



## Correction to: The interrelationship between LST, NDVI, NDBI, and land cover change in a section of Lagos metropolis, Nigeria

Alfred S. Alademomi<sup>1,2,3</sup> · Chukwuma J. Okolie<sup>1,2,3</sup> · Olagoke E. Daramola<sup>1,2</sup> · Samuel A. Akinnusi<sup>1,2</sup> · Elias Adediran<sup>1,2</sup> · Hamed O. Olanrewaju<sup>1,2</sup> · Abiodun O. Alabi<sup>1,2</sup> · Tosin J. Salami<sup>1,2</sup> · Joseph Odumosu<sup>2,4</sup>

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This article was inadvertently published shortly after the initial submission of correction. There had been a correction in Eq. 3 and Tables 8, 9, 10 when the whole team of authors finalized the corrections. The authors have limited the analysis of variation in LST, NDVI, and NDBI, and their relationship with land cover to the Landsat 8-derived data only (2013, 2016 and 2019). Consequently, year 2002 has been excluded from the initial tables 8, 9, 10, 11. Given here are the corrected equation and tables.

Where:

$r$  number of rows and columns in error matrix  
 $N$  total number of observation (pixels)  
 $X_{ii}$  observation in row  $i$  and column  $i$   
 $X_{i+}$  marginal total of row  $i$   
 $X_{+i}$  marginal total of column  $i$   
 $k$  Kappa coefficient

The original article has been corrected.

### **Correction to Eq. 3**

$$k = \frac{N \sum_{i=1}^r X_{ii} - \sum_{i=1}^r (X_{i+} * X_{+i})}{N^2 - \sum_{i=1}^r (X_{i+} * X_{+i})} \quad (3)$$

The original article can be found online at <https://doi.org/10.1007/s12518-022-00434-2>.

✉ Abiodun O. Alabi  
aolabi@unilag.edu.ng

<sup>1</sup> Department of Surveying and Geoinformatics, Faculty of Engineering, University of Lagos, Lagos, Nigeria

<sup>2</sup> Geospatial and Environmental Research Group, University of Lagos, Lagos, Nigeria

<sup>3</sup> Centre for Multidisciplinary Research and Innovation (CEMRI), Abuja, Nigeria

<sup>4</sup> Department of Surveying and Geoinformatics, School of Environmental Technology, Federal University of Technology, Niger State, Minna, Nigeria

**Table 8** Descriptive statistics of NDVI, NDBI, and LST

Parameter	LST			NDVI			NDBI		
	2013	2016	2019	2013	2016	2019	2013	2016	2019
Mean	26.69	25.47	26.25	0.41	0.36	0.36	-0.14	-0.11	-0.10
Median	26.10	25.18	26.18	0.43	0.35	0.34	-0.16	-0.12	-0.10
Min	22.31	21.42	20.15	-0.12	-0.02	-0.03	-0.48	-0.44	-0.42
Max	33.05	31.24	32.06	0.80	0.67	0.73	0.20	0.20	0.19
Range	10.75	9.81	11.91	0.93	0.69	0.76	0.68	0.64	0.61

**Table 9** Coefficient of correlation (r) between LST, NDVI, and NDBI

	LST 2013	LST 2016	LST 2019	NDVI 2013	NDVI 2016	NDVI 2019	NDBI 2013	NDBI 2016	NDBI 2019
LST 2013	1.00	0.95	0.93	-0.28	-0.38	-0.37	0.84	0.81	0.79
LST 2016	0.95	1.00	0.92	-0.42	-0.53	-0.51	0.86	0.87	0.84
LST 2019	0.93	0.92	1.00	-0.25	-0.38	-0.37	0.85	0.85	0.86
NDVI 2013	-0.28	-0.42	-0.25	1.00	0.95	0.92	-0.54	-0.52	-0.47
NDVI 2016	-0.38	-0.53	-0.38	0.95	1.00	0.96	-0.62	-0.67	-0.62
NDVI 2019	-0.37	-0.51	-0.37	0.92	0.96	1.00	-0.59	-0.63	-0.63
NDBI 2013	0.84	0.86	0.85	-0.54	-0.62	-0.59	1.00	0.94	0.92
NDBI 2016	0.81	0.87	0.85	-0.52	-0.67	-0.63	0.94	1.00	0.95
NDBI 2019	0.79	0.84	0.86	-0.47	-0.62	-0.63	0.92	0.95	1.00

**Table 10** Descriptive statistics of LST, NDVI and NDBI per land cover class

Year	Land cover class	*N	LST			NDVI			NDBI		
			Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
2013	Bare land	12404	23.17	33.28	27.98	-0.03	0.8	0.45	-0.29	0.29	-0.05
	Built-up area	82466	23.03	33.93	28.8	-0.05	0.66	0.31	-0.28	0.25	-0.01
	Mixed vegetation	26300	23.09	30.78	25.45	0.06	0.82	0.62	-0.3	0.12	-0.15
	Wetland	45580	23.09	29.62	24.9	0.13	0.82	0.65	-0.32	0.03	-0.21
2016	Bare land	17784	21.67	31.64	25.89	0.05	0.66	0.41	-0.41	0.39	-0.09
	Built-up area	84271	22.52	31.66	27.45	0.06	0.55	0.26	-0.28	0.35	0.03
	Mixed vegetation	28519	21.39	29.71	23.63	0.11	0.67	0.53	-0.44	0.19	-0.21
	Wetland	36110	21.44	29.96	23.41	0.26	0.68	0.58	-0.45	0.03	-0.32
2019	Bare land	22100	21.93	33.17	26.32	0.04	0.72	0.44	-0.23	0.13	-0.08
	Built-up area	89862	20.12	33.15	28.08	0.05	0.61	0.27	-0.18	0.16	0.001
	Mixed vegetation	21007	19.64	29.14	24.77	0.06	0.73	0.53	-0.25	0.07	-0.14
	Wetland	33841	21.65	28.99	24.27	0.21	0.73	0.58	-0.26	0.00	-0.19

\*N – Number of sample points

A few typographical errors in stated land cover class areas within the results section have been corrected as follows:

#### Analysis of land cover change

Between 2016 and 2019, mixed vegetation reduced from 25.7 km<sup>2</sup> to 18.88 km<sup>2</sup>.

#### Transition matrix of land cover change

Between 2016 and 2019, the transition from wetland to mixed vegetation was 4.93 km<sup>2</sup>.

From 2002 to 2019, the transition from wetland to mixed vegetation was 8.72 km<sup>2</sup>.