenic in groundwater found during the National Hydrochemical Survey

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Abbreviations

| | | | |
|---------|--------------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------|
| AAN | Asian Arsenic Network | IDA | International Development Association |
| BAMWSP | Bangladesh Arsenic Mitigation Water Supply Project | JICA | Japan International Cooperation Agency |
| BGS | British Geological Survey | LGED | Local Government Engineering Department, Government of the People's Republic of Bangladesh |
| BWDB | Bangladesh Water Development Board, Government of the People's Republic of Bangladesh | MMI | Mott MacDonald International |
| CEC | Centre of Environmental Chemistry, Hanoi National University | MML | Mott MacDonald Ltd |
| DANIDA | Danish Agency for Development Assistance | MMP | Sir M MacDonald and Partners |
| DCH | Dhaka Community Hospital | MPO | Master Plan Organisation |
| DFID | UK Department for International Development | NESP | National Emergency Screening Programme, part of BAMWSP |
| DPHE | Department of Public Health Engineering, Government of the People's Republic of Bangladesh | NERC | Natural Environment Research Council (UK) |
| DTW | Deep tubewell | NHS | DPHE/BGS National Hydrochemical Survey |
| DU | Dhaka University | NIPSOM | National Institute for Preventative & Social Medicine |
| DWASA | Dhaka Water Supply and Sewerage Authority | REE | Rare-earth element |
| EAWAG | Swiss Federal Institute for Environmental Science and Technology | SDDC | Silver diethyl dithiocarbamate |
| EGIS | Environment and Geographic Information System Supply Project for Water Sector Planning | SEM | Scanning electron microscopy |
| GBM | Ganges-Brahmaputra-Meghna | SOES | School of Environmental Studies, Jadavpur University, Calcutta |
| GoB | Government of the People's Republic of Bangladesh | SPARRSO | Space Research and Remote Sensing Organisation, Government of the People's Republic of Bangladesh |
| GPS | Global Positioning System | STW | Shallow tubewell |
| GSB | Geological Survey of Bangladesh | UNDP | United Nations Development Programme |
| HG-AFS | Hydride-generation atomic-fluorescence spectrometry | UNDTCD | United Nations Department for Technical Cooperation in Development |
| HTW | Hand-pump tubewell | UNICEF | United Nations Children's Emergency Fund |
| ICP-AES | Inductively-coupled-plasma atomic-emission spectrometry | USEPA | United States Environmental Protection Agency |
| ICP-MS | Inductively-coupled-plasma mass spectrometry | USGS | United States Geological Survey |
| | | WHO | World Health Organisation |
| | | XRF | X-ray fluorescence |

Note: Use of the word 'upazila' in place of 'thana'

On April 20, 2000, the Government of Bangladesh issued a directive to use the word '*upazila*' in place of 'thana'. This reflects the passage of the Upazila Parishad Act (1998) which came into effect on February 1, 1999. The directive has been honoured in this report. '*Upazila*' is also sometimes spelt '*upazilla*'.