

class of sensor	Aerial photography			Hyperspect	High Res. Sat.		Fine resolution optical satellite				Coarse res. optical satellite			Radar satellites						
	240 mm camera				Airborne	IKONOS/QuickBird		IRS	SPOT	Landsat	OrbView-1	NOAA	RADARSAT	ERS	JERS-1	ENVISAT	RSAT-2	ALOS		
mission					digital camera		LISS	HRV	TM/ETM+	SeaWifs	AVHRR	MERIS	SAR	SAR	SAR	ASAR	SAR	PALSAR		
spectral mode	B&W	colour	CIR*5		Pan	MS	Pan	MS	Pan	MS	reflective	reflective	reflective	MODIS	C band	C band	L band	pol-C	pol-C	pol-L
swath width (km)	1-10	1-10	1-10	1-10	60	60	60	60	60	60	185	2800	3000	575	50-500	100	75	50-500	50-500	70-360
spatial resolution (m)	0.1-1.0	0.1-1.0	0.1-1.0	1-10	1	4	10	20	10	20	30	1100	1100	300	10-100	25	18	6-100	6-100	10-100
image repeat with pointing (days)	1	1	1	1	5	5			5	5	N/A	1	1	3	3	31	N/A	3	3	3
image repeat with identical geometry (days)	1	1	1	1	N/A	N/A	24,25	24,25	26	26	16	16	N/A	35,16	24	31	44	35	24	46

sensor imaging characteristics

Application Advantages for each application

Application	SPC	SPD	SPD	D	SP*3	S	S	S	S	SDA	DCPA	DCPW	DTW	DT	DT	DTW	DTW	DTW	DTW	DTW
Base Mapping																				
Creation of base map information	SPC	SPD	SPD	D	SP*3	S	S	S	S	SDA	DCPA	DCPW	DTW	DT	DT	DTW	DTW	DTW	DTW	DTW
Inventory																				
Boundary and area	SA	SPD	SPD	D	S	SD	S	SD	S	SDA	DCPA	DCPW	DTW	DT	DT	DTW	DTW	DTW	DTW	DTW
Geomorphic setting	D	D	D	D	D	D	D	D	D	D	D	D	DTW	DT	DTW	DTW	DTW	DTW	DTW	DTW
Land cover - Vegetation type	S	SDP	SDP	SD	S	SD	S	SD	SA	SDA	DCA	DCPW	T	T	T	T	T	T	T	T
Vegetation condition	S	S	SDP	DS	S	SD	S	SD	SA	SDA	DCA	DCPW	FT	T	T	FT	FT	FT	FT	FT
Land use	SDPCA	DSP	DSP	DS	S	SD	S	SD	SA	SDA	DCA	DCPW	FT	T	T	T	T	T	T	T
Water level	S	S	DSP	DS	S	SD	S	SD	SA	SDA	CA	DCPW	FD*1T	D*1T	D*2T	FD*1T	FD*1T	FD*1T	FD*1T	FD*2T
Chlorophyll and suspended sediment concentration, turbidity		DS	DS	DS	S							DCPAW	DCPW	DCPW	TW	T	T	TW	TW	TW
Geog. context for mgmt. planning	SDPCA	SDP	SDP	DS	S	SD	S	SD	SA	SDA	DCPA	DCPW	TW	T	T	TW	TW	TW	TW	TW
Identification of current or potential problems	SP	SDP	SDP	SD	S	SD	S	SD	SA	SDA	DCA	DCPW	TW	T	T	TWA	TWA	TWA	TWA	TWA
National, regional, continental, and global inventories of wetlands	S	S	S									DCPW	TW	T	T	TWA	TWA	TWA	TWA	TWA
Assessment and Monitoring																				
Changes in area	SDAC	SDP	SDP	SD	S	S	S	S	SA	SDA	DCA	DCPW	D*1	D*1	D*2T	D*1	D*1	D*1	D*1	D*2T
Changes in vegetation type	S	SDP	SDP	SD	S	SD	S	SD	SA	SDA	DCA	DCPW	T	T	T	T	T	T	T	T
Changes in vegetation condition	S	S	SDP	SD	S	SD	S	S	SA	SDA	DCA	DCPW	FT	T	T	FT	FT	FT	FT	FT
Change in land cover	S	SDP	S	SD	S	SD	S	S	SA	SDA	DCA	DCPW	FT	T	T	FT	FT	FT	FT	FT
Change in land use	SDPCA	SDP	S	SD	SP	SDP	SDP	SP	SPA	SPA	DCA	DCPW	FT	T	T	FT	FT	FT	FT	FT
Changes in water level	S	S	SDP	SD	S	SD	S	SD	SA	SDA	CA	DCPW	SDPFT	DPT	SDPT	SDFT	SDFT	SDFT	SDFT	SDFT
Changes in chlorophyll, suspended sediment, turbidity	S	SDP	SDP	SD	S	SD	S	SD	SA	SDA	CA	DCPW	SDPFT	DPT	SDPT	SDFT	SDFT	SDFT	SDFT	SDFT
Regional climatic change	S	S	S	SD	S	SD	S	SD	SA	SDA	CA	DCPW	AFTW	DFSCW	TW	T	T	TA	TA	TA
impact assessment	S	SD	SDP	SD	SF	SDF	SF	SDF	SFA	SFA	DACW	DCPW	FT	T	T	TA	TA	TA	TA	TA
Identify wetlands needing restoration	S	S	SDP	SD	SF	SDF	SF	SDF	SFA	SFA	DACW	DCPW	FT	T	T	TA	TA	TA	TA	TA
Cost effectiveness of restoration	SDPCA	SDP	S	SD	SP	SDP	SDP	SP	SPA	SPA	DCA	DCPW	FT	T	T	FT	FT	FT	FT	FT
Characterization of New Sites																				
Identification of potential new Ramsar sites	S	SDP	SDP	SD	S	SD	S	SD	SA	SDA	DCA	DCPW	FT	FT	FT	FT	FT	FT	FT	FT
Provision of case studies of new sites	S	SDP	SDP	SD	S	SD	S	SD	SA	SDA	DCA	DCPW	TW	T	T	T	T	T	T	T
Public Information, Training and Characterization																				
Information for training to inventory, monitor, and manage wetlands	S	SDP	SDP	SD	SP	SDP	SP	DP	DPA	DPA	DCPA	CPW	CPW	TW	T	TW	TW	TW	TW	TW
Case studies to build awareness in the community	S	SDP	SDP	SD	SP	SDP	SP	DP	DPA	DPA	DCPA	CPW	CPW	TW	T	T	TWA	TWA	TWA	TWA

Advantages (codes)

good Discrimination of desired features; good Spatial resolution; low Cost per km2; straightforward Processing for this application; good Archive; Frequent revisit; reliable Timing of data acquisition; Wide area coverage

Notes

*1: Good discrimination of emergent herbaceous vegetation; *2: Good discrimination of flooding under forest canopies; *3: Can be acquired in stereo and processed with analytical stereo mapping tools; *4 Good for rapid assessment of coastal water quality changes; *5: CIR cannot be used for any water-based information.