

# **Report on prioritisation of micro-watersheds in Dikrang Sub-catchment (3A4A1-3 watersheds) of Brahmaputra Basin (FPR) in Papum Pare district of Arunachal Pradesh, Lakhimpur and Shibsagar district of Assam**

## **Abstract**

1. Survey area : Dikrang Sub-catchment (3A4A) of Brahmaputra basin in district Papum Pare of Arunachal Pradesh Lakhimpur and Shibsagar district of Assam
2. Total area Surveyed and mapped : 1, 61,731 ha
3. Location : 26<sup>0</sup> 52' to 27<sup>0</sup> 22' N Latitude  
93<sup>0</sup> 13' 30" to 94<sup>0</sup> 01' E Longitude
4. Agroclimatic Region : Eastern Himalayan Region (II) as per planning commission (1989)
5. Kind of Survey : Rapid Reconnaissance Survey for priority delineation
6. Period of Survey : February to March, 2004
7. Base material used : Topographical maps of Survey of India in the scale of 1: 50,000

**8. State and Districtwise distribution of area under different Runoff Potential Mapping Units**

| Sl. No. | RPMU | Assam     |           |       | Arunachal Pradesh | Total area(ha) |
|---------|------|-----------|-----------|-------|-------------------|----------------|
|         |      | Lakhimpur | Shibsagar | Total | Papum Pare        | %              |
| 1       | A01  | 2135      | 254       | 2389  | 592               | 2981(1.84)     |
| 2       | A02  | 190       | -         | 190   | 264               | 454(0.28)      |
| 3.      | A03  | 175       | -         | 175   | 2523              | 2698(1.67)     |
| 4.      | A04  | 307       | -         | 307   | 2227              | 2534(1.57)     |
| 5.      | A05  | 23629     | -         | 23629 | 8                 | 23637(14.62)   |
| 6.      | A06  | 2274      | -         | 2274  | -                 | 2274(1.41)     |
| 7.      | A07  | 1553      | -         | 1553  | -                 | 1553(0.96)     |
| 8.      | A08  | 18        | -         | 18    | 2324              | 2342(1.45)     |
| 9.      | A09  | 1105      | -         | 1105  | 14                | 1119(0.69)     |
| 10.     | A10  | 640       | -         | 640   | -                 | 640(0.40)      |
| 11.     | A11  | 399       | -         | 399   | -                 | 399(0.25)      |
| 12.     | C01  | -         | -         | -     | 652               | 652(0.40)      |
| 13.     | C02  | -         | -         | -     | 489               | 489(0.30)      |
| 14.     | C03  | -         | -         | -     | 24457             | 24457(15.12)   |
| 15.     | C04  | -         | -         | -     | 24427             | 24427(15.10)   |
| 16.     | C05  | -         | -         | -     | 19198             | 19198(11.87)   |
| 17.     | C06  | -         | -         | -     | 2177              | 2177(1.35)     |
| 18.     | C07  | -         | -         | -     | 3200              | 3200(1.98)     |

| Sl. No.            | RPMU               | Assam        |            |              | Arunachal Pradesh | Total area(ha)     |
|--------------------|--------------------|--------------|------------|--------------|-------------------|--------------------|
|                    |                    | Lakhimpur    | Shibsagar  | Total        | Papum Pare        | %                  |
| 19.                | S01                | -            | -          | -            | 761               | 761(0.47)          |
| 20.                | S02                | 149          | -          | 149          | 831               | 980(0.61)          |
| 21.                | S03                | 28           | -          | 28           | 8698              | 8726(5.40)         |
| 22.                | S04                | 68           | -          | 68           | 11235             | 11303(6.99)        |
| 23.                | S05                | -            | -          | -            | 13494             | 13494(8.34)        |
| 24.                | S06                | 303          | -          | 303          | 4552              | 4855(3.00)         |
| 25.                | S07                | -            | -          | -            | 1765              | 1765(1.09)         |
| 26.                | HA<br>(Habitation) | 183          | -          | 183          | 1693              | 1876(1.16)         |
| 27.                | RI(River)          | 2065         | 147        | 2212         | 528               | 2740(1.69)         |
| <b>Grand Total</b> |                    | <b>35221</b> | <b>401</b> | <b>35622</b> | <b>126109</b>     | <b>161731(100)</b> |

### 9. Priority Categorisation

| Sl. No.            | Priority Category & Range | No. of Microwatersheds | Area in ha.   | Area (%)      |
|--------------------|---------------------------|------------------------|---------------|---------------|
| 1.                 | Very High (above75)       | 49                     | 26716         | 16.52         |
| 2.                 | High(71-75)               | 101                    | 55142         | 34.09         |
| 3.                 | Medium(66-70)             | 62                     | 32420         | 20.05         |
| 4.                 | Low(61-65)                | 25                     | 11932         | 7.38          |
| 5.                 | Very Low (Below 61)       | 45                     | 35521         | 21.96         |
| <b>Grand Total</b> |                           | <b>282</b>             | <b>161731</b> | <b>100.00</b> |

### 10. State and Districtwise Priority Categorisation

| Sl. No.            | Priority Category & Range | Assam        |            | Total        | Arunachal Pradesh<br>PapumPare | Area (ha)<br>Total Assam & Arunachal Pradesh | Area %     |
|--------------------|---------------------------|--------------|------------|--------------|--------------------------------|--|------------|
|                    |                           | Lakhimpur    | Shibsagar  |              |                                |  |            |
| 1.                 | Very High (above75)       | 163          | -          | 163          | 26553                          | 26716  | 16.52      |
| 2.                 | High (71-75)              | 177          | -          | 177          | 54965                          | 55142  | 34.09      |
| 3.                 | Medium (66-70)            | 148          | -          | 148          | 32272                          | 32420  | 20.05      |
| 4.                 | Low (61-65)               | 826          | -          | 826          | 11106                          | 11932  | 7.38       |
| 5.                 | Very Low (below 61)       | 33907        | 401        | 34308        | 1213                           | 35521  | 21.96      |
| <b>Grand Total</b> |                           | <b>35221</b> | <b>401</b> | <b>35621</b> | <b>126109</b>                  | <b>161731</b>                                | <b>100</b> |

## 11. Salient features

- ❖ Total area of the Dikrang Sub-catchment is 161731 ha distributed over 282 micro-watersheds.
- ❖ An area of 26716 ha (16.52%) is under very high priority distributed over 49 micro-watersheds.
- ❖ An area of 55142 ha (34.09%) is under high priority distributed over 101 micro-watersheds.
- ❖ Total 150 micro watersheds are under very high & high priority, constituting 81858 ha (50.61%) which need immediate attention for suitable Soil-water conservation programme.
- ❖ An area of about 17190 ha (10.63%) is under Jhum/ shifting cultivation which needs immediate attention for alternative to shifting cultivation practices.
- ❖ Moderate to Severely eroded land occupies 45254 ha (27.98%) and severely eroded land occupies 1765 ha (1.09%) which needs proper Soil-water conservation practices.
- ❖ About 41.64% area of the sub-catchment is poorly managed while 34.94% area is under unmanaged.
- ❖ An Integrated watershed management programme should be adopted in 150 micro-watersheds which constitutes 81858 ha (50.61%) area to check the devastating flood in the lower sub-catchment.