



Research article

Machine learning-based LULC change detection and environmental implications in Bankura, West Bengal, India

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Table S1. Distribution aerial coverage in km² in the year of 1990.

	AG	DF	OF	BL	WB	BU	SS	Area
ML	4441.1	676.3	434.5	208.1	303	803	93	6959
RF	4451.1	686.2	445.3	212.2	330.2	766	68	6959
SVM	4446.2	680.3	437.3	190.8	309	800.3	95.1	6959
Average	4446.1	680.9	439.0	203.7	314.0	789.7	85.3	
SD (±)	5.0	5.0	5.6	11.4	14.3	20.6	15.1	
CV	0.1	0.7	1.3	5.6	4.6	2.6	17.7	

Note: Agriculture crop and fallow land (AG), Dense Forest (DF), Open Forest (OF), Barren land (BL), Water body (WB), Built-up area (BU) and Sandy soil (SS), Standard deviation (SD), and Coefficient of variance (CV).

Table S2. Distribution aerial coverage in km² in the year 2000.

	AG	DF	OF	BL	WB	BU	SS	Area
ML	4320.1	654.2	456.2	221.2	302.2	910.1	95	6959
RF	4420.1	664.2	466.2	226.3	328.3	781.9	72	6959
SVM	4336.2	660.2	460.5	198.7	304.3	903.1	96	6959
Average	4358.8	659.5	460.9	215.4	311.6	865.03	87.6	
SD (±)	53.7	5.0	5.0	14.7	14.5	72.1	13.6	
CV	1.2	0.8	1.1	6.8	4.7	8.3	15.5	

Note: Agriculture crop and fallow land (AG), Dense Forest (DF), Open Forest (OF), Barren land (BL), Water body (WB), Built-up area (BU) and Sandy soil (SS), Standard deviation (SD), and Coefficient of variance (CV).

Table S3. Distribution aerial coverage in km² in the year 2010.

	AG	DF	OF	BL	WB	BU	SS	Area
ML	4290.1	638.1	470.2	224.4	301.5	938.4	96.3	6959
RF	4410.1	661.2	468.1	228.2	326.1	788.3	77	6959
SVM	4300.1	640.1	481.2	201.4	302.5	936.4	97.3	6959
Average	4333.43	646.467	473.167	218	310.033	887.7	90.2	
SD (±)	66.6	12.8	7.0	14.5	13.9	86.1	11.4	
CV	1.5	2.0	1.5	6.7	4.5	9.7	12.7	

Note: Agriculture crop and fallow land (AG), Dense Forest (DF), Open Forest (OF), Barren land (BL), Water body (WB), Built-up area (BU) and Sandy soil (SS), Standard deviation (SD), and Coefficient of variance (CV).

Table S4. Distribution Aerial coverage in km² in the year of 2024.

	AG	DF	OF	BL	WB	BU	SS	Area
ML	4286.6	636.1	472.2	228.7	301.2	938.1	96.1	6959
RF	4408.1	660.2	474.1	230.2	301.2	797.2	88	6959
SVM	4266.6	618.3	502.6	226.8	298.1	948.4	98.2	6959
Average	4320.43	638.2	482.967	228.567	300.167	894.567	94.1	
SD ($\pm$)	76.6	21.0	17.0	1.7	1.8	84.5	5.4	
CV	1.8	3.3	3.5	0.7	0.6	9.4	5.7	

Note: Agriculture crop and fallow land (AG), Dense Forest (DF), Open Forest (OF), Barren land (BL), Water body (WB), Built-up area (BU) and Sandy soil (SS), Standard deviation (SD), and Coefficient of variance (CV).



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