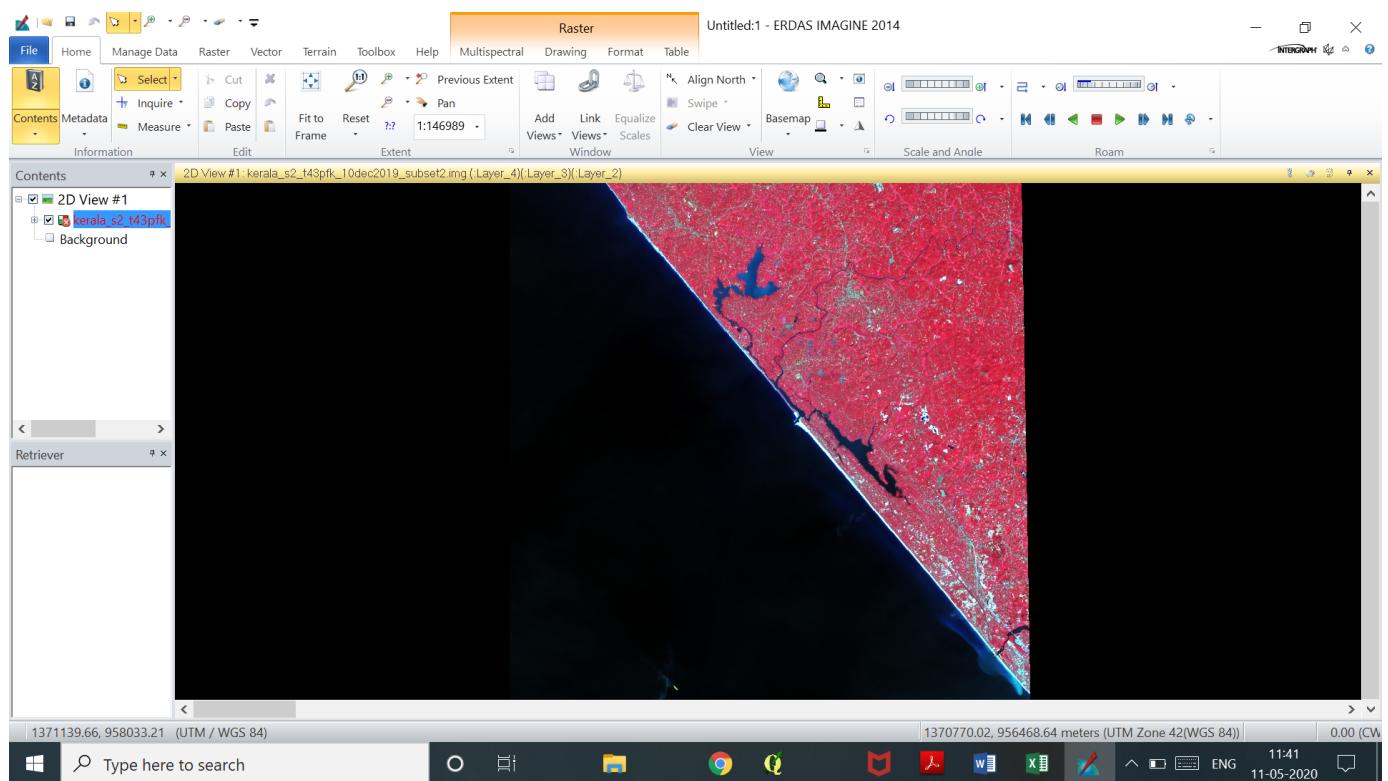


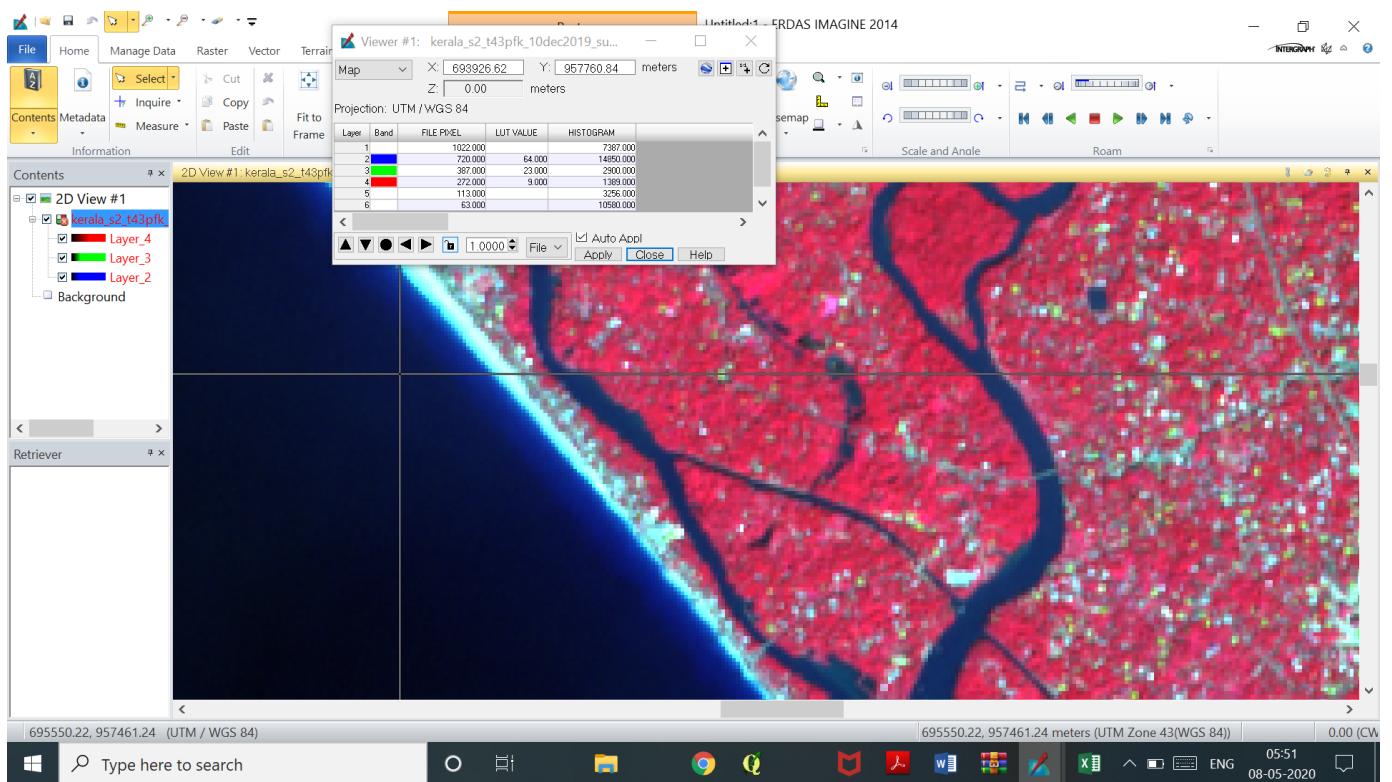
IMAGE-1 KERALA

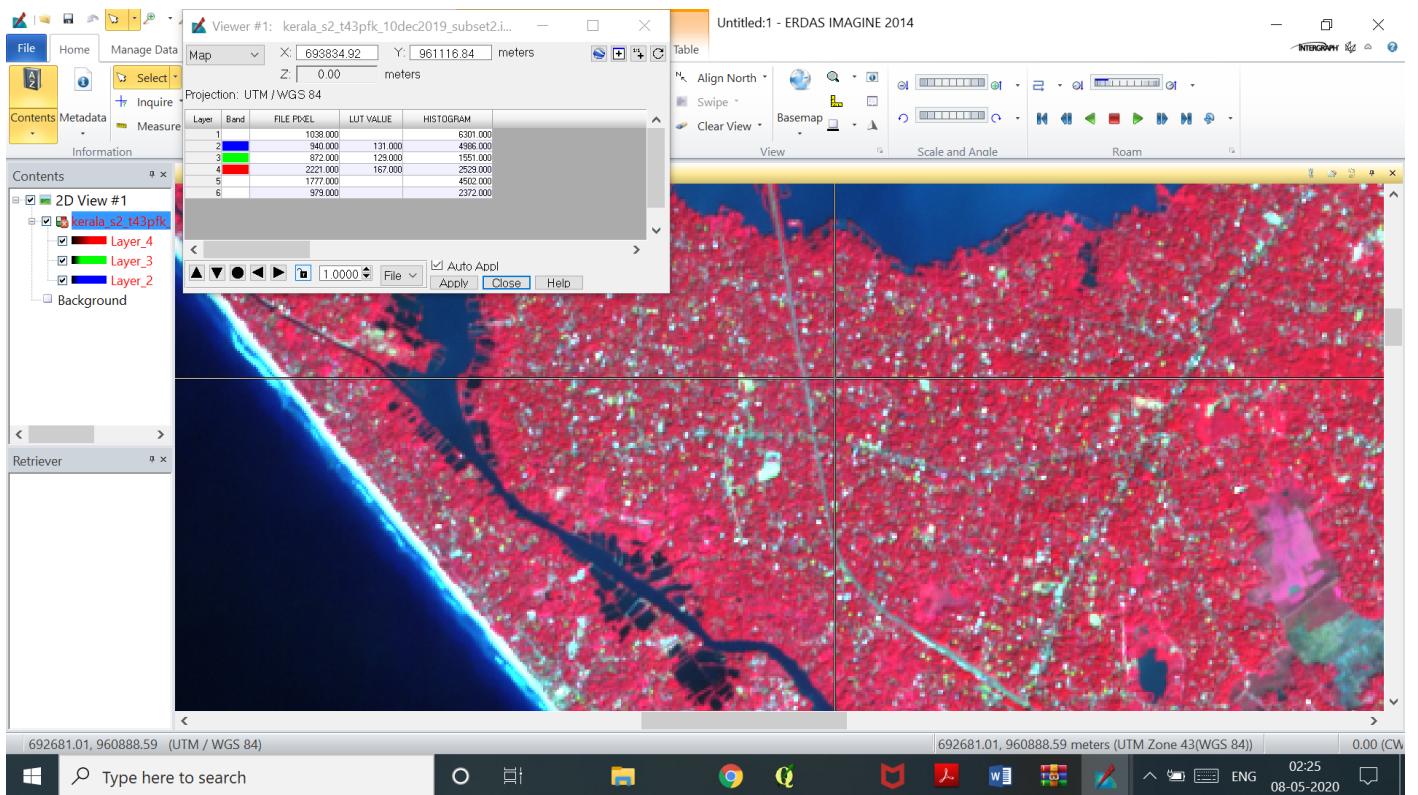
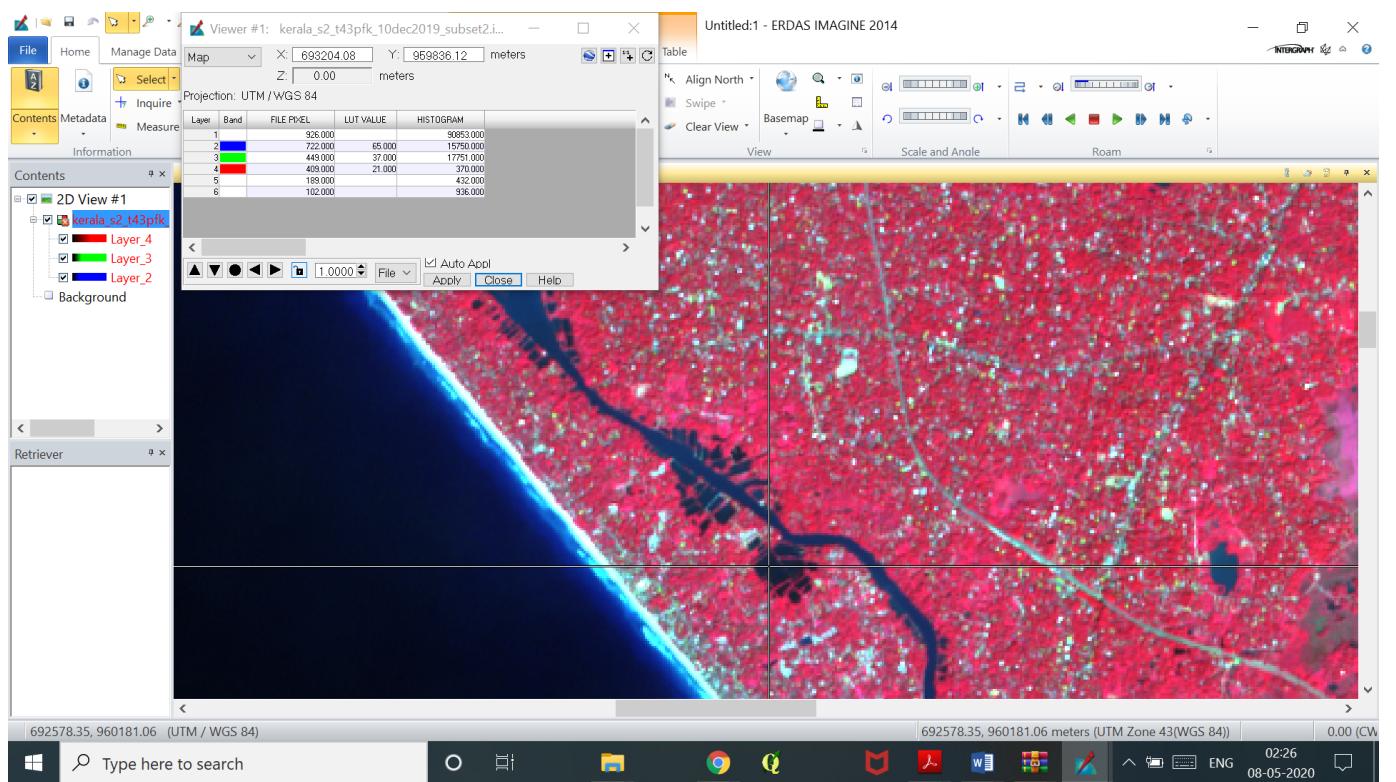
(Standard False colour composite: 4,3,2)

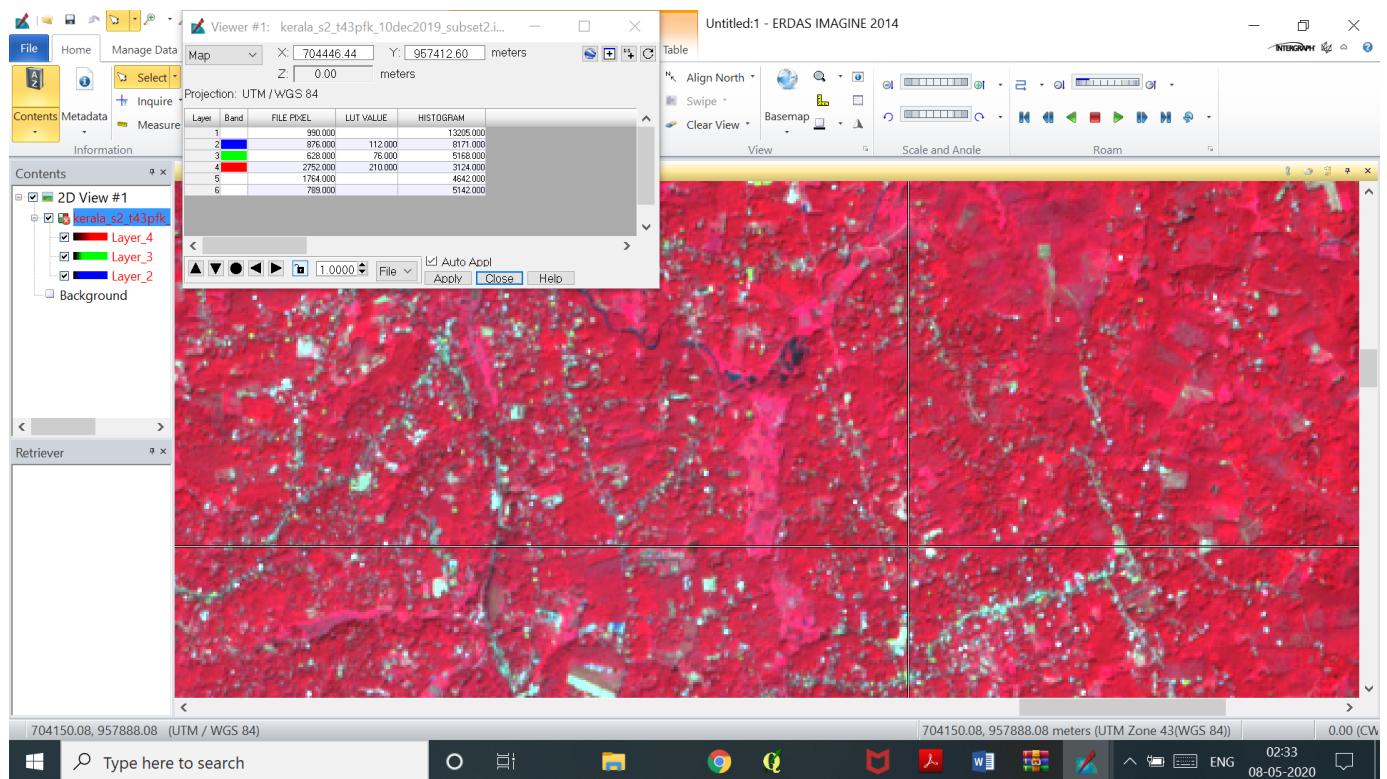
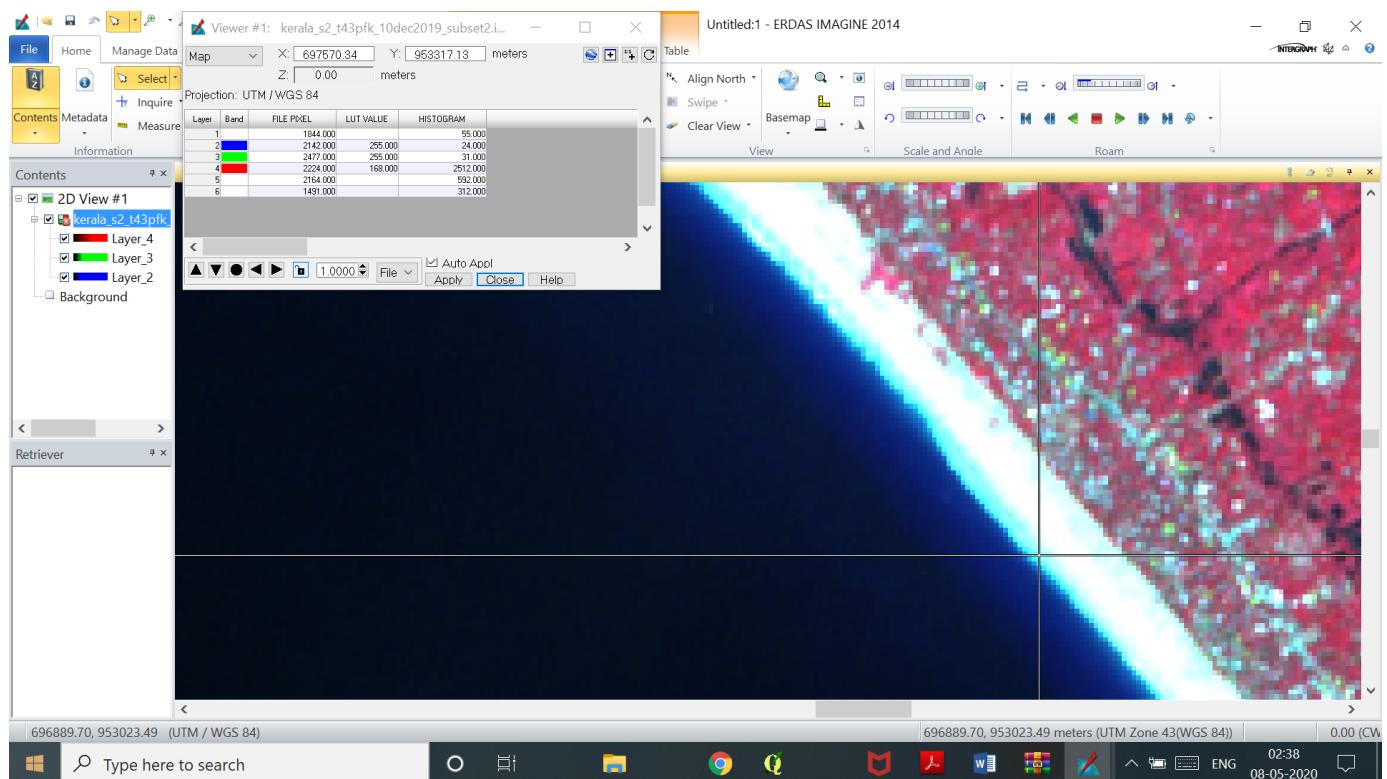


FEATURES

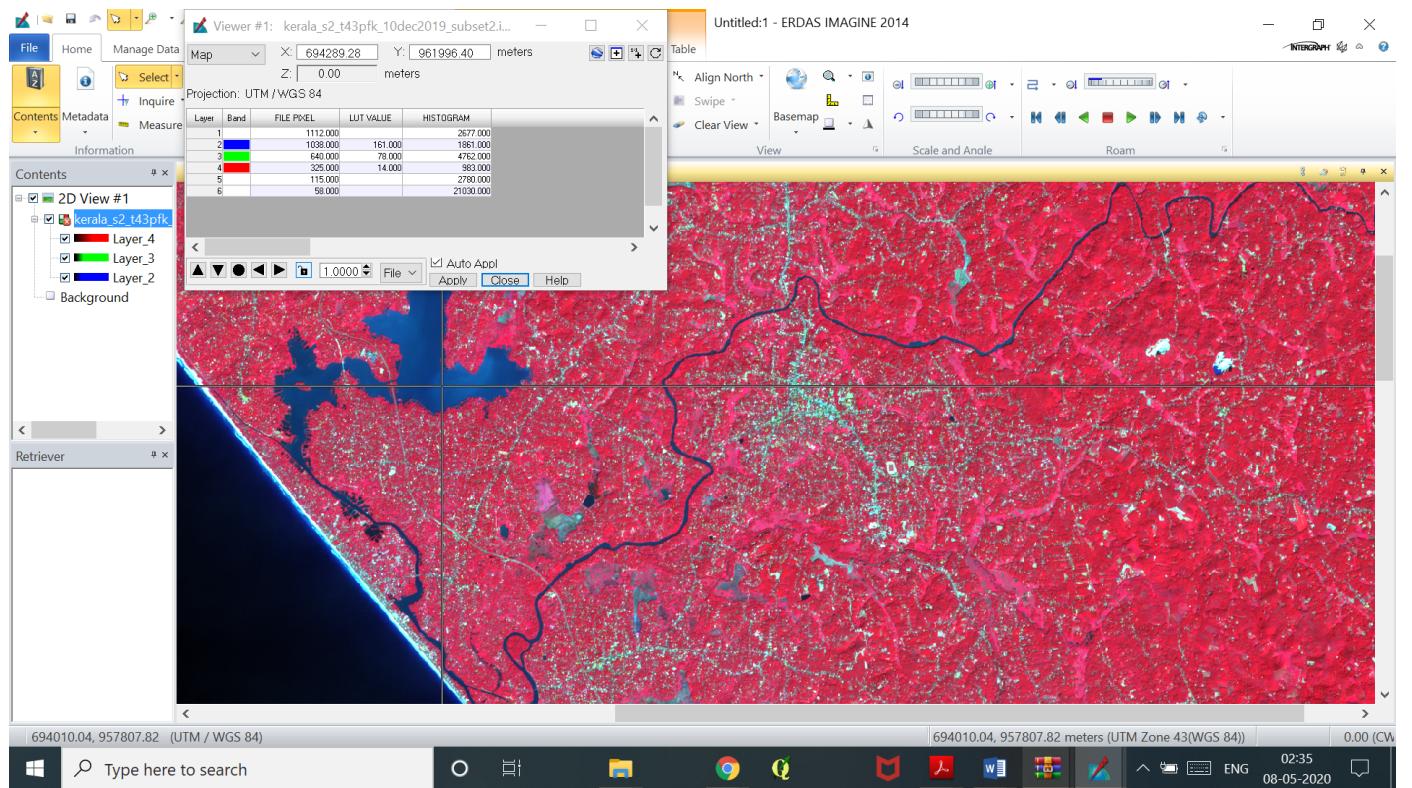
A.



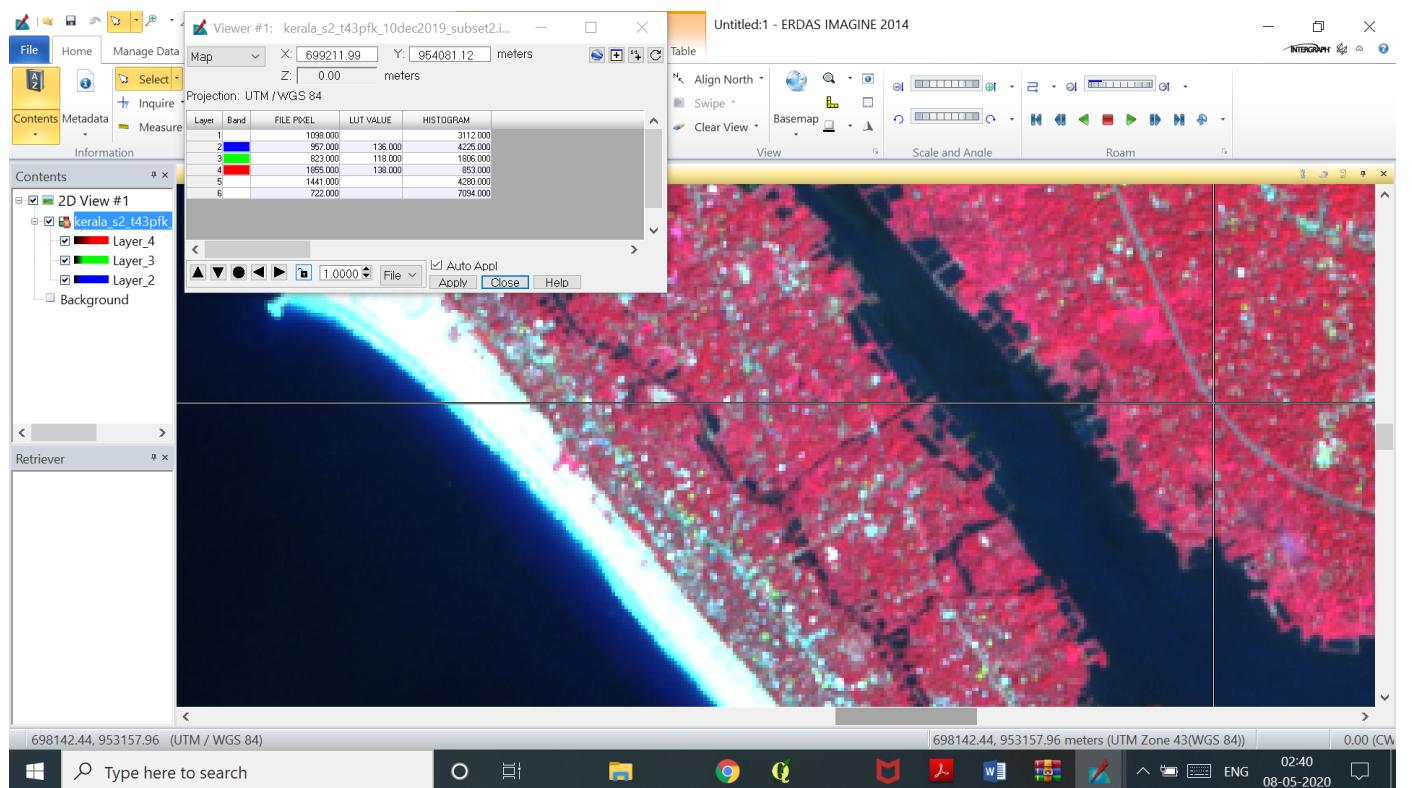
B.**C.**

D.**E.**

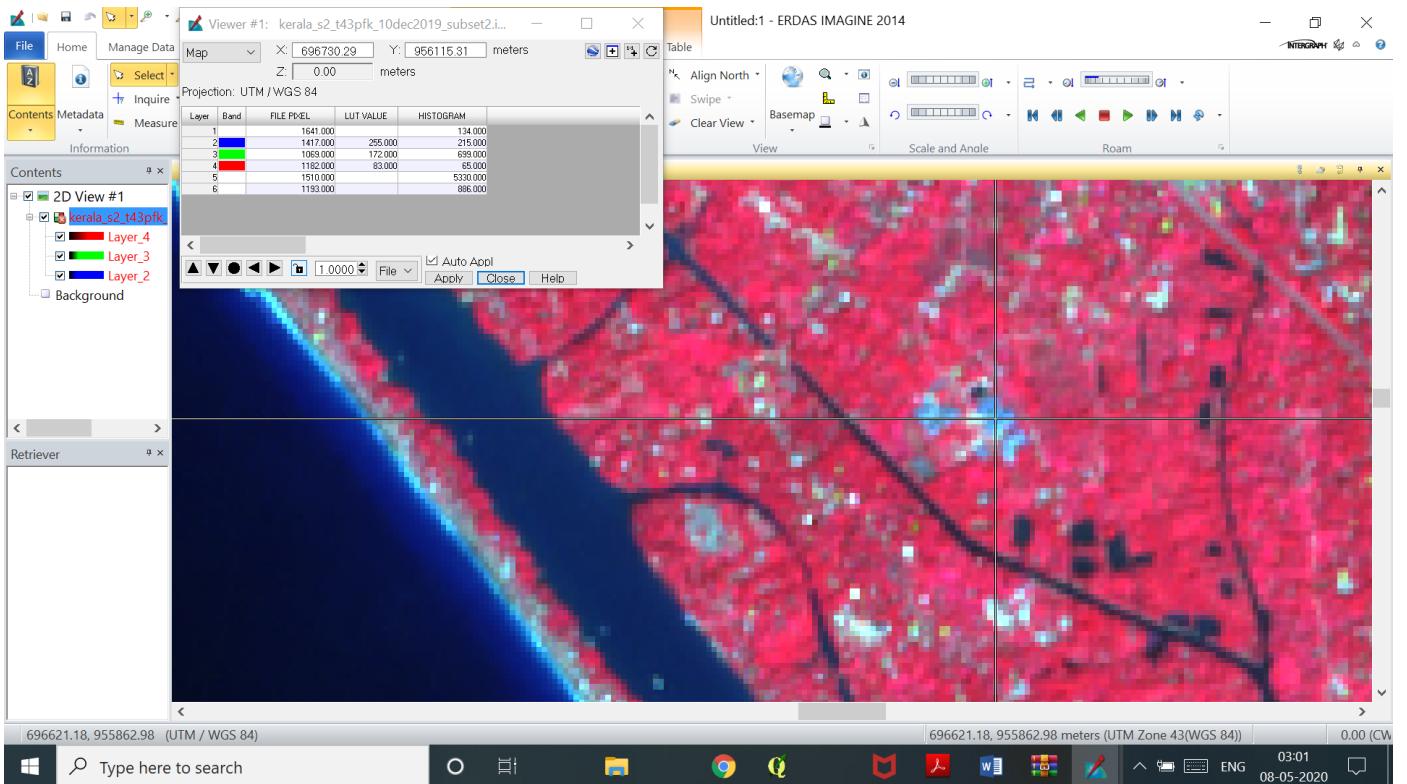
F.



G.



H.



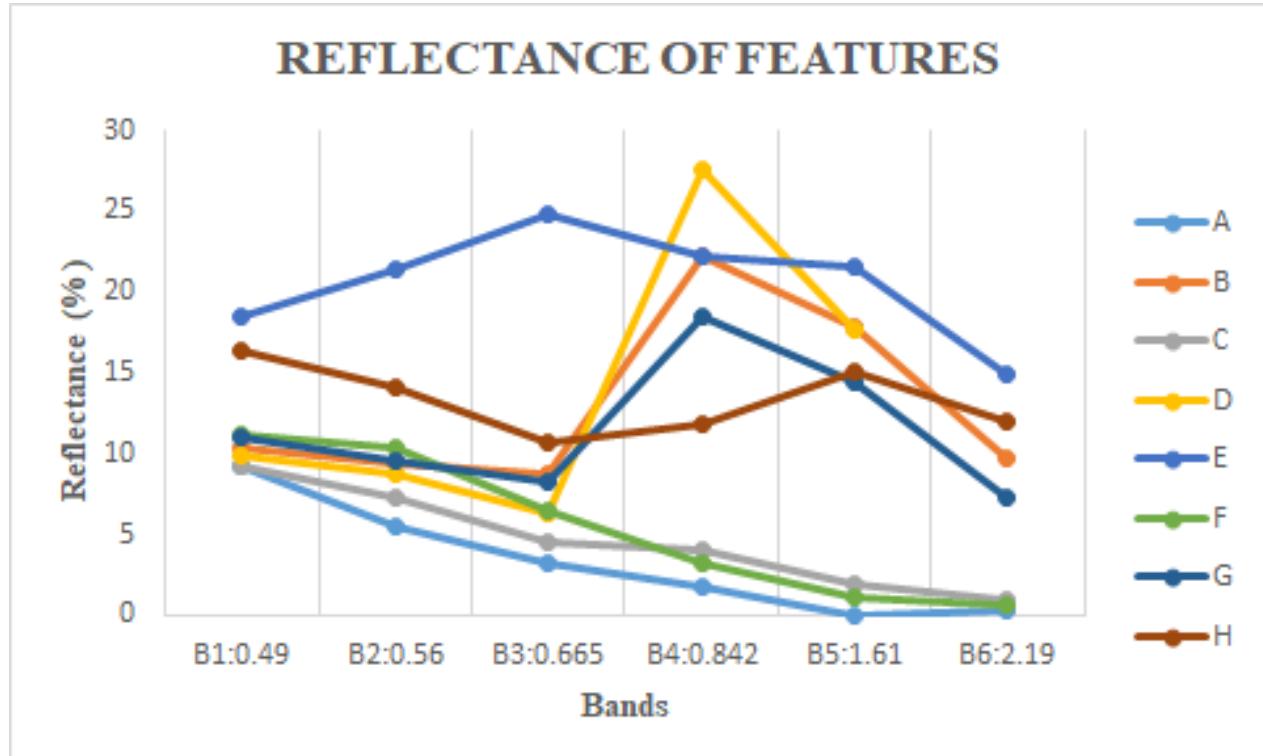
Digital Number values of features identified

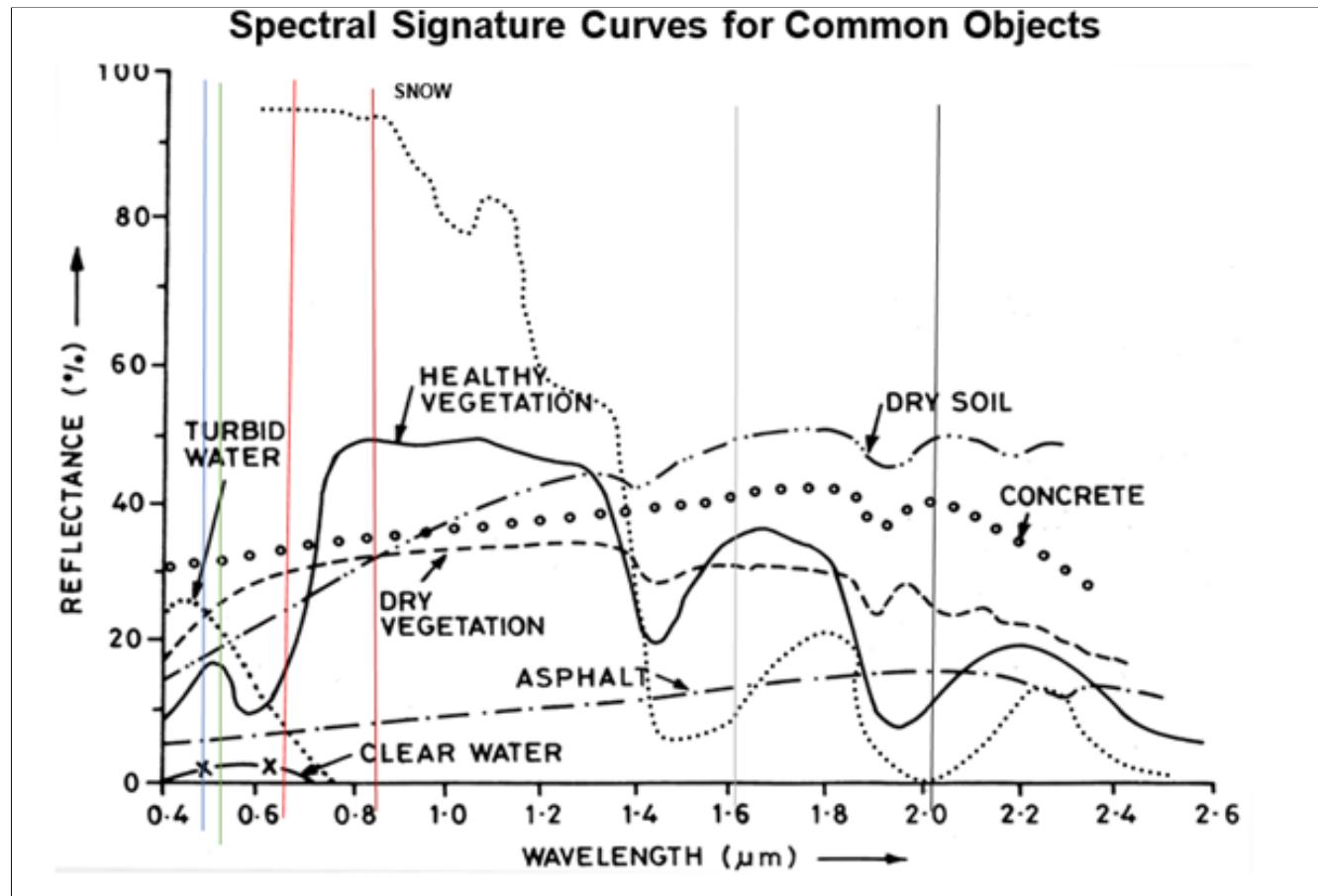
Features	Digital Number Values (FCC)					
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
A.	921	553	318	180	54	36
B.	1038	940	872	2221	1777	979
C.	926	722	449	409	189	102
D.	990	876	628	2752	1764	789
E.	1844	2142	2477	2224	2164	1491
F.	1112	1038	640	325	115	58
G.	1098	957	823	1855	1441	722
H.	1641	1417	1069	1182	1510	1193

Reflectance of features identified in %

Features	Reflectance in %(FCC)					
	B1: Blue 0.49	B2: Green 0.56	B3: Red 0.665	B4: NIR 0.842	B5: SWIR 1.601	B6: SWIR 2.19
A.	9.21	5.53	3.18	1.80	.054	0.36
B.	10.38	9.40	8.72	22.21	17.77	9.79
C.	9.26	7.22	4.49	4.09	1.89	1.02
D.	9.90	8.76	6.28	27.52	17.64	7.89
E.	18.44	21.42	24.77	22.24	21.64	14.91
F.	11.12	10.38	6.40	3.25	1.15	0.58
G.	10.98	9.57	8.23	18.55	14.41	7.22
H.	16.41	14.17	10.69	11.82	15.10	11.93

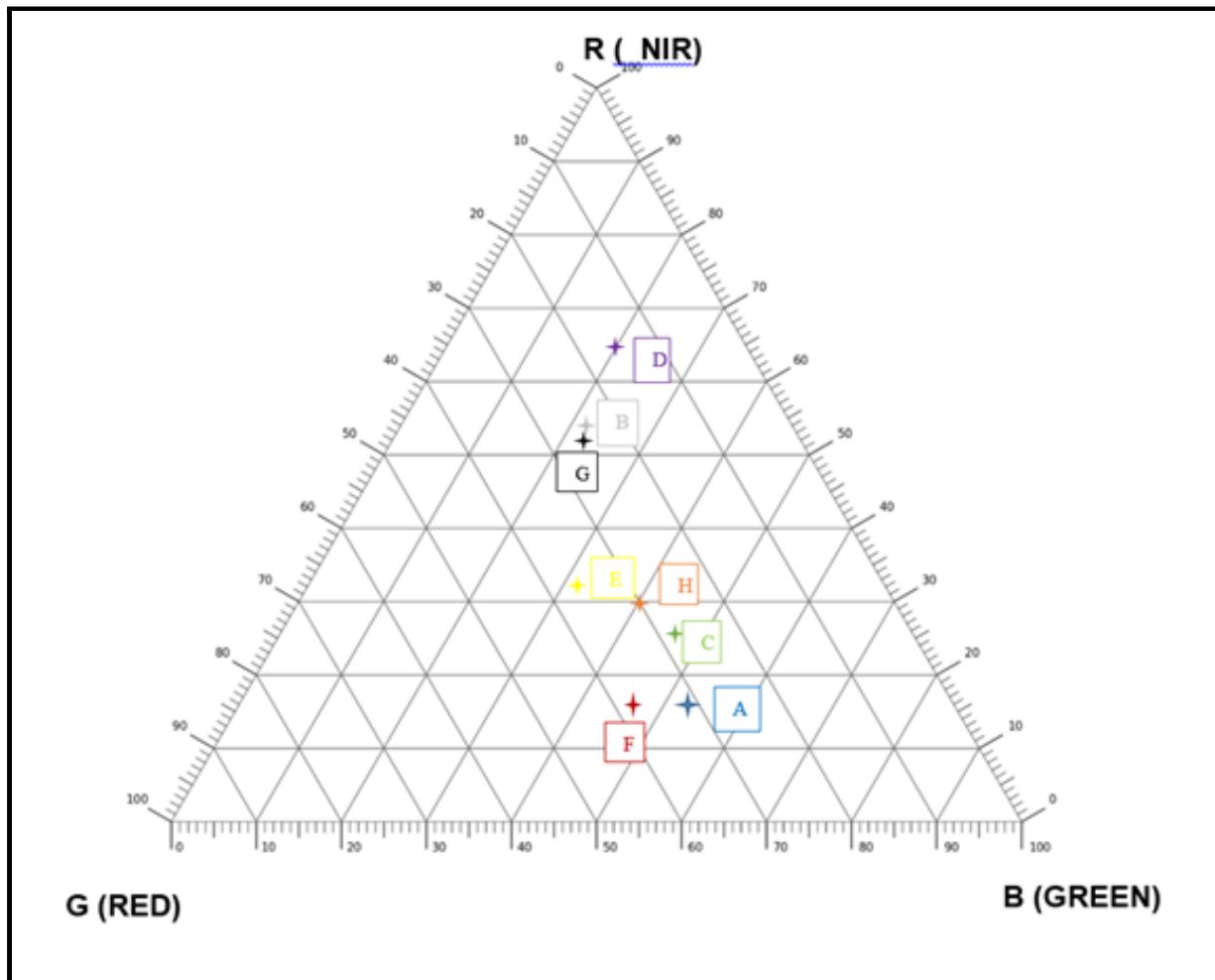
Reflectance of features plotted on a line graph.





Sentinel-2 Bands	Wavelengths
B1: Blue	0.49
B2: Green	0.56
B3: Red	0.665
B4: NIR	0.842
B5: SWIR	1.610
B6: SWIR	2.190

TERNARY DIAGRAM FOR FEATURES BASED ON REFLECTANCE



Calculation of reflectance for ternary representation

Features	DN Values (FCC)			Reflectance for ternary representation (%)		
	B2: Green 0.56	B3: Red 0.665	B4: NIR 0.842	B2: Green	B3: Red	B4: NIR
A.	553	318	180	53	30	17
B.	940	872	2221	23	22	55
C.	722	449	409	46	28	26
D.	876	628	2752	20	15	65
E.	2142	2477	2224	31	36	33
F.	1038	640	325	52	32	16
G.	957	823	1855	26	23	51
H.	1417	1069	1182	39	29	32

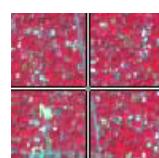
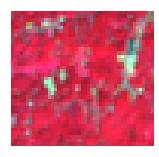
IMAGE INTERPRETATION-1

1. INTRODUCTION

This is image no. 1 which has been taken for interpretation. In the photo above, **8 land covers are distinct and identifiable.** This image is in standard false colour composite. For identification of those elements we have marked it with letters of the alphabet in the pages above.

2. INTERPRETATION

2.1 INTERPRETATION TABLE

Feature	Tone	Size	Shape	Textur e	Pattern	Height/ shadow	Remarks
A. 	Dark blue	-	-	Smooth	Along the coast	-	This feature might be a water body which has great depth.
B. 	Variable	Very large	Undefined	Rough grained	Irregular	Variable	This might be built up areas with vegetation in between
C. 	Dark blue	Small	Irregular polygon	smooth	Jigsaw fit patterned	-	It looks like water filled field i.e. wetland
D. 	Bright red	-	Irregular	Rough with small grains	Dispersed	Small silhouette	The feature might be vegetation
E.	Aqua	-	Elongated	Smooth	linear	-	This appears to

				with rough edges			be ocean sediments lined along the water body.
F. 	Blue	Large	Irregular	Smooth	-	-	This feature might be a lake.
G. 	Dark grey	Narrow	Regularly elongated	Smooth	Linear	-	This feature looks like an asphalt road.
H. 	Light blue	-	Irregular polygon	Smooth	-	Relatively high	This appears to be a large building with a concrete roof.

3. Site, Situation and Association

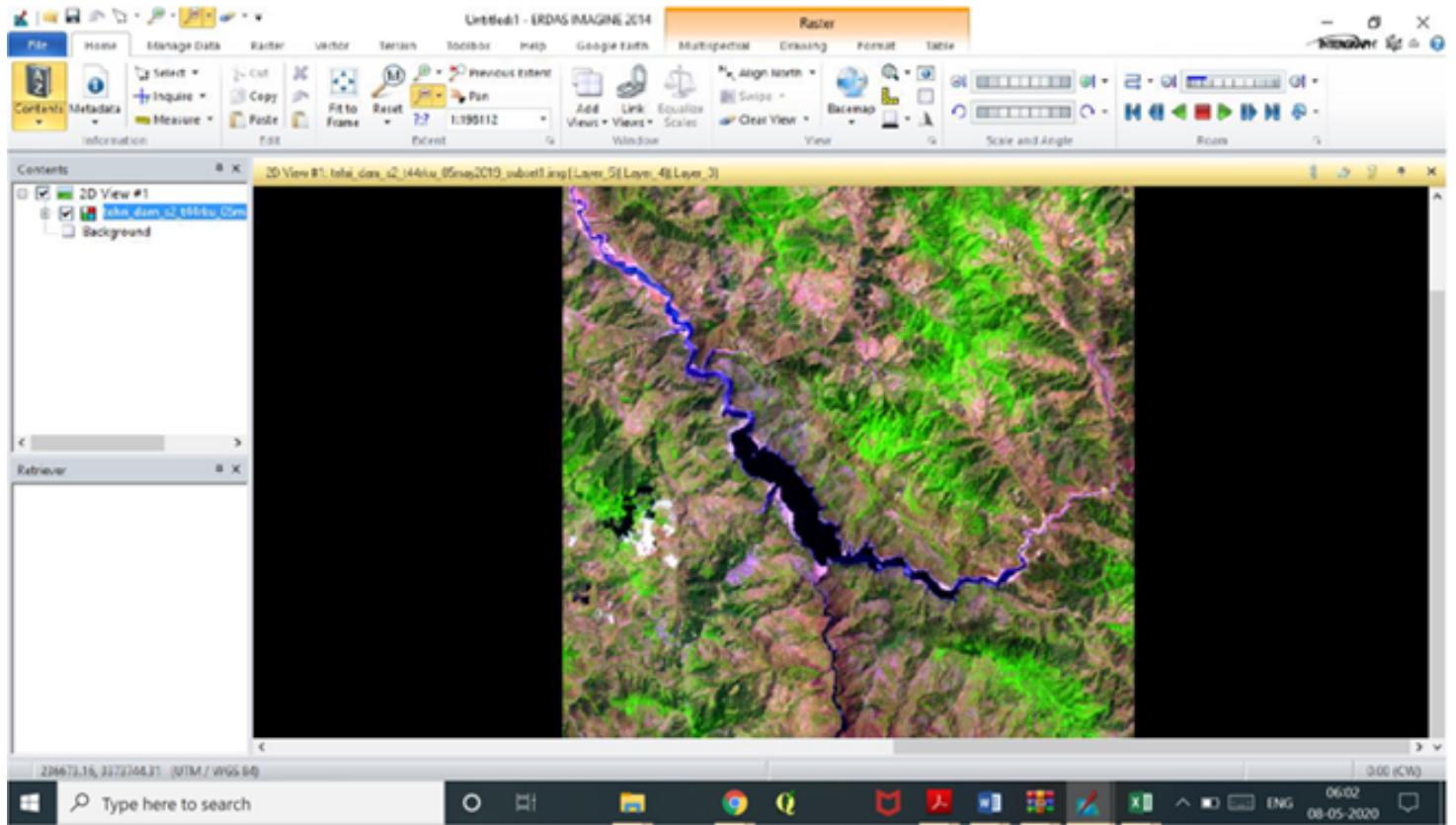
This image depicts an urban landscape along a large river with dense settlements along the coast. There are a number of water bodies protruding inside land breaching the shore. Harbours and ports are evident with different shapes and sizes of built up features.

4. Final remarks

Based on prior information, it is the image of the coast of Kerala, thus the water body is Arabian Sea and inland water bodies are backwaters called kayals.

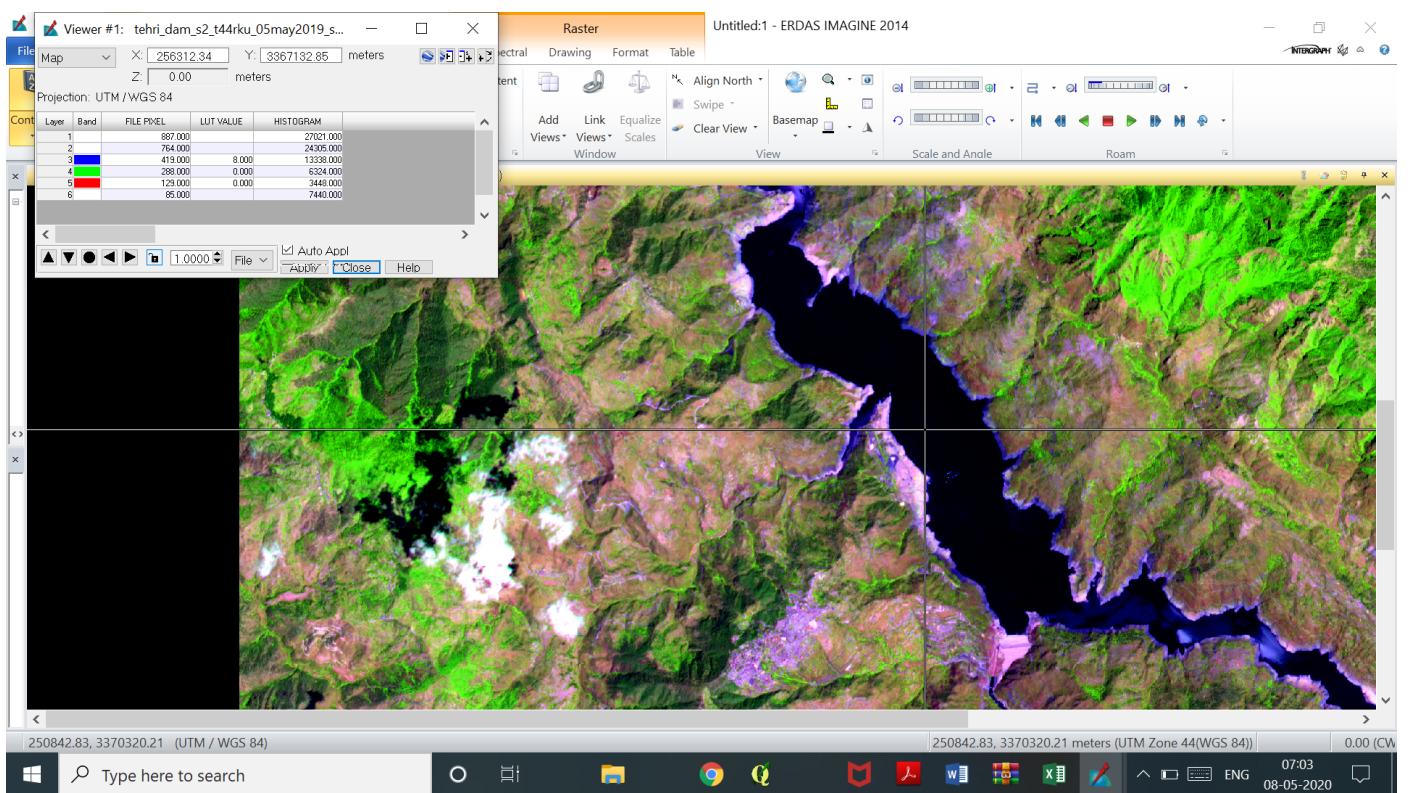
IMAGE 2: TEHRI DAM

(False colour composite: 5,4,3)

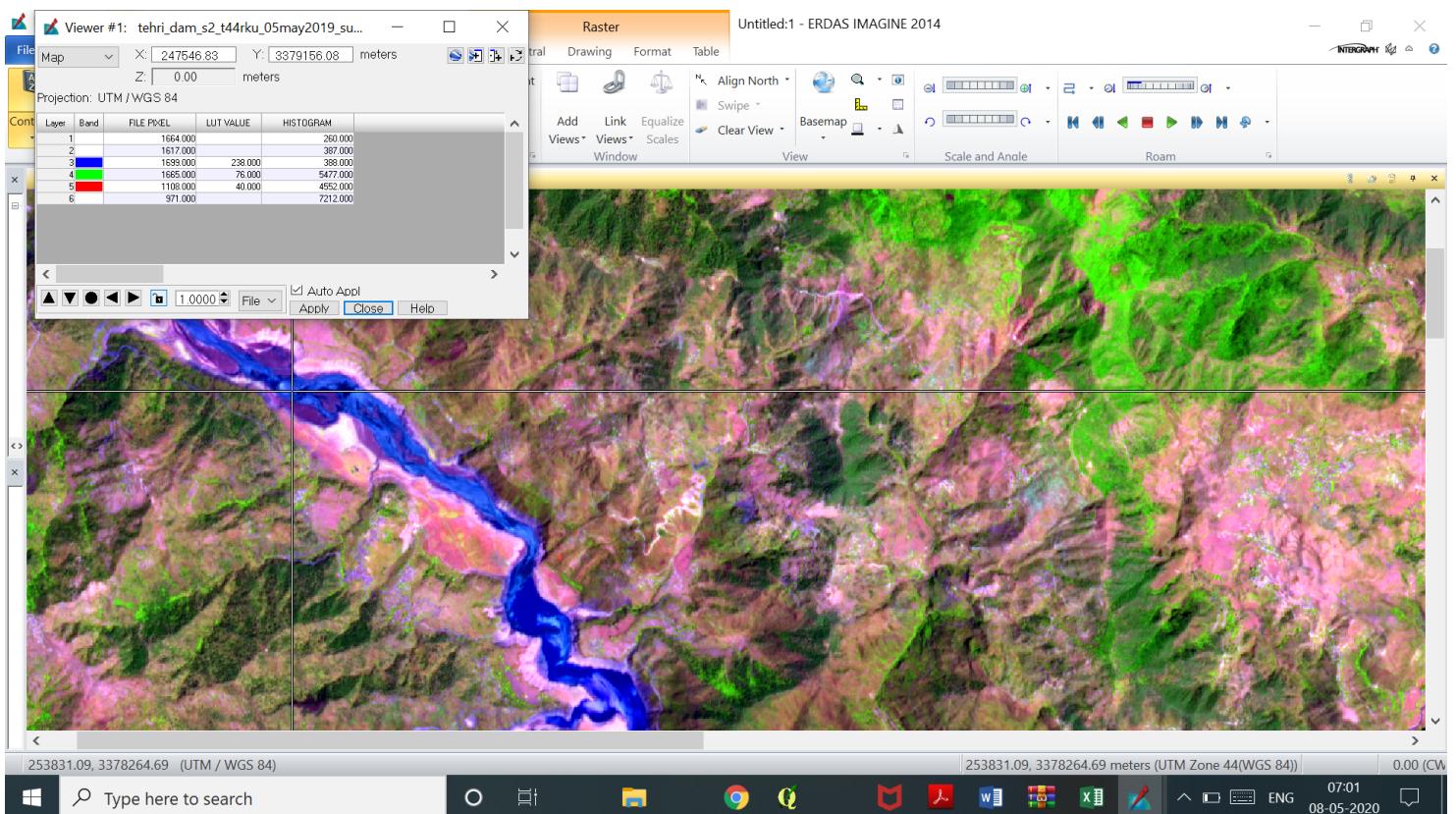


FEATURES

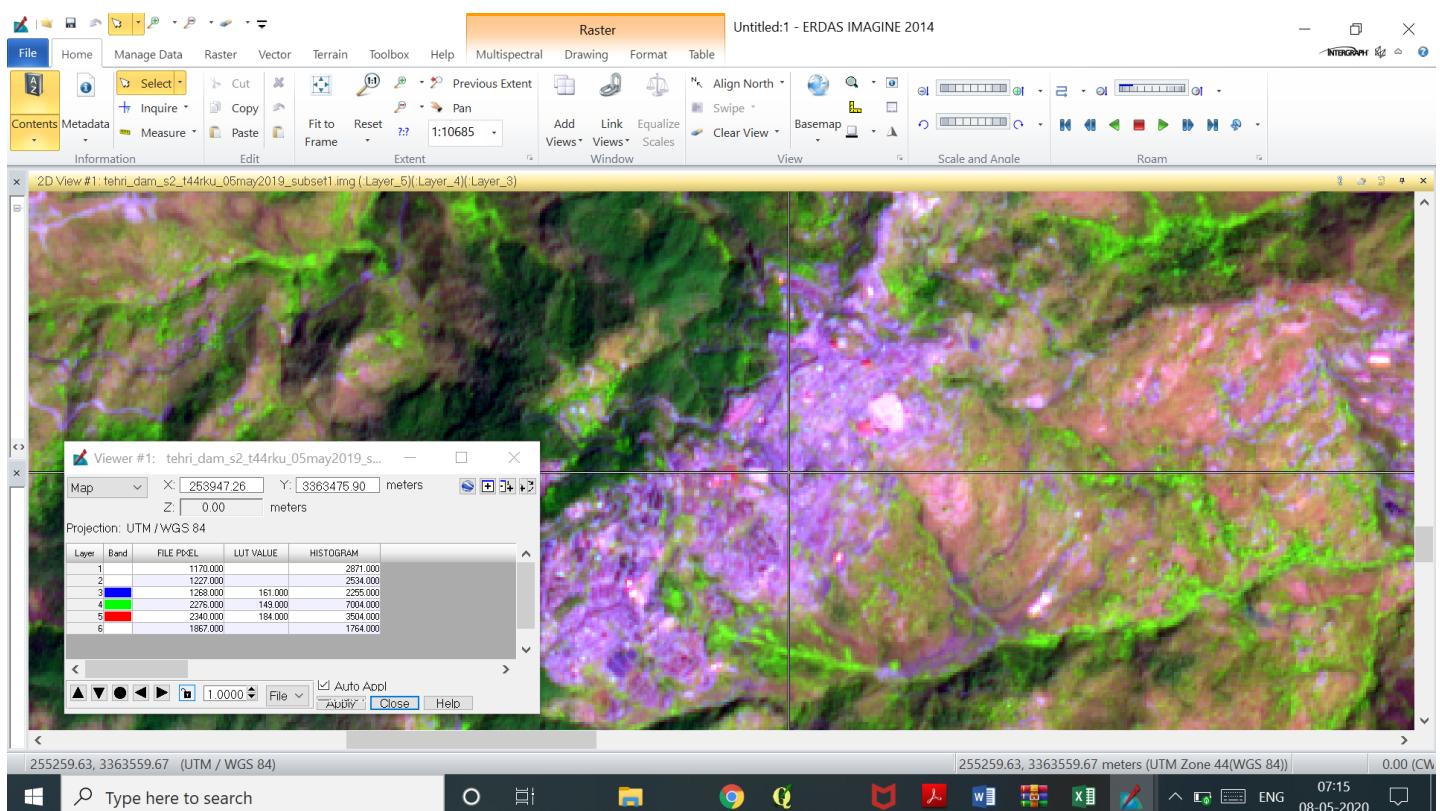
A.



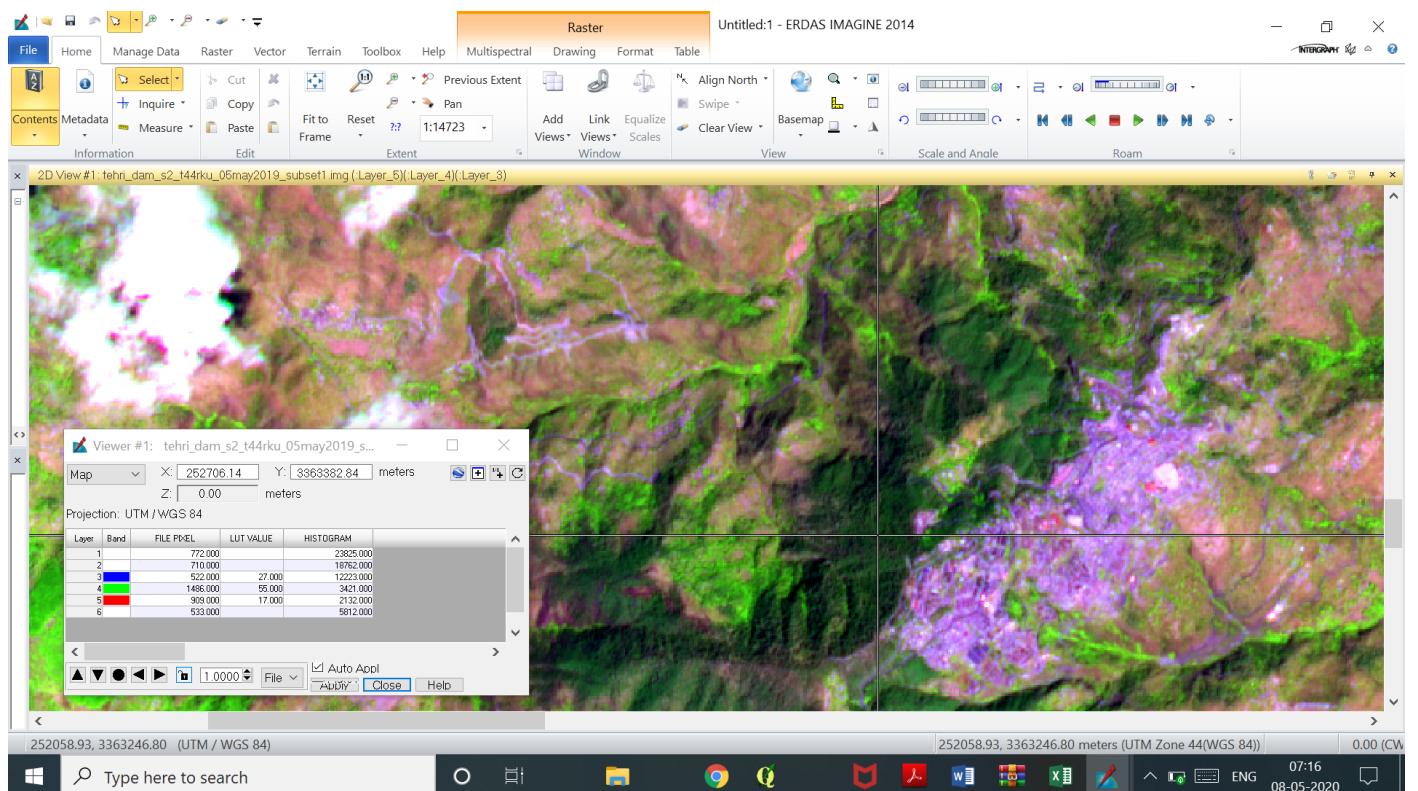
B.



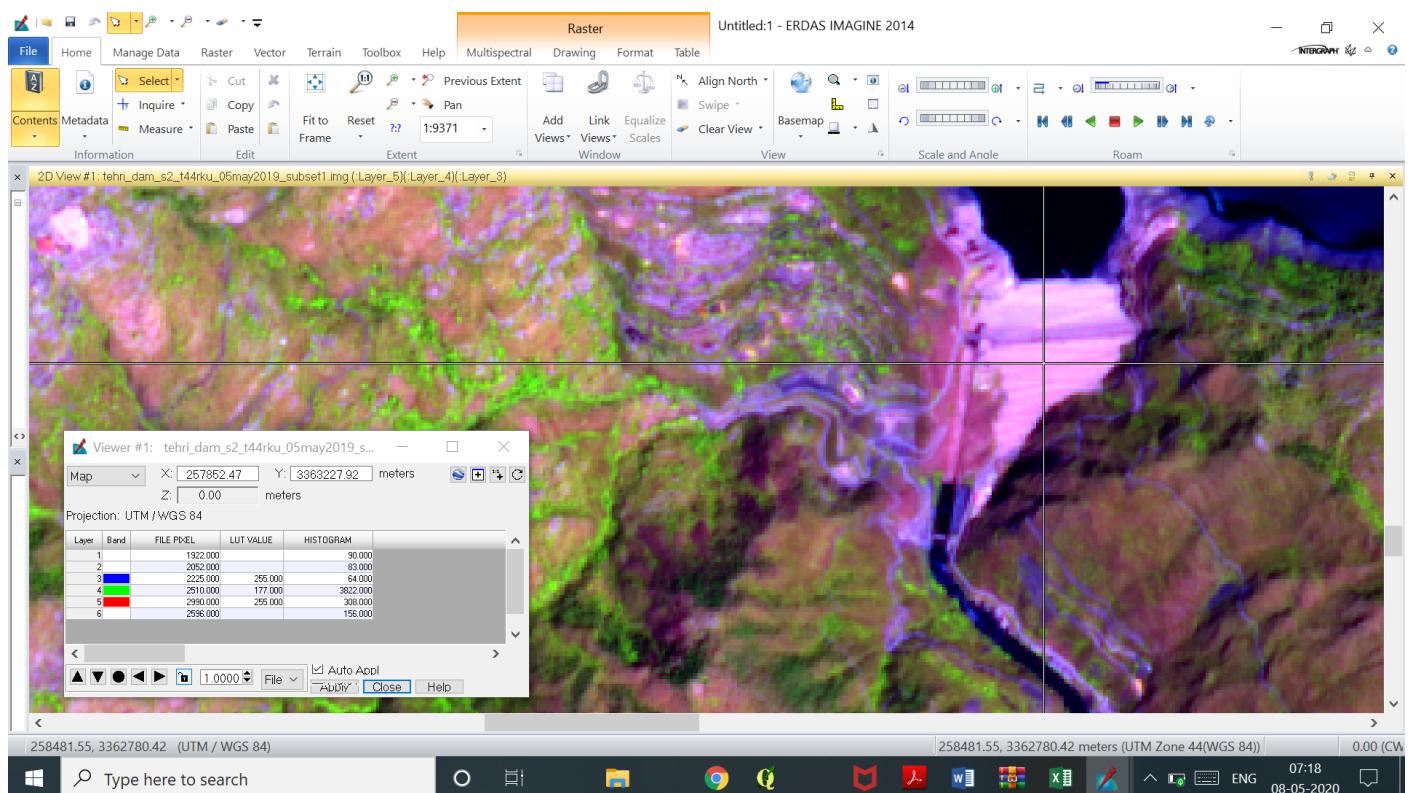
C.



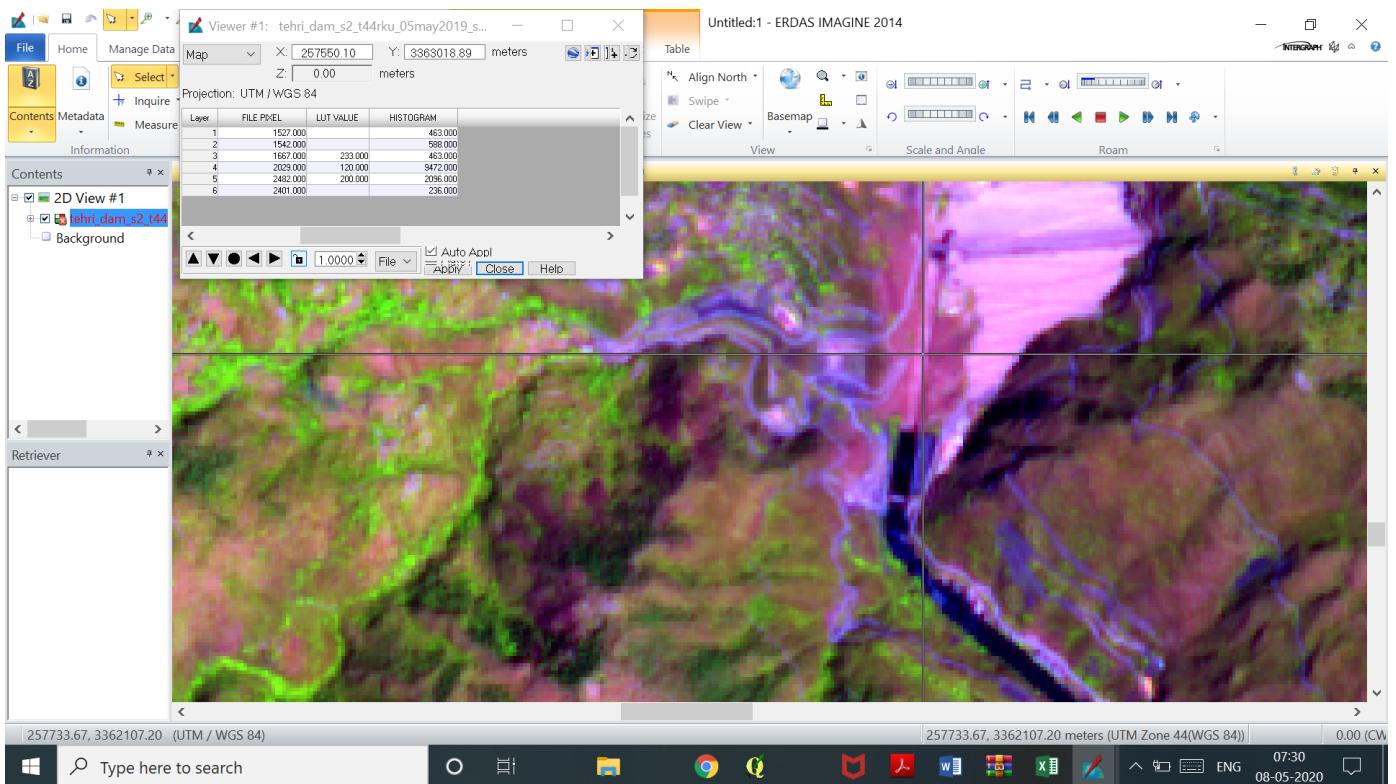
D.



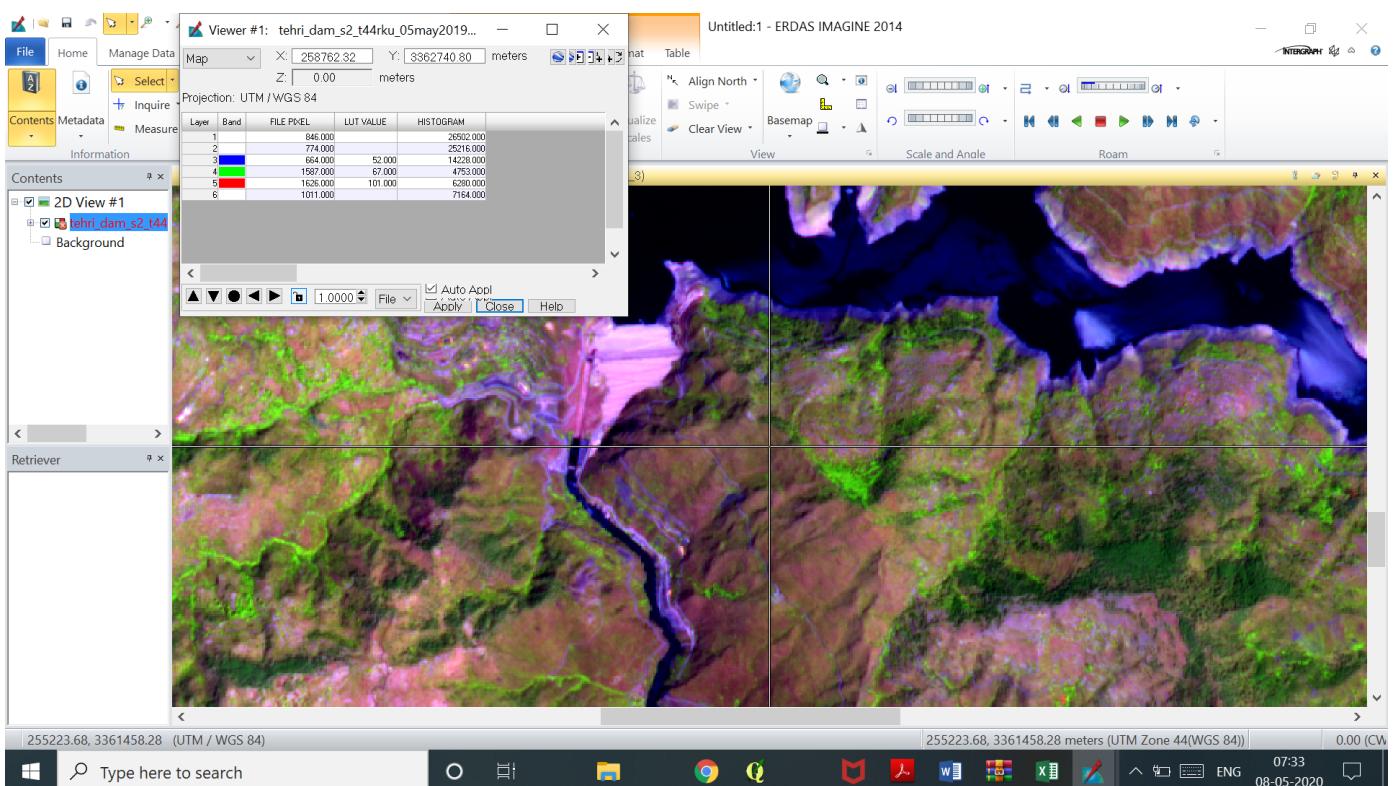
E.



F.



G.



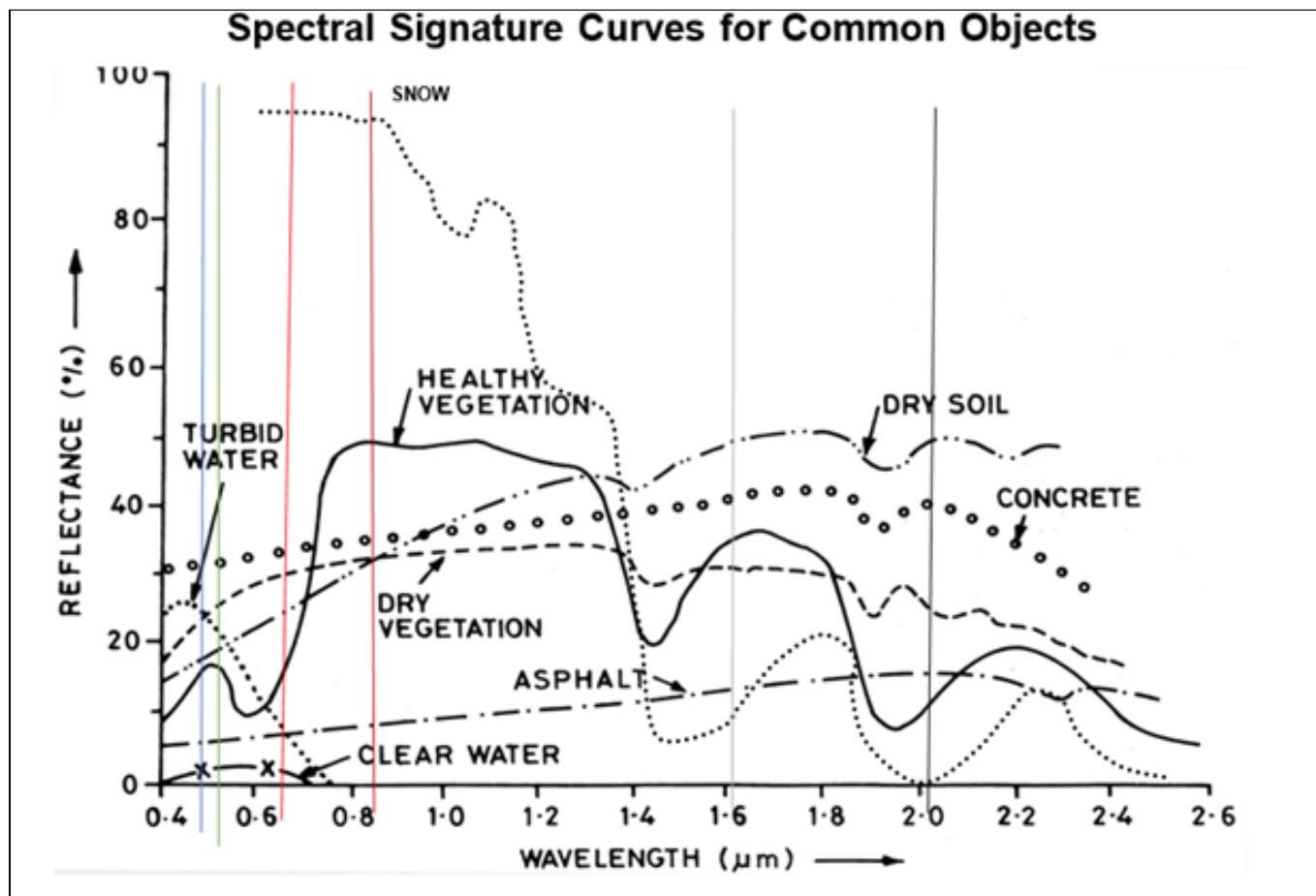
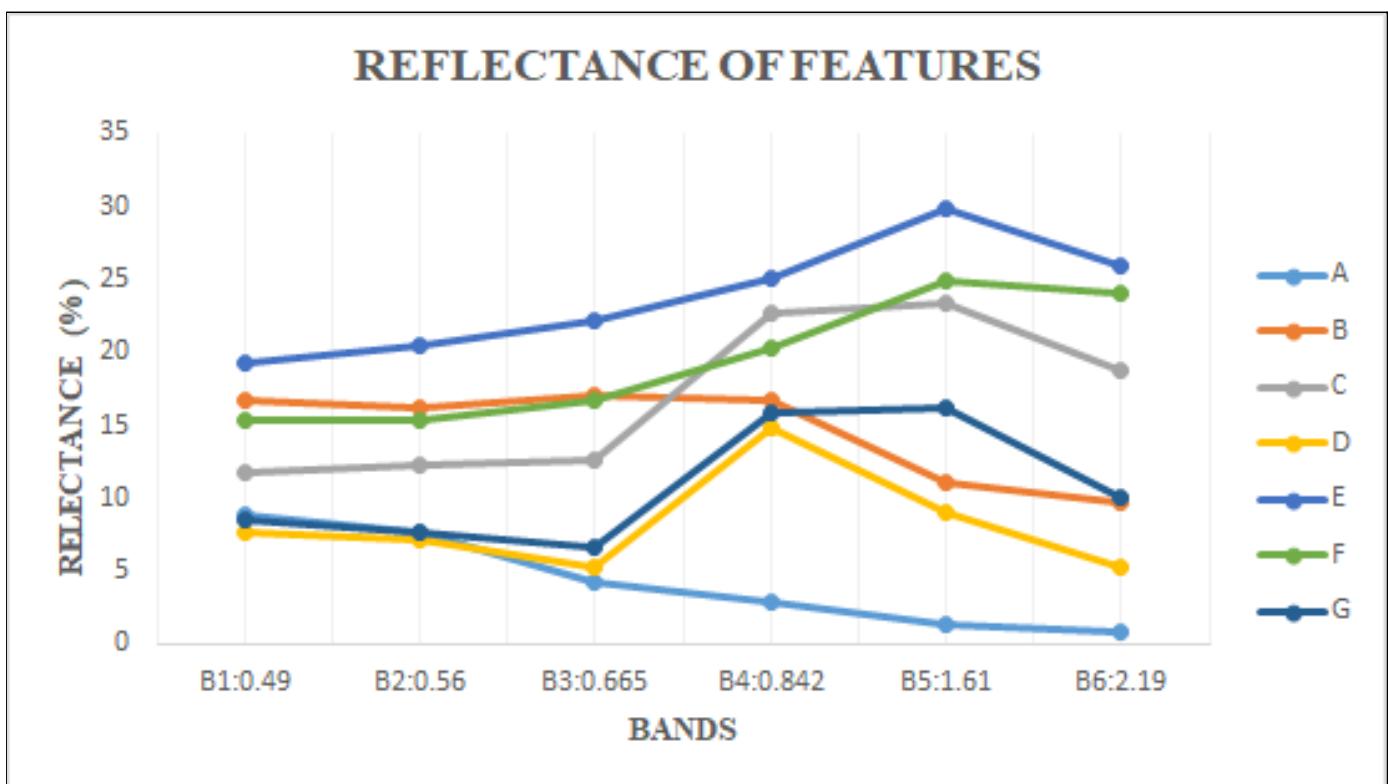
Digital Number values of features identified

Features	Digital Number Values (FCC)					
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
A.	887	764	419	288	129	85
B.	1664	1617	1699	1665	1108	971
C.	1170	1227	1268	2276	2340	1867
D.	772	710	522	1486	909	533
E.	1922	2052	2225	2510	2990	2596
F.	1527	1542	1667	2029	2482	2401
G.	846	774	664	1587	1626	1011

Reflectance of features identified in %

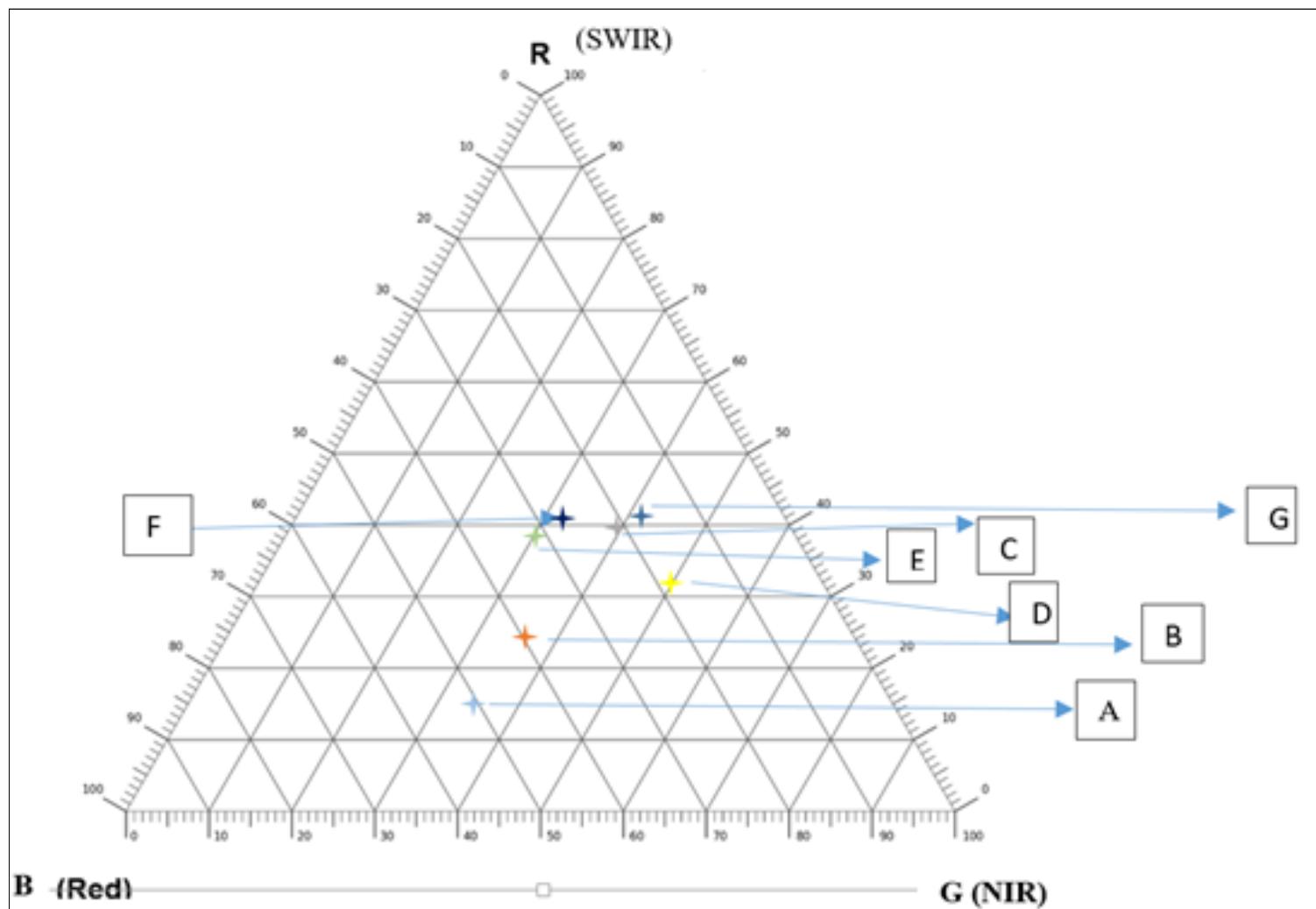
Features	Reflectance in %(FCC)					
	B1: Blue 0.49	B2: Green 0.56	B3: Red 0.665	B4: NIR 0.842	B5: SWIR 1.601	B6: SWIR 2.19
A.	8.87	7.64	4.19	2.88	1.29	0.85
B.	16.64	16.17	16.99	16.65	11.08	9.71
C.	11.70	12.27	12.68	22.76	23.40	18.67
D.	7.72	7.10	5.22	14.86	9.09	5.33
E.	19.22	20.52	22.25	25.10	29.90	25.96
F.	15.27	15.42	16.67	20.29	24.82	24.01
G.	8.46	7.74	6.64	15.87	16.26	10.11

Reflectance of features plotted on a line graph



Sentinel-2 Bands	Wavelengths
Blue	B1: Blue 0.49
Green	B2: Green 0.56
Red	B3: Red 0.665
NIR	B4: NIR 0.842
SWIR 1	B5: SWIR 1.610
SWIR 2	B6: SWIR 2.190

TERNARY DIAGRAM FOR FEATURES BASED ON REFLECTANCE



Calculation of reflectance for ternary representation

Features	DN Values (FCC)			Reflectance for ternary representation (%)		
	B3: Red 0.665	B4: NIR 0.842	B5:SWIR 1.601	B3: Blue	B4: Green	B5:SWIR
A.	4.19	2.88	1.29	50	35	15
B.	16.99	16.65	11.08	38	37	25
C.	12.68	22.76	23.40	21	39	40
D.	5.22	14.86	9.09	18	51	31
E.	22.25	25.10	29.90	29	32	39
F.	16.67	20.29	24.82	27	33	40
G.	6.64	15.87	16.26	17	41	42

IMAGE INTERPRETATION-2

1. INTRODUCTION

This is image no. 1 which has been taken for interpretation. In the photo above, **7 land covers are distinct and identifiable.** This image is in false colour composite(5,4,3). For identification of those elements we have marked it with letters of the alphabet in the pages above.

2. INTERPRETATION

2.1 INTERPRETATION TABLE

Feature	Tone	Size	Shape	Texture	Pattern	Height/s hadow	Remarks
A. 	Black	Large	Irregular patch	Smooth	Large patch	-	This feature appears to be a deep water body
B. 	Dark blue	Very Small	Elongated	Smooth	Branched	-	This feature appears to be a river with tributary or distributary
C. 	Light purple	medium	Irregular polygon	Rough	Scattered	-	This appears to be a settlement.
D. 	Dark green	Very Large	Irregular patch	Rough	Scattered	Small to medium silhouette	This looks like a dense forest.
E. 	Light pink	Small	Undefined	Very smooth but rough edges	Irregular and along feature A	-	This feature appears to be alluvial sediments

F.	Pink	Small	Rectangular polygon	smooth	-	Relatively high	This feature appears to be a large concrete built object probably a dam.
G.	Brown	medium	Undefined	Rough gained	Varied	-	This feature appears to be an undulating landform.

3. Site, Situation and Association

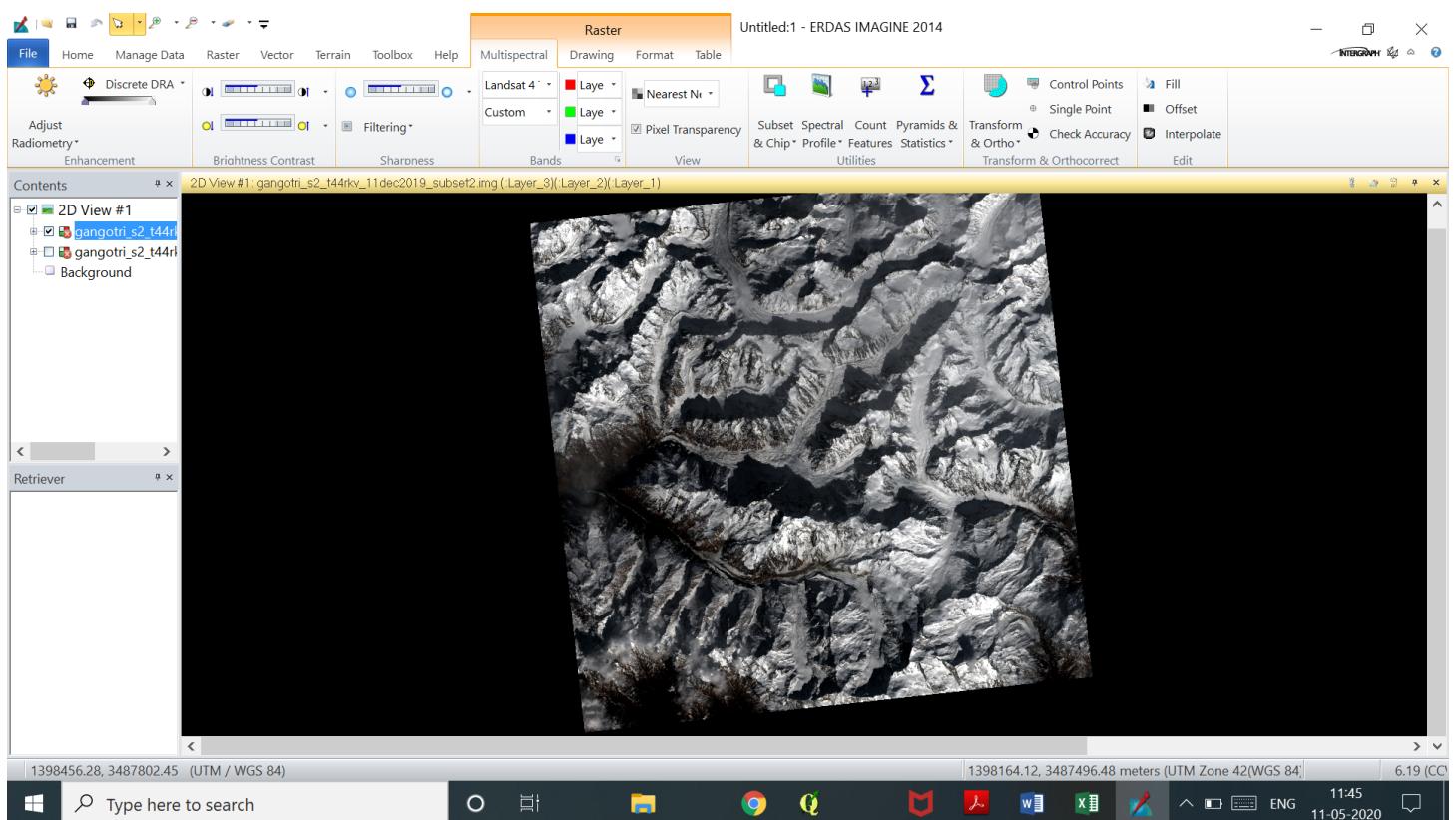
This image depicts a river flowing at a place with undulating topography. There is a huge concrete feature, probably a dam with a reservoir behind. The region has a mountainous topography that the river is in its early stage.

4. Final remarks

Based on our prior knowledge, this image is of Tehri Dam in Uttarakhand, India. Thus, the river is Ganga and the mountains are in the middle Himalayas.

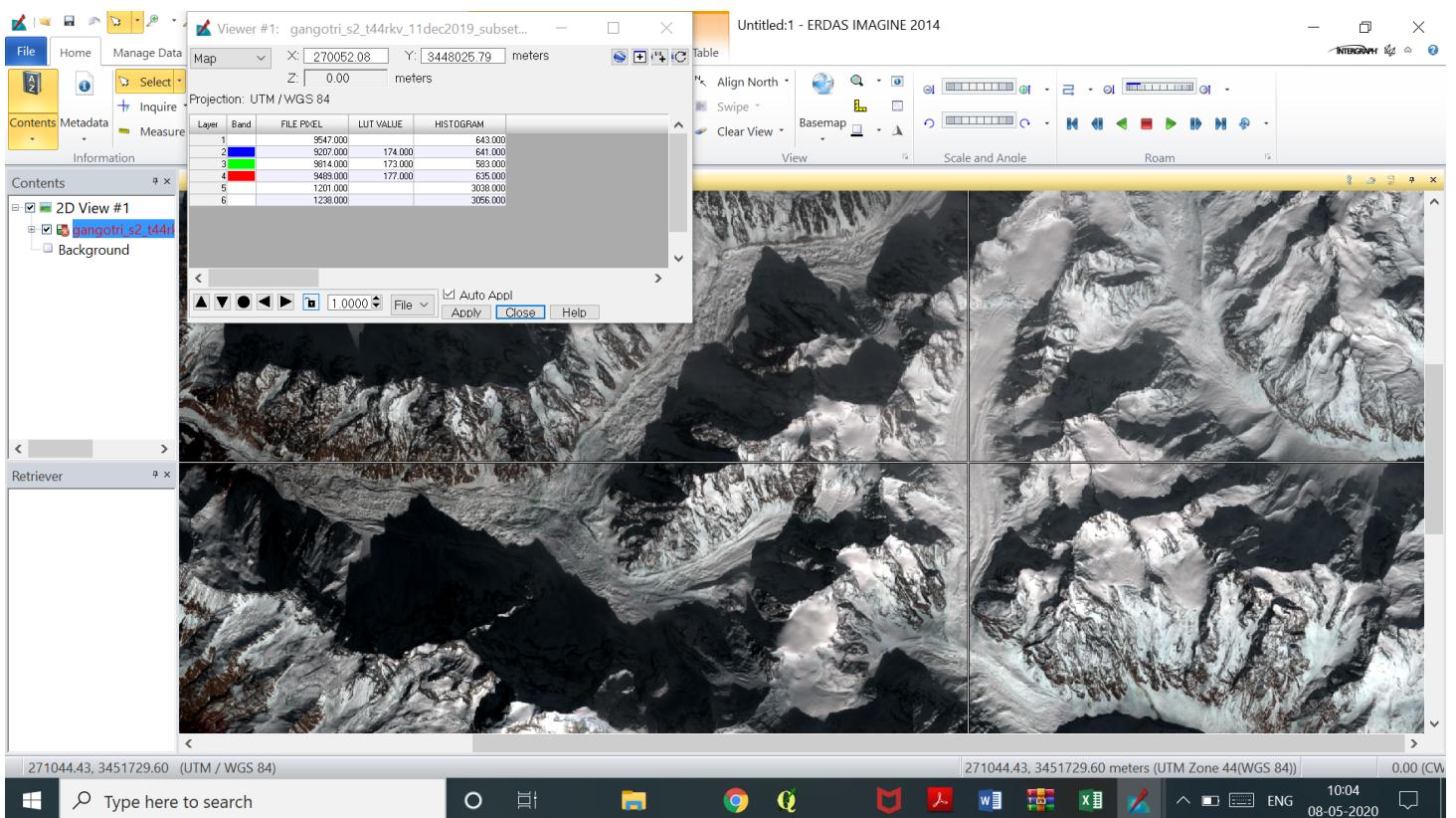
IMAGE 3: GANGOTRI

(True colour Composite: 3,2,1)

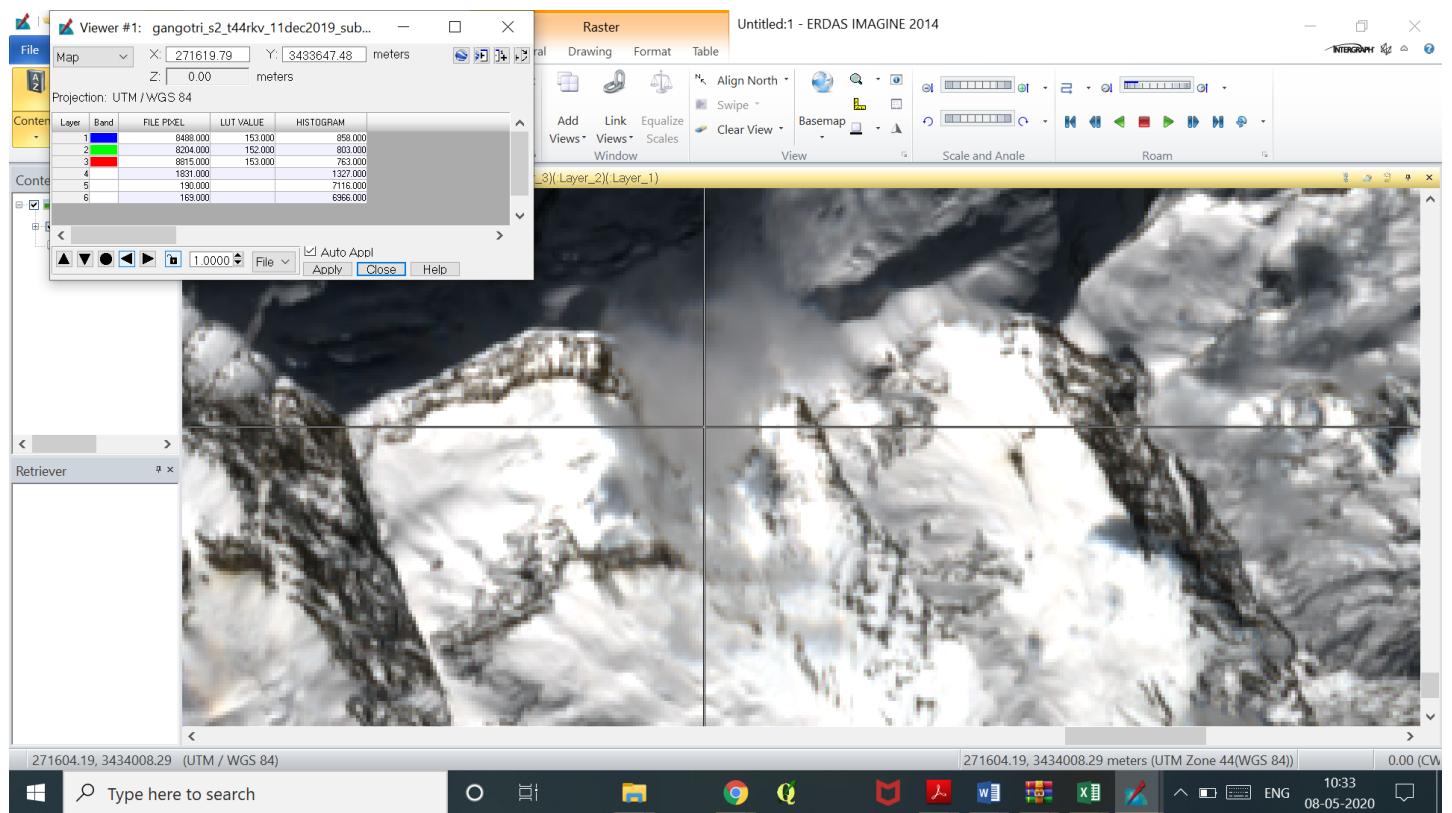


FEATURES

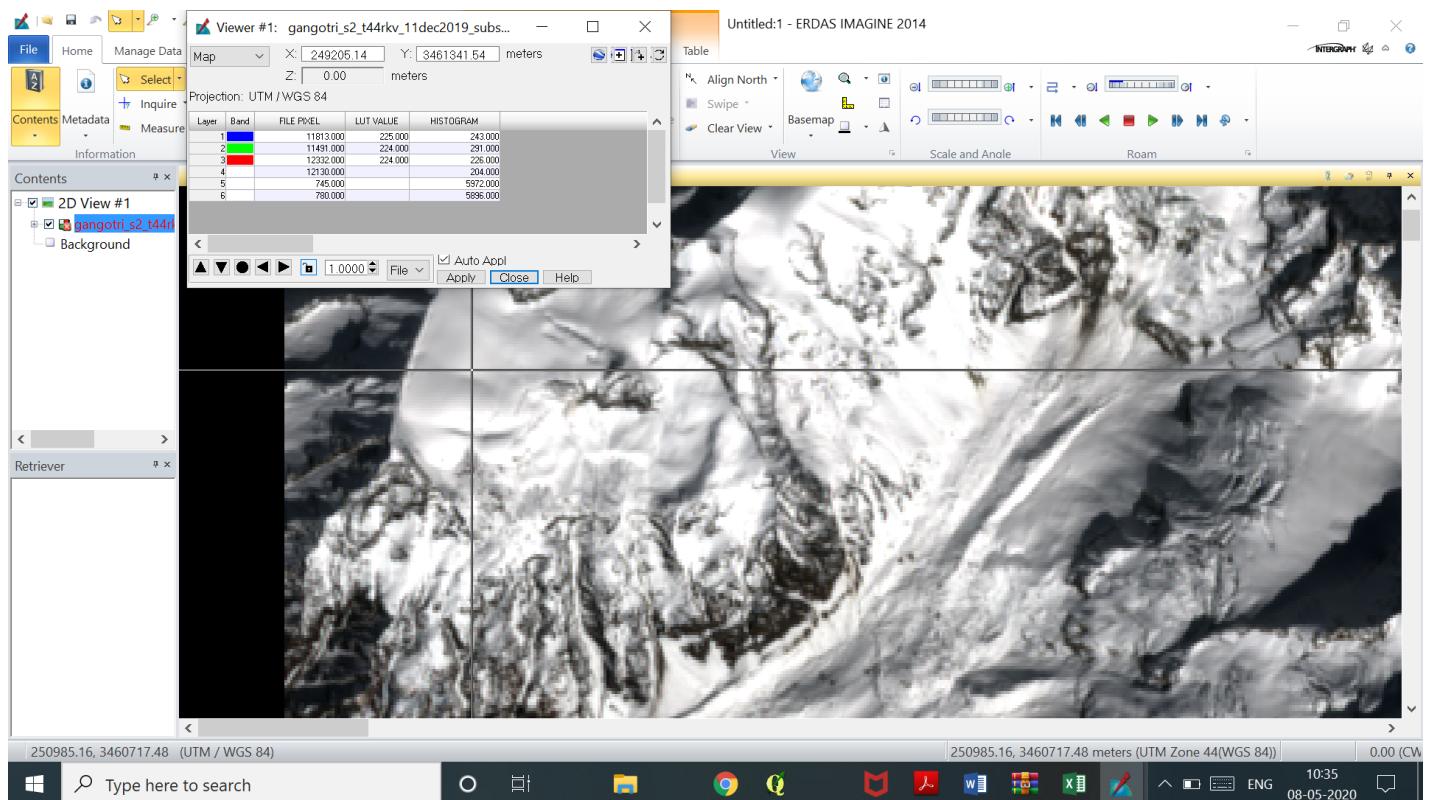
A.



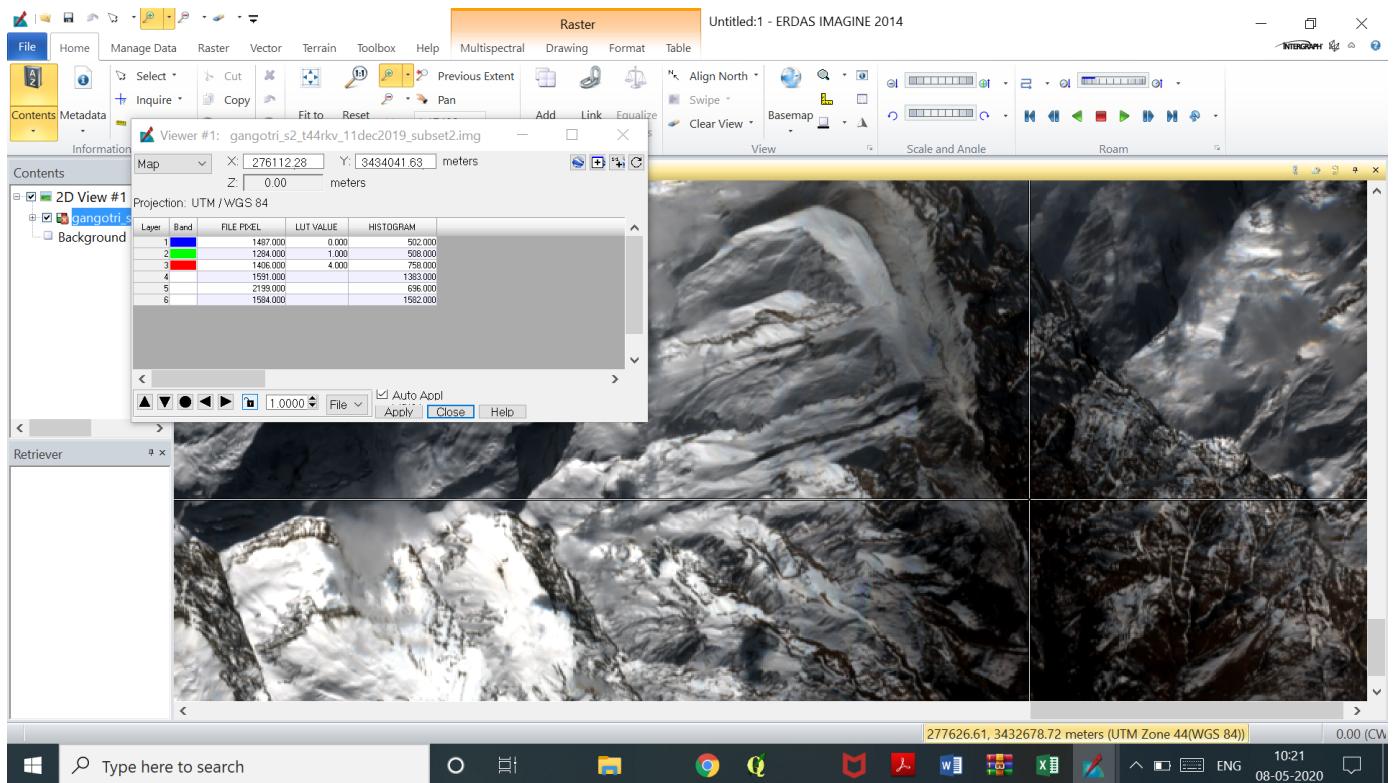
B.



C.



D.



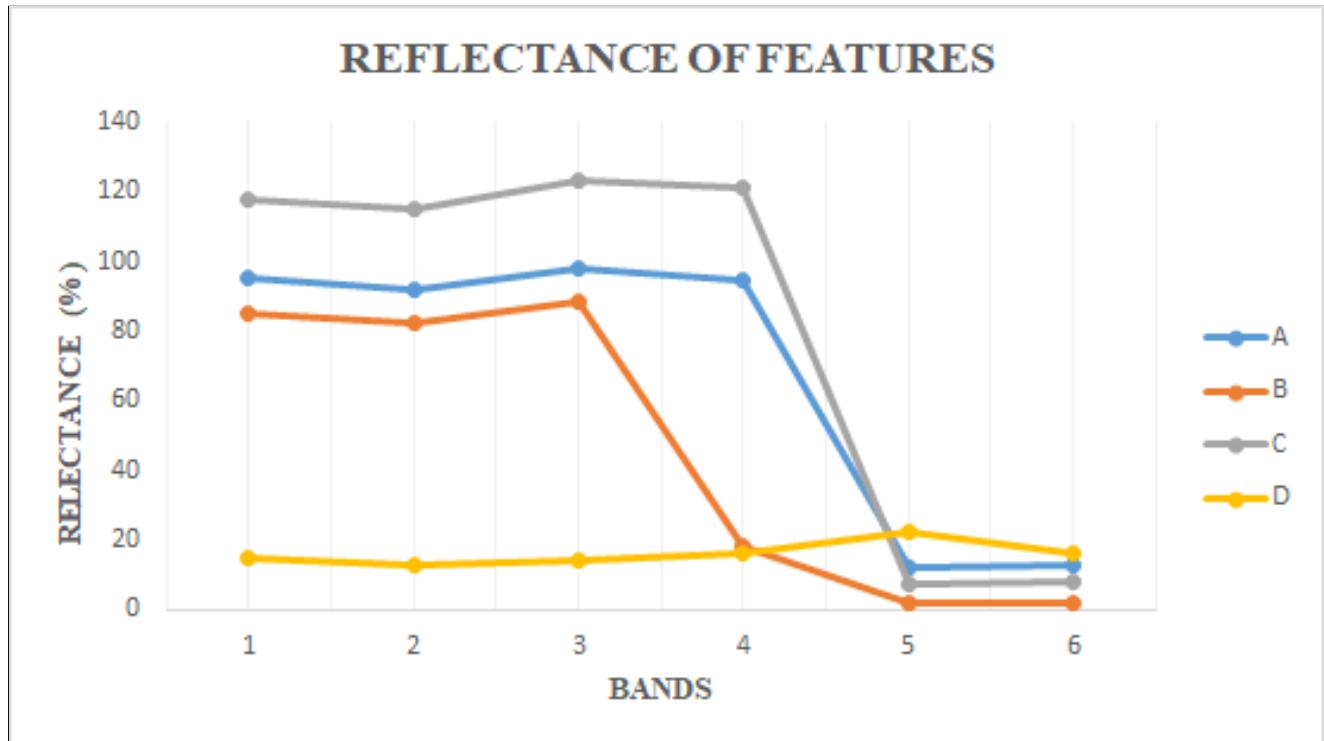
Digital Number values of features identified

Features	Digital Number Values (FCC)					
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
A.	9547	9207	9814	9489	1201	1238
B.	8488	8204	8815	1831	190	169
C.	11813	11491	12332	12130	745	780
D.	1487	1284	1406	1591	2199	1584

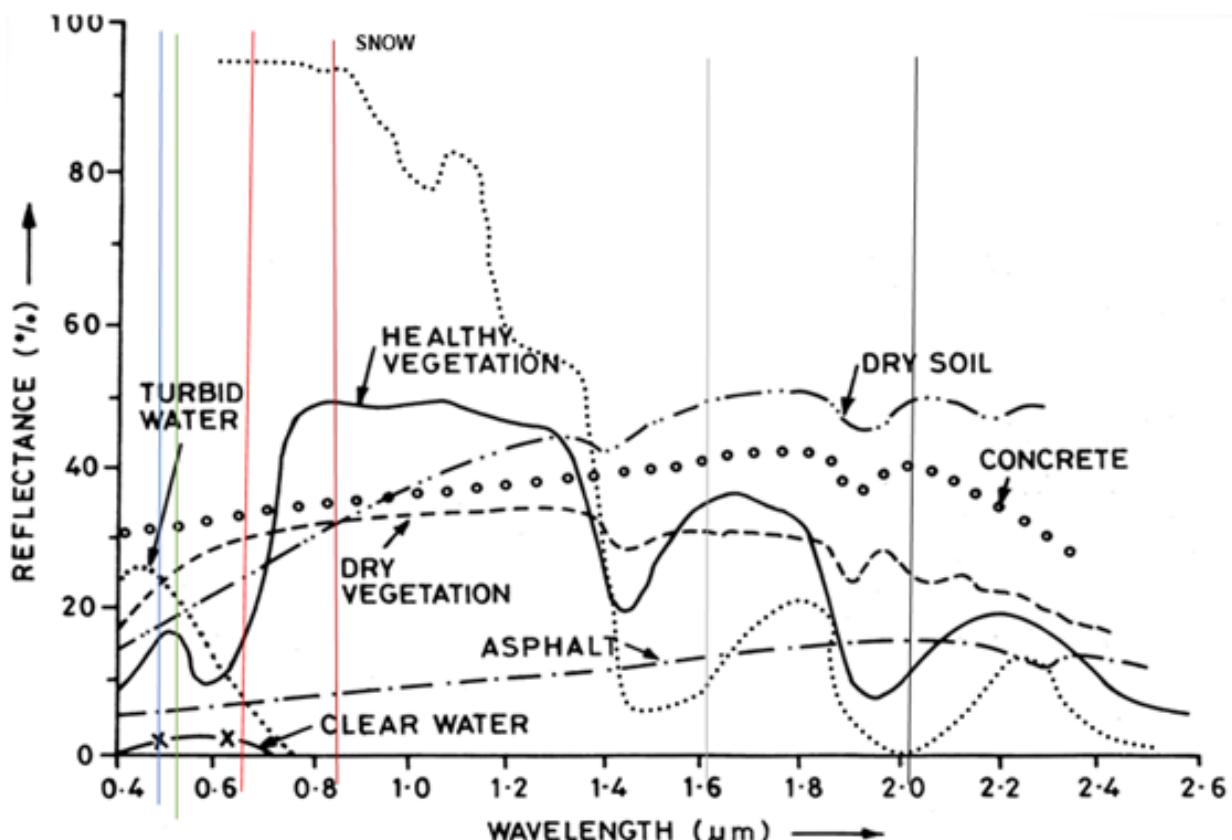
Reflectance of features identified in %

Features	Reflectance in %(FCC)					
	B1: Blue 0.49	B2: Green 0.56	B3: Red 0.665	B4: NIR 0.842	B5: SWIR 1.601	B6: SWIR 2.19
A.	95.47	92.07	98.14	94.89	12.01	12.38
B.	84.88	82.04	88.15	18.31	1.90	1.69
C.	118.13	114.91	123.32	121.30	7.45	7.80
D.	14.87	12.84	14.06	15.91	21.99	15.84

Reflectance of features plotted on a line graph

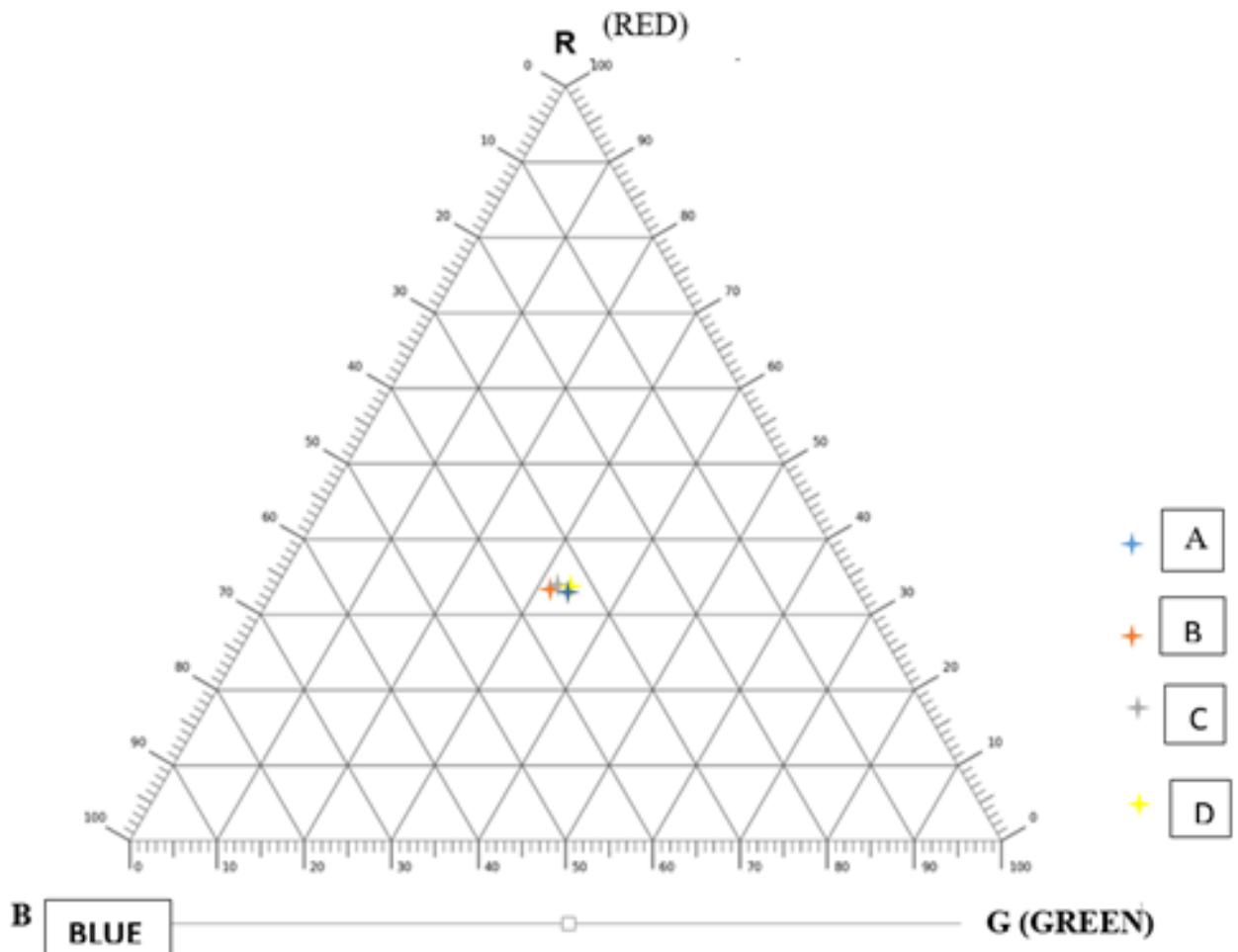


Spectral Signature Curves for Common Objects



Sentinel-2 Bands	Wavelengths
B1: Blue	0.49
B2: Green	0.56
B3: Red	0.665
B4: NIR	0.842
B5: SWIR	1.610
B6: SWIR	2.190

TERNARY DIAGRAM FOR FEATURES BASED ON REFLECTANCE



Calculation of reflectance for ternary representation

Features	DN Values (FCC)			Reflectance for ternary representation (%)		
	B1:Blue 0.49	B2: Green 0.56	B3: Red 0.665	B1: Blue	B2: Green	B3: Red
A.	9547	9207	9814	34	32	34
B.	8488	8204	8815	33	32	35
C.	11813	11491	12332	33	32	35
D.	1487	1284	1406	36	31	33

IMAGE INTERPRETATION-3

1. INTRODUCTION

This is image no. 1 which has been taken for interpretation. In the photo above, **4 land covers are distinct and identifiable.** This image is in true colour composite. For identification of those elements we have marked it with letters of the alphabet in the pages above.

2. INTERPRETATION

2.1 INTERPRETATION TABLE

Feature	Tone	Size	Shape	Texture	Pattern	Height/s hadow	Remarks
A.	Grey	-	Randomly elongated	Very fine grained	Branched	-	This feature might be a stream glacier given its river like physical features but ice like texture.
B.	Dark grey	Small	Undefined	Like cotton	Dispersed In pockets	Variable	This feature appears to be like a cloud.
C.	White	Large	Undefined	Smooth	Undulating sheets	Variable	This feature might be a sheet of snow
D.	Black	-	Long and Dendritic	Smooth	Branched	-	This feature appears like a stream channel on mountainous terrain.

3. Site, Situation and Association

This image shows a mountainous region with glaciers and young branched streams.

4. Final remarks

Based on prior information, it is an image of Gangotri in Uttarakhand India; we can clearly ascertain that the rivers are tributaries of Ganga falling in a dendritic pattern. There are clouds in the southwest part of the image. The mountain slopes and valleys are clearly evident as the shadows of the mountains are clearly visible.