

# Report on Detailed Soil Survey and Land Use of 2A3E2q' and 2A3E6l Sub-watersheds of Lower Ganga Basin, P.S. Maheshpur and Pakuria of Pakur district and Rajmahal, Bario and Taljhari of Sahebganj District, Jharkhand

## Abstract

1. Survey area : 2A3E2q' and 2A3E6l Sub-watersheds of Lower Ganga Basin, P.S. Maheshpur and Pakuria of Pakur district and Rajmahal, Bario and Taljhari of Sahebganj District, Jharkhand.
2. Type of Survey : Detailed Soil Survey
3. Base map used : Cadastral map
4. Total area mapped : 9214 ha
5. Scale of map : 1: 3,960
6. Agro Climatic Region : Lower Gangetic Plain Region (III) as per planning commission (1989)
7. Period of Survey : Dec 2001 to June 2002.

## 8. Soil Series mapped and their area extent (Sub watershedwise)

| Sl. No.            | Name of Soil Series | No. of mapping units | Area<br>2A3E2q' | Area<br>2A3E6l | Total<br>area<br>(ha) | %            |
|--------------------|---------------------|----------------------|-----------------|----------------|-----------------------|--------------|
| 1.                 | Akrasol (AK)        | 4                    | 37              | -              | 37                    | 0.4          |
| 2.                 | Amdiha (AD)         | 2                    | -               | 23             | 23                    | 0.2          |
| 3.                 | Brindaban (BB)      | 3                    | -               | 174            | 174                   | 1.9          |
| 4.                 | Damanbandh (DB)     | 4                    | 282             | -              | 282                   | 3.1          |
| 5.                 | Devinagar (DN)      | 5                    | 179             | -              | 179                   | 2.0          |
| 6.                 | Gharchura (GC)      | 4                    | 29              | 1745           | 1774                  | 19.3         |
| 7.                 | Jobo (J)            | 5                    | 438             | 352            | 790                   | 8.6          |
| 8.                 | Khairbani (KB)      | 1                    | -               | 18             | 18                    | 0.2          |
| 9.                 | Lalchuan (LC)       | 3                    | 758             | -              | 758                   | 8.2          |
| 10.                | Nischinta (N)       | 3                    | -               | 84             | 84                    | 0.9          |
| 11.                | Paroria (PR)        | 6                    | 477             | 84             | 561                   | 6.1          |
| 12.                | Radhakisan (RK)     | 3                    | -               | 1776           | 1776                  | 19.3         |
| 13.                | Rajmahal (RM)       | 2                    | -               | 115            | 115                   | 1.2          |
| 14.                | Simuldahi (SD)      | 6                    | 871             | 111            | 982                   | 10.6         |
| 15.                | Taljhari (TJ)       | 2                    | -               | 378            | 378                   | 4.1          |
| 16.                | Tinpahar (TP)       | 5                    | 300             | 246            | 546                   | 5.9          |
| 17.                | Tulmi (TM)          | 4                    | -               | 125            | 125                   | 1.4          |
| 18.                | Misc.               |                      | 205             | 407            | 612                   | 6.6          |
| <b>Grand Total</b> |                     | <b>62</b>            | <b>3576</b>     | <b>5638</b>    | <b>9214</b>           | <b>100.0</b> |

## 9. Distribution of Area under Different Land Capability Classes

| Sl. No.            | Land Capability Class | Area 2A3E2q' | Area 2A3E6l | Area (ha)   | Percentage   |
|--------------------|-----------------------|--------------|-------------|-------------|--------------|
| 1.                 | II                    | 1499         | 2302        | 3801        | 41.3         |
| 2.                 | III                   | 832          | 940         | 1772        | 19.3         |
| 3.                 | IV                    | 883          | 177         | 1060        | 11.5         |
| 4.                 | VI                    | 128          | 67          | 195         | 2.1          |
| 5.                 | VII                   | 29           | 1745        | 1774        | 19.2         |
| 6.                 | Misc.                 | 205          | 407         | 612         | 6.6          |
| <b>Grand Total</b> |                       | <b>3576</b>  | <b>5638</b> | <b>9214</b> | <b>100.0</b> |

## 10. Sub-watershed wise Area (ha) under different Erosion Classes and their Percentage.

| Sl. No.            | Erosion Class                 | 2A3E2q'     | 2A3E6l      | Total Area  | Percentage   |
|--------------------|-------------------------------|-------------|-------------|-------------|--------------|
| 1.                 | None to slight                | 2307        | 2876        | 5183        | 56.3         |
| 2.                 | Moderate (e <sub>2</sub> )    | 1035        | 610         | 1645        | 17.8         |
| 3.                 | Severe (e <sub>3</sub> )      | 29          | 1745        | 1774        | 19.3         |
| 4.                 | Very Severe (e <sub>4</sub> ) | -           | -           | -           | -            |
| 5.                 | Misc.                         | 205         | 407         | 612         | 6.6          |
| <b>Grand Total</b> |                               | <b>3576</b> | <b>5638</b> | <b>9214</b> | <b>100.0</b> |

## 11. Salient Features of the area

- The survey area is dominated by very deep soils, covering an area 4636 ha (50.3%), followed by deep soils, 564 ha (6.2%), moderately deep soils 623 ha (6.8%), shallow soils 2750 ha (29.8%), and very shallow soils (0.3%) respectively.
- Very gently slope 4454 ha (48.3%) covers major area followed by gentle slope 2040 ha (22.2%). Hilly i.e. steep to very steep slope 1774 ha (19.3%) whereas nearly level occupies 334 ha (3.7%) of the total area.
- Survey area is partly affected by moderate erosion 1645 ha (17.8%) and severe erosion 1774 ha (19.3%).
- Only 5183 ha (56.3%) of survey area is terraced and is under paddy cultivation.
- Only 378 ha (4.1%) area is under seasonal water logging.
- Nearly 3801 ha (41.8%) area is potentially good with minor limitations which can be used for wide variety of crops.