

	Landsat	SPOT	RapidEye	DMC	Sentinel-2	Aster	Worldview	CBERS	Modis	IRS	ALOS Palsar	ENVISAT	Sentinel-1	Lidar (aerial)
Type of sensor	optical	optical	optical	optical	optical	optical	optical	optical	optical	optical	SAR	SAR	SAR	Laser
Spatial resolution	30 m (can be increased to 15m)	1,5-20m	5m	22-31 m 2,5 -5 m	10 m (4 bands) 20m (6 bands) 60 m (3 band)	15m(VNIR) 30m (SWIR) 90m (TIR)	0,55 m	20 m	250 m (b1-2) 500m (b3-7) 1000m(b8-36)	5.8m (liss4) 23,5m (liss3) 56 m (Awifs)	25-50 m	40m	5m (strip map) 5*20m (Interferometric)	n/a
Spectral resolution	8 bands	4 bands	5 bands	3 band (DMC1) 4 bands (R,G, B, NIR) (DMC2)	13 bands	14 bands	8 bands	5 bands	36 bands	3 bands (liss4) 4 bands (liss3 & Awifs)	L-band HH/HV or VV/VH	C-band full pol	C-band single or dual pol	n/a
Archived dates available	Since around 1983	Since around 1986	Since 2008	since 2005	not yet launched	since 2000	no archive?	since 2001	since 2000	since 1996 (liss3 & Awifs), 2003 (liss 4)	ALOS 1: 2006 to 2011, ALOS 2 expected from 2014.	Since 2002	launched february 2014 (images expected end 2014)	on demand
Frequency of new images	16 days	From 2-3 days	From 1 -5,5 days	2 days (DMC 2) 1 day (DMC 1)	5 days	16 days	1-7 days	26 days	1 days	5 days (Awifs), 24 days (Liss3)	ALOS 1: 46 days ALOS 2: 14 days	35 days	12 days	on demand
Image size / order size	185km x 185km	From 13x13km to 60x60km	77km x 77km	60 km x 60 km swath width of 290 km		60 km x 60km	16 km x 16 km	113km x 113km	2330km x 10 km	141 x 141 km2 (liss 3), 741 x741 km2 (Awifs), 70 x70 km2 (liss 4)	70km x 70km	100km x 100km	strip map: 80km swath interferometric: 250 km swath	n/a
Cost	Free	2700€ to 8700€ per scene 0.7-2.4 € /km2 (archive data)	1€/km ² (min. 500km ²)	0.01€/km2	Free	Free (on demand)	n/a	free	free	0.007 €/ km2 (liss 3) 0.0005 €/ km2 (Awifs)	Around 0.03€/ km2 for ALOS 1, price for ALOS 2 not yet known	0.04€/ km2	Free	very expensive
Processing time	medium	medium-high	high	medium	medium-high	medium	high	medium	low	medium	very low	very low	very low	high
Processing software	TerraAmazon, QGIS, Envi, Erdas, Claslite, PCI, Idrisi...	TerraAmazon, QGIS, Envi, Erdas, Claslite, PCI, Idrisi...	Envi, Erdas, PCI, check	TerraAmazon, QGIS, Envi, Erdas, Claslite,	unknown	TerraAmazon, QGIS, Envi, Erdas, Claslite,	Envi	TerraAmazon, QGIS, Envi, Erdas, Claslite,	Envi	TerraAmazon, QGIS, Envi, Erdas, Claslite,	PalsarPro, Nest, Sarscape	PalsarPro, Nest, Sarscape	PalsarPro, Nest, Sarscape	Envi,
HR capacity needed	low	low	medium	low	medium	low	medium	low	low	low	high	high	high	high- very high
Future perspective	long term	long term- higher resolution	unknown	unknown	long term	unknown	long term	long term	long term	long term	long term	unknown	unknown	n/a
Limitation	1) Landsat 7: SLC off 2) difficult to detect small changes 3) cloud cover	1) not possible to produce natural color image (# band) 2) many images needed (>100) 3) too high resolution with new sensors 4) cloud cover	many images needed (>100) too high resolution cloud cover	1) cloud cover		1) difficult acquisition process (NASA) 2) cloud cover	1) very small images 2) cloud cover 3)limited access archive	1) CBERS 1 en 2: low radiometric quality	1) low resolution 2) only possible to detect large scale deforestation	1) cloud cover	difficult to interpret resolution might be too low to detect small changes	difficult to interpret resolution might be too low to detect small changes not very suitable for forest mapping	difficult to interpret resolution might be too low to detect small changes not very suitable for forest mapping	1) high storing capacity needed 2) have to be tested

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Applications	<ul style="list-style-type: none"> 1) wall-to-wall deforestation 2) fire detection 3) forest degradation 4) Drivers of deforestation 	<ul style="list-style-type: none"> 1) wall-to-wall deforestation (spot 4 en 5) 2) NRT fine scale monitoring 3) Detection of small canopy gaps- monitoring of logging (spot 6) (Astrium) 4) Assesment of the commercial potential of concession 5) Validation 6) Drivers of deforestation 	<ul style="list-style-type: none"> 1) NRT fine scale monitoring 2) validation of wall-to-wall deforestation 3) driver of deforestation 4) wall-to-wall ??? 			<ul style="list-style-type: none"> 1) wall-to-wall deforestation 2) fire detection 3) forest degradation 4) Drivers of deforestation 5) NRT fine scale monitoring 	<ul style="list-style-type: none"> 1) validation 2) dsm/ elevation model (multiple images in stereo) 	<ul style="list-style-type: none"> 1) wall-to-wall deforestation 2) fire detection 3) forest degradation 4) Drivers of deforestation 		<ul style="list-style-type: none"> 1) wall-to-wall deforestation 2) fire detection 3) forest degradation 4) Drivers of deforestation 	<ul style="list-style-type: none"> 1) wall-to-wall deforestation 2) Is complementary to Landsat images (because it has no cloud cover) 3) detection of flooded forest/ vegetation types 4) detection of different soil types 5) Drivers of deforestation ??? (goldmining might be possible to distinguish) 6) Biomass mapping (<150 ton/ha) 	?		<ul style="list-style-type: none"> 1) biomass mapping 2) Terrain elevation 3) 3D tree maps
MMU	> 0.5 ha	>0.2 ha (spot 4-5), 0.001 ha (spot 6)	>0.0125 ha	0.242 ha	0.05 ha	0.1125 ha	0,00015 ha	0,2 ha	10-20 ha	0,02ha 0.28 ha	??	??		n/a