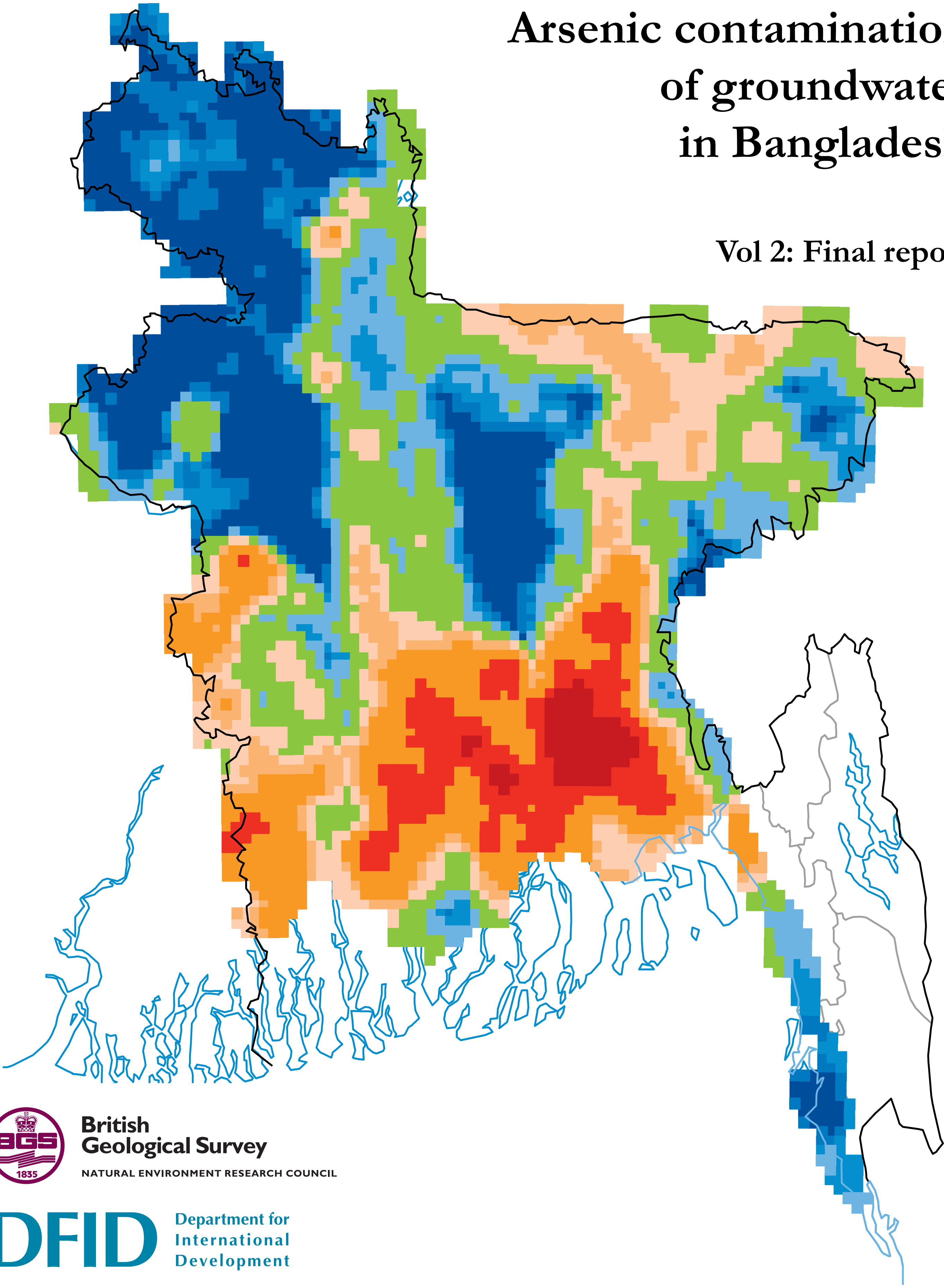
BGS Technical Report WC/00/19, Volume 2

Arsenic contamination of groundwater in Bangladesh



Vol 2: Final report

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

DFID Department for International Development

Government of the People's Republic of Bangladesh
Ministry of Local Government, Rural Development and Co-operatives
Department of Public Health Engineering

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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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Chapter 9. Scales of variation
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Contents

List of Figures

x

List of Tables

Table 11.3. Fractionation of the Chapai Nawabganj sediments from test borehole CPW5 by sieve, heavy mineral and magnetic separation 191

Abbreviations

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