Table S1. Landsat satellite missions with thermal infrared spectral band.

Satellite	Sensor	Operational period	Band	Wavelength
Landsat 4	TM	1982-1993	B6	10.40-12.50 µm
Landsat 5	TM	1984-2013	B6	10.40-12.50 µm
Landsat 7	ETM+	1999-present	B6	10.40-12.50 µm
Landsat 8	TIRS	2013-present	B10	10.6-11.19 µm
			B11	11.5-12.51 µm

Source: https://pubs.er.usgs.gov/publication/fs20153081

Table S2. Summary of the literature database.

General information	
Search period	1995-2020
Total number of documents	155
Annual growth percent	22.58%
Average documents per year	4.76
Average citations per document	10.24
Annual average citation per document	1.65
Type of documents	
Articles	101
Book chapters	1
Proceedings papers	53
Authors	
Total number of authors	554
Authors of single-authored document	4
Authors of multi-authored document	550
Documents per author	0.29
Authors per document	3.51
Collaboration index	3.59

Table S3. The ten journals with the highest number of about land surface temperature derived from Landsat missions (1995-2020).

Scientific sources	Start of publication	Total publications	Publications per year
Proceedings of SPIE - The International Society for Optical Engineering. (Proc. SPIE - Int. Soc. Opt. Eng.)	1995	14	0.6
Remote Sensing	2014	9	1.5
IOP Conference Series: Earth and Environmental Science (IOP Conf. Ser.: Earth Environ. Sci.)	2014	7	1.2
International Journal of Applied Earth Observation and Geoinformation (Int. J. Appl. Earth Obs. Geoinf)	2015	6	1.2
International Geoscience and Remote Sensing Symposium (IGARSS)	2008	5	0.4
Environmental Monitoring and Assessment (Environ. Monit. Assess.)	2015	4	0.8
International Archives of the Photogrammetry Remote Sensing and Spatial Information Sciences (ISPRS)	2008	4	0.3
International Multidisciplinary Scientific Geoconference Surveying Geology and Mining Ecology Management (SGEM)	2013	4	0.6
Remote Sensing of Environment (Remote Sens. Environ)	2016	4	1
International Journal of Remote Sensing (Int. J. Remote Sens.)	2017	3	1

Table S4. The ten most cited publications about surface temperature derived from Landsat missions (1995-2020).

	Journal	Total cites	Cites per year
Fu (2016)	Remote Sens Environ	174	43.5
Xiao & Weng (2007)	J Environ Manage	127	9.7
Srivastava *et al.* (2009)	Adv Space Res	66	6
Rodriguez-Galiano & Chica-Olmo (2012)	Appl Geogr	53	6.6
Li *et al.* (2016)	J Geophy Res	49	12.3
Eisavi *et al.* (2015)	Environ Monit Assess	49	9.8
Kayet *et al.* (2016)	Model Earth Syst Environ	47	11.7
Sinha *et al.* (2015)	Egypt J Remote Sens Space Sci	44	8.8
Quintano *et al.* (2015)	Egypt J Remote Sens Space Sci	44	8.8
Vlassova *et al.* (2014)	Remote Sens	40	6.6

Table S5. Classification by main research topic of the 155 documents analyzed.

Research topic	No. of papers	References
Land cover classification	51	Xiao & Weng (2007); Srivastava *et al*. (2009); Sousa & Laerte (2012); Rodriguez-Galiano & Chica-Olmo (2012); Robbany *et al*. (2013); Vorovencii (2013b); Vorovencii (2013a); Vorovencii (2014); Eisavi *et al*., (2015); Li *et al*. (2015); Park & Um (2015); Sheikhi *et al*. (2015); Sinha *et al*. (2015); Trinh *et al*. (2015); Fu (2016); Ilayaraja *et al*. (2017); Kayet *et al*. (2016); Sahana *et al*. (2016); Wang *et al*. (2016); Yee *et al*. (2016); Al-Hamdan *et al*. (2017); Dash & Revi (2017); Faqe Ibrahim (2017); Kumari & Sarma (2017); Mushore *et al*. (2018); Thakur *et al*. (2017); Ghosh & Porchelvan (2018); Hua & Ping (2018); Zoran *et al*. (2018); Gosteva *et al*. (2019a); Gosteva *et al*. (2019b); Hao *et al*. (2019); Madakarah *et al*. (2019); Nguyen & Henebry (2019); Norovsuren *et al*. (2019); Ranagalage *et al*. (2019); Rangzan *et al*. (2019); Savastru *et al*. (2019); Shumilo *et al*. (2019b); Shumilo *et al*. (2019a); Al-Doski *et al*. (2020); Carrasco *et al*. (2020); Fathololoumi *et al*. (2020); Rahaman *et al*. (2020); Sarker *et al*. (2020); Satriawan *et al*. (2020); Sayão *et al*. (2020); Shidiq *et al*. (2020); Singh & Mishra (2020); Tan *et al*. (2020); Thakur *et al*. (2020).
Forest monitoring	25	Inanaga *et al*. (1997); Sprintsin *et al*. (2011); van Leeuwen *et al*. (2011); Bright *et al*. (2013); Gillespie *et al*. (2014); Yang *et al*. (2014); Zhao *et al*. (2014); Dutta *et al*. (2015); Zhang *et al*. (2015); Boike *et al*. (2016); Cristóbal *et al*. (2016); Godinho *et al*. (2016); Siyal *et al*. (2017); Cao & Sanchez-Azofeifa (2017); Sabajo *et al*. (2017); Arekhi *et al*. (2018); Ghazaryan *et al*. (2018); Barros Santiago *et al*. (2019); Crabbe *et al*. (2019); Dergunov *et al*. (2019); Herrero *et al*. (2019); Sholihah & Shibata (2019); Khorrami *et al*. (2019); Quispe-Reymundo y Révolo-Acevedo (2020); Shen *et al*. (2020).
Evapotranspiration/Dryness	12	Lahoche *et al*. (1999); Xu *et al*. (2008); Zhu *et al*. (2010); Cristóbal *et al*. (2011); Gao & Gao (2011); Xu *et al*. (2011); Peters *et al.* (2013); Natsagdorj *et al*. (2017); Yagci *et al*. (2017); Yang *et al*. (2017); Gustin *et al*. (2019); Natsagdorj *et al*. (2019).
Thermal analysis	12	Yang *et al*. (2008); Srivastava *et al*. (2010); Huang et al. (2014); Silva *et al*. (2015); Bendib *et al*. (2017); Geletič *et al*. (2017); Marques *et al*. (2017); Arif *et al*. (2019); Firoozy Nejad & Zoratipour (2019); Zhang & Zhang (2019); Winanti *et al*. (2020); Sharma *et al*. (2020).

Urban forests analysis	12	Yang *et al*. (2010); Zhang *et al*. (2014); Wang & Zhang (2015); Huang *et al*. (2015); Ara *et al*. (2016); Ahmad & Goparaju (2017); Urmambetova (2017); Gage & Cooper (2017); Zuo *et al*. (2018); Matuzko & Yakubailik (2019); Yin *et al*. (2019); Jana *et al*. (2020).
Wildfire	10	Vlassova *et al*. (2014); Quintano *et al*. (2015); Sánchez *et al*. (2015); Vlassova & Pérez-Cabello (2016); Quintano *et al*. (2017); Wang *et al*. (2017); Guindos-Rojas *et al*. (2018); García-Llamas *et al*. (2019); Çolak & Sunar (2020); Fernández-Manso *et al*. (2020).
Deforestation	8	Zoran *et al*. (2013a); Huang & Anderegg (2014); Li *et al*.,(2016); Liou *et al*. (2017); Roitberg *et al*. (2018); Tarawally *et al*. (2018); Wan Mohd Jaafar *et al*. (2020); Silva *et al*. (2020).
Vegetation indexes	5	Zoran *et al*. (2013b); Ning *et al*. (2017); Malik & Shukla (2018); Neinavaz *et al*. (2019); Neinavaz *et al*. (2020).
Environmental quality analysis	4	Zheng & Ren (2013); Liu *et al*. (2018); Zhu *et al*. (2019); Zuhro *et al*. (2020).
Mountain ecology /Snow monitoring	4	Park *et al*. (2016); Lv & Pomeroy (2019); Firozjaei *et al*. (2020); Wang *et al*. (2020)
Climate change analysis	3	Oh (2017); Mukherjee & Siddique (2018); Savastru *et al*. (2020).
Phenological analysis	3	Khare *et al*. (2016); Khare *et al*. (2017); Khare & Rossi (2019).
Mining	3	Trinh & Zablotskii (2017); Ramdhani *et al*. (2019); Hou *et al*. (2020).
Desertification	2	Roozekrans (1995); Vorovencii (2015).
Above-ground biomass estimation	1	Gunawardena & Fernando (2016).

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