

Table S1. Examples of commonly used commercial and governmental (civilian) spaceborne satellites and sensors used in natural resources applications of remote sensing. Not all sensors are listed per satellite. Earth observing missions are often joint ventures between different government agencies with commercial vendors. Exact repeat time is time elapsed between satellites passing over the exact same spot on Earth, and ground image repeat is the image coverage of the same point on Earth regardless of orbit position and depends on satellite ground trace and sensor swath width.

Agency/Business (Country)	Satellite	Service Years	Sensor: Type (No. bands)	Swath width at nadir (km)	Nadir spatial resolution (m)	Exact Satellite Repeat (Ground Image Repeat)		
COMMERCIAL								
Digital Globe	Ikonos	1999-2015	Pan, Multispectral (4)	11	1, 4	3 d ¹		
	Quickbird-2	2001-2014	Pan, Multispectral (4)	17	0.5, 2	1-3.5 d ¹		
Planet Labs	Worldview-3	2014-pres	Pan, Multispectral (16)	13	0.3, 1.2, 3.7	<1 d ¹		
	Rapideye	2008-pres	Multispectral (5)	77	6.5	1 d ¹		
Terra Bella	Flock	2014-pres	Multispectral (3,4)	25	3-4	<1 d ¹		
	Sky-Sat	2013-pres	Pan, Multispectral (4)	8	0.9	<1 d ¹		
GOVERNMENTAL								
NASA (USA)	Landsat 1, 2, 3	1972- 1983	RBV: Multispectral (3)	185	40, 80	18 d		
			MSS: Multispectral (4,5)	185	80	18 d		
	Landsat 4, 5	1982- 2013	MSS: Multispectral (4)	185	80	16 d		
			TM: Multispectral (7)	185	30, 120	16 d		
	Landsat 7	1999-pres	ETM+: Multispectral (8)	185	15, 30, 60	16 d		
			EO-1	2000-pres	ALI: Multispectral (10)	37	10, 30	16 d
	Landsat 8	2013-pres	Hyperion: Hyperspectral (220)	7.5	30	16 d		
			OLI: Multispectral (11)	185	15, 30	16 d		
			TIRS: Infrared (2)	185	100	16 d		
			Terra/Aqua	2000-pres	ASTER: Multispectral (14)	60	15, 30, 90	16 d
	NOAA (USA)	SMAP	2015-pres	MISR: Multispectral (4)	360	250	16 d (2-9 d ²)	
				MODIS: Multispectral (36)	2300	250, 500, 1000	16 d (1-2 d ²)	
				AIRS: Hyperspectral (2382)	1650	13500	16 d (0.5 d ²)	
AMSR-E: Microwave (6)				1445	5400-56000	16 d (1 d ²)		
SAR				1000	3000	8 d (3 d ¹)		
ICESat				2003-2009	GLAS: LiDAR	70	1	2 - 12 h ¹
POES TIROS-N & NOAA 6				1978-1986	AVHRR/1: Multispectral (4)	2900	1100	16 d (0.5 d ¹)
POES NOAA 7-14	1981-2007	AVHRR/2: Multispectral (5)	2900	1100	16 d (0.5 d ¹)			
POES NOAA 15-19	1998-pres	AVHRR/3: Multispectral (6)	2900	1100	16 d (0.5 d ¹)			
Suomi NPP	2011-pres	VIIRS: Multispectral (22)	3040	375, 750	1-2 d ²			
SMS 1,2, GOES 1-3	1978-1983	VISSR: Multispectral (4)	Half global ³	1000, 7000	0.5 h ¹			
GOES 4-7 (D-H)	1981-1996	VAS: Multispectral (5)	Half global ³	1000, 7000, 14000	0.5 h ¹			
GOES 8-15 (I-P)	1994-pres	Imager: Multispectral (5)	Half global ³	1000, 4000, 8000	0.5 h ¹			
JAXA (Japan)	ALOS 1,2	2006-pres	PRISM: Panchromatic (1)	35, 70	2.5	46 d (14 d ²)		
			AVNIR-2: Multispectral (4)	70	10	46 d (14 ² , 2 d ¹)		
			PALSAR: Spotlight, Stripmap	25, 50-70	1-3, 3-10	46 d (14 d ²)		
			PALSAR: ScanSAR	350, 490	60, 100	46 d (14 d ²)		
CNES (France)	SPOT-1,2,3	1986-2009	Pan, Multispectral (3)	60	10, 20	26-d (1-3 d ¹)		
			SPOT-4	1998-2013	HRVIR: Pan, Multispectral (4)	60	10, 20	26-d (1-3 d ¹)
	SPOT-5	2002-pres	VGT-1: Multispectral (4)	2250	1150	26-d (1-3 d ¹)		
			HRS: Panchromatic (1)	60, 120	2.5, 5	26-d (1-3 d ¹)		
			HRG: Multispectral (5)	60	10, 20	26-d (1-3 d ¹)		
Proba-V	2013-pres	VGT-2: Multispectral (4)	2250	1000	26-d (1-3 d ¹)			
SPOT-6,7	2012-pres	VGT-P: Multispectral (4)	2300	100, 300	5 d (1-2 d ²)			
KARI (S. Korea)	Pleiades 1A, 1B	2011-pres	Pan, Multispectral (4)	60	1.5, 6	26-d (1-3 d ¹)		
			Pan, Multispectral (4)	20	0.5, 2	26-d (1 d ¹)		
	Kompsat 1	1999-2007	EOC: Panchromatic (1)	17	6.6	28 d (2-3 d ¹)		
			OSMI: Multispectral (8)	800	1000	28 d (2-3 d ¹)		
			MSC: Pan, Multispectral (4)	15	1, 4	28 d (2-3 d ¹)		
Kompsat 3	2012-pres	AEISS: Pan, Multispectral (4)	16	0.7, 2.8	28 d (2-3 d ¹)			
Kompsat 3A	2015-pres	AEISS-A: Pan, Multispectral (4)	12	0.55	28 d (2-3 d ¹)			

Dauwalter, Fesenmyer et al. 2017. Satellite and Airborne Remote Sensing Applications to Freshwater Fisheries. Fisheries 42(10):510-521.

			IIS: Infrared (1)	12	5.5	28 d (2-3 d ¹)
CSA (Canada)	Kompsat 5	2014-pres	COSI: SAR (High, Std, Wide)	5, 30, 100	1, 3, 20	28 d (2-3 d ¹)
	Radarsat 1,2	1995-pres	Fine, Standard, Wide	50, 100, 150	10, 30	24 d (4-6 d ²)
ESA (Europe)	ERS 1,2	1991 - 2011	ScanSAR: Narrow, Wide	300, 500	50, 100	24 d (4-6 d ²)
			ATSR: Multispectral (4, 7)	1000	1000	35 d (1-8 d ²)
	Envisat	2002-2012	AMI: SAR Image, Wave, Scat	5, 100, 500	10, 30, 50	35 d (1-8 d ²)
			MERIS: Multispectral (15)	1150	1000	35 d (1-3 d ²)
			AATSR: Multispectral (6)	500	1000	35 d (1-3 d ²)
	Sentinel-1A,1B	2014-pres	ASAR: Standard, Wide, Global	100, 400, global	30, 150, 1000	35 d (1-8 d ²)
			C-SAR: Strip, Wide, X-Wide	80, 250, 400	5, 20, 100	12 (1-3 d ¹)
				C-SAR: Wave	20	20
Sentinal-2A,2B	2015-pres	MSI: Multispectral (13)	290	10, 20, 60	5 d (<2 d ¹)	
Sentinal-3A,3B,3C	2016-pres	OLCI: Multispectral (21)	1300	300	27d (1-2 d ²)	
			SLSTR: Multispectral (11)	1400	500,1000	27d (1 d ²)
DLR (Germany)	TerraSAR-X/TanDEM-X	2008-pres	SRAL: SAR-Standard	1300	300	27 d (2-3 d ²)
			Spotlight (3 modes)	5-10	1-2	11 d (1-2 d ¹)
			StripMap	30	3	11 d (1-2 d ¹)
			ScanSAR (standard, wide)	100	16	11 d (1-2 d ¹)
ASI (Italy)	COSMO-SkyMed	2007-pres	Spotlight	10	1	5 d (<1 d ¹)
			Stripmap	30-40	3-15	5 d (<1 d ¹)
			ScanSAR	100-200	30-100	5 d (<1 d ¹)

¹ custom revisit based on body or sensor pointing capability

² off nadir revisit based on swath overlap, number of satellites in constellation, and can depend on latitude

³ geostationary orbits, with near half-global coverage between the two satellites (GOES-East, GOES-West)