

**Report on Detailed Soil and Land Use Survey of  
4E4A3c, A4a, C3c, C3d, C3f and C3h  
Sub-watersheds of Jayakwadi catchment (RVP),  
Taluka- Newasa, Distt- Ahmadnagar and Taluka-  
Gangapur, Distt- Aurangabad (Maharashtra)**

**Nagpur Centre**

**SOIL AND LAND USE SURVEY OF INDIA  
(Department of Agriculture & Cooperation)  
Ministry of Agriculture  
Government of India  
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**Report on Detailed Soil and Land Use Survey of 4E4A3c, A4a, C3c, C3d, C3f and C3h, Sub-watersheds of Jayakwadi catchment (RVP), Taluka-Newasa, Distt- Ahmadnagar and Taluka-Gangapur, Distt- Aurangabad (Maharashtra)**

**ABSTRACT**

1. Survey Area : Report on Detailed Soil and Land Use Survey of 4E4A3c, A4a, C3c, C3d, C3f and C3h, Sub-watersheds of Jayakwadi catchment (RVP), Taluka- Newasa, Distt- Ahmadnagar and Taluka- Gangapur, Distt- Aurangabad (Maharashtra)
2. Total Area Mapped and Reported : 23,689 ha
3. Base map used :
  1. Aerial photographs on 1: 20,000 Scale
  2. Cadastral maps on 1: 4,000 Scale
  3. Google map on 1:12500
4. Geographical Location :
  - I) 4E4A3c, 4E4A4a 74<sup>0</sup>-55' to 75<sup>0</sup>-02' E, longitude  
19<sup>0</sup>-25' to 19<sup>0</sup>-37' N, latitude
  - II) 4E4C3c, C3d, C3f and 4E4C3h 74<sup>0</sup>-59' to 75<sup>0</sup>-11' E, longitude  
19<sup>0</sup>-38' to 19<sup>0</sup>-59' N, latitude
5. Kind of Survey : Detailed Soil Survey
6. Period of Survey : April 2012 to May 2012
7. Agro climatic Zone : Western plateau & hill region (Region No.09)

8. Micro-watershed wise distribution of soil series and their extent of area (ha).

Series Name	Area	4E4A3c3	4E4A3c4	4E4A4a1	4E4A4a2	4E4C3d1	4E4C3d2	4E4C3d3	4E4C3d4	4E4C3d5	4E4C3d6	4E4C3f1	4E4C3f7	4E4C3h1	4E4C3h2	4E4C3h3	4E4C3h4	4E4C3h5	4E4C3h6
Ambeloid	167	0	0	0	0	0	0	8	0	0	87	0	72	0	0	0	0	0	0
Balanagar	810	0	0	210	240	0	0	0	0	0	0	360	0	0	0	0	0	0	0
Hingangaon	1211	0	0	404	807	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jambhali	5709	53	52	0	0	12	346	91	106	242	69	0	602	558	585	697	207	892	1197
Lakhegaon	5624	25	73	0	0	665	388	415	490	134	138	797	989	246	295	32	0	266	671
Nilisgaon	2667	504	525	0	0	0	262	228	125	396	186	0	51	0	0	181	96	65	48
Padali	226	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	0	192
Wava	6116	628	691	0	0	151	752	696	143	423	257	0	576	102	355	501	219	292	330
Misc.	1159	36	14	44	33	9	31	15	0	20	50	85	87	15	24	164	232	56	244
<b>Total</b>	<b>23689</b>	<b>1246</b>	<b>1355</b>	<b>658</b>	<b>1080</b>	<b>837</b>	<b>1779</b>	<b>1453</b>	<b>864</b>	<b>1215</b>	<b>787</b>	<b>1242</b>	<b>2377</b>	<b>921</b>	<b>1259</b>	<b>1609</b>	<b>754</b>	<b>1571</b>	<b>2682</b>
<b>Percentage</b>	<b>100</b>	<b>5.3</b>	<b>5.7</b>	<b>2.8</b>	<b>4.6</b>	<b>3.5</b>	<b>7.5</b>	<b>6.1</b>	<b>3.6</b>	<b>5.1</b>	<b>3.3</b>	<b>5.2</b>	<b>10.0</b>	<b>3.9</b>	<b>5.3</b>	<b>6.8</b>	<b>3.2</b>	<b>6.6</b>	<b>11.3</b>

9. Micro-watershed wise Distribution of Area under various Land Capability units (LCU):

Land Capability Unit	Area	4E4A3c3	4E4A3c4	4E4A4a1	4E4A4a2	4E4C3d1	4E4C3d2	4E4C3d3	4E4C3d4	4E4C3d5	4E4C3d6	4E4C3f1	4E4C3f7	4E4C3h1	4E4C3h2	4E4C3h3	4E4C3h4	4E4C3h5	4E4C3h6
Ile-1	35	0	0	17	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0
Ile-2	109	0	0	67	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iles-1	7442	4	18	154	310	116	587	338	298	310	125	416	782	585	596	487	148	968	1200
IIle-1	235	0	0	56	65	0	0	0	0	0	0	114	0	0	0	0	0	0	0
IIles-1	2708	0	0	0	81	208	90	168	179	35	82	147	255	219	284	206	59	240	455
IIles-2	3958	519	574	0	0	118	418	347	123	245	139	0	380	0	181	302	167	196	249
IIles-3	2049	0	0	0	0	33	334	357	20	178	205	0	268	102	174	199	52	46	81
IIIs-1	226	109	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IIs-1	649	49	34	0	0	348	57	0	119	0	0	6	0	0	0	36	0	0	0
IIs-2	1795	25	73	250	416	5	0	0	0	31	0	228	554	0	0	0	0	0	213
IVe-1	431	0	0	70	133	0	0	0	0	0	0	228	0	0	0	0	0	0	0
IVes-1	1051	324	258	0	0	0	102	110	0	69	13	0	36	0	0	57	0	16	66
IVes-2	1758	158	215	0	0	0	160	118	125	327	173	0	15	0	0	158	96	49	164
Vles-1	84	22	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Misc.	1159	36	14	44	33	9	31	15	0	20	50	85	87	15	24	164	232	56	244
<b>Total</b>	<b>23689</b>	<b>1246</b>	<b>1355</b>	<b>658</b>	<b>1080</b>	<b>837</b>	<b>1779</b>	<b>1453</b>	<b>864</b>	<b>1215</b>	<b>787</b>	<b>1242</b>	<b>2377</b>	<b>921</b>	<b>1259</b>	<b>1609</b>	<b>754</b>	<b>1571</b>	<b>2682</b>
<b>Percentage</b>	<b>100</b>	<b>5.3</b>	<b>5.7</b>	<b>2.8</b>	<b>4.6</b>	<b>3.5</b>	<b>7.5</b>	<b>6.1</b>	<b>3.6</b>	<b>5.1</b>	<b>3.3</b>	<b>5.2</b>	<b>10.0</b>	<b>3.9</b>	<b>5.3</b>	<b>6.8</b>	<b>3.2</b>	<b>6.6</b>	<b>11.3</b>

**10. Micro-watershed wise Distribution of Area under various Erosion Class:**

Erosion	Area	4E4A3c3	4E4A3c4	4E4A4a1	4E4A4a2	4E4C3d1	4E4C3d2	4E4C3d3	4E4C3d4	4E4C3d5	4E4C3d6	4E4C3f1	4E4C3f7	4E4C3h1	4E4C3h2	4E4C3h3	4E4C3h4	4E4C3h5	4E4C3h6
none to slight erosion (e1)	3868	183	224	250	416	353	57	0	119	31	0	234	682	204	108	175	44	419	369
moderate erosion (e2)	18147	1005	1065	294	498	475	1691	1438	745	1164	737	695	1608	702	1127	1270	478	1096	2059
severe erosion (e3)	515	22	52	70	133	0	0	0	0	0	0	228	0	0	0	0	0	0	10
Misc.	1159	36	14	44	33	9	31	15	0	20	50	85	87	15	24	164	232	56	244
<b>Total</b>	<b>23689</b>	<b>1246</b>	<b>1355</b>	<b>658</b>	<b>1080</b>	<b>837</b>	<b>1779</b>	<b>1453</b>	<b>864</b>	<b>1215</b>	<b>787</b>	<b>1242</b>	<b>2377</b>	<b>921</b>	<b>1259</b>	<b>1609</b>	<b>754</b>	<b>1571</b>	<b>2682</b>
Percentage	100	5.3	5.7	2.8	4.6	3.5	7.5	6.1	3.6	5.1	3.3	5.2	10.0	3.9	5.3	6.8	3.2	6.6	11.3

## 11. Salient features:

- Out of the total surveyed area of 23,689 ha, About 32.3 % (7,645 ha) is under very deep soils, 24.1 % (5,709 ha) is under deep soils, 26.5 % (6,283 ha) is under moderate deep soils, and 12.2 % (2,893 ha) is under shallow soils..
  
- Regarding different slope phases 30.9 % ( 7,324 ha) of total reported area occurs on gently sloping land, 47.9 % ( 11,338 ha) of total reported area occurs on Very gently sloping land and rest of the area is under nearly level or terraced land..
  
- About 76.6 % land (18,147 ha) of the total area suffers from moderate soil erosion hazard and 2.2 % ( 515 ha) of total area suffers from severe erosion class however these two areas needs immediate attention from soil conservation point of view.