

Figures

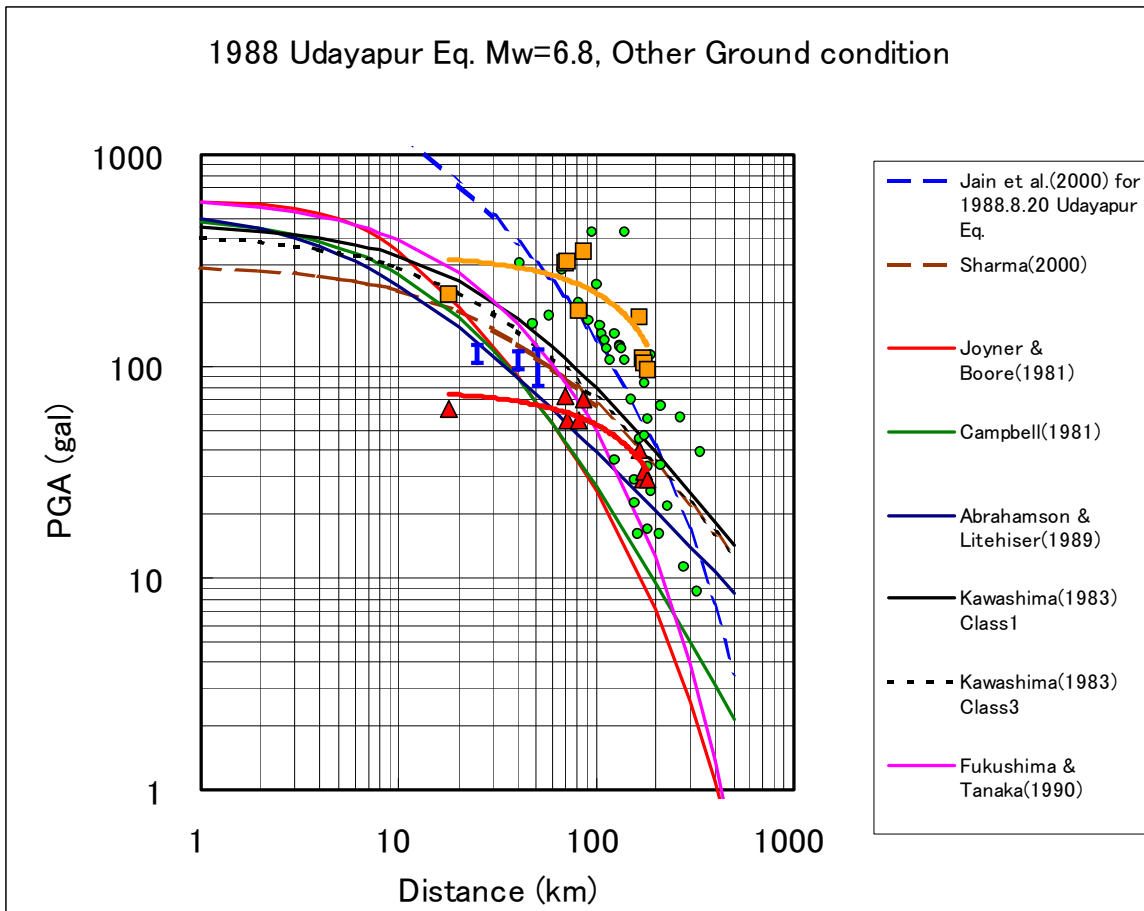
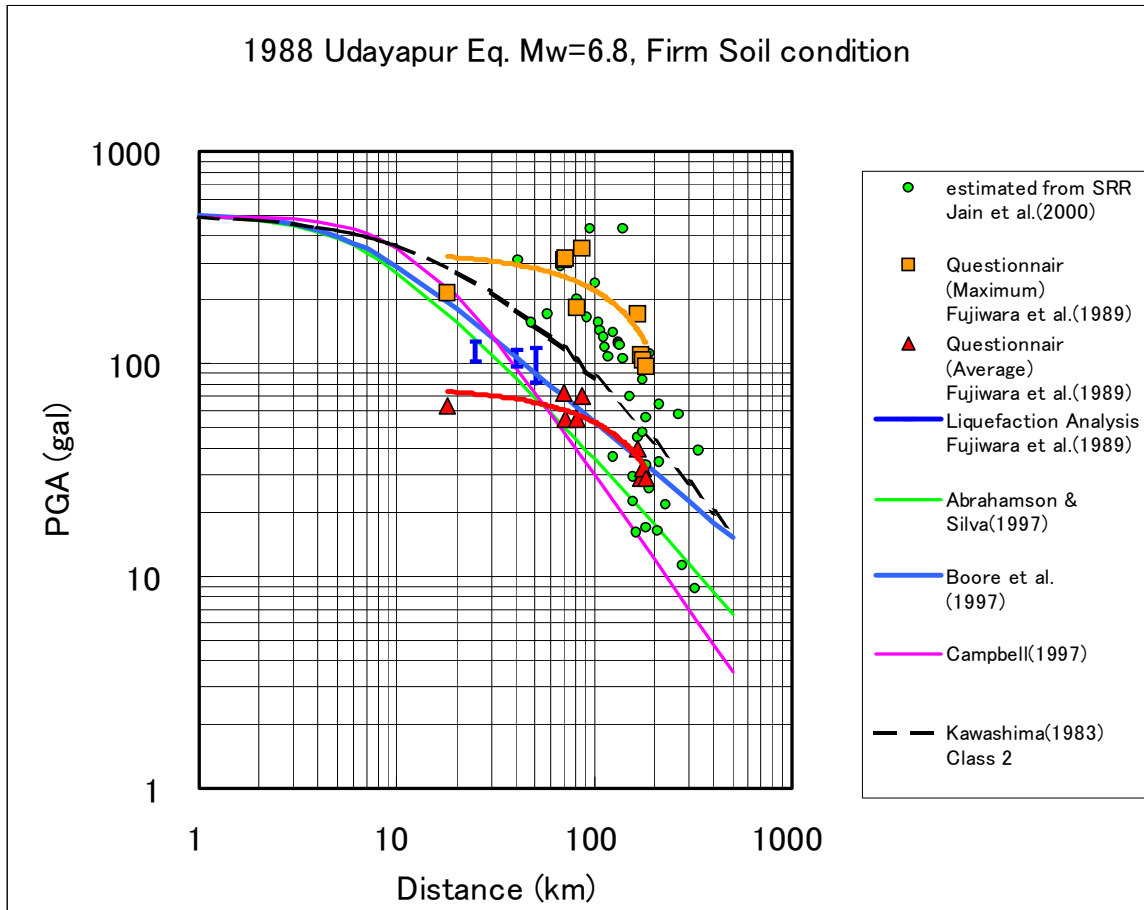


Figure 1.4.2 Comparison of Several Attenuation Formula

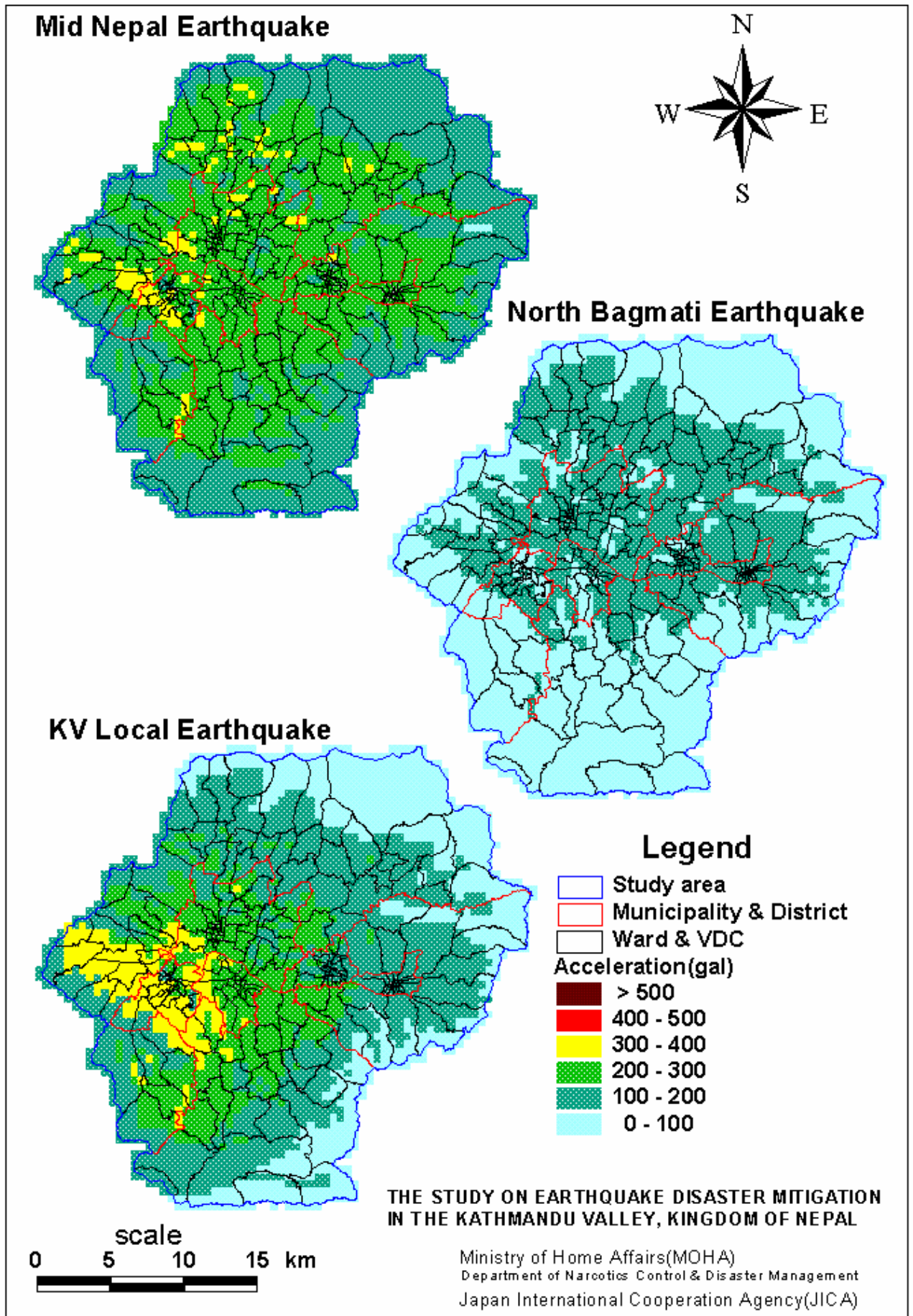


Figure 1.4.5 Peak Ground Acceleration Distribution (1/2)

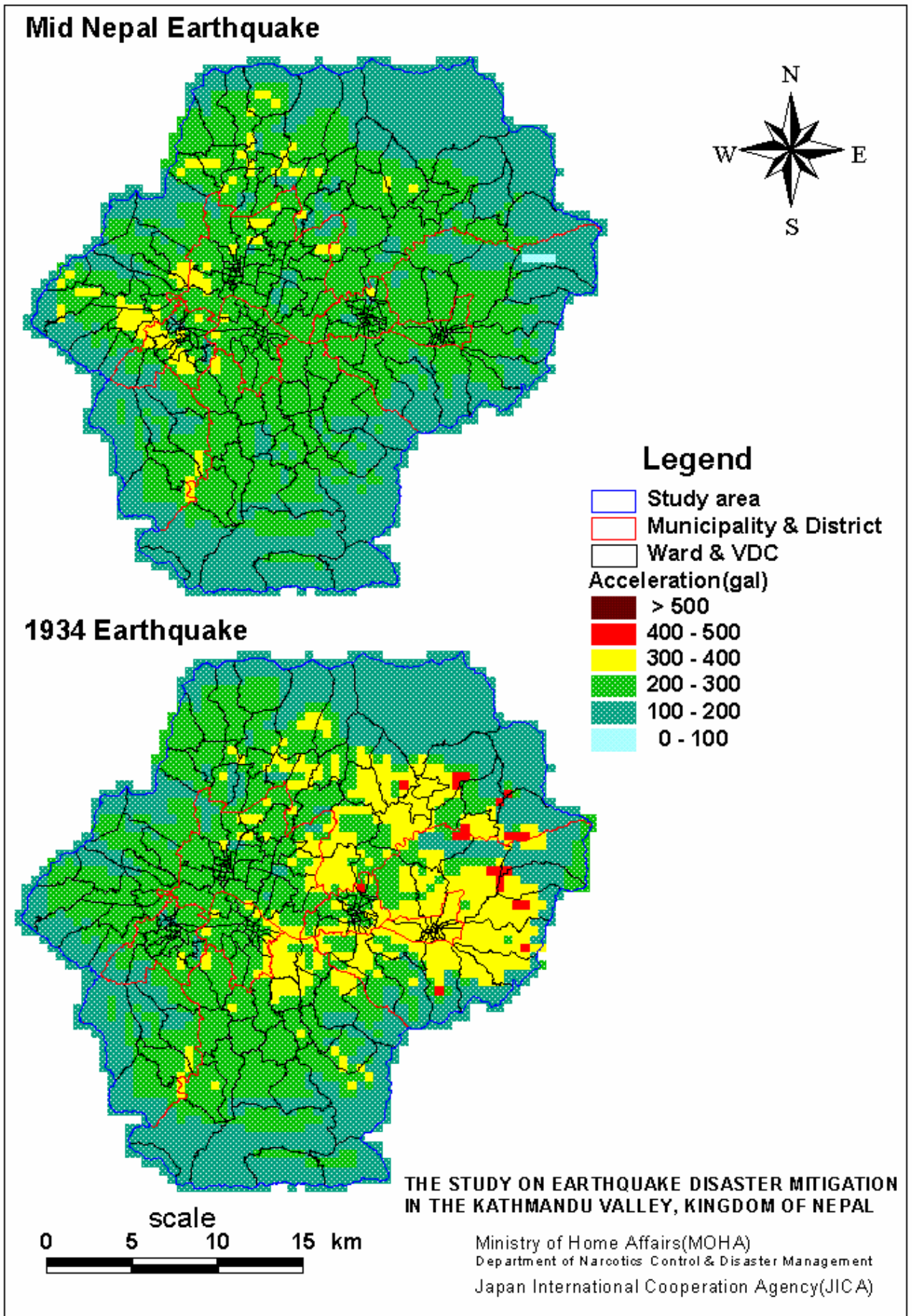


Figure 1.4.6 Peak Ground Acceleration Distribution (2/2)

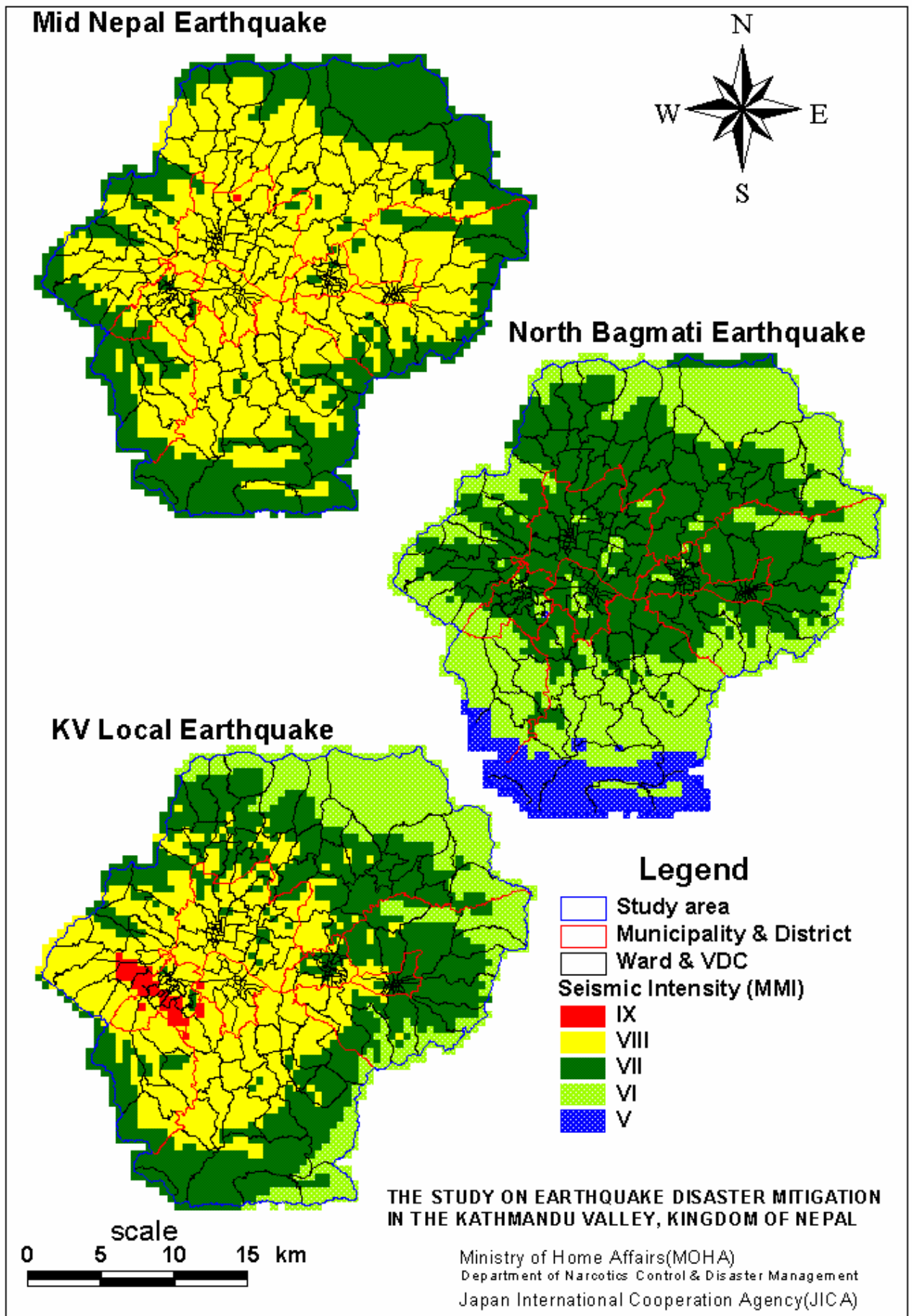


Figure 1.4.8 Seismic Intensity Distribution (1/2)

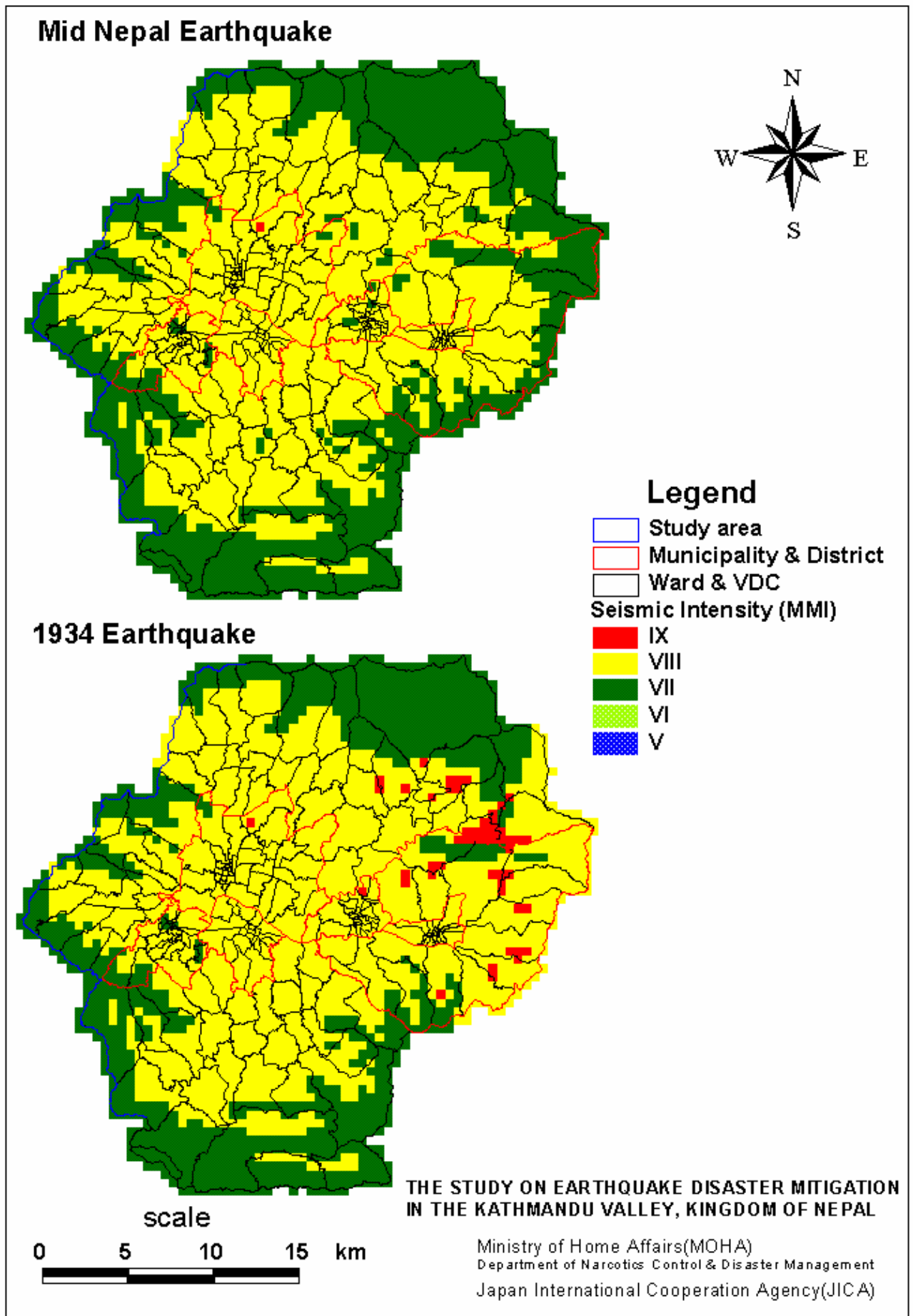


Figure 1.4.9 Seismic Intensity Distribution (2/2)

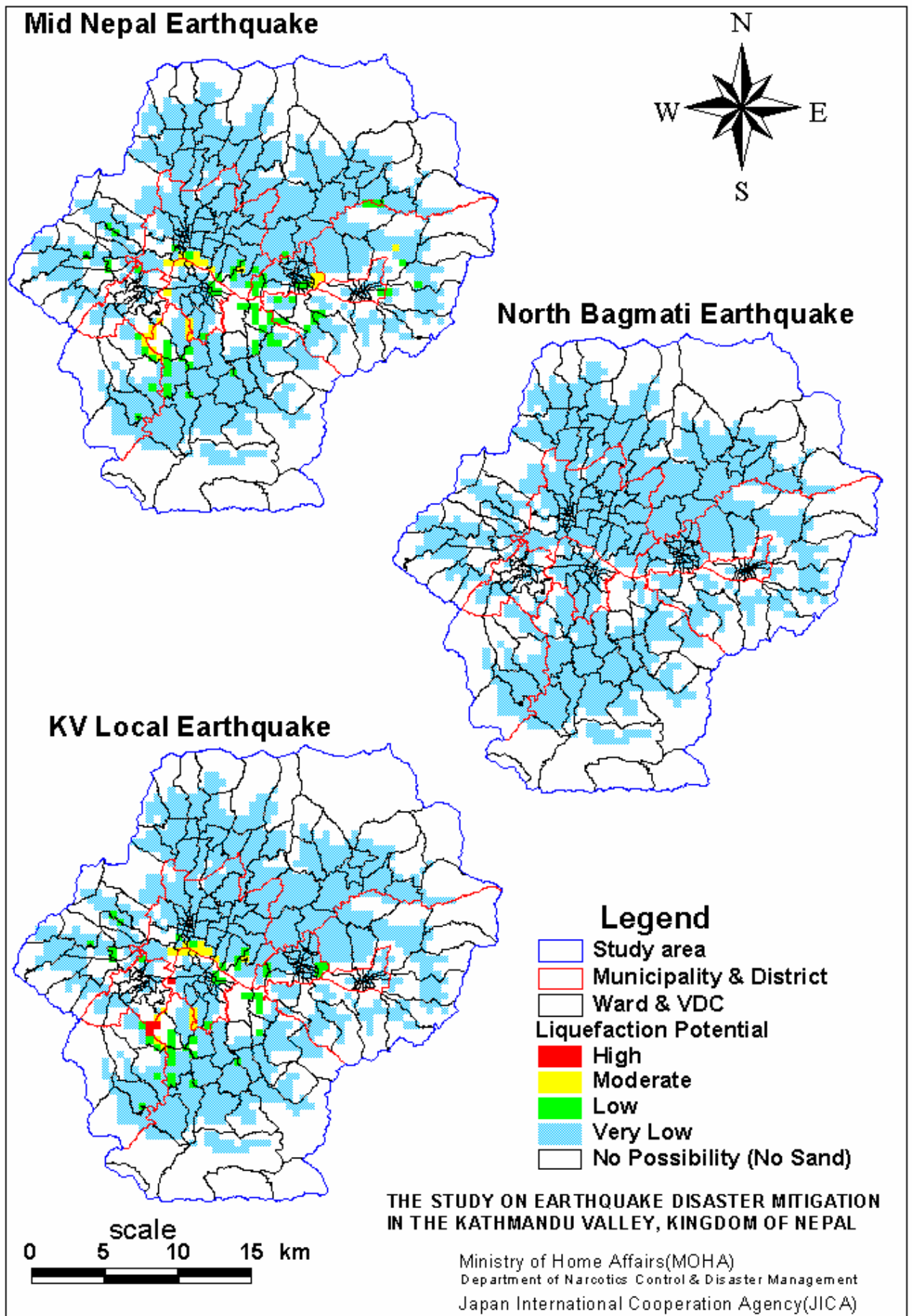


Figure 1.5.3 Liquefaction Potential Distribution (1/2)

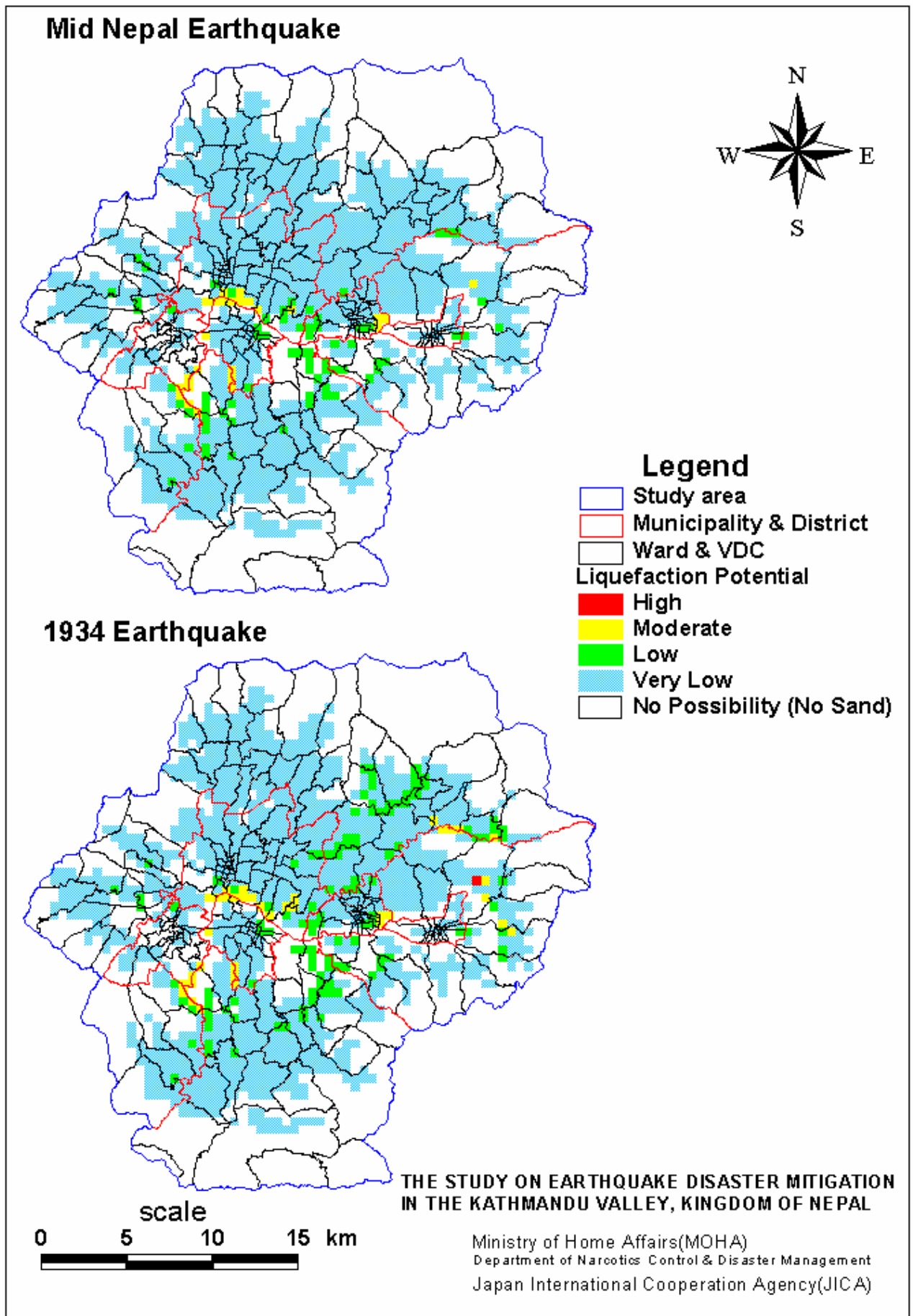
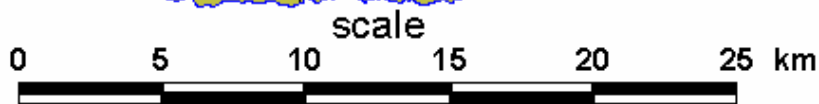
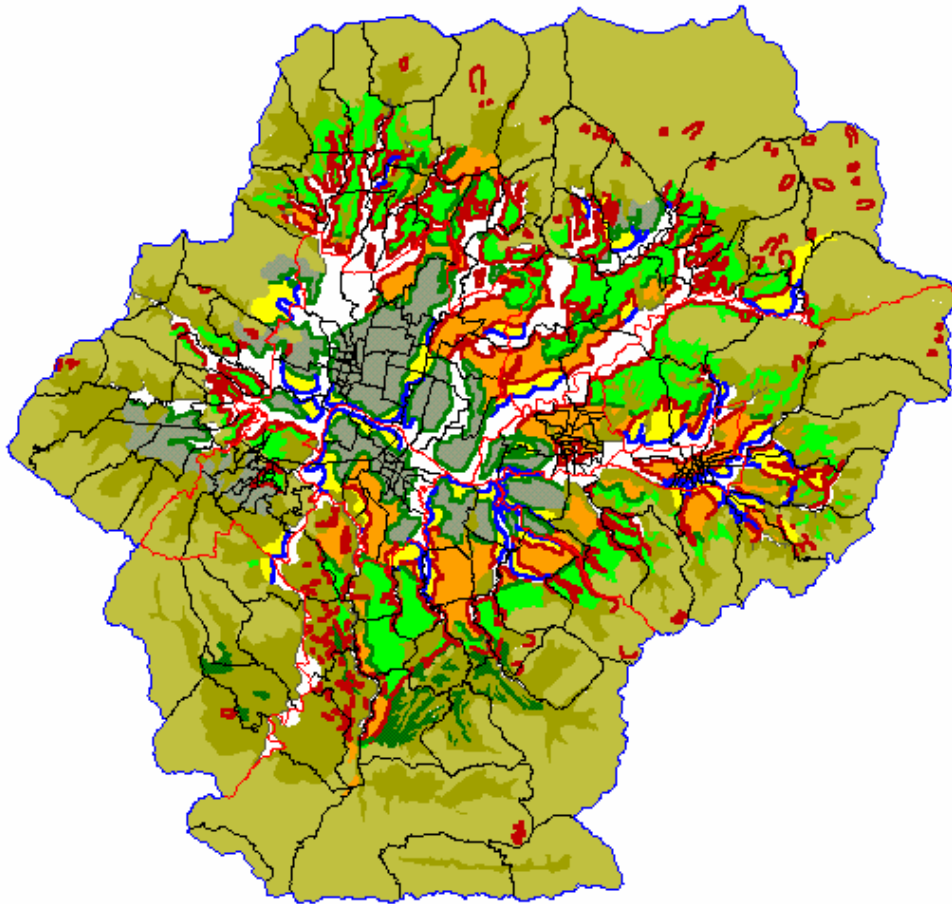
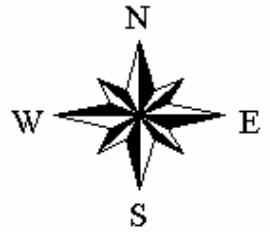


Figure 1.5.4 Liquefaction Potential Distribution (2/2)

Slope Stability



Legend

- Study area
- Municipality & District
- Ward & VDC
- Possibility of Slope Failure
 - High
 - Moderate
 - Low

Geomorphologic and Geologic classification

- Recent river deposit
- Talus deposit
- Terrace I deposit
- Terrace II deposit
- Terrace III deposit
- Terrace IV deposit
- Terrace V deposit
- Rock

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Figure 1.6.1 Slope Stability

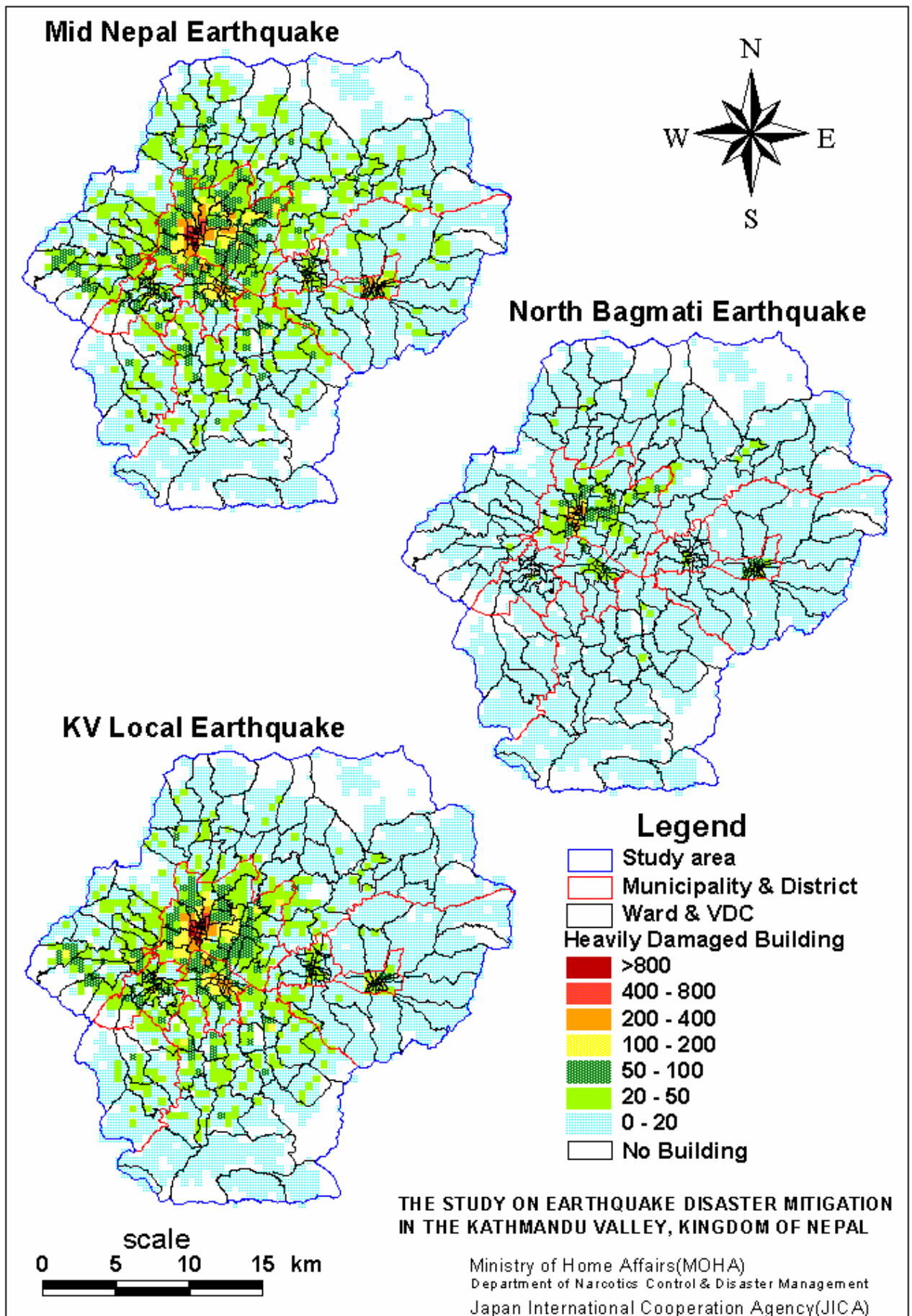


Figure 1.8.7 Heavily Damaged Building Number Distribution (1/2)

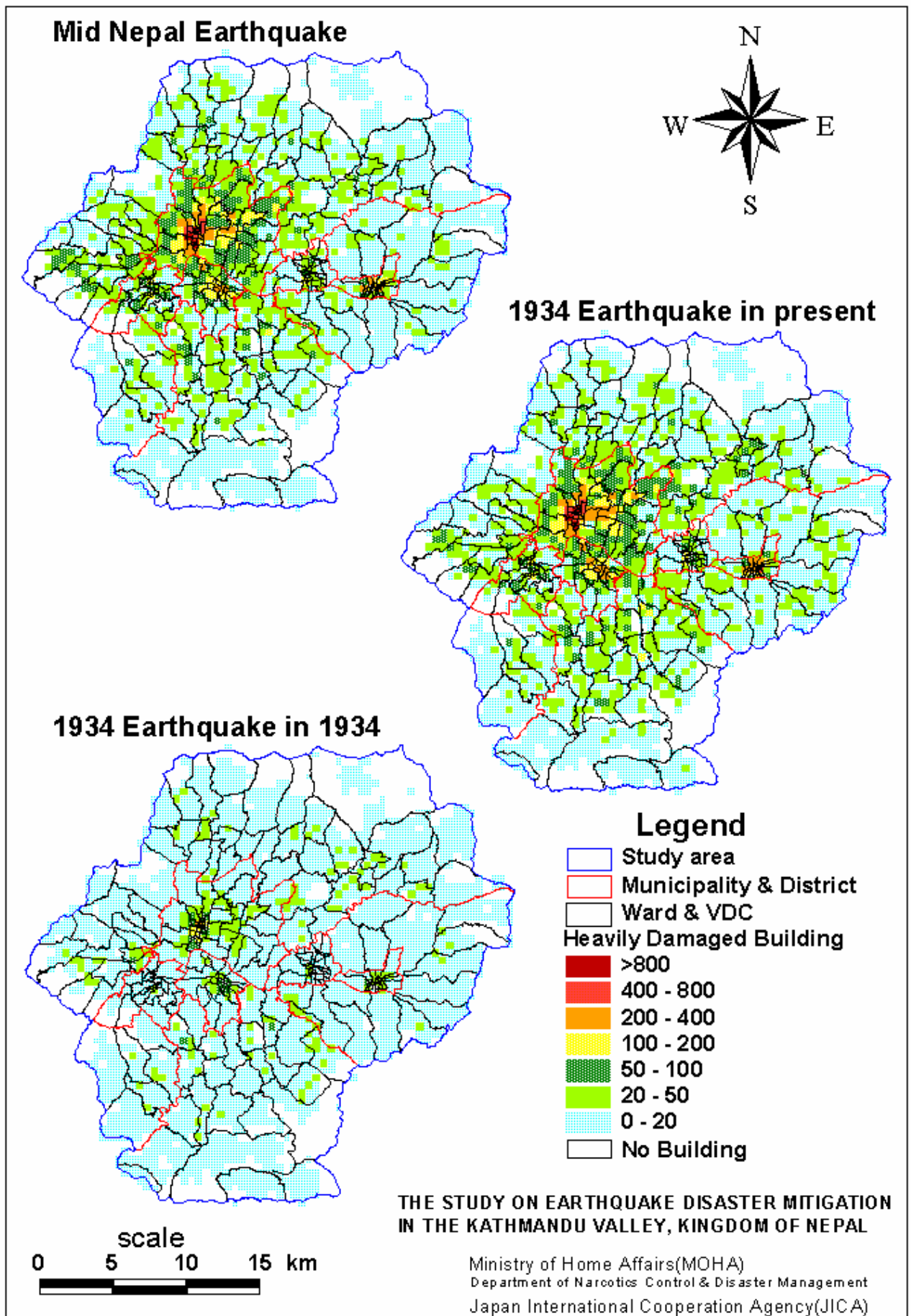


Figure 1.8.8 Heavily Damaged Building Number Distribution (2/2)

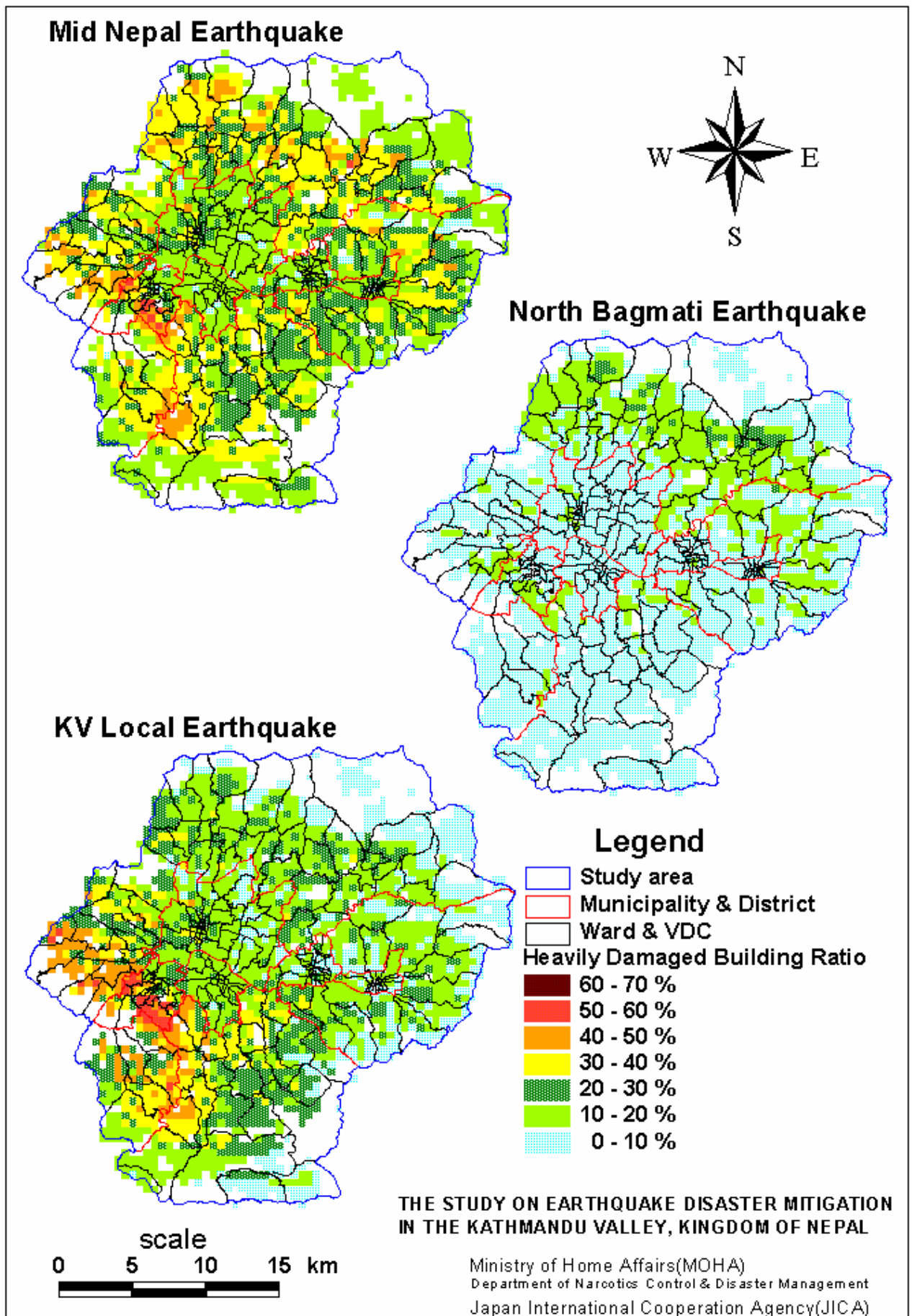


Figure 1.8.9 Heavily Damaged Building Ratio Distribution (1/2)

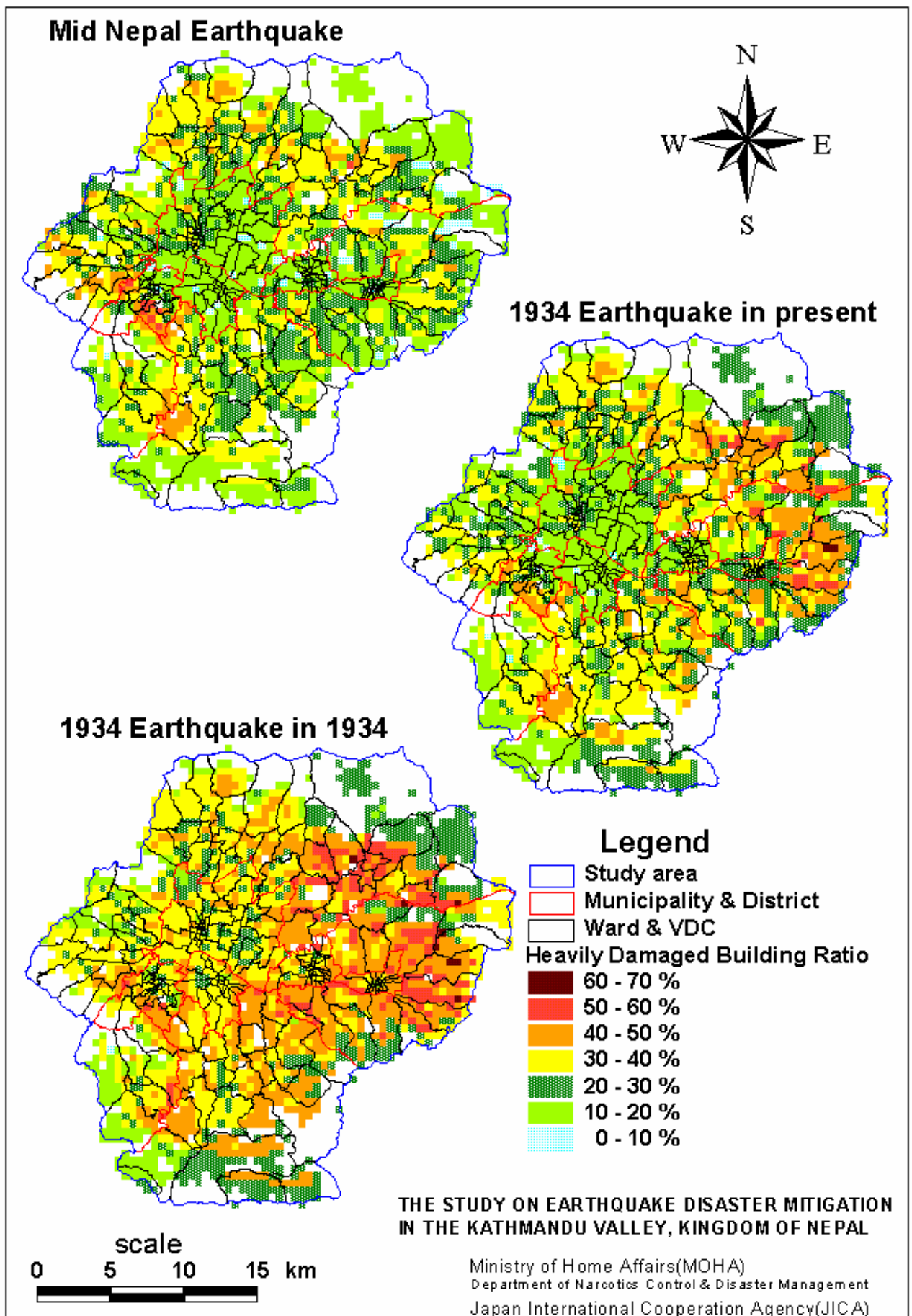


Figure 1.8.10 Heavily Damaged Building Ratio Distribution (2/2)

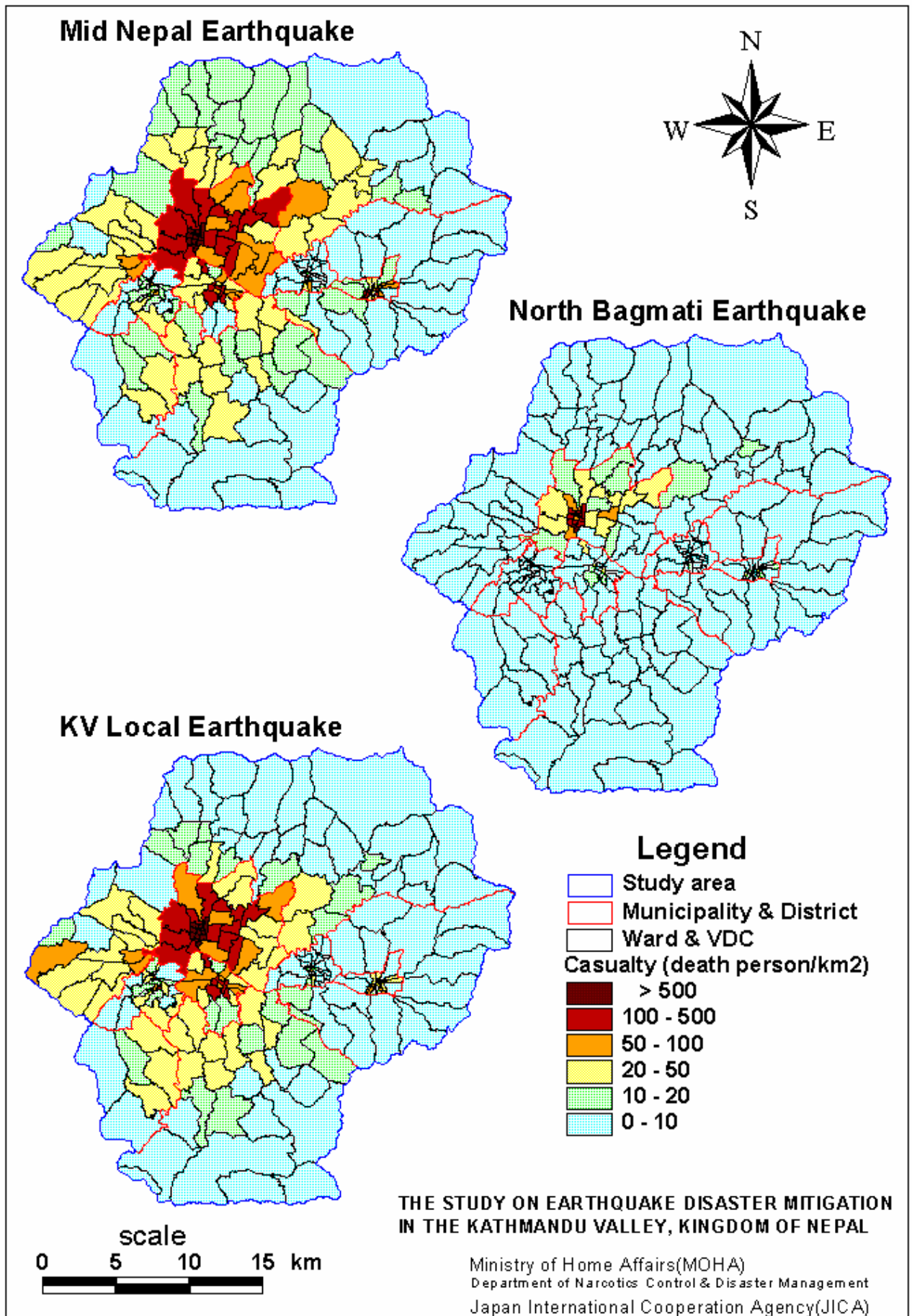


Figure 1.10.3 Death Toll Density Distribution (1/2)

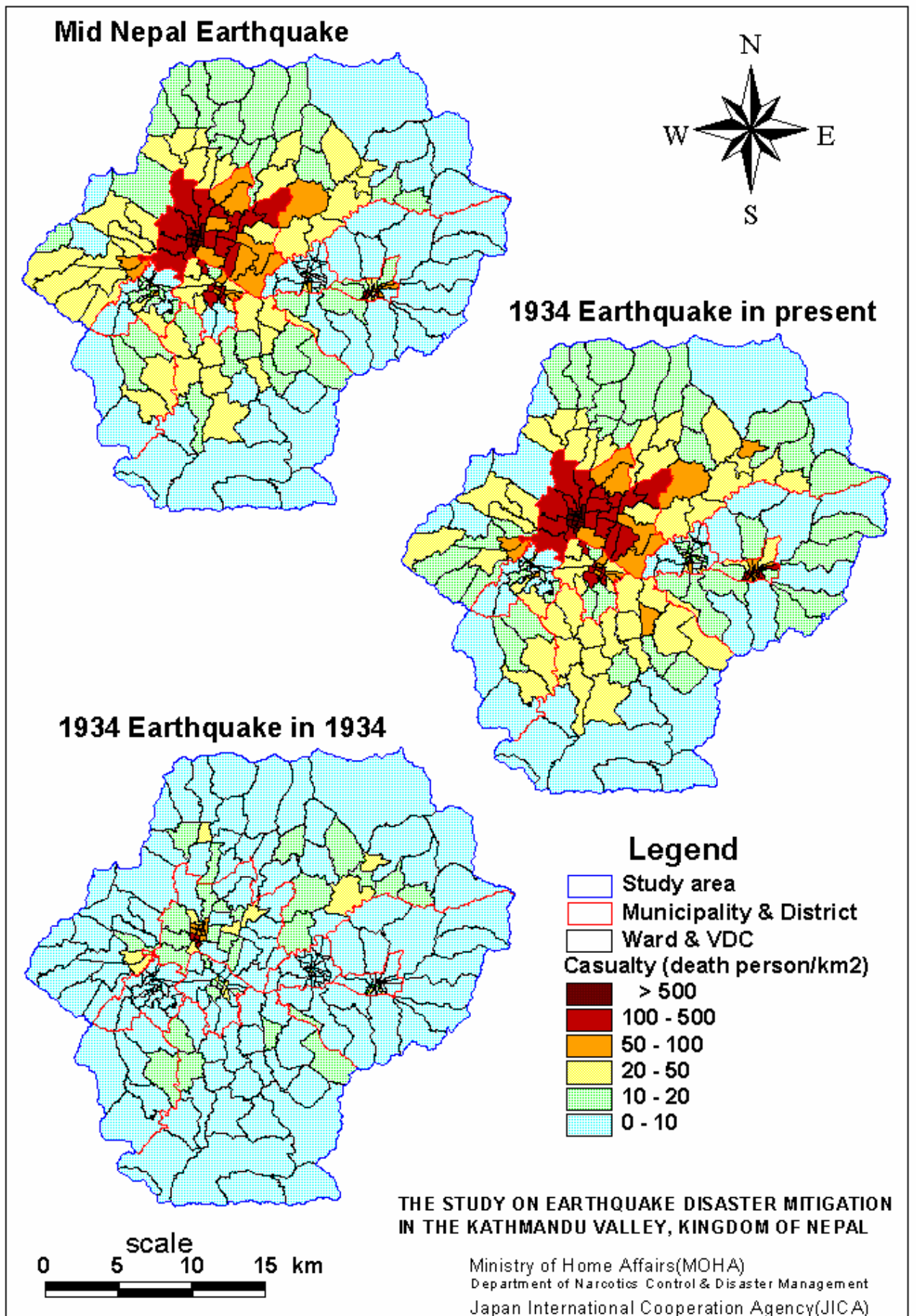


Figure 1.10.4 Death Toll Density Distribution (2/2)

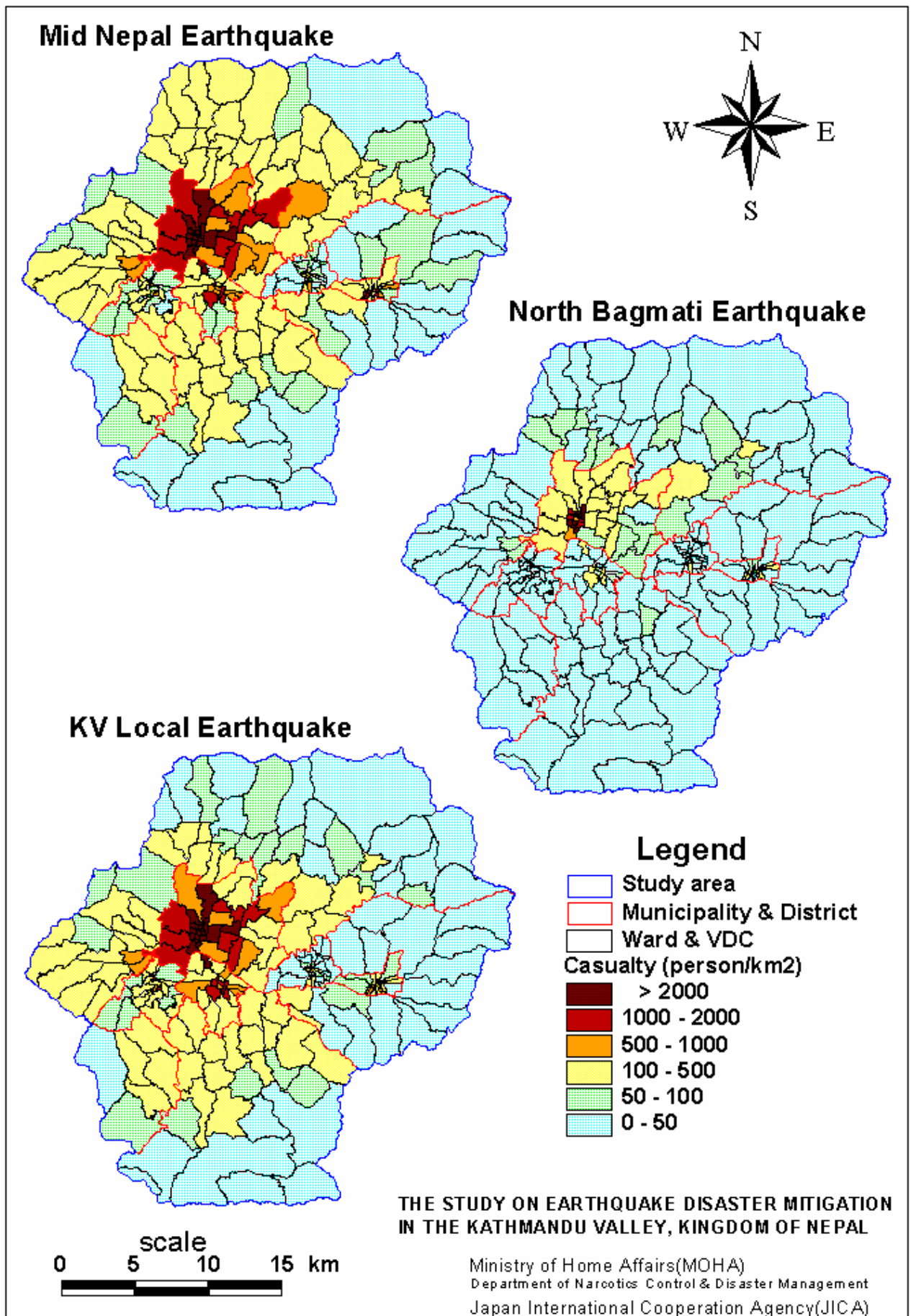


Figure 1.10.5 Total Casualty Density Distribution (1/2)

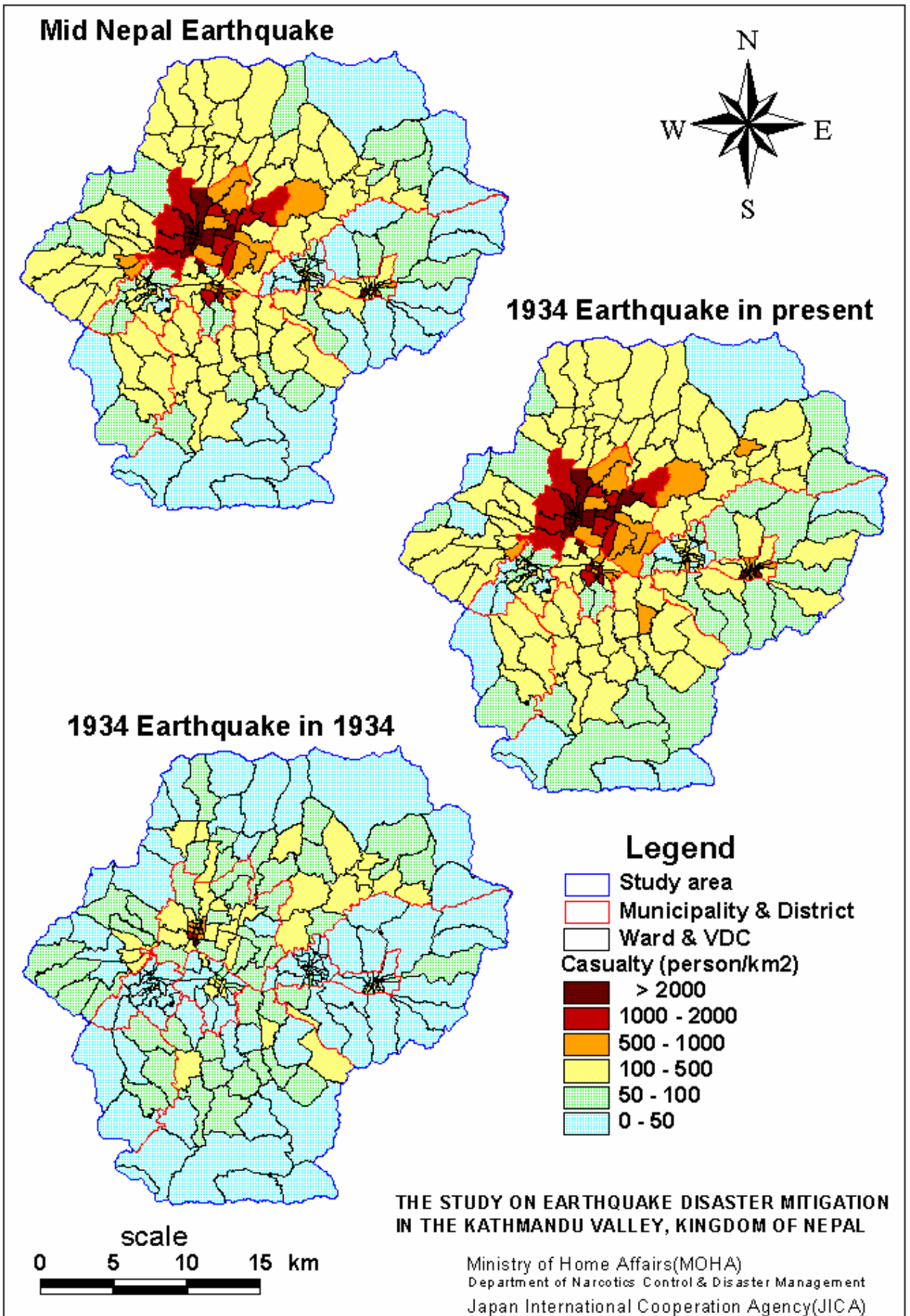


Figure 1.10.6 Total Casualty Density Distribution (2/2)

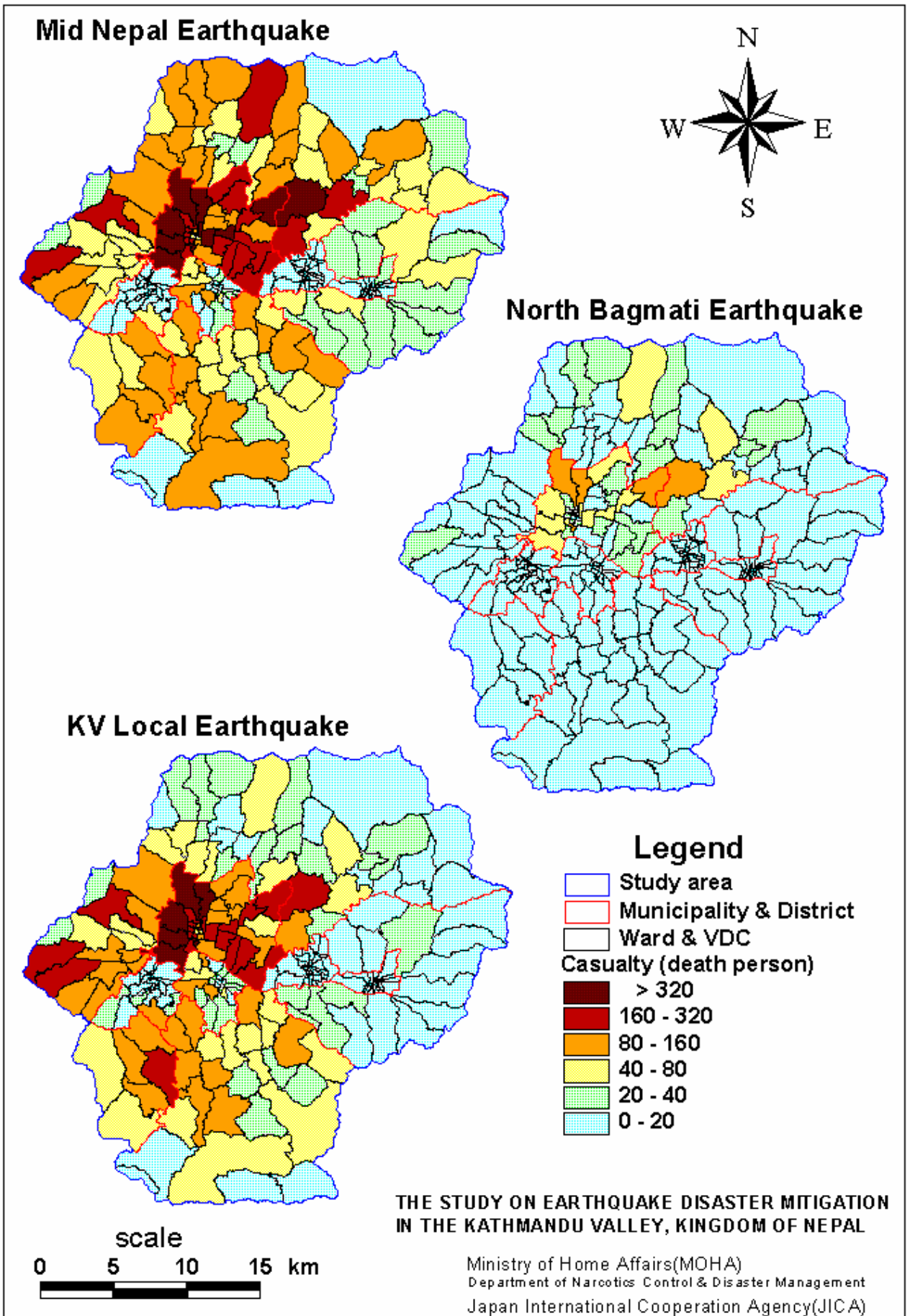


Figure 1.10.7 Death Toll Distribution (1/2)

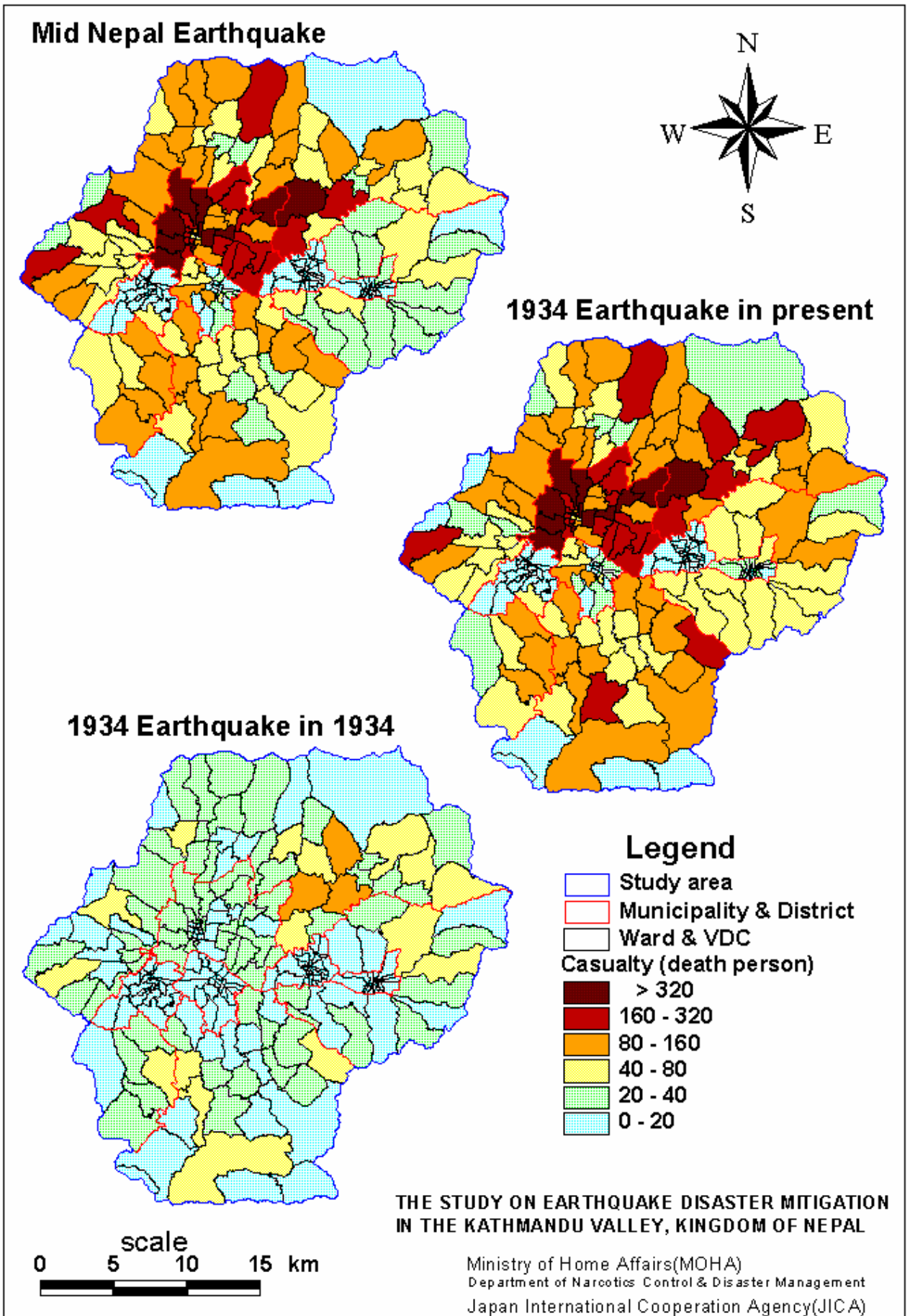


Figure 1.10.8 Death Toll Distribution (2/2)

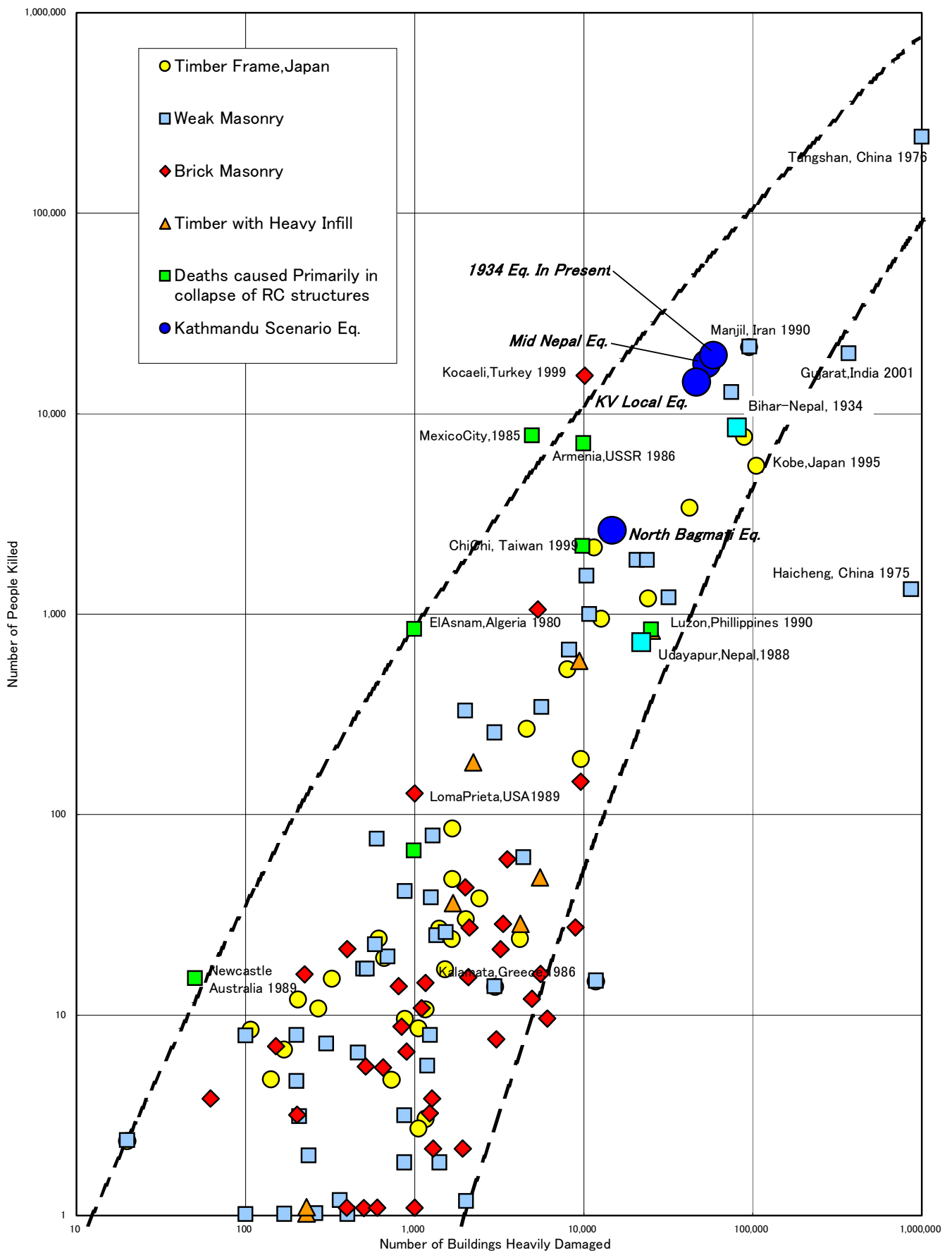
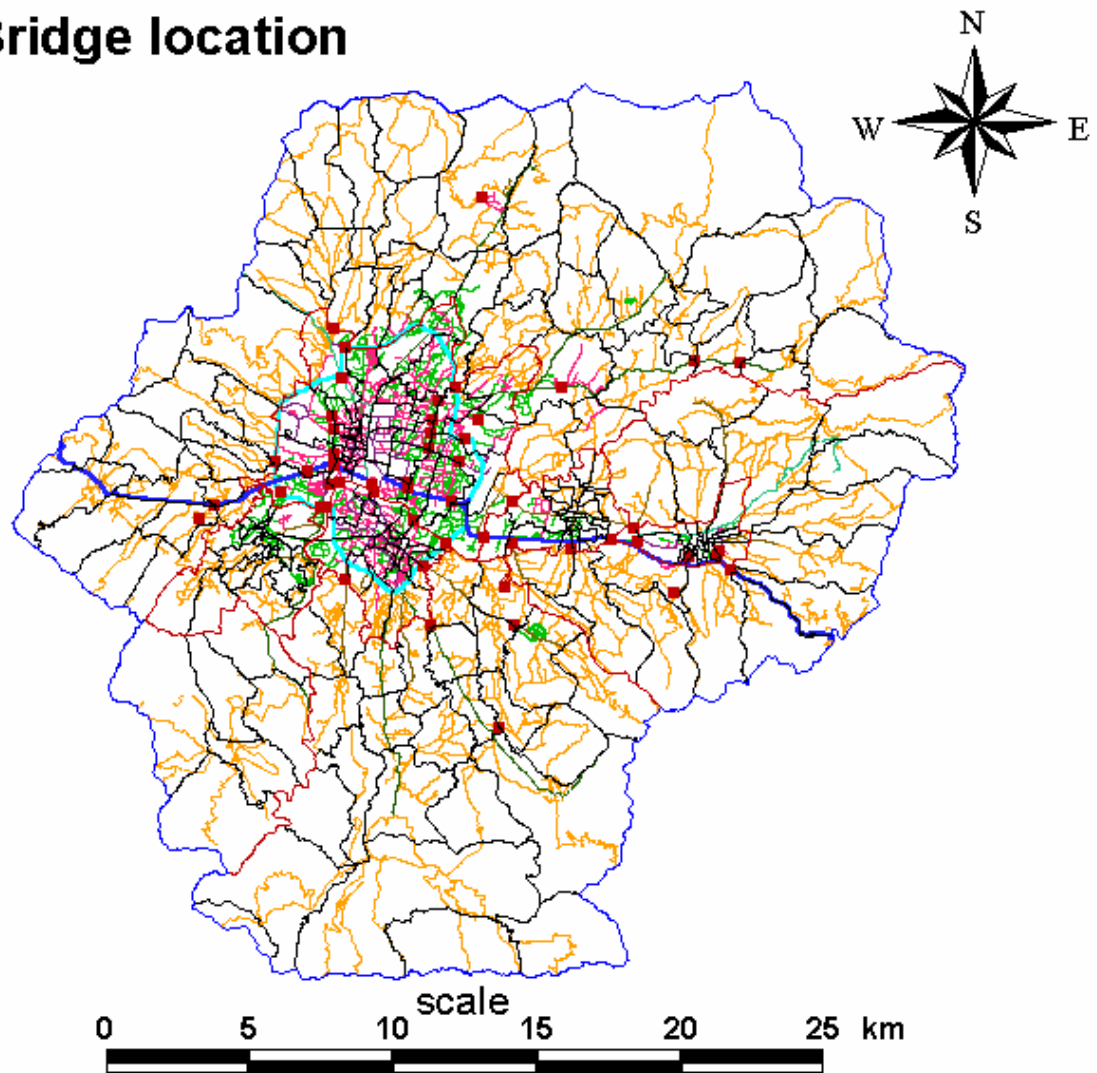












Figure 1.10.9 Relationship between Building Damages and Human Casualty
(retouched to Coburn & Spence, 1992)

Bridge location



Legend

- | | |
|---|--|
|  Study area |  National Highway |
|  Municipality & District |  Ringroad |
|  Ward & VDC |  Feeder Road (Major) |
|  Bridge |  Feeder Road (Minor) |
| |  Urban Road (Major) |
| |  District Road (Bituminous) |
| |  Urban Road (Minor) |
| |  Urban Road (Gravel) |
| |  District Road (Gravel) |

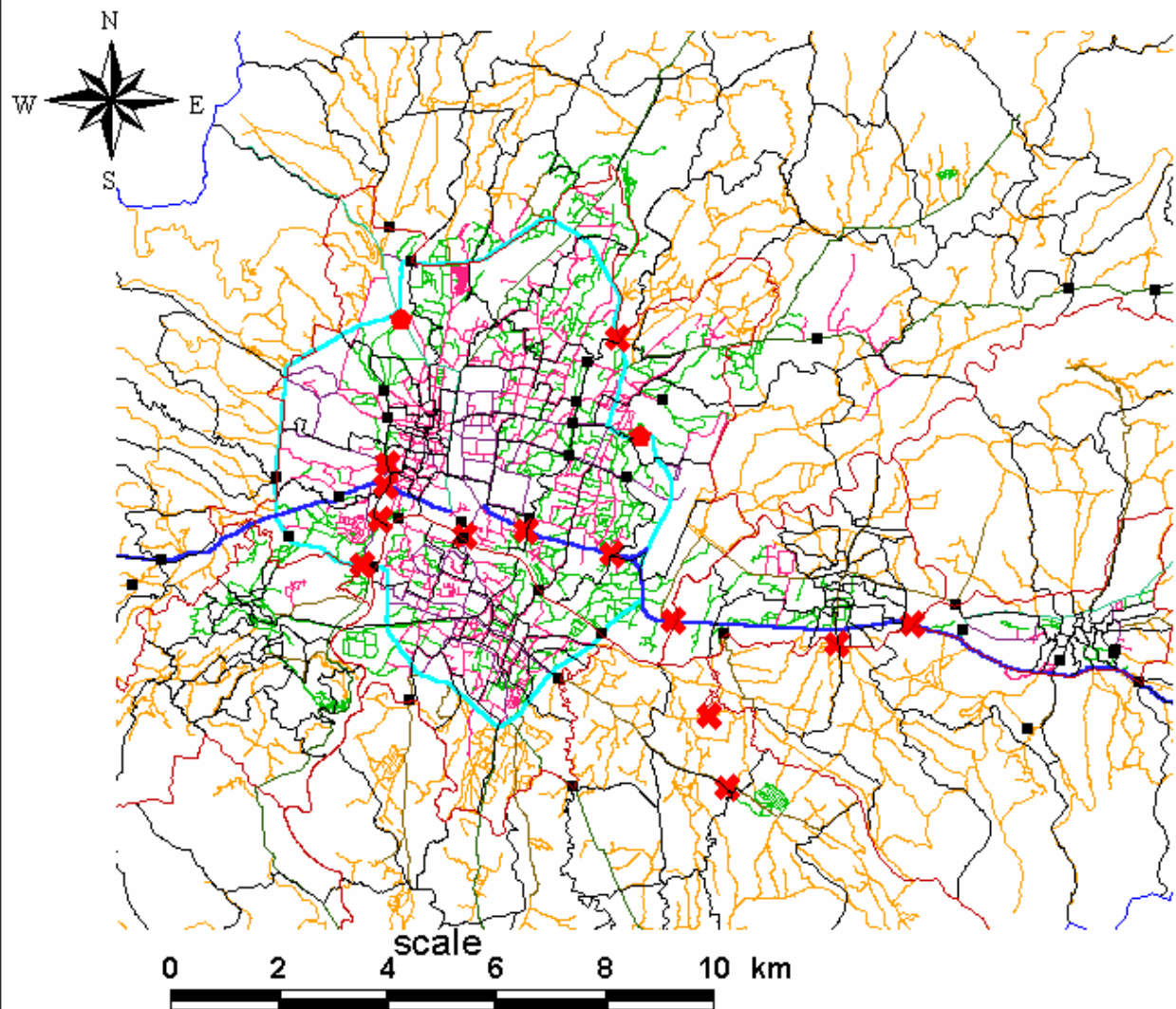
Data source : Department of Roads

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Figure 1.11.1 Location of Bridges

Bridge Damage Distribution (Mid Nepal Earthquake)



Legend

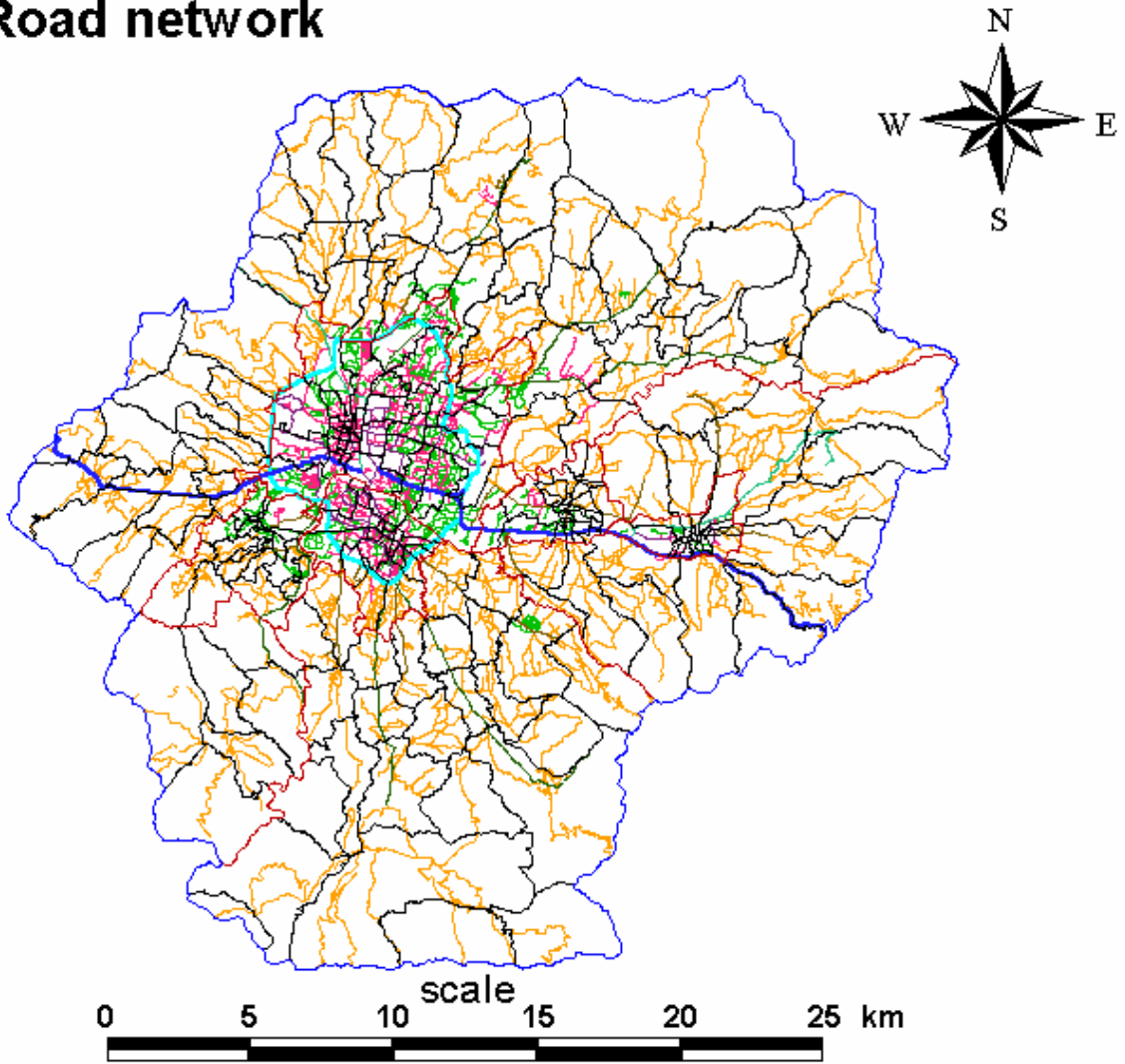
- | | |
|-------------------------|----------------------------|
| Study area | National Highway |
| Municipality & District | Ringroad |
| Ward & VDC | Feeder Road (Major) |
| Bridge | Feeder Road (Minor) |
| Collapse | Urban Road (Major) |
| Unstable | District Road (Bituminous) |
| Not collapse | Urban Road (Minor) |
| | Urban Road (Gravel) |
| | District Road (Gravel) |

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Figure 1.11.2 Bridge Damage Distribution -Mid Nepal Earthquake-

Road network



Legend

- Study area
- Municipality & District
- Ward & VDC
- ↗ National Highway
- ↗ Ringroad
- ↗ Feeder Road (Major)
- ↗ Feeder Road (Minor)
- ↗ Urban Road (Major)
- ↗ District Road (Bituminous)
- ↗ Urban Road (Minor)
- ↗ Urban Road (Gravel)
- ↗ District Road (Gravel)

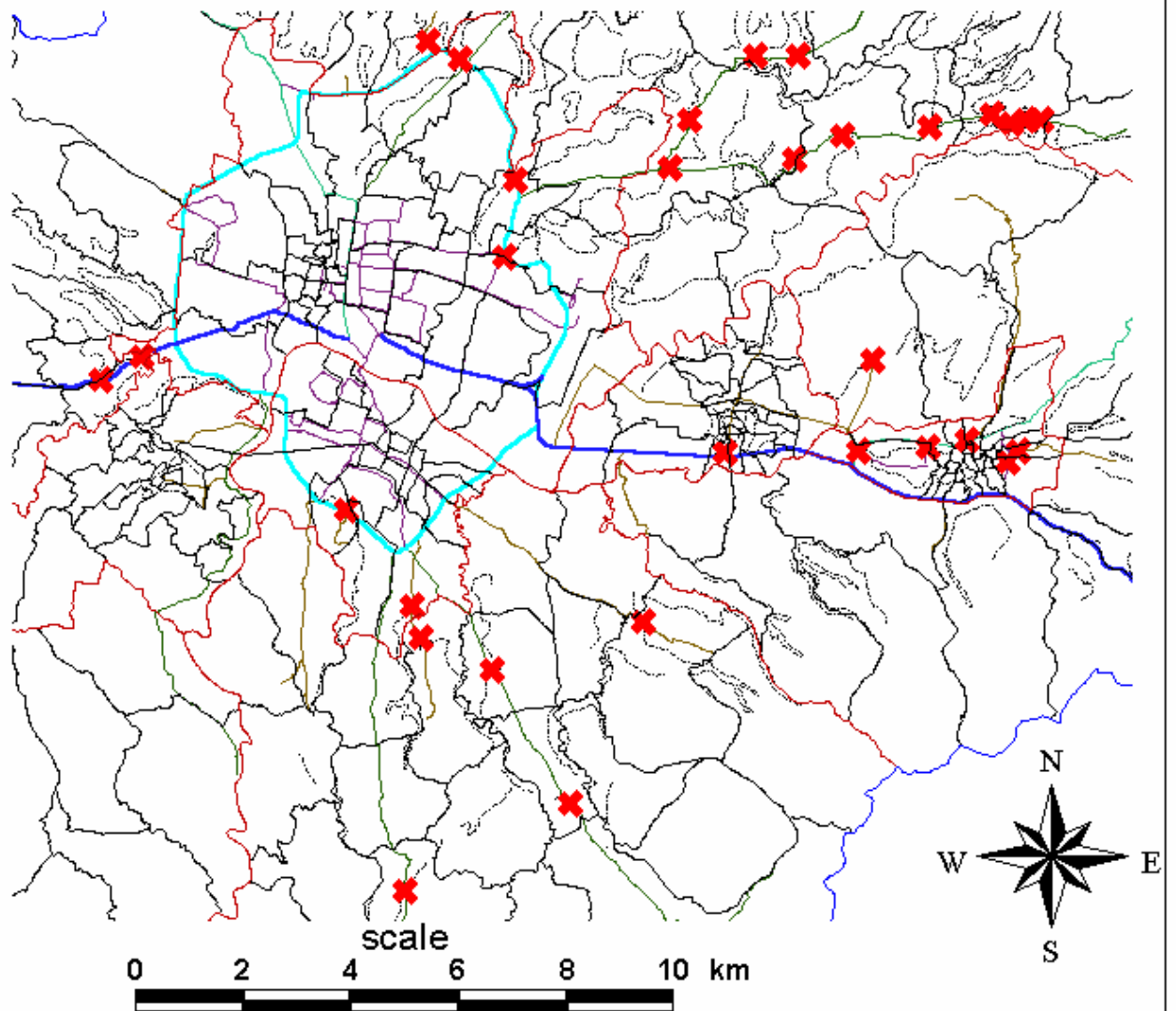
Data source :
 Kathmandu Valley Town Development Committee
 International Centre for Integrated Mountain Development

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Figure 1.11.3 Road Network

Hazardous Points of Road



Legend

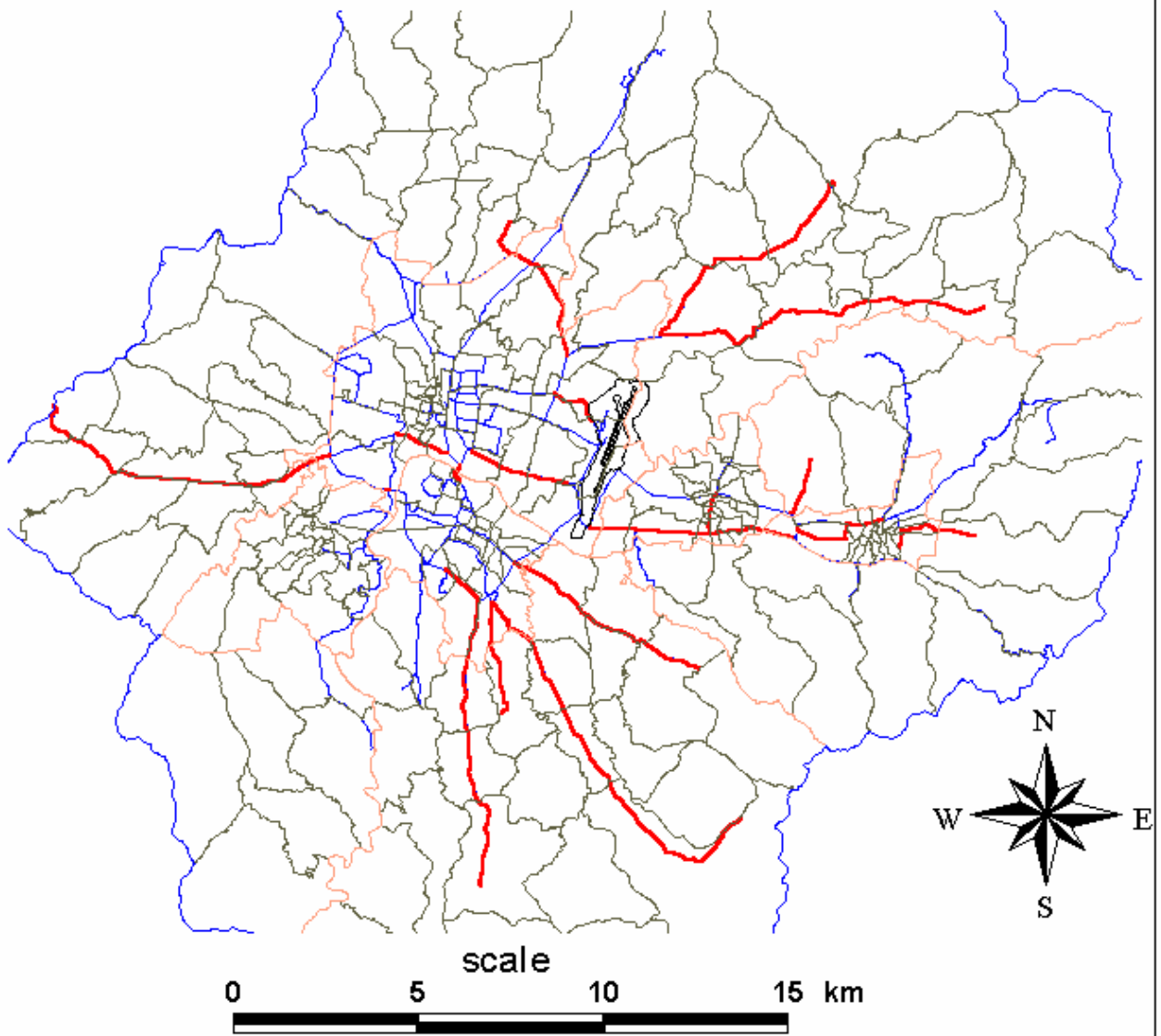
- | | |
|-------------------------|----------------------------|
| Study area | National Highway |
| Municipality & District | Ringroad |
| Ward & VDC | Feeder Road (Major) |
| Hazardous Point | Feeder Road (Minor) |
| Relative Height (m) | Urban Road (Major) |
| >50 | District Road (Bituminous) |

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Figure 1.11.4 Hazardous Points of Roads

Accessibility of Roads (Mid Nepal Earthquake)



Legend

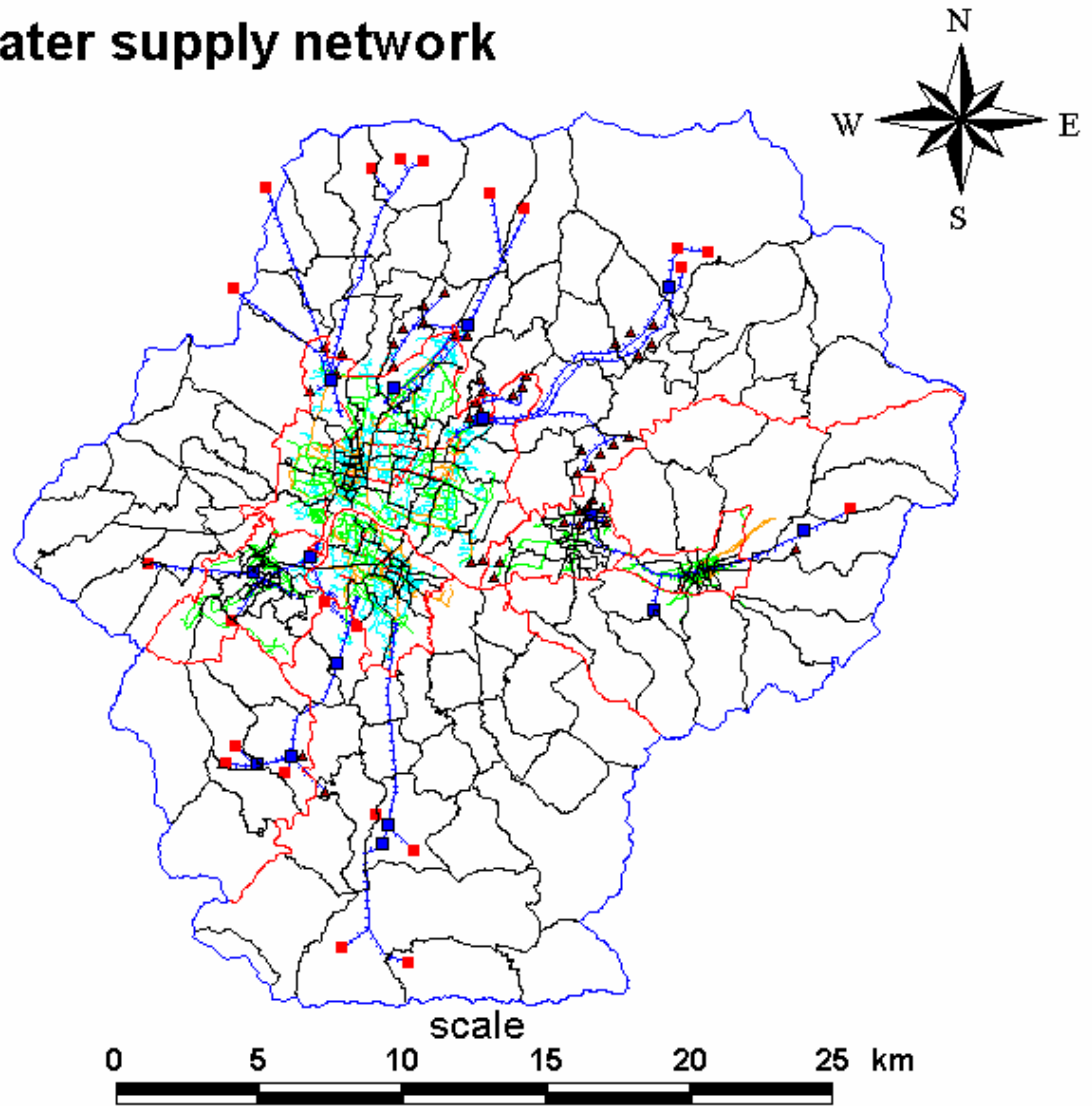
-  Study area
-  Municipality & District
-  Ward & VDC
-  Airport
-  Unpassable Road
-  Passable Road

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Figure 1.11.5 Accessibility of Roads -Mid Nepal Earthquake-

Water supply network



Legend

- | | | | |
|---|-------------------------|--|---------------|
|  | Study area |  | Main Pipeline |
|  | Municipality & District |  | Diameter (mm) |
|  | Ward & VDC |  | >350 |
|  | Intake |  | 150 - 350 |
|  | Reservoir |  | <150 |
|  | Well |  | Unknown |

Data source : Nepal Water Supply Corporation

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Figure 1.12.1 Water Supply Network

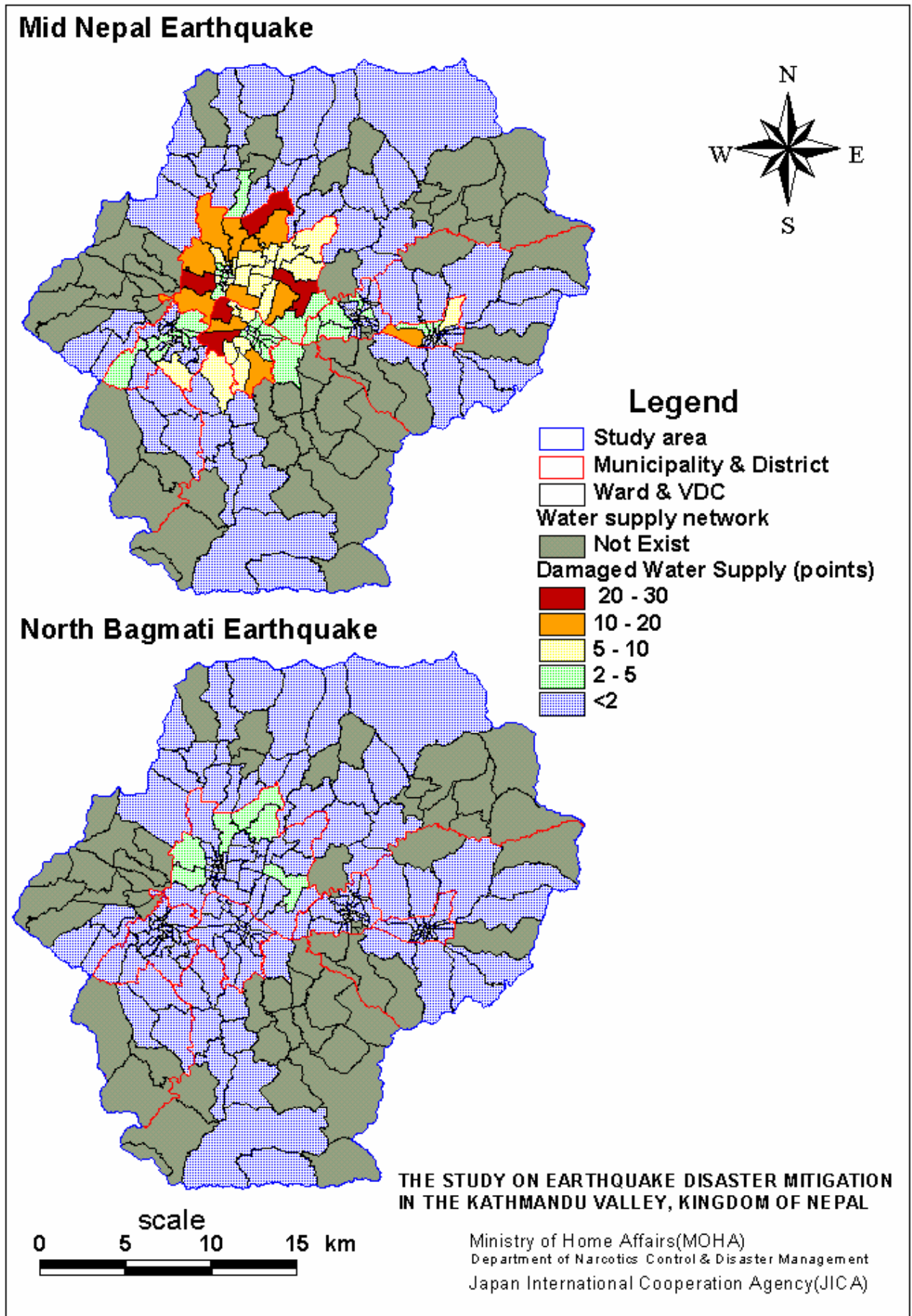
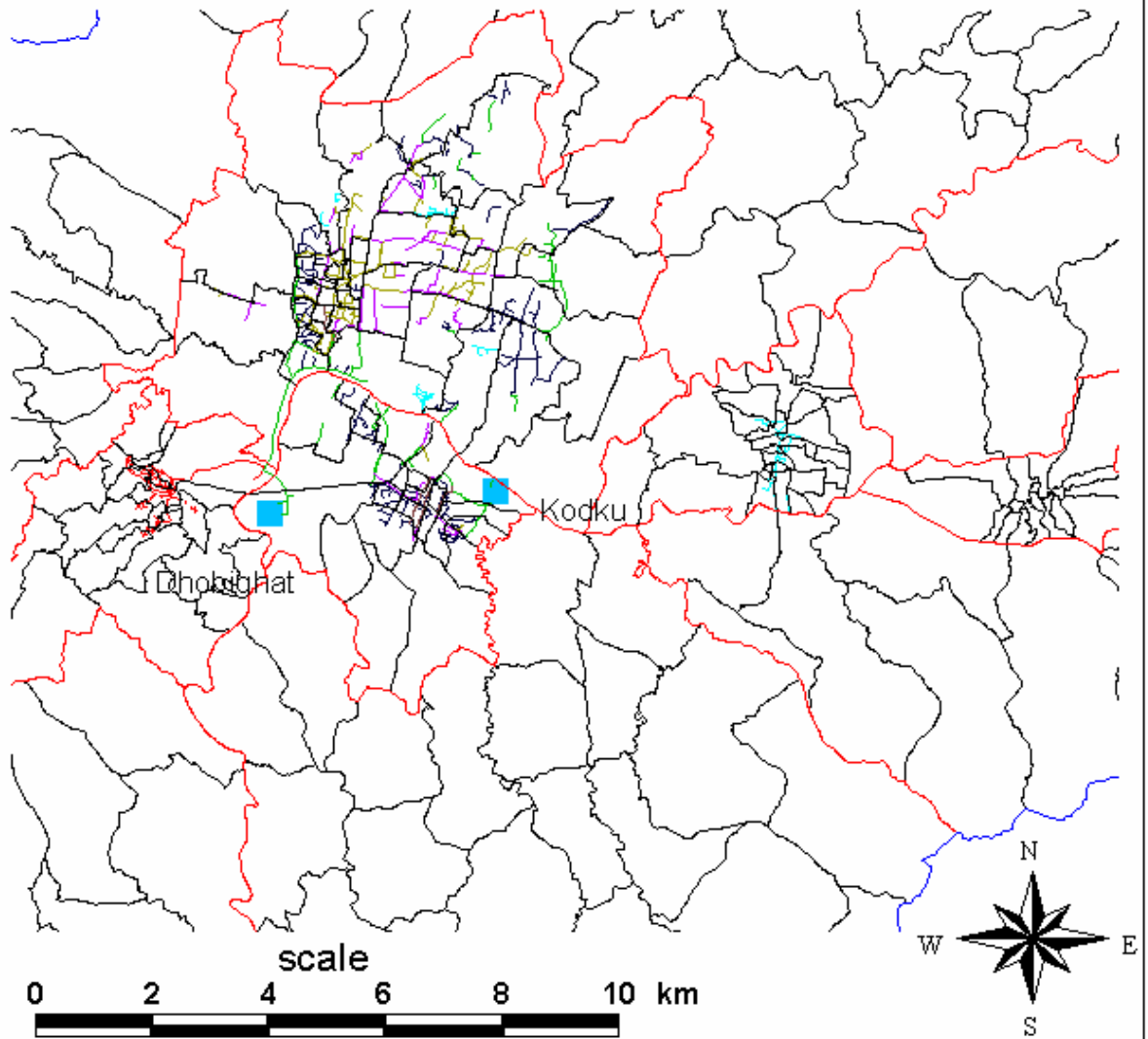















Figure 1.12.3 Damage of Water Supply Pipelines

Sewerage network



Legend

- | | |
|---|--|
|  Study area |  PC : diameter (mm) |
|  Municipality & District |  >1000 |
|  Ward & VDC |  500 - 1000 |
| Brick : diameter (mm) |  <500 |
|  >1000 | Unknown : diameter (mm) |
|  500 - 1000 |  <500 |
|  <500 |  Unknown |
| |  Sewerage plant |

Data source : Nepal Water Supply Corporation

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Figure 1.12.4 Sewerage Network

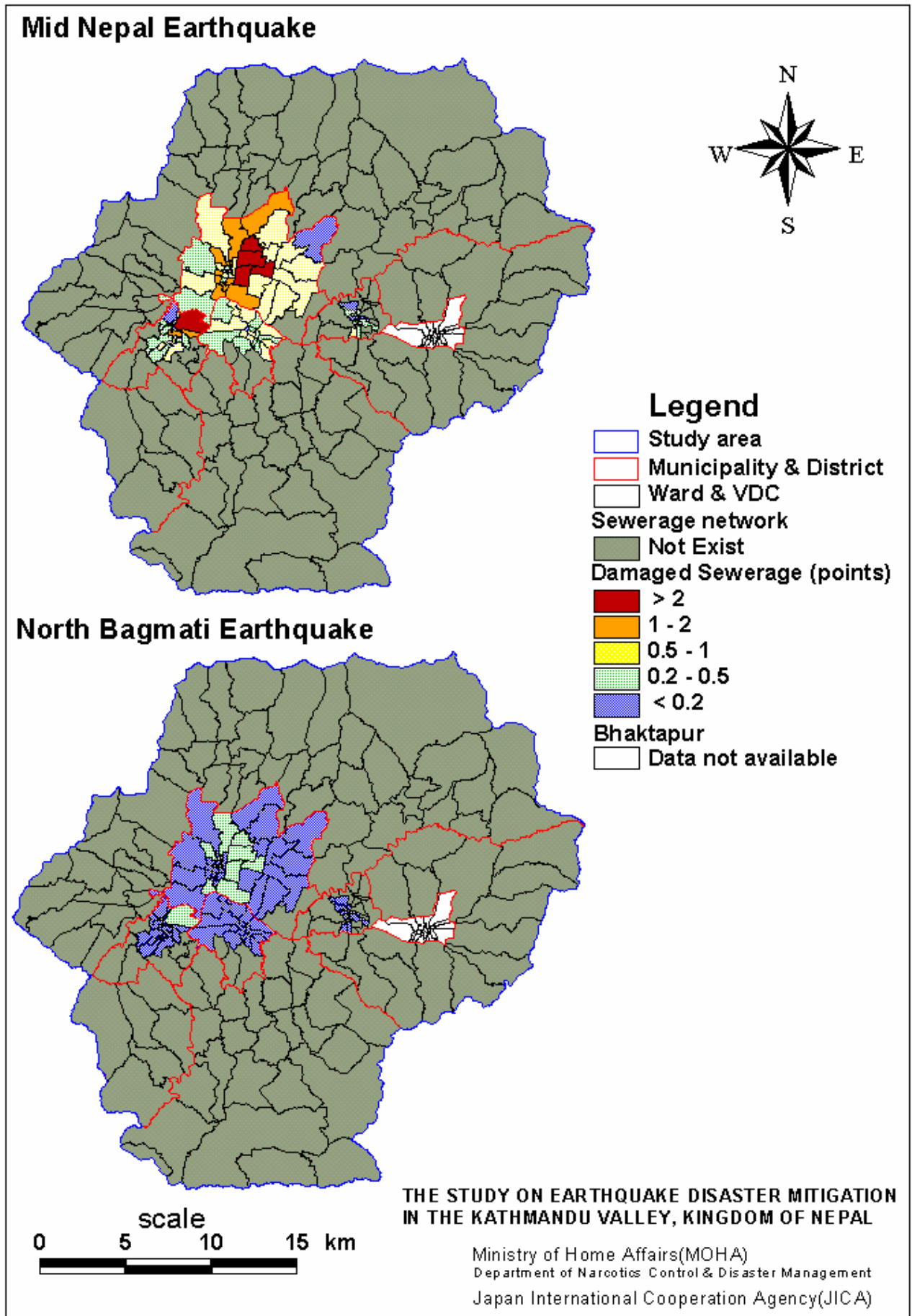
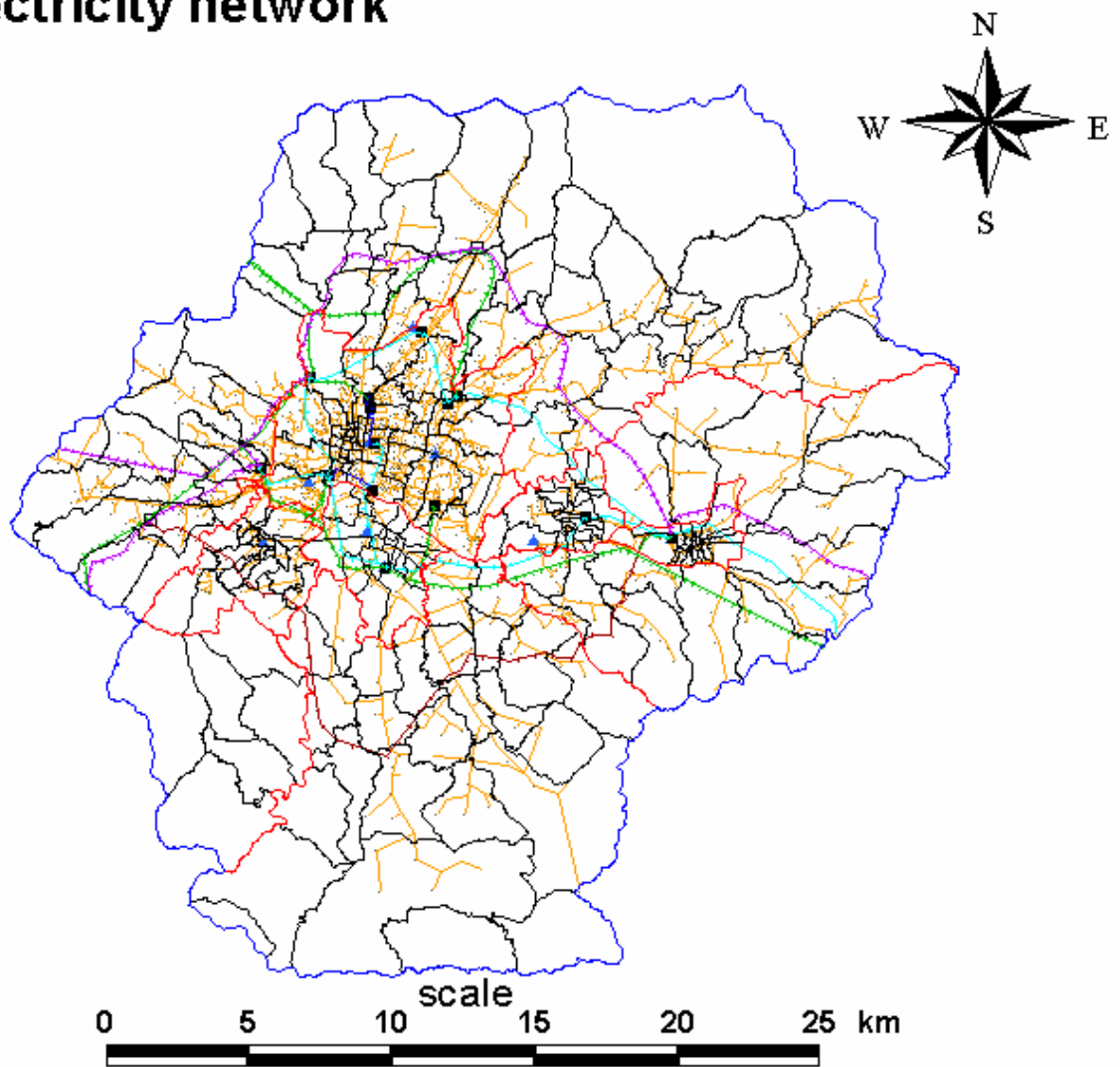


Figure 1.12.5 Damage of Sewerage Pipelines

Electricity network



Legend

- | | |
|-----------------------------|----------------------|
| Study area | Sub-station |
| Municipality & District | Existing |
| Ward & VDC | Under construction |
| Transmission network | Branch office |
| 11kV | Distribution network |
| 11kV (underground) | Transformer |
| 66kV | |
| 132kV | |
| 132kV (under construction) | |
- Data source : Nepal Electricity Authority

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Figure 1.12.6 Electric Power Supply Network

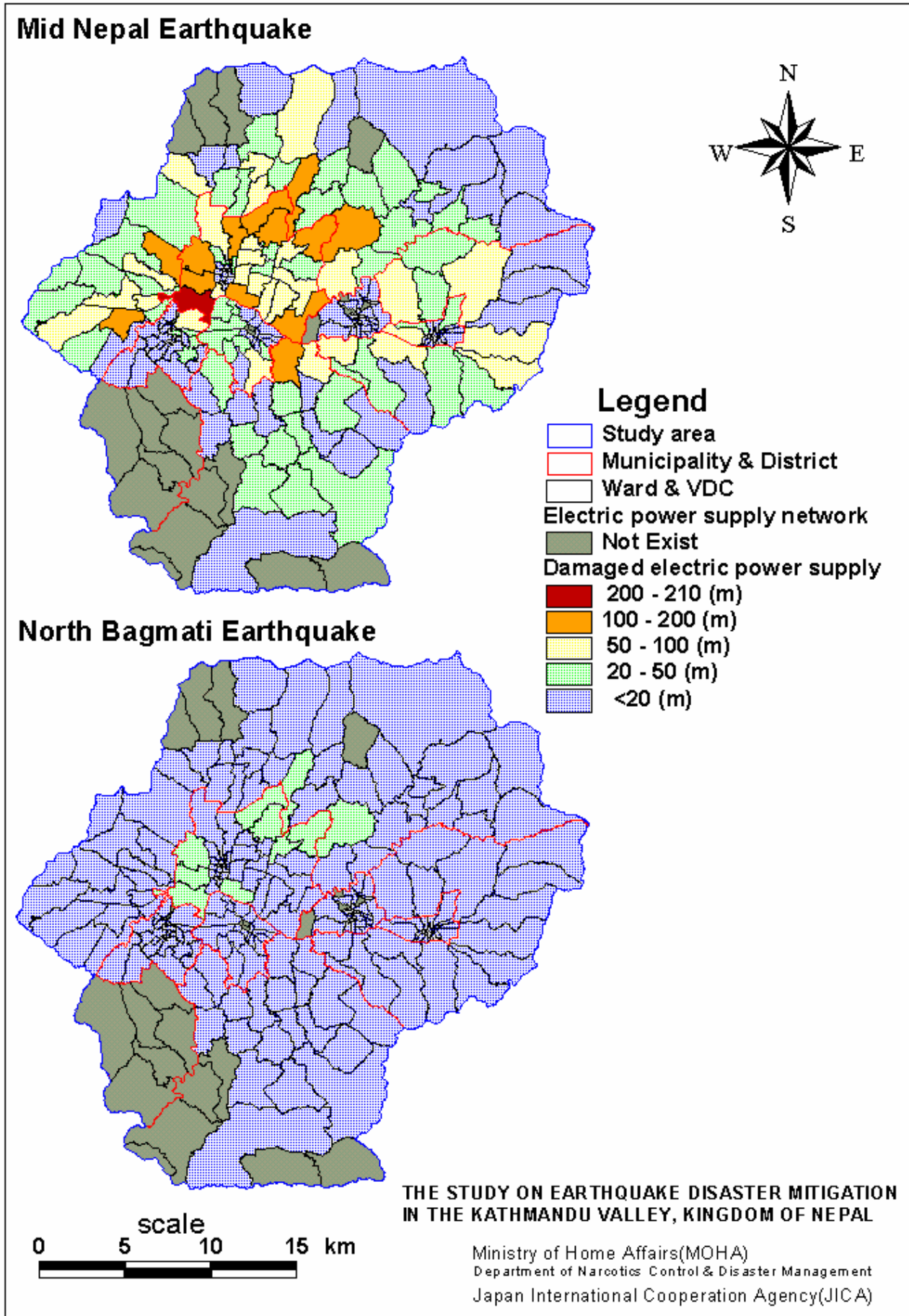
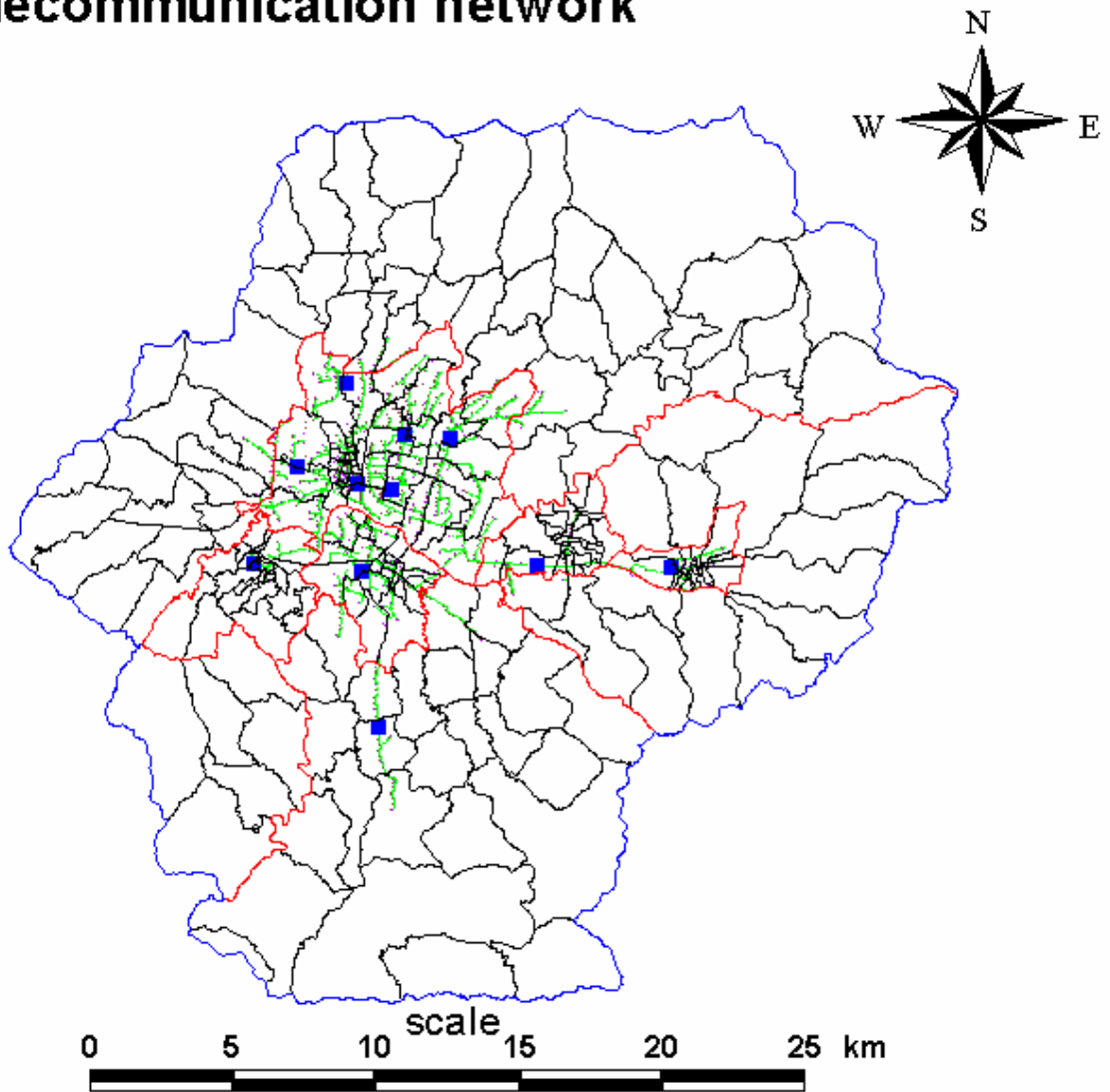


Figure 1.12.8 Damage of Electric Power Supply Lines

Telecommunication network



Legend

- | | |
|---|---|
|  Study area |  Exchange building |
|  Municipality & District |  Primary network |
|  Ward & VDC |  Cabinet |
| |  Manhole |

Data source : Nepal Telecommunications Corporation

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Figure 1.12.9 Telecommunication Network

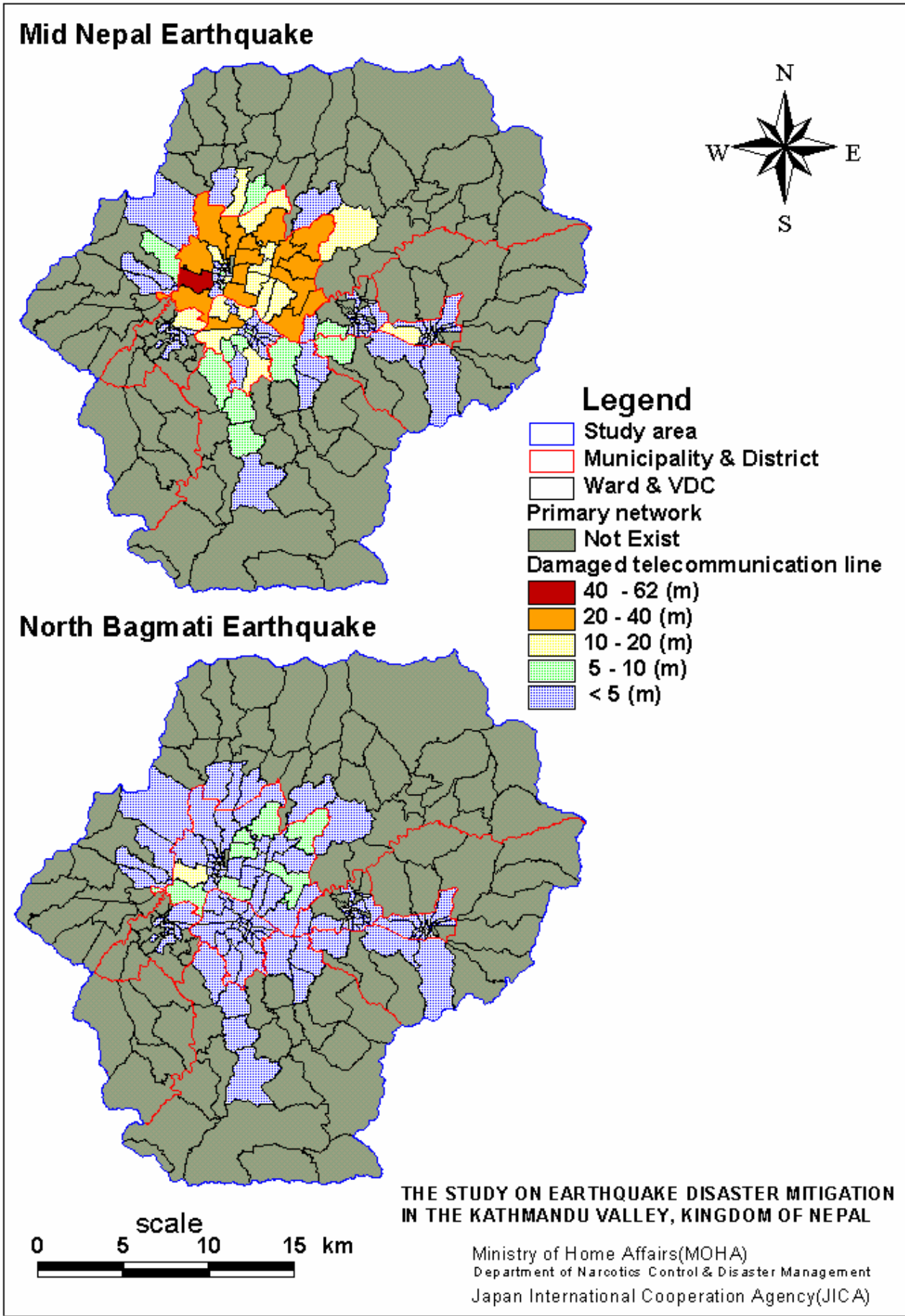


Figure 1.12.10 Damage of Telecommunication Lines

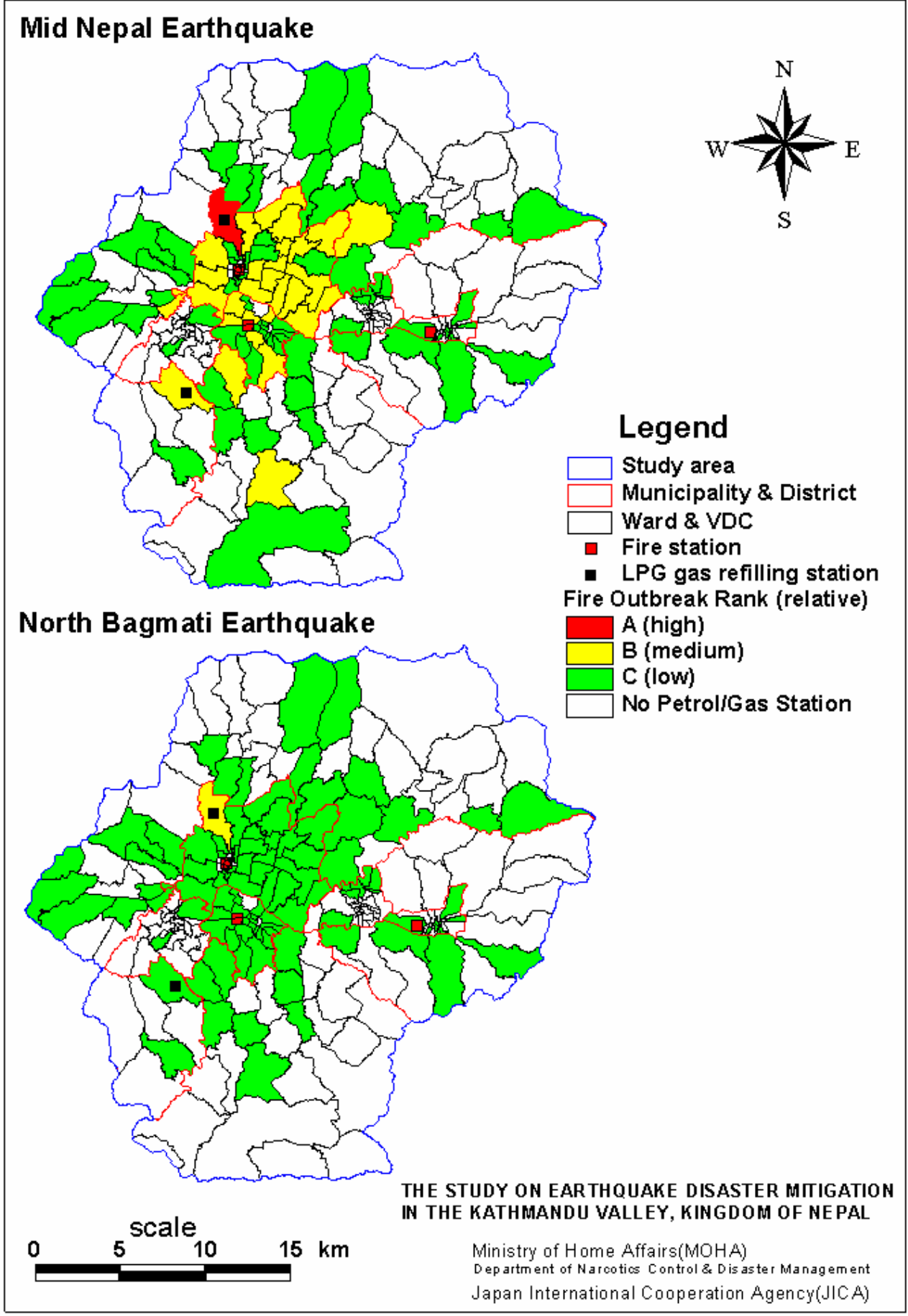


Figure 1.13.2 Fire Outbreak Rank by Petrol/ Gas Station

Kathmandu Earthquake Risk Mitigation Tool (KERMIT)

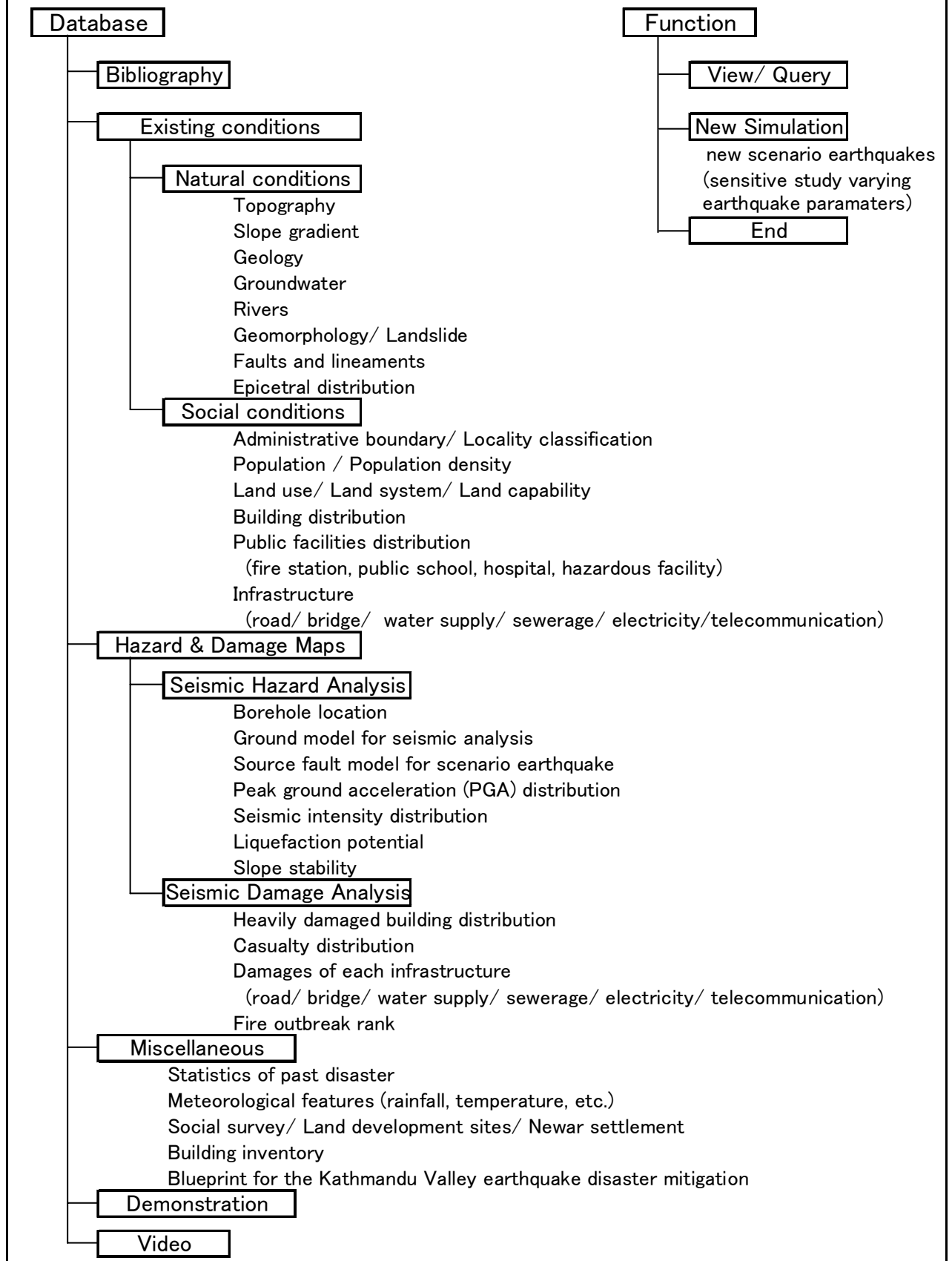


Figure 2.2.1 Design of the System

Mesh configuration (1)

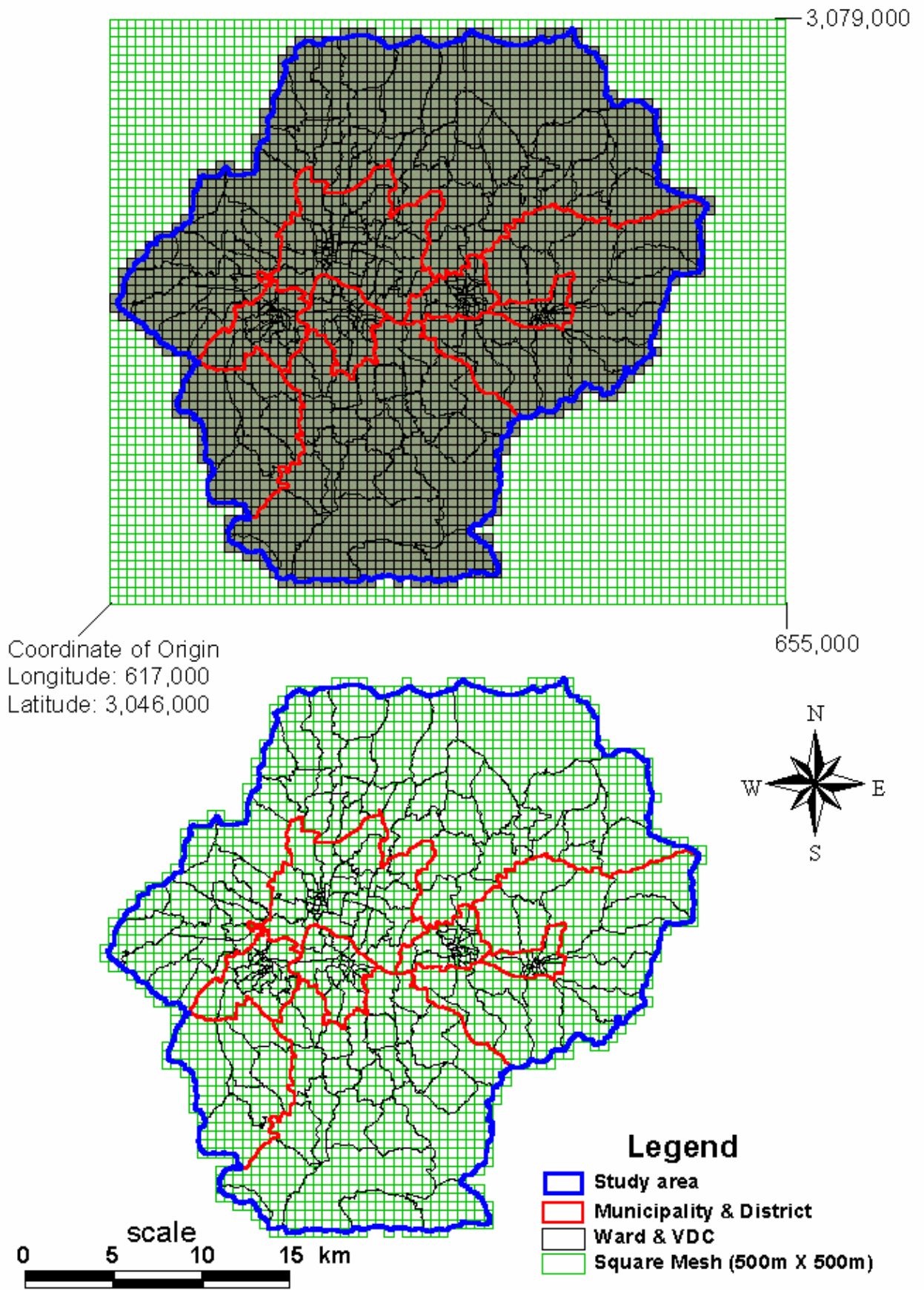


Figure 2.3.1 Mesh Configuration (1/2)

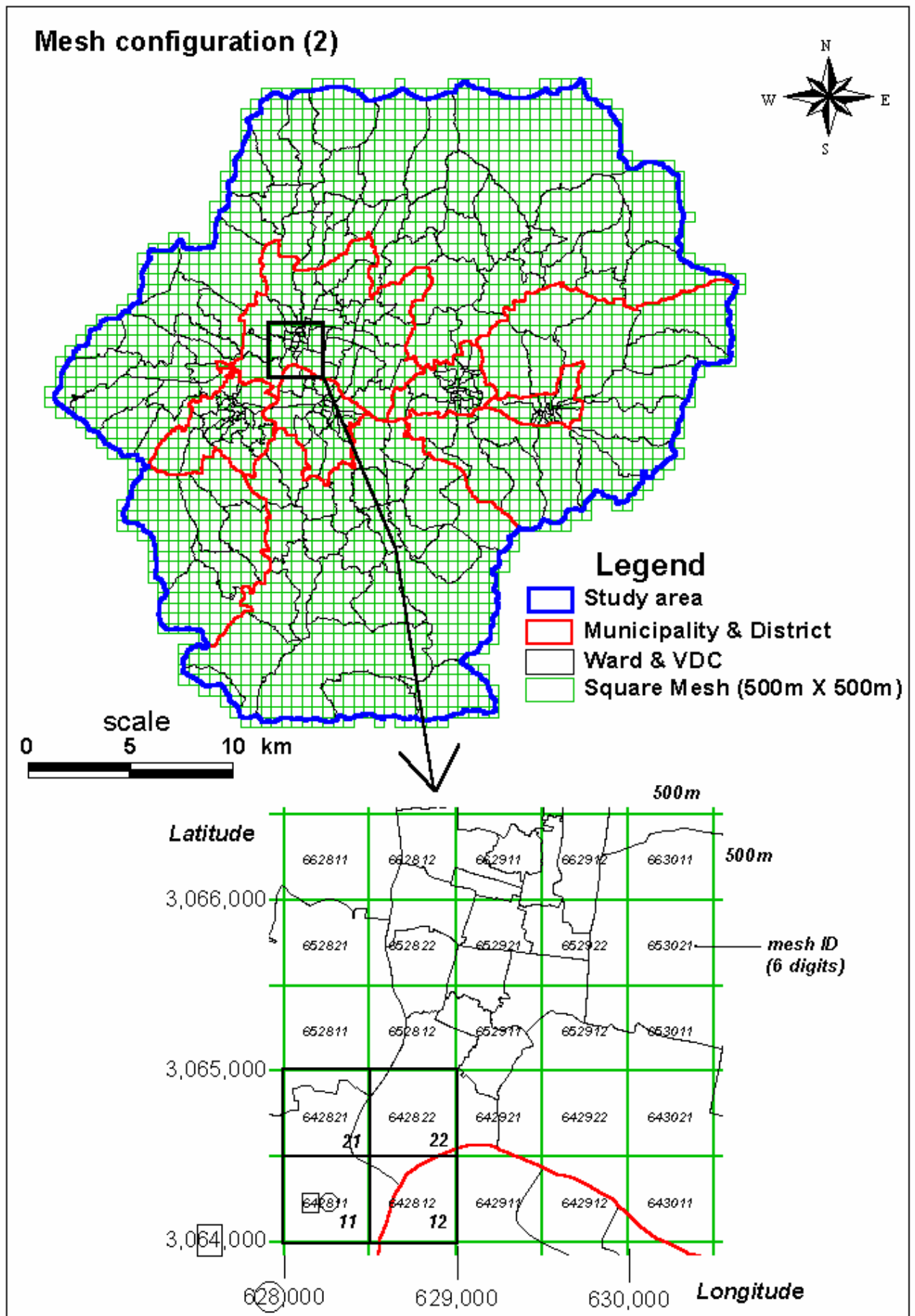


Figure 2.3.2 Mesh Configuration (2/2)