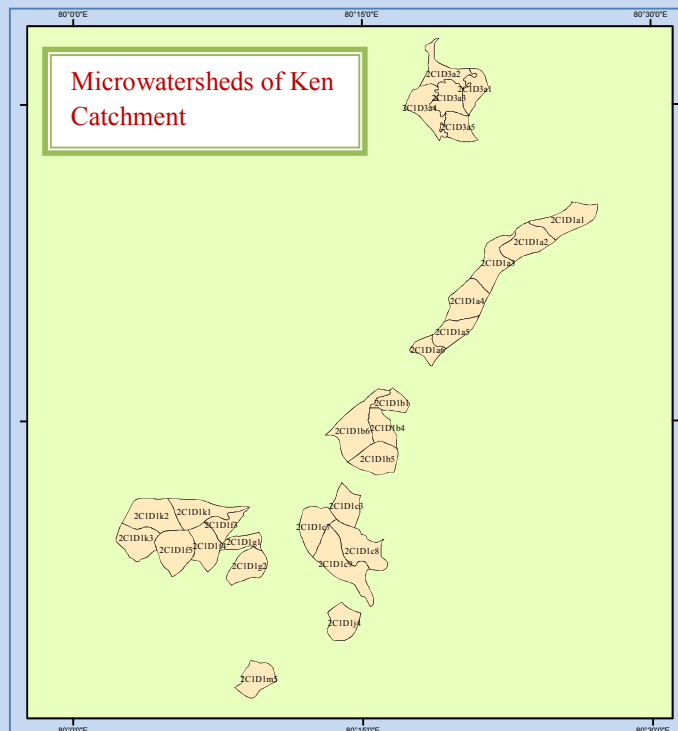


Detailed Soil Survey and Land Use Plan of 2C1D1a1 to a6, b1, b4 to b6, c3, c7 to c9, f3 to f5, g1, g2, j4, k1 to k3, m5 and 2C1D3a1 to a5 Microwatersheds in Right Bank & Left Bank, Lower Ken Subcatchment, Ken FPR Catchment, Tehsil- Ajaigarh, Gourihar, Loundi & Rajnagar, District- Chhatarpur & Panna, Madhya Pradesh and Tehsil- Naraini, District- Banda, Uttar Pradesh



Noida Centre



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LIST OF OLD AND NEW MICROWATERSHED'S CODES

S. no.	Old Microwatersheds	New Microwatersheds
1.	2C1B6a1	2C1D1a1
2.	2C1B6a2	2C1D1a2
3.	2C1B6a3	2C1D1a3
4.	2C1B6a4	2C1D1a4
5.	2C1B6a5	2C1D1a5
6.	2C1B6a6	2C1D1a6
7.	2C1B6b1	2C1D1b1
8.	2C1B6b4	2C1D1b4
9.	2C1B6b5	2C1D1b5
10.	2C1B6b6	2C1D1b6
11.	2C1B6c3	2C1D1c3
12.	2C1B6c7	2C1D1c7
13.	2C1B6c8	2C1D1c8
14.	2C1B6c9	2C1D1c9
15.	2C1B6f3	2C1D1f3
16.	2C1B6f4	2C1D1f4
17.	2C1B6f5	2C1D1f5
18.	2C1B6g1	2C1D1g1
19.	2C1B6g2	2C1D1g2
20.	2C1B6j4	2C1D1j4
21.	2C1B6k1	2C1D1k1
22.	2C1B6k2	2C1D1k2
23.	2C1B6k3	2C1D1k3
24.	2C1B6m5	2C1D1m5
25.	2C1B5a1	2C1D3a1
26.	2C1B5a2	2C1D3a2
27.	2C1B5a3	2C1D3a3
28.	2C1B5a4	2C1D3a4
29.	2C1B5a5	2C1D3a5

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केन (FPR) जलग्रहण, लोअर केन जल प्रकल्प क्षेत्र, दायाँ किनारा एवं बायाँ किनारा, तहसील- अजयगढ़, गौरिहर, लौन्दी एवं राजनगर, जिला- छतरपुर एवं पन्ना और तहसील- नरेनी, जिला- बांदा, उत्तर प्रदेश में 2C1D1a1 से a6, b1, b4 से b6, c3, c7 से c9, f3 से f5, g1, g2, j4, k1 से k3, m5 और 2C1D3a1 से a5 तक सूक्ष्म जलग्रहण क्षेत्रों की विस्तृत मृदा सर्वेक्षण एवं भू उपयोग योजना

सारांश

१. सर्वेक्षित क्षेत्र : केन (FPR) जलग्रहण, लोअर केन जल प्रकल्प क्षेत्र, दायाँ किनारा एवं बायाँ किनारा में 2C1D1a1 से a6, b1, b4 से b6, c3, c7 से c9, f3 से f5, g1, g2, j4, k1 से k3, m5 और 2C1D3a1 से a5 तक सूक्ष्म जलग्रहण क्षेत्र
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३. सर्वेक्षण के प्रकार : विस्तृत मृदा सर्वेक्षण
४. प्रयुक्त आधार मानचित्र : उच्च संकल्प उपग्रह चित्रण
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७. सर्वेक्षण की अवधि : मई, २०१३ से जून, २०१३
८. नक्शे के पैमाने : १:१२,५००

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कं. सं.	मृदा श्रेणी	मृदा मानचित्र इकाइयों की संख्या	क्षेत्रफल (हे.)	क्षेत्रफल (%)
१.	बमिठा	६	२३८३	१०.०४
२.	देवरा	३	३३३९	१४.०७
३.	हरबंसपुर	१	३०५	१.२९
४.	हराई	३	३०८	१.३०
५.	जागरी	६	१९६४	८.२८
६.	खजुराहो	५	३७६०	१५.८५
७.	मोहना	७	७१२९	३०.०४
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१०.	मिश्रित उपयोग वाली भूमियाँ	-	६२२	२.६२
कुल योग		३७	२३,७२९	१००.००

विभिन्न मृदा गहराई के अन्तर्गत क्षेत्र का वर्गीकरण

कं. सं.	मृदा गहराई वर्ग	क्षेत्रफल (हे.)	क्षेत्रफल (%)
१.	उथली (d2)	६१४३	२५.८९
२.	मध्य गहरी (d3)	२४५३	१०.३४
३.	गहरी (d4)	३०८	१.३०
४.	अति गहरी (d5)	१२,७३७	५३.६८
५.	जल क्षेत्र	१४६६	६.१८
६.	मिश्रित उपयोग वाली भूमियाँ	६२२	२.६२
कुल योग		२३,७२९	१००.००

विभिन्न मृदा अपरदन के अन्तर्गत क्षेत्र का वर्गीकरण

कं. सं.	मृदा अपरदन वर्ग	क्षेत्रफल (हे.)	क्षेत्रफल (%)
१.	अल्प अपरदन (e1)	८७०	३.६७
२.	मध्यम अपरदन (e2)	१०,४८७	४४.१९
३.	तीक्ष्ण अपरदन (e3)	८८०५	३७.११
४.	अति तीक्ष्ण अपरदन (e4)	१४७९	६.२३
५.	जल क्षेत्र	१४६६	६.१८
६.	मिश्रित उपयोग वाली भूमियाँ	६२२	२.६२
कुल योग		२३,७२९	१००.००

विभिन्न भूमि क्षमता वर्ग के अन्तर्गत क्षेत्र का वर्गीकरण

कं. सं.	भूमि क्षमता वर्ग	क्षेत्रफल (हे.)	क्षेत्रफल (%)
१.	II	५३२८	२२.४६
२.	III	५१२८	२१.६१
३.	IV	३४२६	१४.१४
४.	VI	३८५९	१६.२६
५.	VII	२७८	१.१७
६.	वन क्षेत्र	३६२२	१५.२६
७.	जल क्षेत्र	१४६६	६.१८
८.	मिश्रित उपयोग वाली भूमियाँ	६२२	२.६२
कुल योग		२३,७२९	१००.००

सर्वेक्षण क्षेत्र के मुख्य बिन्दु

- १३,०३५ हे. (५४.९८ %) क्षेत्र “गहरी” से “अति गहरी” मृदा गहराई के अन्तर्गत है।
- ६,१४३ हे. (२५.८९ %) क्षेत्र में “उथली” मृदा गहराई है।
- १०,२८४ हे. (४३.३४ %) क्षेत्र “तीक्ष्ण” से “अति तीक्ष्ण” अपरदन के अन्तर्गत है और तुरन्त एकीकृत मृदा संरक्षण के अपनाने की आवश्यकता है।
- १०,४५६ हे. (४४.०७ %) क्षेत्र कृषि/ अनाज आधारित फसल के लिए उपयुक्त है।
- ७,५६३ हे. (३१.५७ %) क्षेत्र कृषि- बागवानी या चारागाह के अन्तर्गत लाया जा सकता है।

Detailed Soil Survey and Land Use Plan of 2C1D1a1 to a6, b1, b4 to b6, c3, c7 to c9, f3 to f5, g1, g2, j4, k1 to k3, m5 and 2C1D3a1 to a5 Microwatersheds in Right Bank & Left Bank, Lower Ken Subcatchment, Ken FPR Catchment, Tehsil- Ajaigarh, Gourihar, Loundi & Rajnagar, District- Chhatarpur & Panna, Madhya Pradesh and Tehsil- Naraini, District- Banda, Uttar Pradesh

Abstract

1. **Survey area** : 2C1D1a1 to a6, b1, b4 to b6, c3, c7 to c9, f3 to f5, g1 to g2, j4, k1 to k3, m5 and 2C1D3a1 to a5 Microwatersheds, RB & LB, Lower Ken Subcatchment, Ken FPR Catchment
2. **Geographical Location** : Lies between 24° 47' to 25° 19' N Latitude and between 80° 02' to 80°27' E Longitude
3. **Type of Survey** : Detailed Soil Survey
4. **Base map used** : High Resolution Satellite Imagery
5. **Total area mapped** : 23, 729 ha
6. **Agro Climatic Zone** : VIII- Central Plateau & Hill Region
7. **Period of Survey** : May, 2103 to June, 2013
8. **Scale of map** : 1:12,500 Scale

Names of Soil Series and their Extent

S.no.	Soil Series	No. of Mapping Units	Area (ha)	Area (%)
1.	Bamitha (B)	6	2383	10.04
2.	Devra (D)	3	3339	14.07
3.	Harbanspur (HB)	1	305	1.29
4.	Harrai (HR)	3	308	1.30
5.	Jagri (J)	6	1964	8.28
6.	Khajuraho (KH)	5	3760	15.85
7.	Mohana (M)	7	7129	30.04
8.	Satna (S)	6	2453	10.34
9.	Water Bodies	-	1466	6.18
10.	Misc. Lands	-	622	2.62
TOTAL		37	23,729	100.00

Distribution of Area under different Depth Class

S. no.	Soil Depth Class	Area (ha)	Area (%)
1.	Shallow (d2)	6143	25.89
2.	Moderately deep (d3)	2453	10.34
3.	Deep (d4)	308	1.30
4.	Very deep (d5)	12, 737	53.68
5.	Water Bodies	1466	6.18
6.	Misc. Lands	622	2.62
	Total	23,729	100.00

Distribution of Area under different Soil Erosion Class

S. no.	Erosion Class	Area (ha)	Area (%)
1.	None to slight erosion (e1)	870	3.67
2.	Moderate erosion (e2)	10, 487	44.19
3.	Severe erosion (e3)	8805	37.11
4.	Very Severe erosion (e4)	1479	6.23
5.	Water Bodies	1466	6.18
6.	Misc. Lands	622	2.62
	Total	23,729	100.00

Distribution of Area under different Land Capability Class

S. no.	Land Capability Class	Area (ha)	Area (%)
1.	II	5328	22.46
2.	III	5128	21.61
3.	IV	3426	14.14
4.	VI	3859	16.26
5.	VII	278	1.17
6.	Forest	3622	15.26
7.	Water Bodies	1466	6.18
8.	Misc. Lands	622	2.62
	Total	23,729	100.00

Salient Features of the Area:

- 13,045 ha (54.98 %) area is covered by deep to very deep soils.
- 6,143 ha (25.89 %) area has shallow soils.
- 10,284 ha (43.34 %) area is subjected to severe to very severe erosion and thus urgently required integrated soil conservation.
- 10,456 ha (44.07 %) area is suitable for agriculture/ cereal based cropping system.
- 7,563 ha (31.57 %) area may be brought under Agro-horticulture or Silvi pastoral system.

HOW TO USE SOIL SURVEY REPORT

The present report furnishes a detailed account of various soil and land characteristics of the surveyed area like physiography, relief, geology, climate, natural vegetation, land use and soil morphology. Detailed description of soil series recognized in the area and interpretation of different soil mapping units for various applied aspects of agricultural development, such as land use planning, soil and water management, soil conservation, are given in relevant chapters. Different problems of the area have been depicted and corrective measures have also been suggested.

In order to use the report, the user will locate the area of his interest on the soil map appended to the report. On the map, each soil mapping unit has been delineated and represented by symbolic expression. The abbreviated symbol of the mapping unit reflects information about the name of soil series, soil depth, surface texture, land slope, gradient erosion status and surface features like gravelliness, stoniness and rockiness. The soil mapping unit is demarcated as **B2dD3SR** where ‘**B**’ represents for Bamitha soil series, ‘**2**’ for shallow soil depth, ‘**d**’ for gravelly sandy loam surface texture, ‘**D**’ for moderate sloping (5-10%), ‘**3**’ for severe water erosion, ‘**S**’ for slight stoniness and ‘**R**’ for slight rockiness.

The detailed soil mapping units, their description and multipurpose interpretative groupings have been shown in **Annexure- I** (Guide to Soil Mapping Units). The Differentiating Morphological Characteristics of Soil Series are furnished in **Table: 5** and the Morphological Description of Soil Series is described in **Annexure- II**. Village wise mapping units along with their area extent, present land use and management status are given in **Annexure- III**. An analytical method is described in **Annexure- IV**. The Glossary of scientific terms used in this report is given in **Annexure- V**. The symbols used in the report are also illustrated in **Annexure- VI** and contributors in **Annexure- VII**.

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