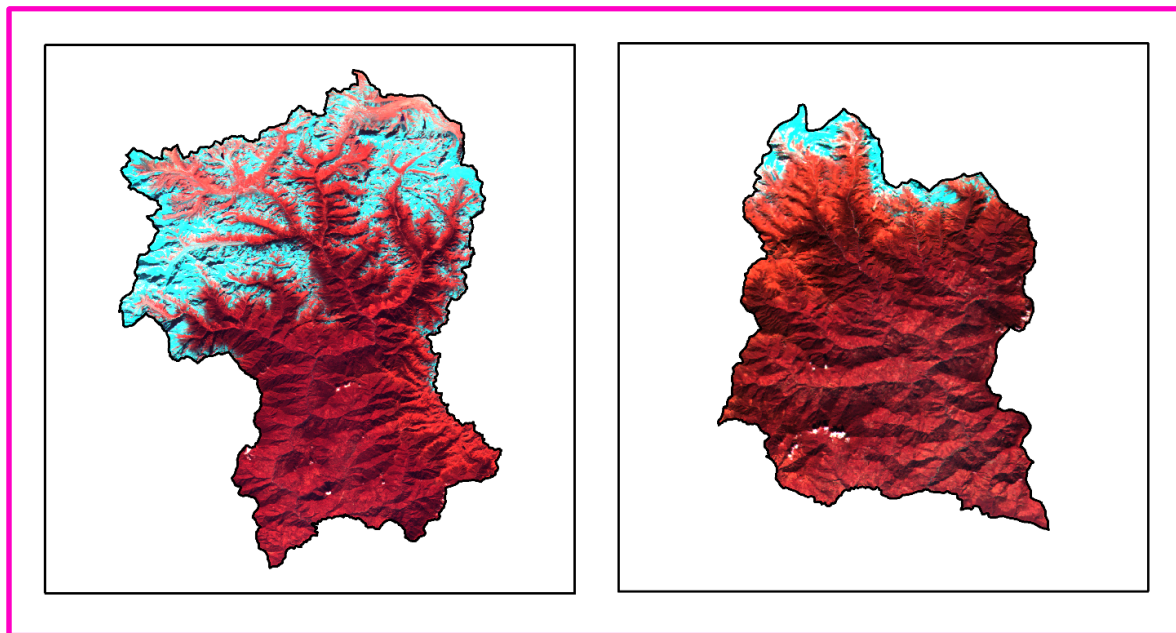


SNOW COVER ATLAS OF TISTA BASIN

Sub basins: Tista and Rangit

(A Joint Project of Indian Space Research Organisation and
Ministry of Environment and Forests, Govt. of India)

Year : 2009-10



Space Applications Centre (ISRO)
Ahmedabad - 380015

December 2012

AREAL EXTENT OF SNOW (5 DAILY)

BASIN NAME: TISTA

BASIN AREA: 5310 sq km

S No	Date	Snow cover (sq km)	Snow cover (%)	S No	Date	Snow cover (sq km)	Snow cover (%)
October 2009							
1	1-Oct-09	515	10	5	20-Oct-09	960	18
2	10-Oct-09	1811	34	6	25-Oct-09	1616	30
3	15-Oct-09	2059	39	7	30-Oct-09	1336	25
4	16-Oct-09	1601	30				
November 2009							
8	4-Nov-09	1159	22	11	23-Nov-09	1475	28
9	13-Nov-09	1100	21	12	27-Nov-09	1341	25
10	18-Nov-09	2658	50	13	28-Nov-09	1164	22
December 2009							
14	2-Dec-09	1113	21	19	21-Dec-09	1084	20
15	3-Dec-09	975	18	20	22-Dec-09	901	17
16	7-Dec-09	1009	19	21	26-Dec-09	1131	21
17	12-Dec-09	969	18	22	27-Dec-09	1035	19
18	17-Dec-09	451	9				
January 2010							
23	5-Jan-10	1288	24	27	19-Jan-10	969	18
24	10-Jan-10	1025	19	28	24-Jan-10	1091	21
25	14-Jan-10	587	11	29	29-Jan-10	1527	29
26	15-Jan-10	937	18				
February 2010							
30	3-Feb-10	1571	30	33	12-Feb-10	1690	32
31	7-Feb-10	1600	30	34	13-Feb-10	2525	48
32	8-Feb-10	1287	24	35	22-Feb-10	1603	30
March 2010							
36	3-Mar-10	1840	35	39	18-Mar-10	1811	34
37	4-Mar-10	1704	32	40	27-Mar-10	494	9
38	13-Mar-10	1068	20				
April 2010							
41	1-Apr-10	602	11	41	20-Apr-10	508	10
42	6-Apr-10	764	14	42	25-Apr-10	519	10
43	11-Apr-10	1015	19	45	20-Apr-10	508	10
44	16-Apr-10	798	15	46	25-Apr-10	519	10

S No	Date	Snow cover (sq km)	Snow cover (%)	S No	Date	Snow cover (sq km)	Snow cover (%)
May 2010							
June 2010							
47	7-Jun-10	490	9				
48	12-Jun-10	267	5				

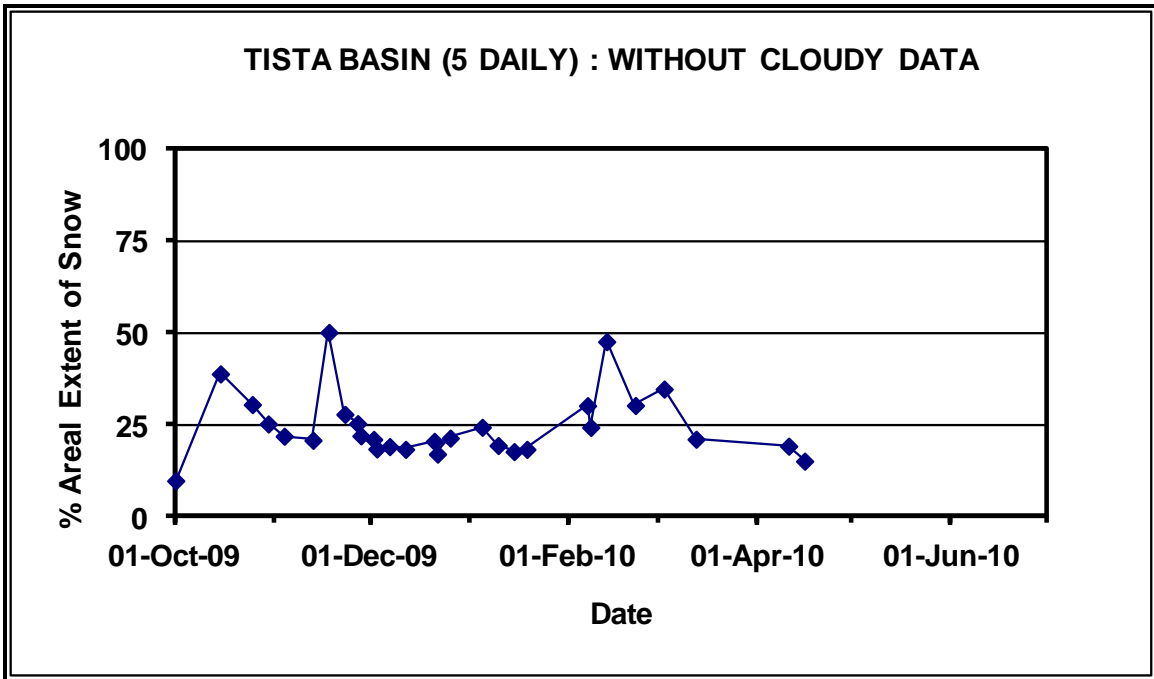
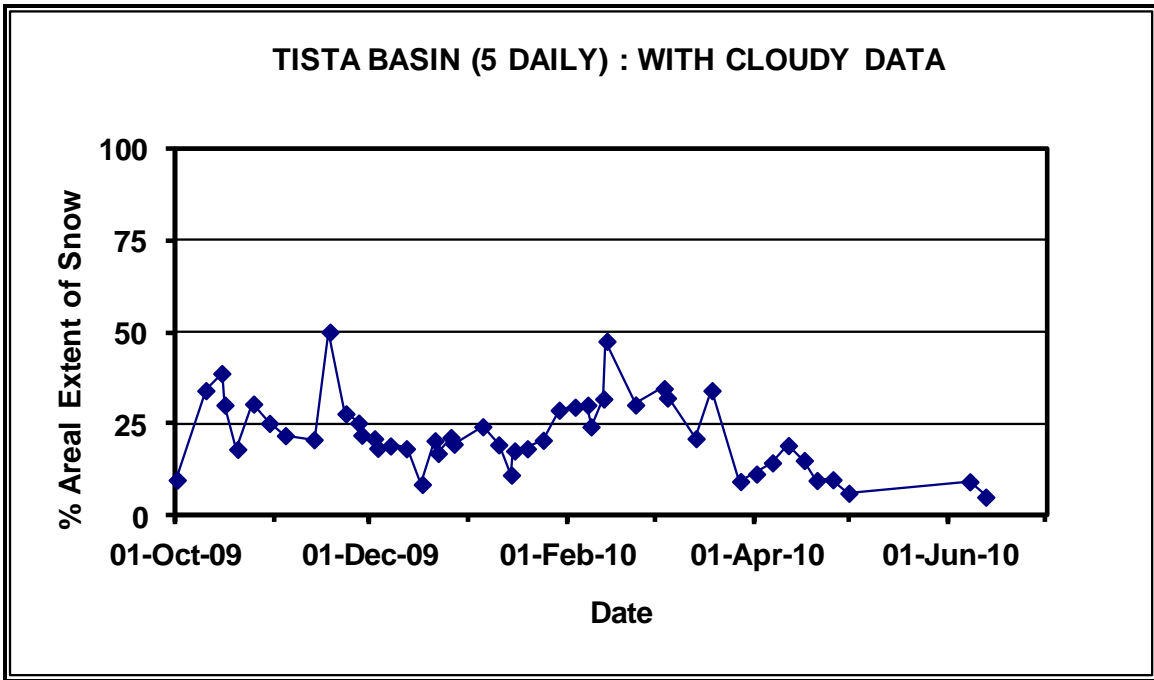
AREAL EXTENT OF SNOW (10 DAILY)

BASIN NAME: TISTA

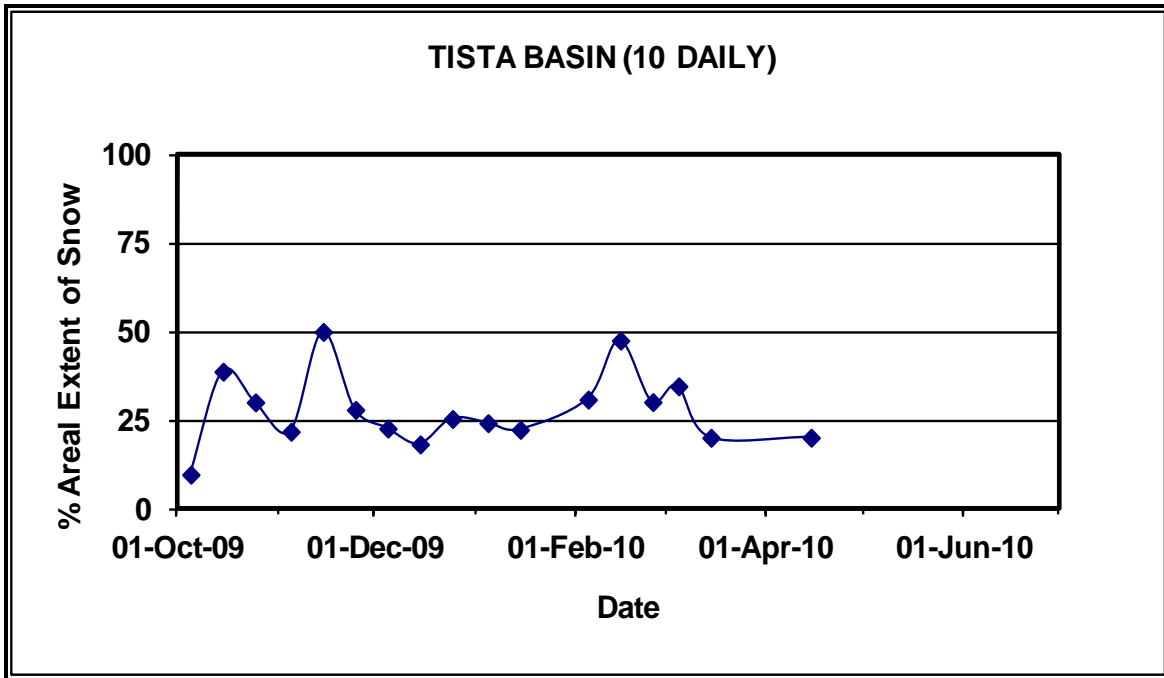
BASIN AREA: 5310 Sq km

S No	Date	Snow cover (sq km)	Snow cover (%)	S No	Date	Snow cover (sq km)	Snow cover (%)
October 2009				November 2009			
1	5-Oct-09	515	10	4	5-Nov-09	1159	22
2	15-Oct-09	2059	39	5	15-Nov-09	2697	50
3	25-Oct-09	1599	30	6	25-Nov-09	1439	27
December 2009				January 2010			
7	5-Dec-09	1206	23	10	5-Jan-10	1288	24
8	15-Dec-09	969	18	11	15-Jan-10	1188	22
9	25-Dec-09	1350	25				
February 2010				March 2010			
12	5-Feb-10	1641	31	15	5-Mar-10	1840	35
13	15-Feb-10	2525	48	16	15-Mar-10	1068	20
14	25-Feb-10	1603	30				
April 2010				May 2010			
17	11-Apr-10	1069	20				
June 2010							

Snow cover depletion curve

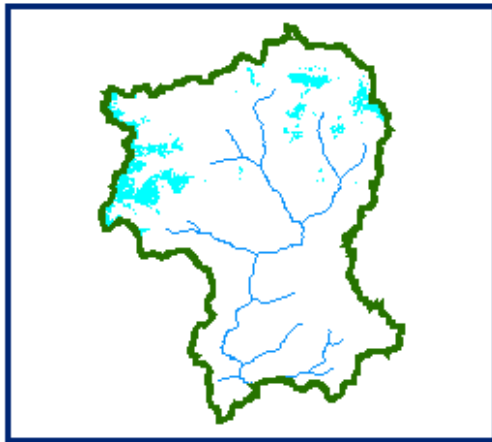


Snow cover depletion curve

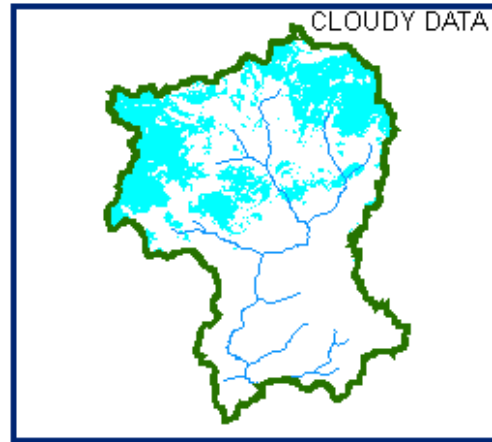


SNOW COVER MAP

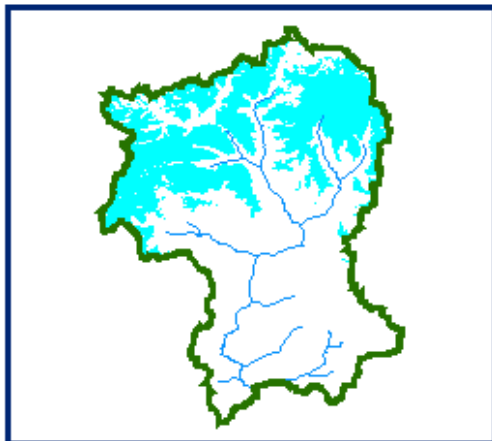
SNOW COVER MAP : TISTA BASIN



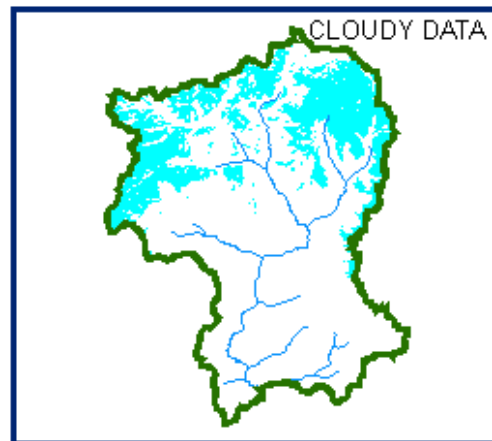
1 OCTOBER 2009



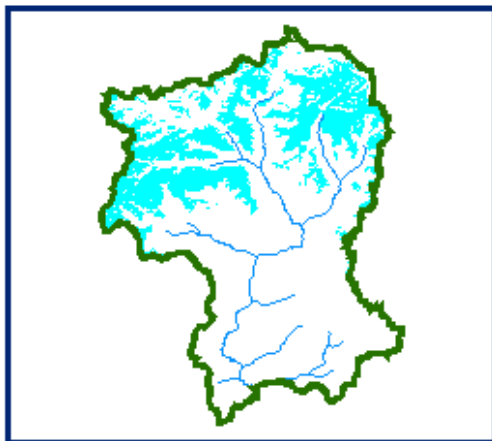
10 OCTOBER 2009



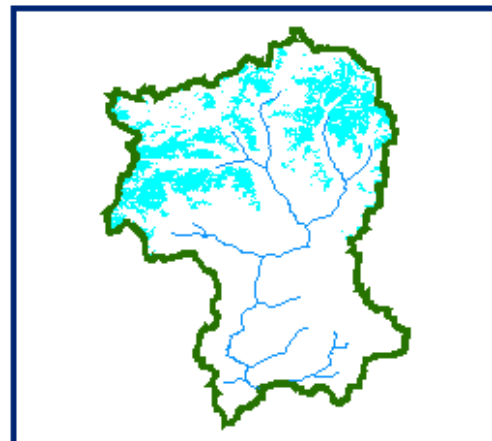
15 OCTOBER 2009



16 OCTOBER 2009



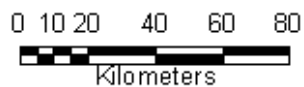
25 OCTOBER 2009



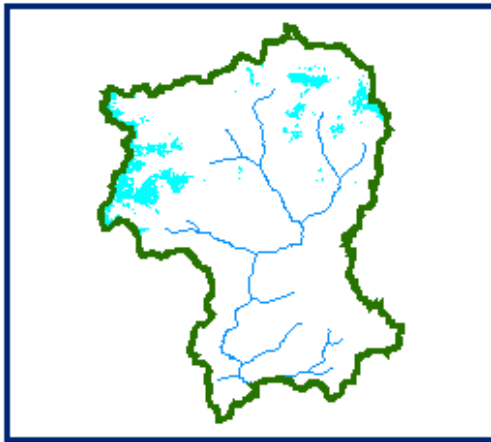
30 OCTOBER 2009



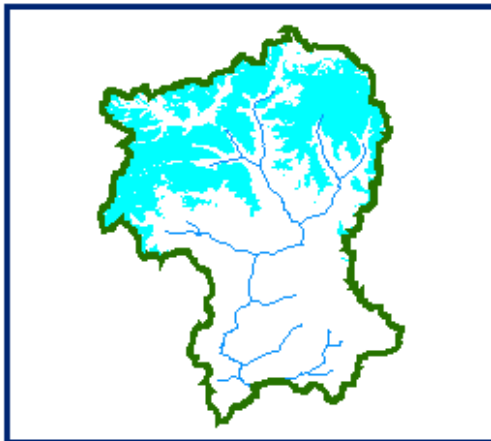
SNOW



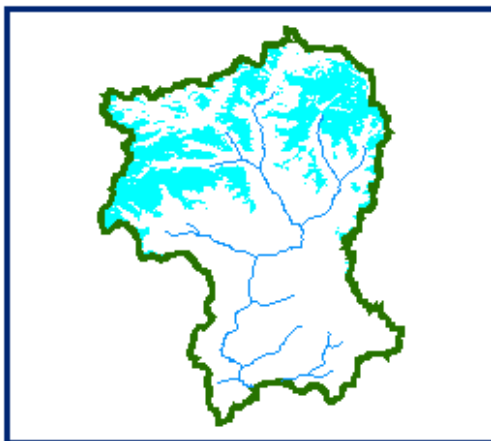
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
1 OCTOBER 2009



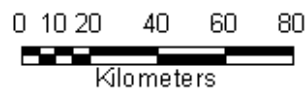
DATA USED
15 OCTOBER 2009



DATA USED
25 OCTOBER 2009
30 OCTOBER 2009



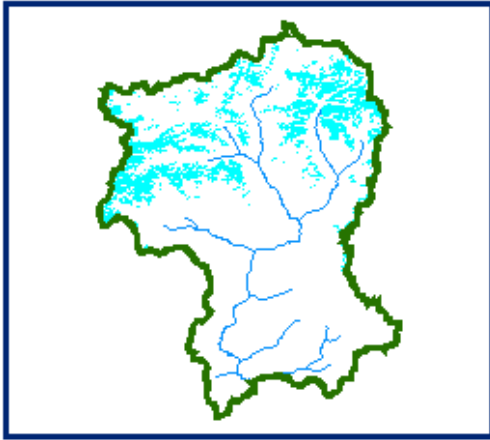
SNOW



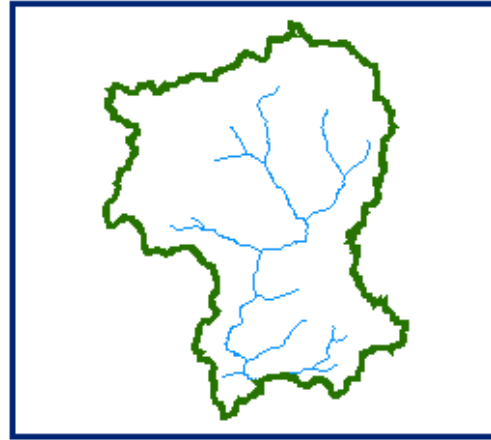
SNOW COVER MAP

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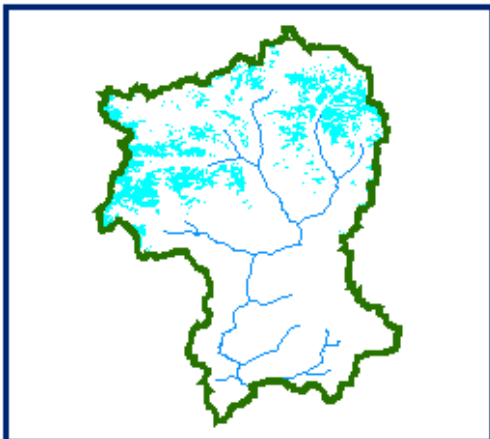
TISTA BASIN



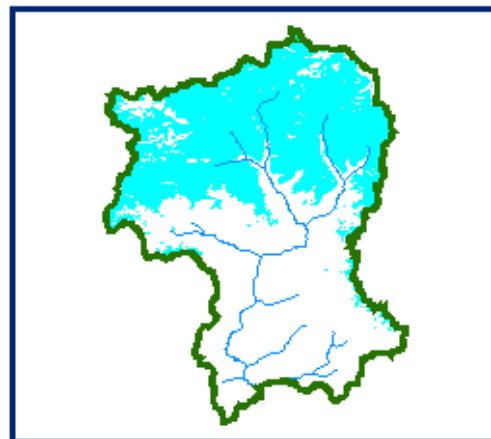
4 NOVEMBER 2009



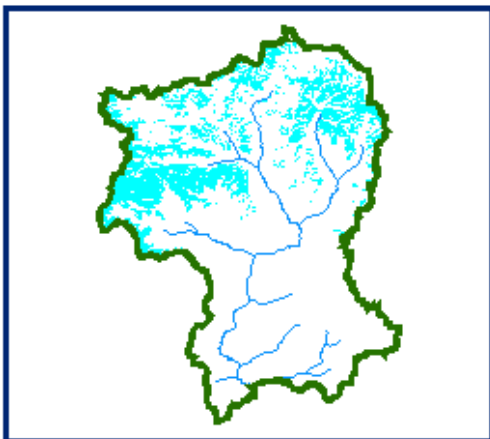
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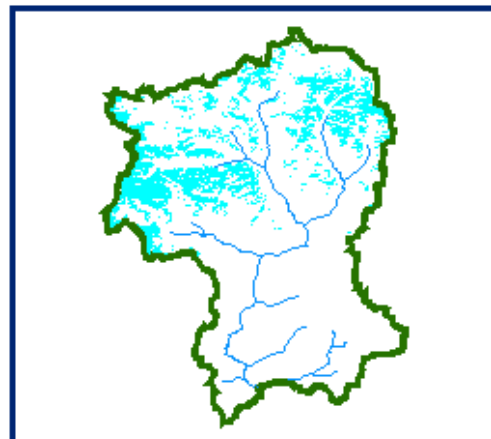
19 NOVEMBER 2009



18 NOVEMBER 2009



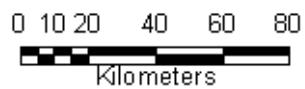
23 NOVEMBER 2009



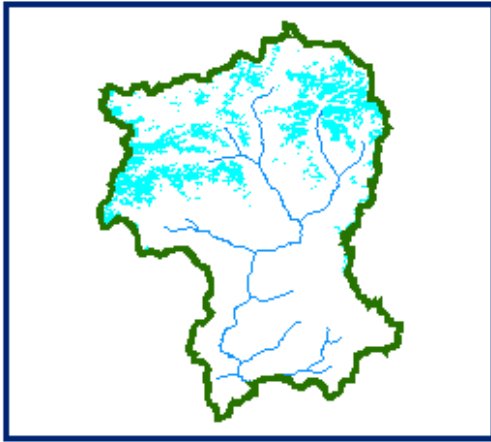
23 NOVEMBER 2009



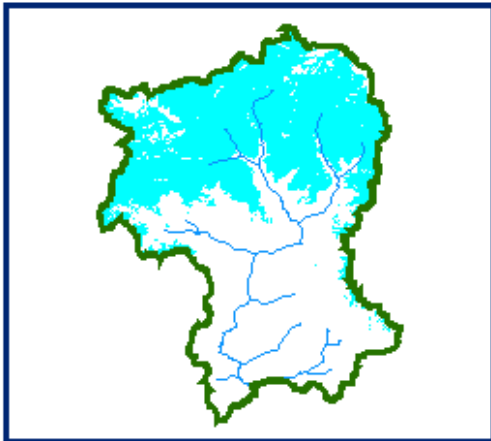
SNOW



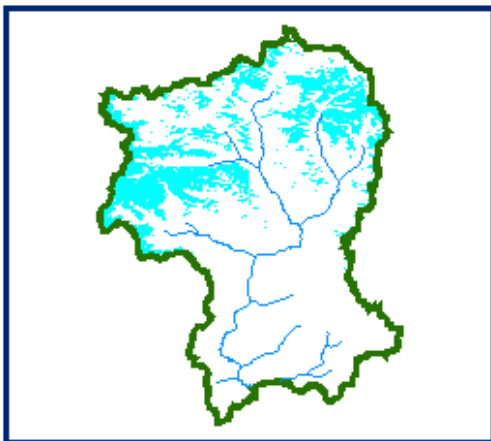
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
4 NOVEMBER 2009



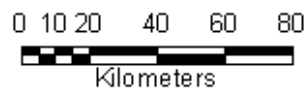
DATA USED
13 NOVEMBER 2009
18 NOVEMBER 2009



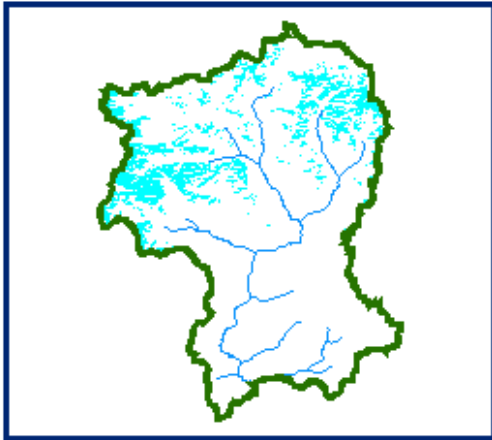
DATA USED
23 NOVEMBER 2009
27 NOVEMBER 2009
28 NOVEMBER 2009



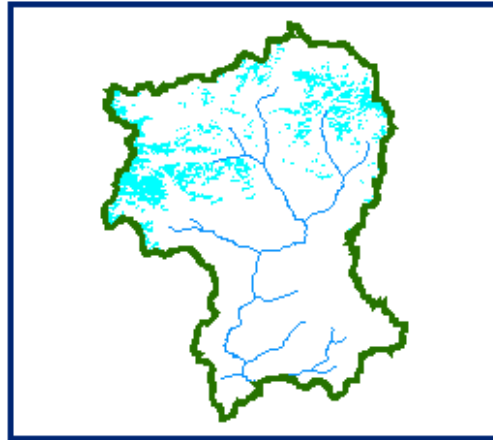
SNOW



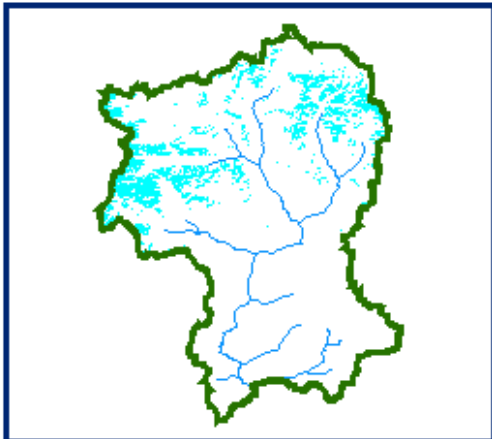
SNOW COVER MAP : TISTA BASIN



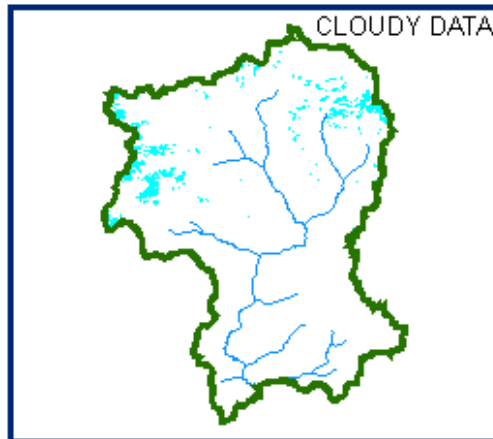
2 DECEMBER 2009



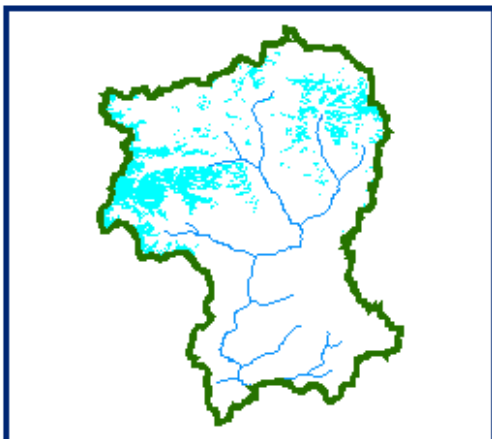
7 DECEMBER 2009



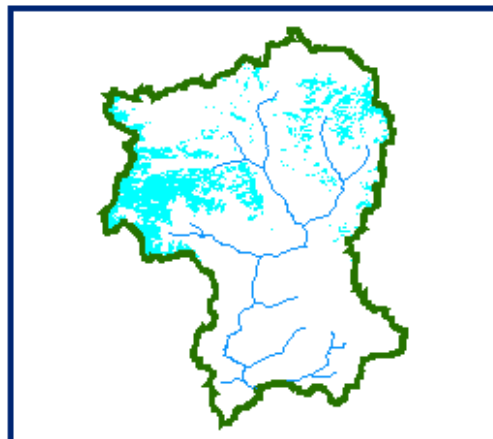
12 DECEMBER 2009



17 DECEMBER 2009



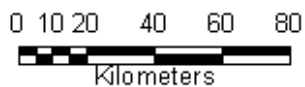
21 DECEMBER 2009



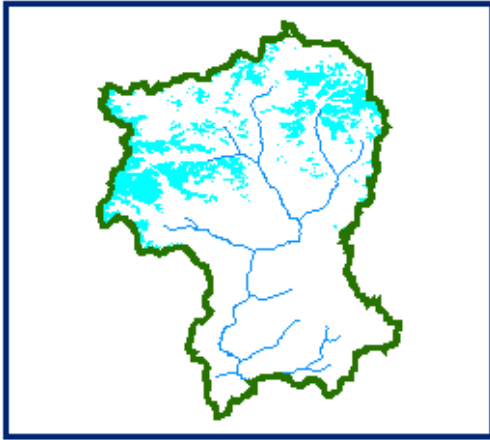
26 DECEMBER 2009



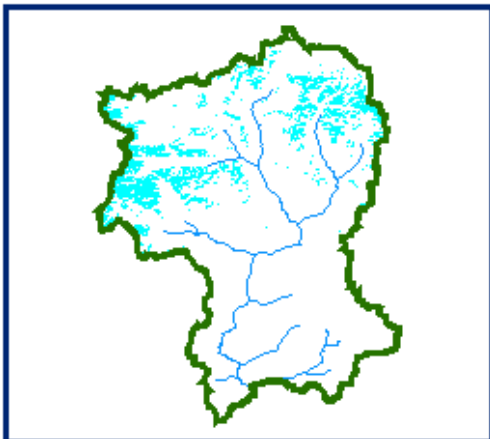
SNOW



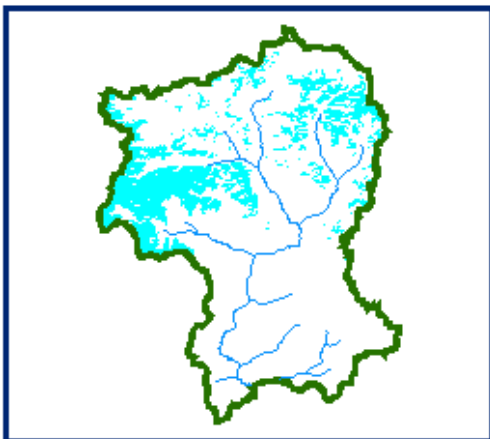
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
2 DECEMBER 2009
3 DECEMBER 2009
7 DECEMBER 2009



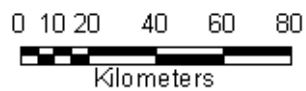
DATA USED
12 DECEMBER 2009



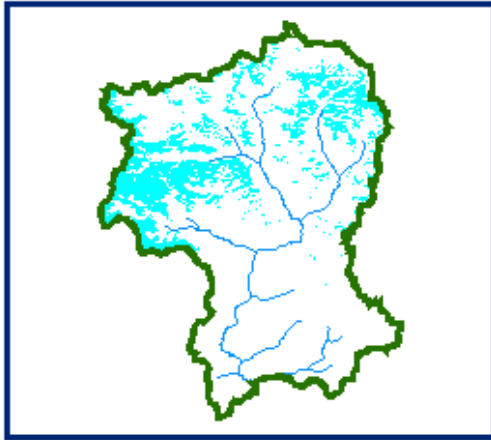
DATA USED
21 DECEMBER 2009
26 DECEMBER 2009



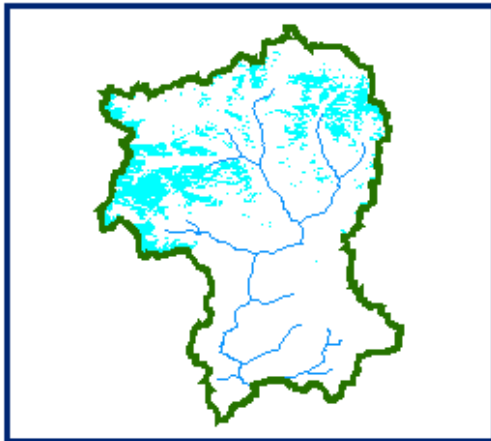
SNOW



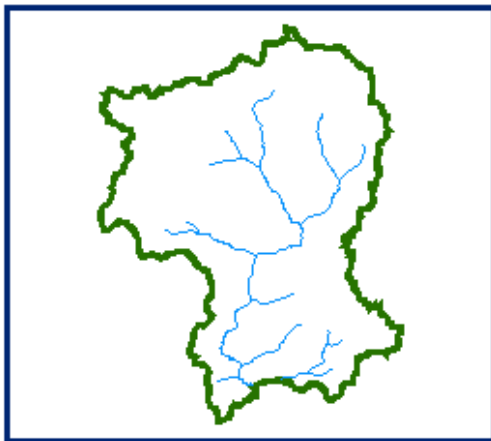
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
5 JANUARY 2010
10 JANUARY 2010



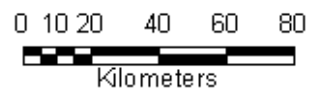
DATA USED
15 JANUARY 2010
19 JANUARY 2010



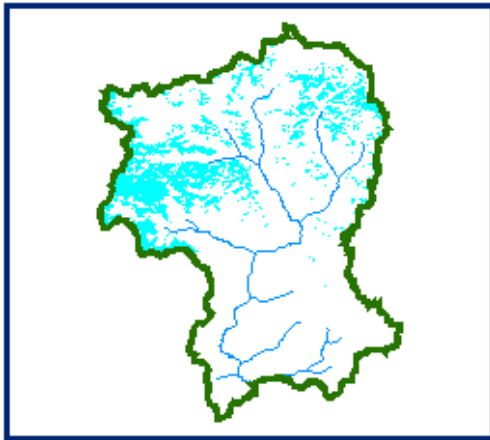
DATA USED
DADA NOT AVAILABLE



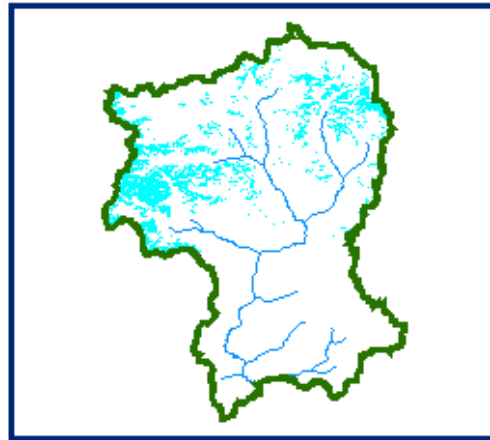
SNOW



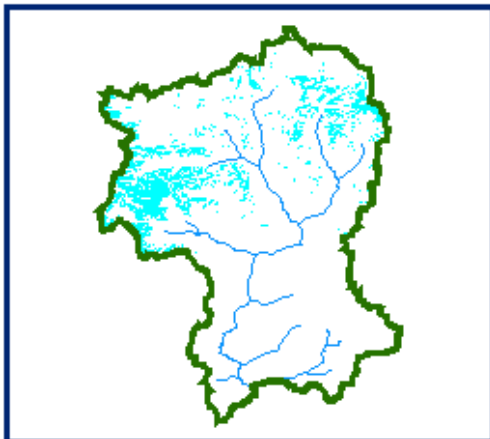
SNOW COVER MAP : TISTA BASIN



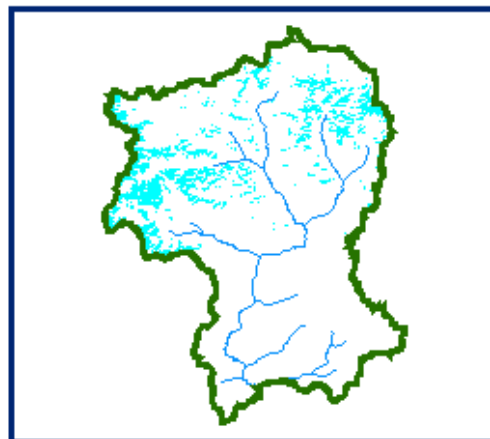
5 JANUARY 2010



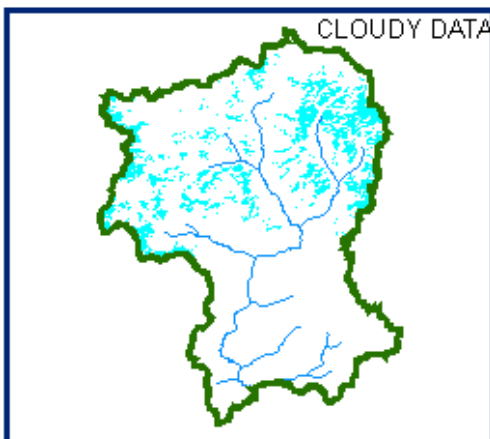
10 JANUARY 2010



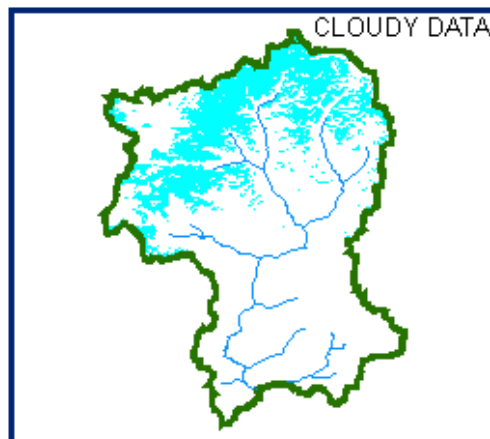
15 JANUARY 2010



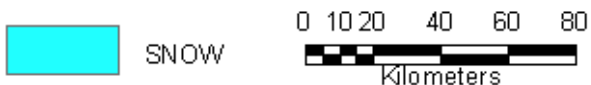
19 JANUARY 2010



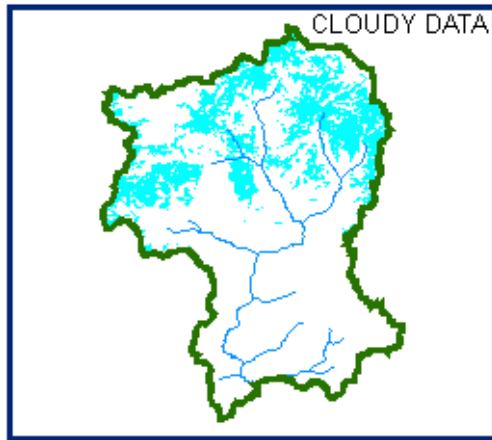
24 JANUARY 2010



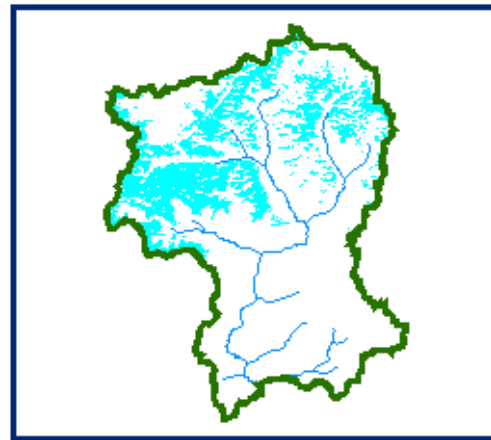
29 JANUARY 2010



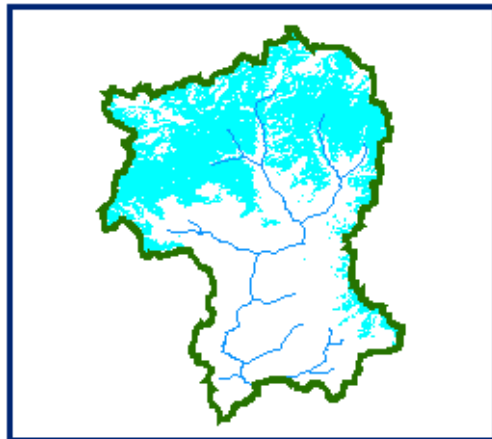
SNOW COVER MAP : TISTA BASIN



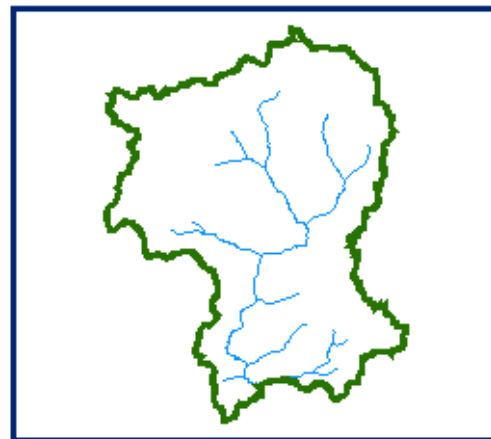
3 FEBRUARY 2010



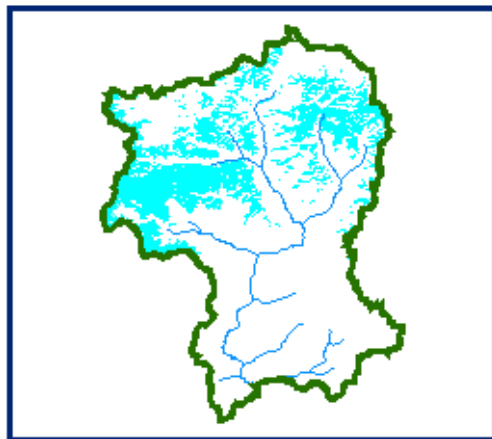
7 FEBRUARY 2010



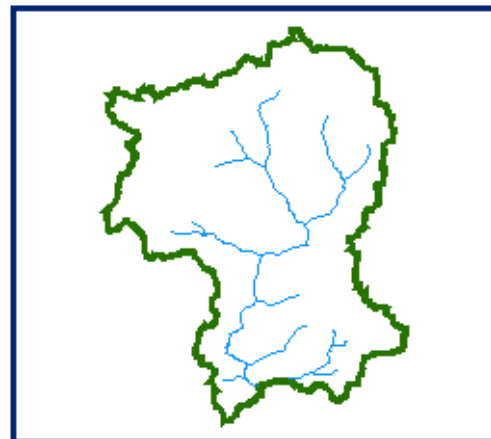
13 FEBRUARY 2010



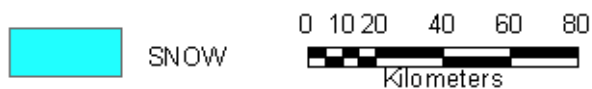
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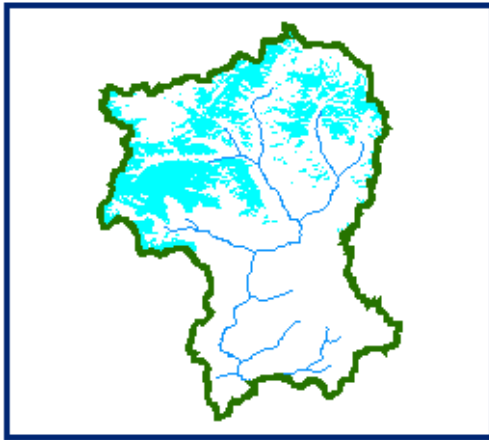
22 FEBRUARY 2010



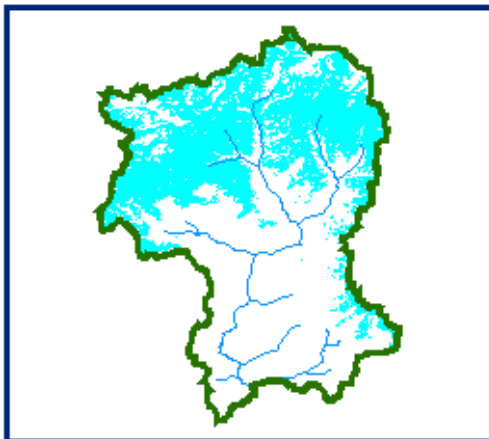
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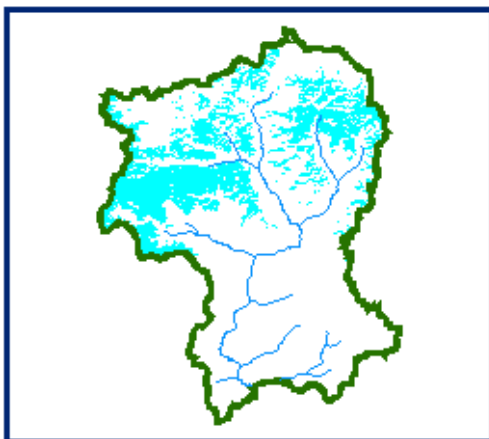
10 DAILY SNOW COVER MAP: TISTA BASIN



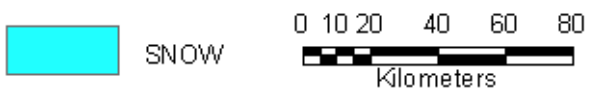
DATA USED
7 FEBRUARY 2010
8 FEBRUARY 2010



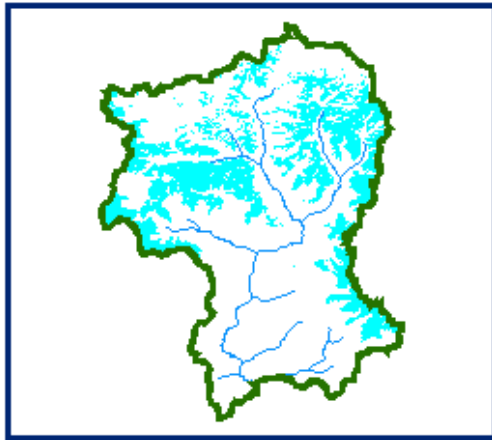
DATA USED
13 FEBRUARY 2010



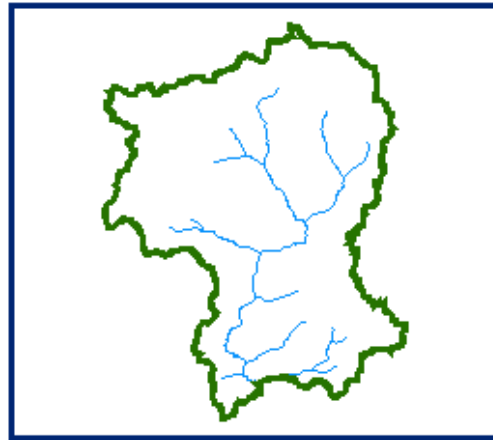
DATA USED
22 FEBRUARY 2010



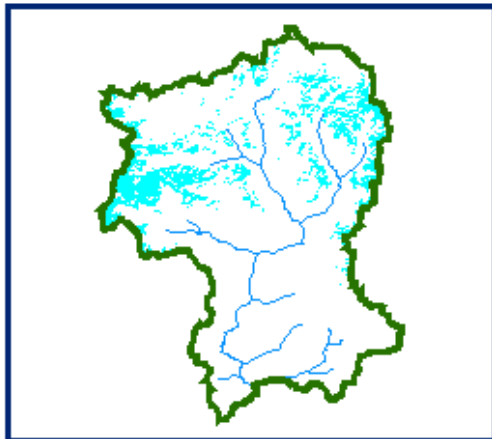
SNOW COVER MAP : TISTA BASIN



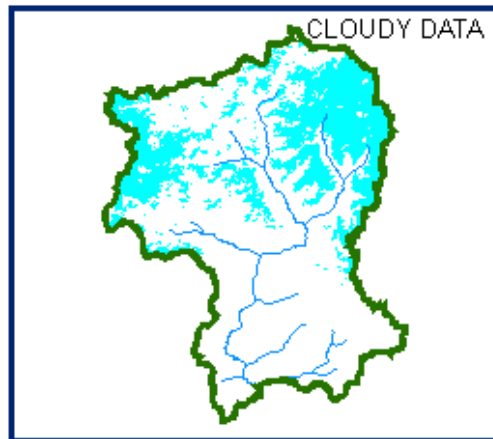
3 MARCH 2010



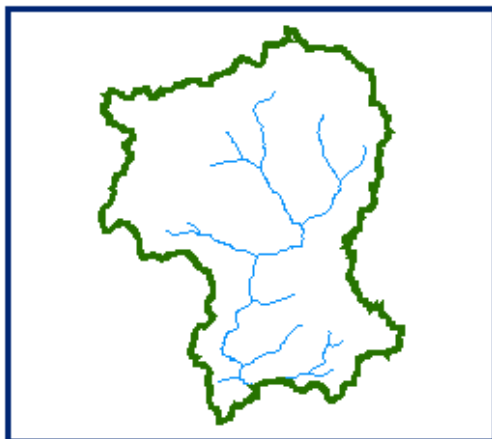
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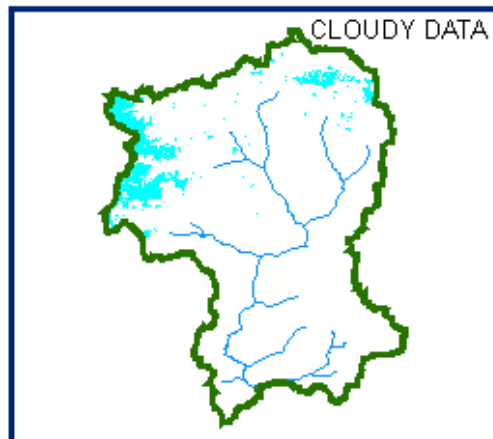
13 MARCH 2010



18 MARCH 2010



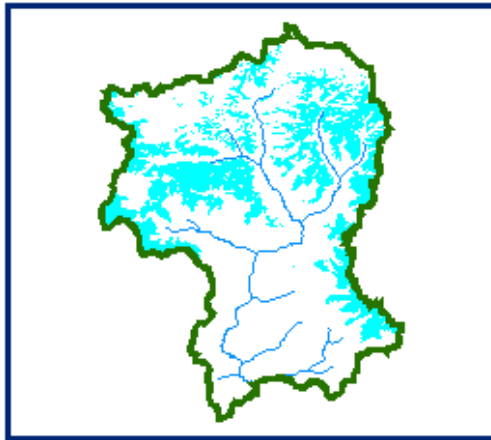
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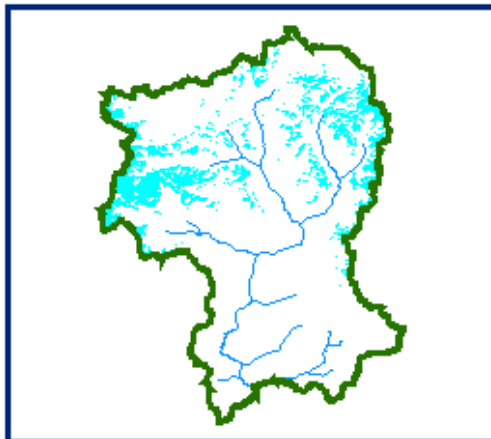
27 MARCH 2010



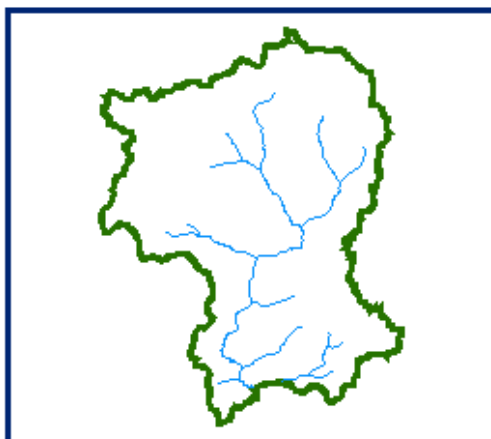
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
3 MARCH 2010



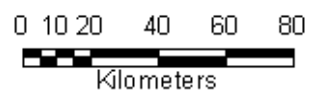
DATA USED
13 MARCH 2010



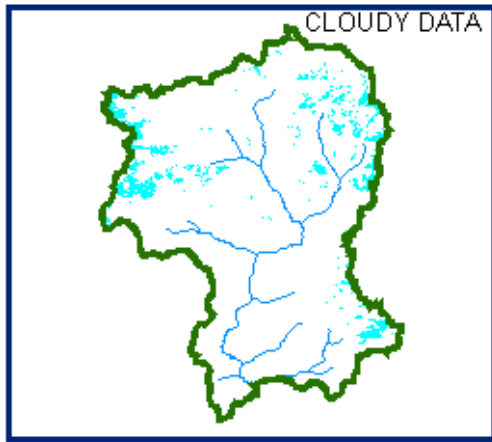
DATA USED
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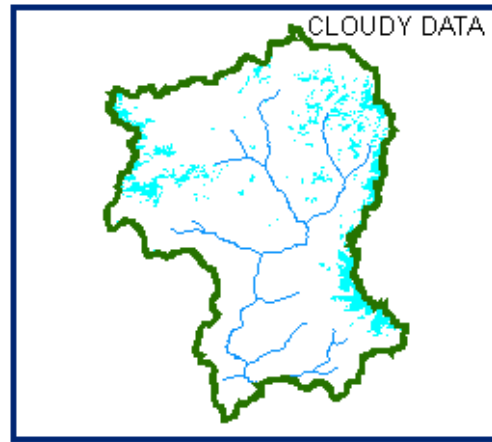
SNOW



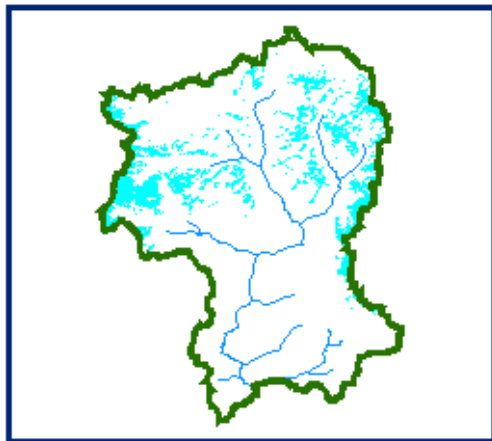
SNOW COVER MAP : TISTA BASIN



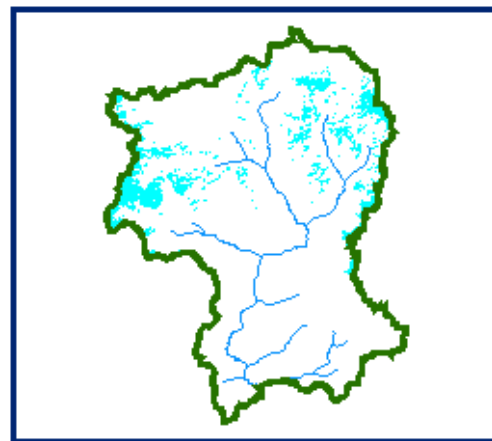
1 APRIL 2010



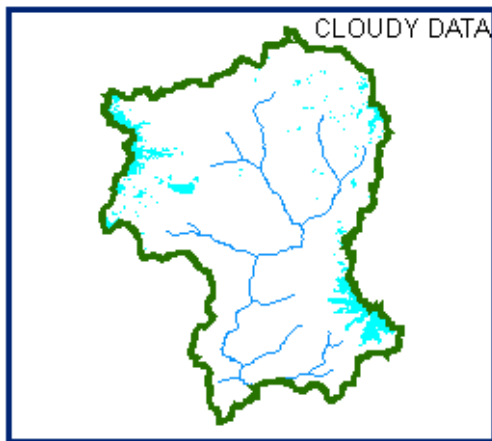
6 APRIL 2010



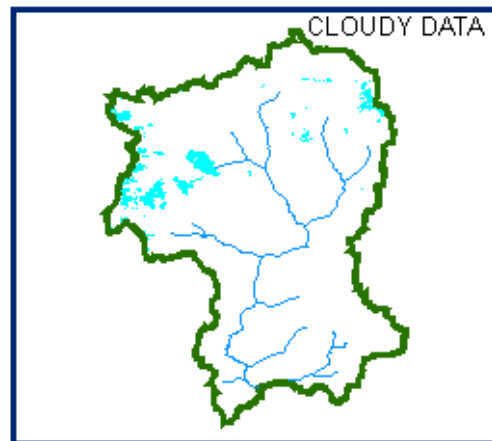
11 APRIL 2010



16 APRIL 2010



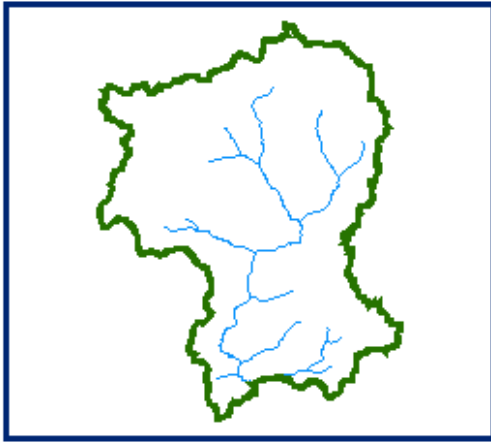
25 APRIL 2010



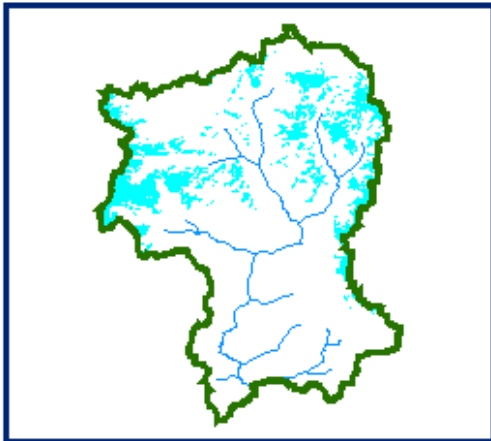
30 APRIL 2010



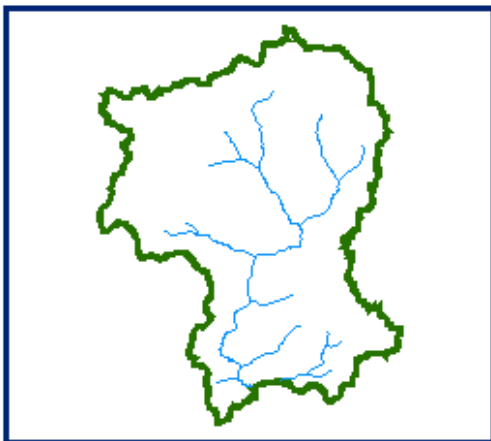
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
DATA NOT AVAILABLE



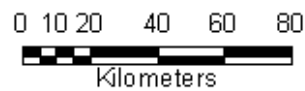
DATA USED
11 APRIL 2010
16 APRIL 2010



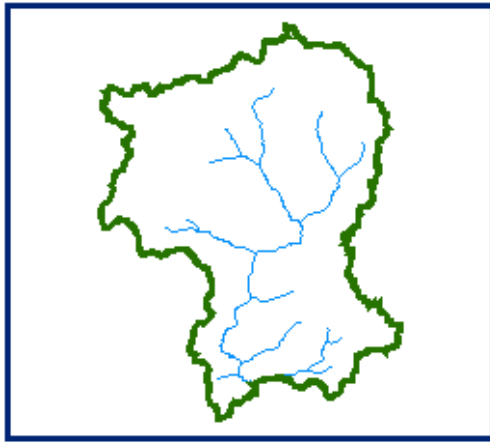
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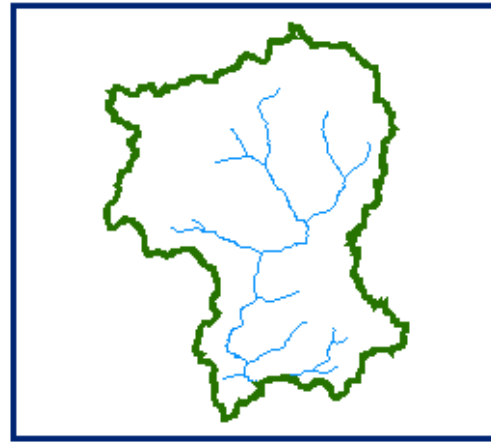
SNOW



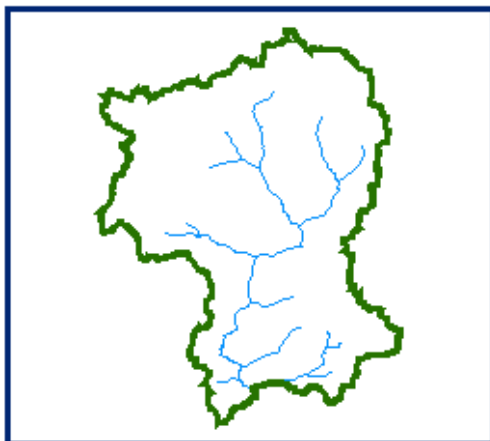
SNOW COVER MAP : TISTA BASIN



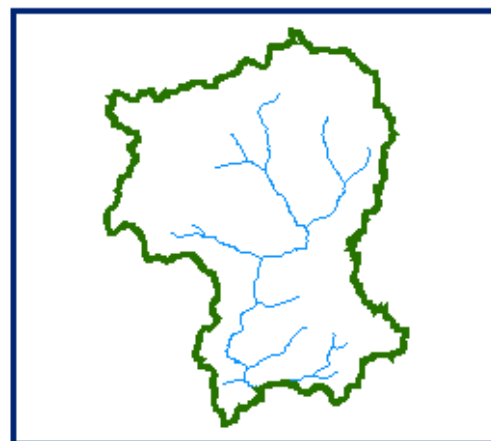
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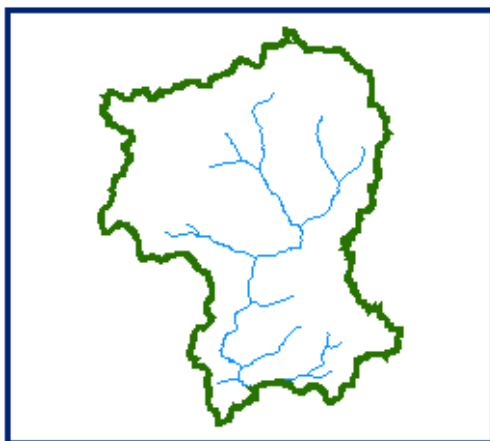
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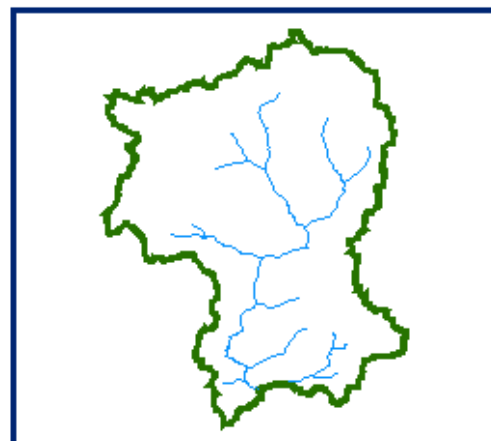
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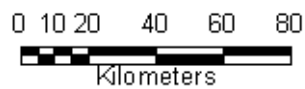
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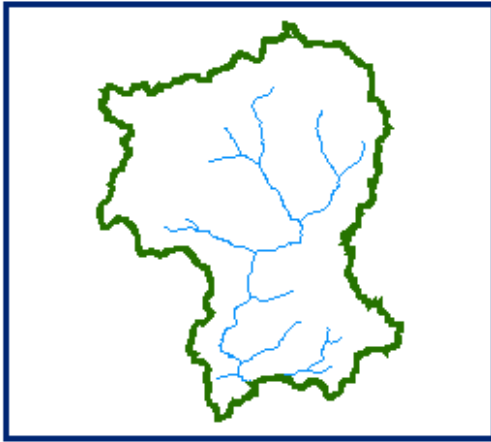
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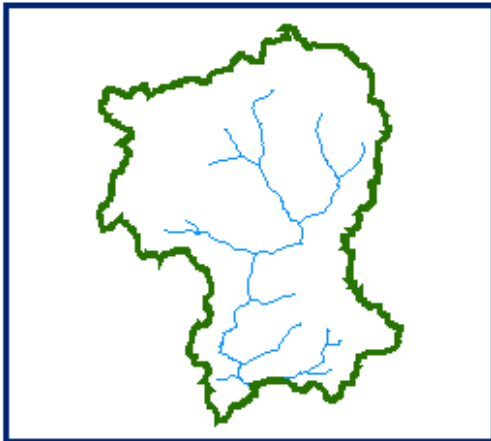
SNOW



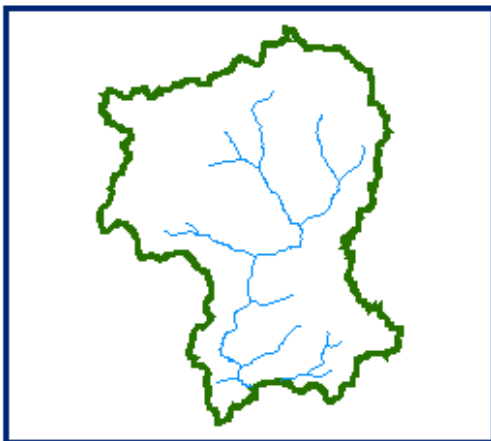
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
DATA NOT AVAILABLE



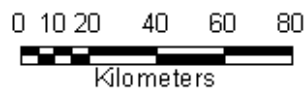
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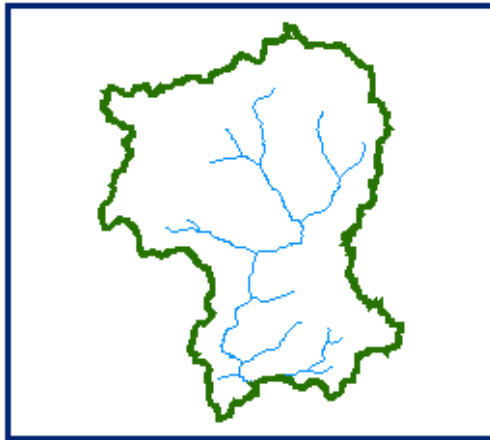
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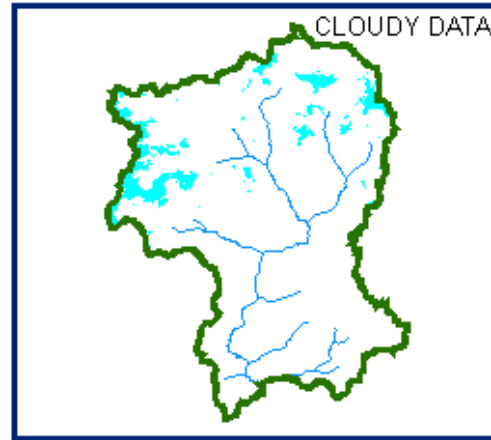
SNOW



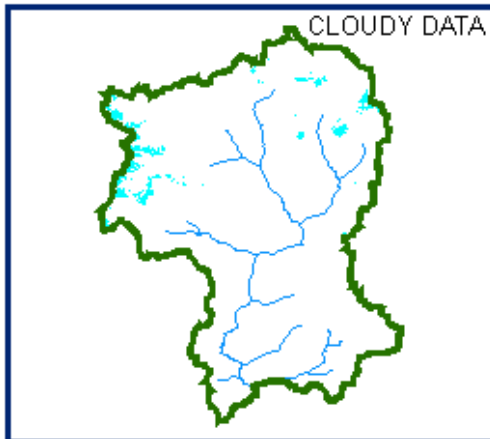
SNOW COVER MAP : TISTA BASIN



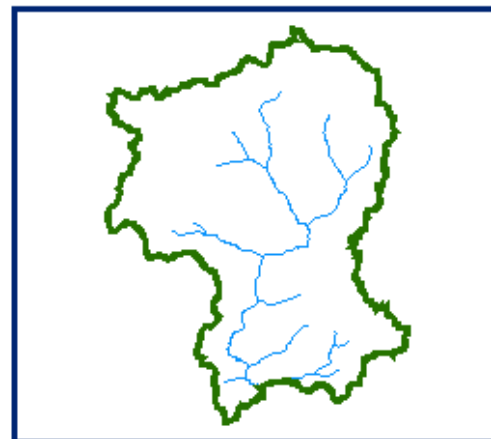
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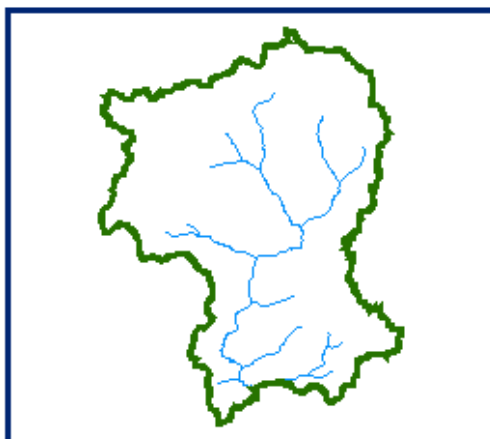
7 JUN 2010



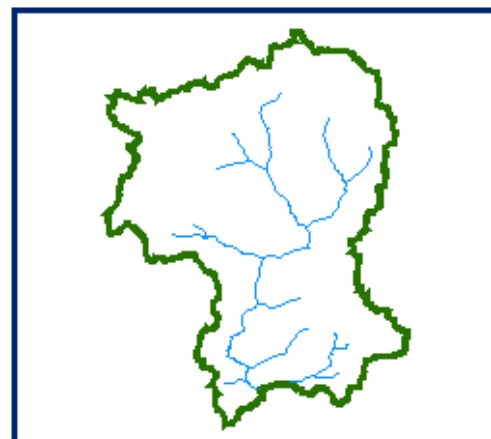
12 JUN 2010



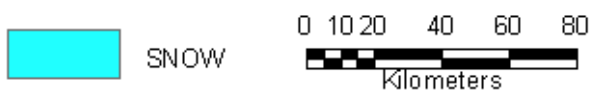
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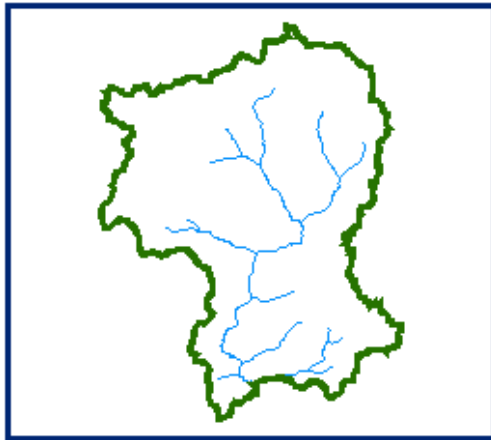
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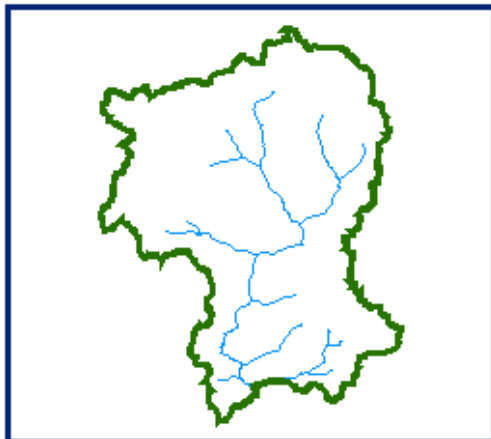
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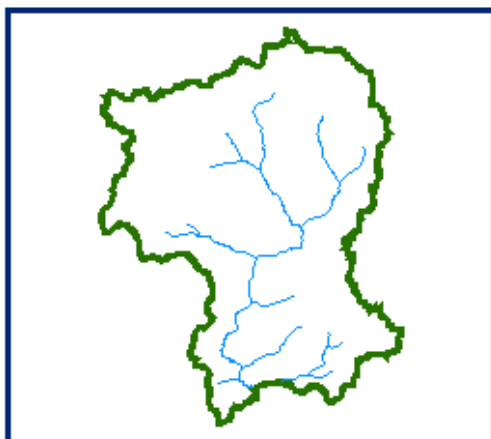
10 DAILY SNOW COVER MAP: TISTA BASIN



DATA USED
DATA NOT AVAILABLE



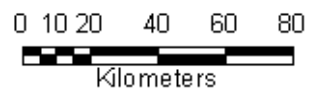
DATA USED
DATA NOT AVAILABLE



DATA USED
DATA NOT AVAILABLE



SNOW



AREAL EXTENT OF SNOW (5 DAILY)

BASIN NAME: RANJIT

BASIN AREA: 1630 sq km

S No	Date	Snow cover (sq km)	Snow cover (%)	S No	Date	Snow cover (sq km)	Snow cover (%)
October 2009							
1	1-Oct-09	39.66	2	5	25-Oct-09	81.30	5
2	10-Oct-09	118.70	7	6	30-Oct-09	58.99	4
3	15-Oct-09	117.99	7				
4	20-Oct-09	50.99	3				
November 2009							
7	3-Nov-09	49.91	3	11	18-Nov-09	123.88	8
8	4-Nov-09	41.32	3	12	23-Nov-09	60.96	4
9	8-Nov-09	68.49	4	13	27-Nov-09	60.36	4
10	13-Nov-09	50.68	3	14	28-Nov-09	54.33	3
December 2009							
15	2-Dec-09	53.05	3	20	21-Dec-09	56.32	3
16	3-Dec-09	48.54	3	21	22-Dec-09	50.30	3
17	7-Dec-09	48.31	3	22	26-Dec-09	59.47	4
18	12-Dec-09	47.21	3	23	27-Dec-09	57.73	4
19	17-Dec-09	35.55	2				
January 2010							
24	5-Jan-10	61.42	4	28	19-Jan-10	47.82	3
25	10-Jan-10	52.04	3	29	24-Jan-10	60.21	4
26	14-Jan-10	41.03	3	30	29-Jan-10	48.11	3
27	15-Jan-10	52.30	3				
February 2010							
31	3-Feb-10	39.74	2	34	13-Feb-10	126.39	8
32	8-Feb-10	62.23	4	35	22-Feb-10	65.71	4
33	12-Feb-10	60.67	4				
March 2010							
36	3-Mar-10	277.42	17	39	13-Mar-10	55.67	3
37	4-Mar-10	134.50	8	40	18-Mar-10	119.06	7
38	8-Mar-10	96.29	6	41	27-Mar-10	29.50	2
April 2010							
42	1-Apr-10	95.00	6	46	20-Apr-10	38.30	2
43	6-Apr-10	39.70	2	47	25-Apr-10	90.35	6
44	11-Apr-10	46.96	3	48	25-Apr-10	91.57	6
45	16-Apr-10	54.15	3	49	30-Apr-10	15.37	1

S No	Date	Snow cover (sq km)	Snow cover (%)	S No	Date	Snow cover (sq km)	Snow cover (%)
May 2010							
June 2010							
50	7-Jun-10	31.86	2				
51	12-Jun-10	33.23	2				

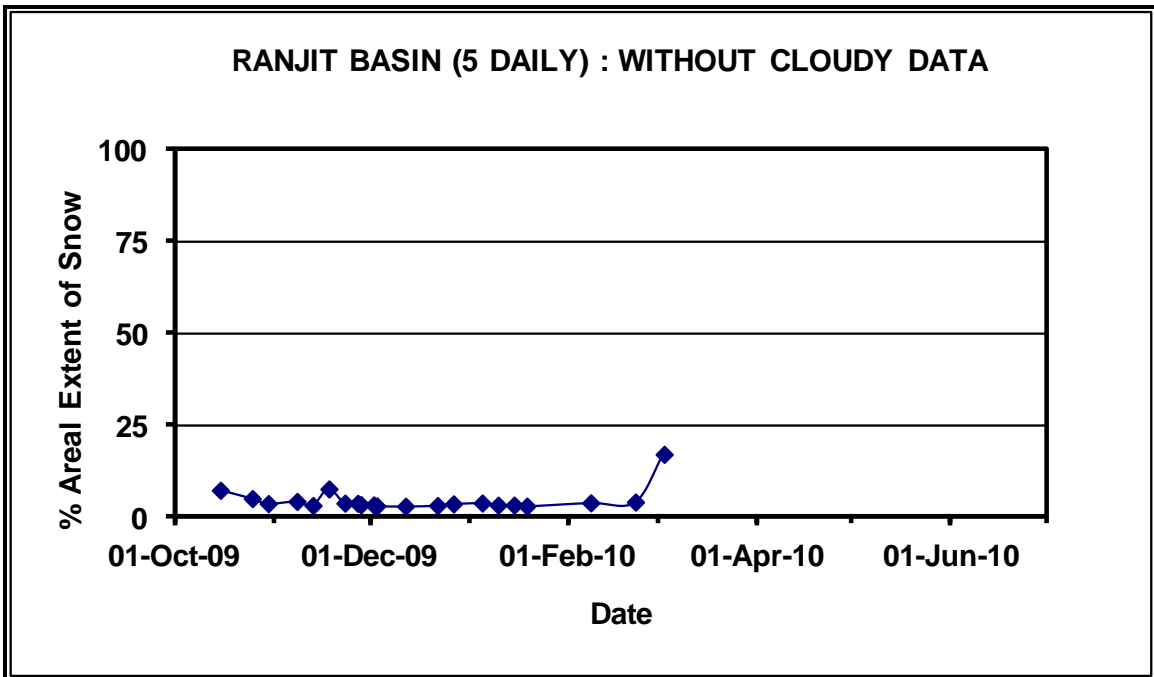
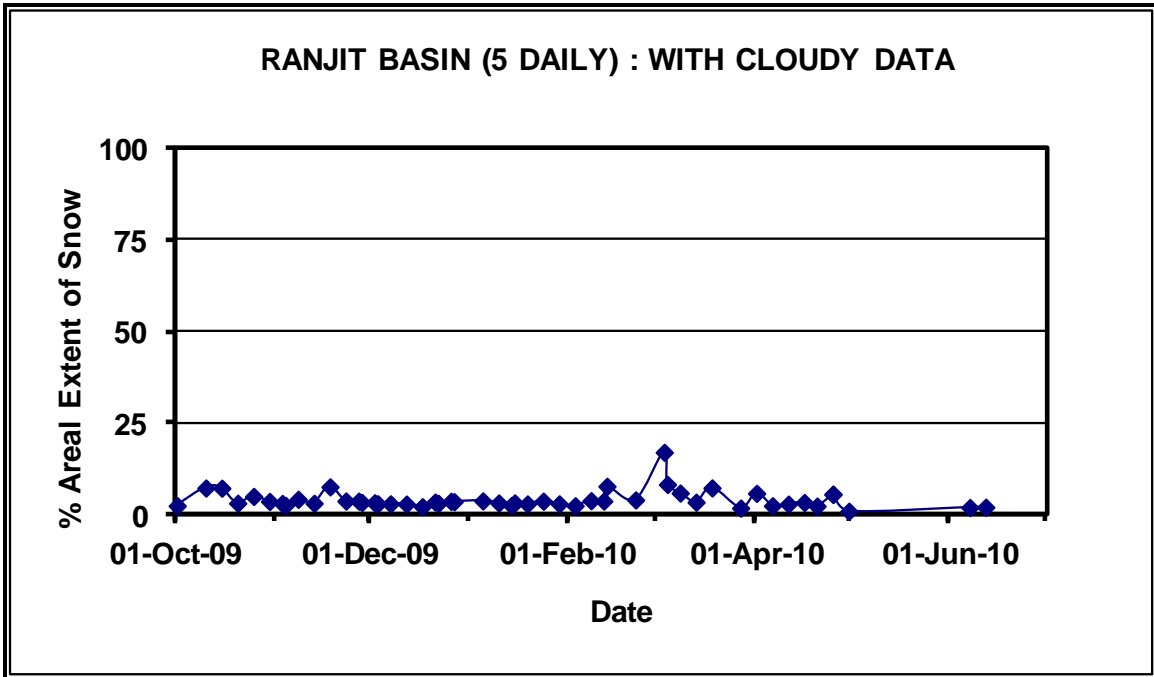
AREAL EXTENT OF SNOW (10 DAILY)

BASIN NAME: RANJIT

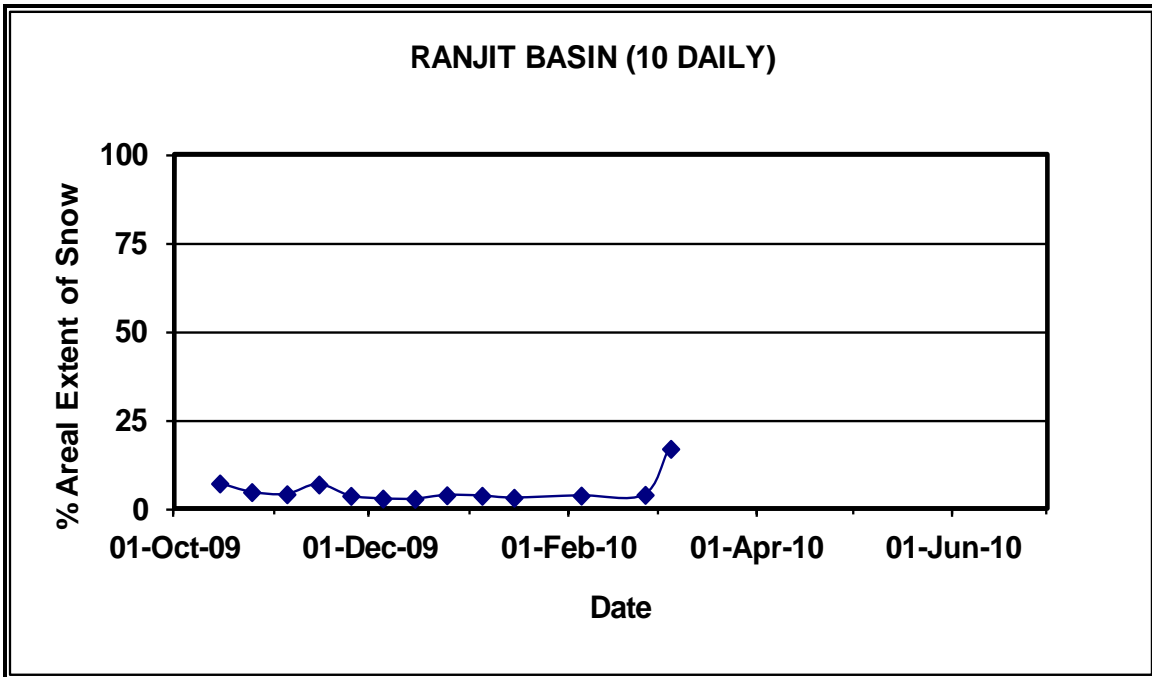
BASIN AREA: 1630 Sq km

S No	Date	Snow cover (sq km)	Snow cover (%)	S No	Date	Snow cover (sq km)	Snow cover (%)
October 2009				November 2009			
1	15-Oct-09	117.99	7	3	8-Nov-09	68.49	4
2	25-Oct-09	78.38	5	4	13-Nov-09	113.36	7
				5	27-Nov-09	61.01	4
December 2009				January 2010			
6	3-Dec-09	48.54	3	8	15-Jan-10	52.30	3
7	22-Dec-09	63.78	4				
February 2010				March 2010			
9	8-Feb-10	62.23	4	10	3-Mar-10	277.42	17
April 2010				May 2010			
June 2010							

Snow cover depletion curve



Snow cover depletion curve

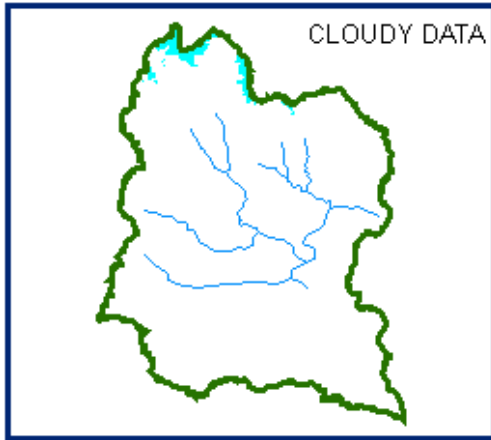


SNOW COVER MAP

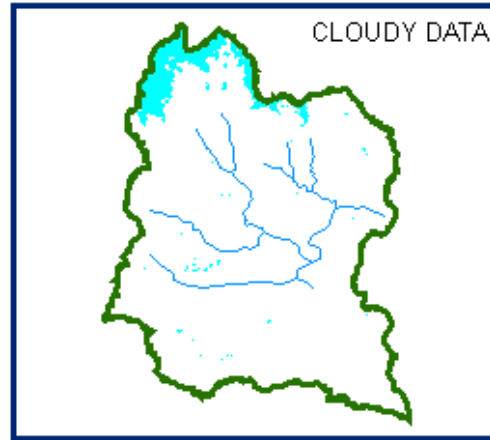
SNOW COVER MAP

:

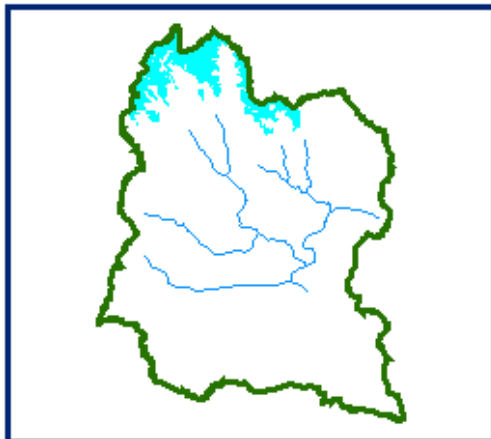
RANJIT BASIN



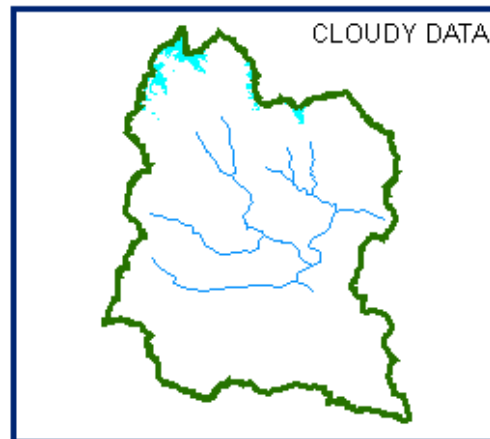
1 OCTOBER 2009



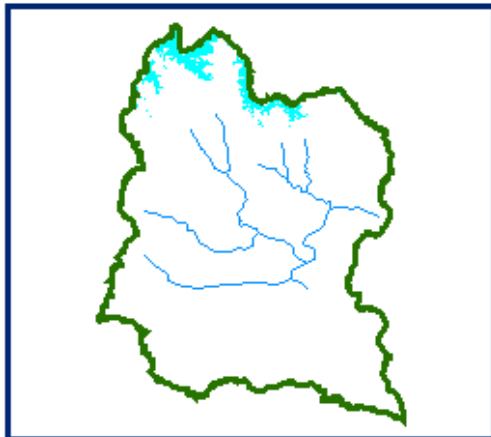
10 OCTOBER 2009



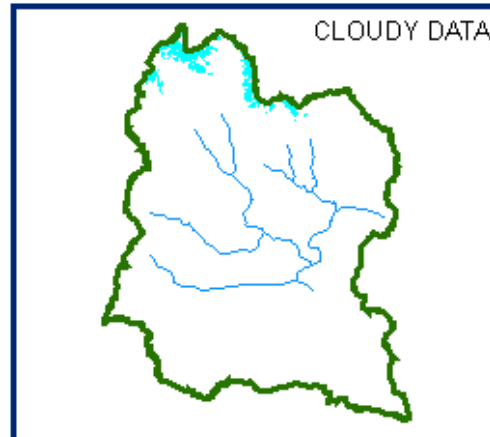
15 OCTOBER 2009



20 OCTOBER 2009



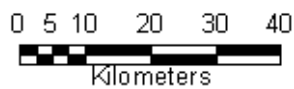
25 OCTOBER 2009



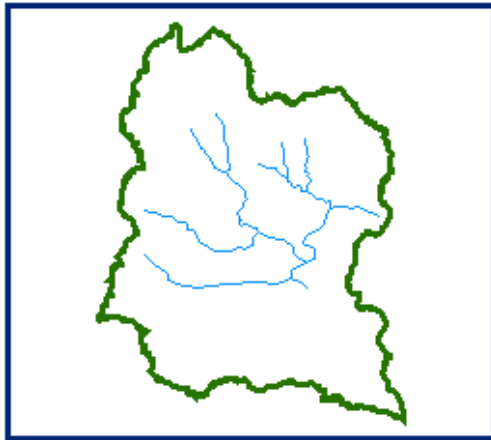
30 OCTOBER 2009



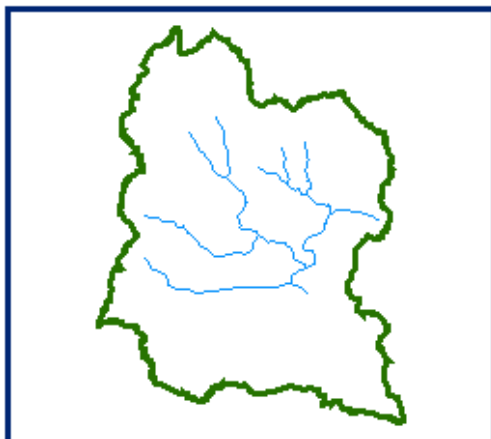
SNOW



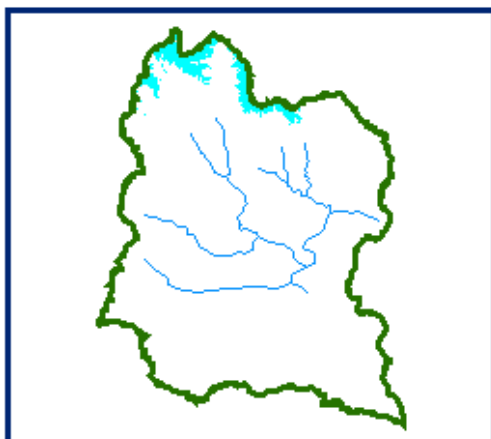
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
DATA NOT AVAILABLE



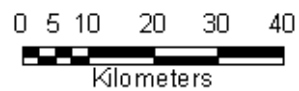
DATA USED
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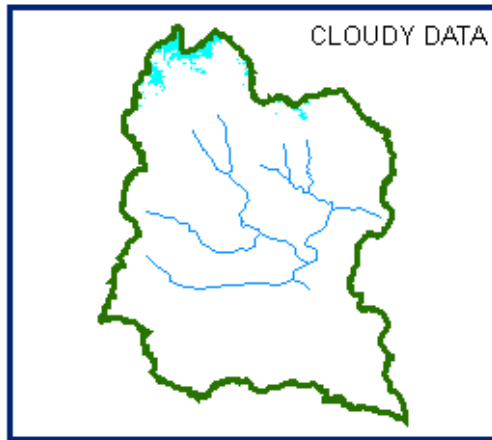
DATA USED
25 OCTOBER 2009
30 OCTOBER 2009



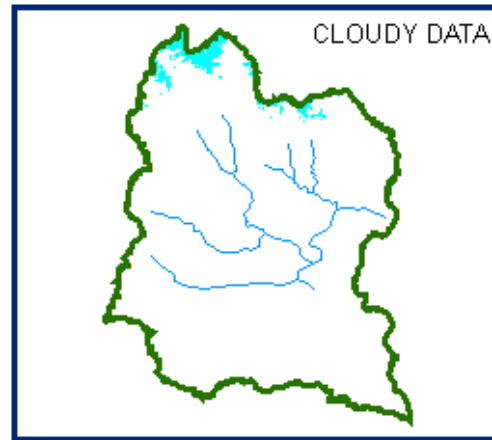
SNOW



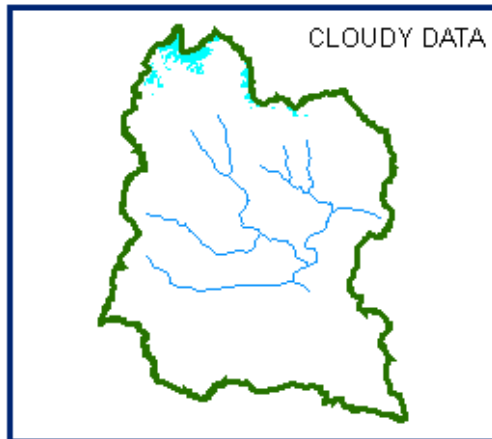
SNOW COVER MAP : RANJIT BASIN



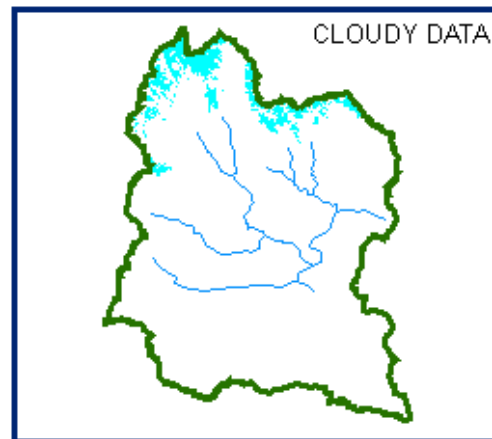
3 NOVEMBER 2009



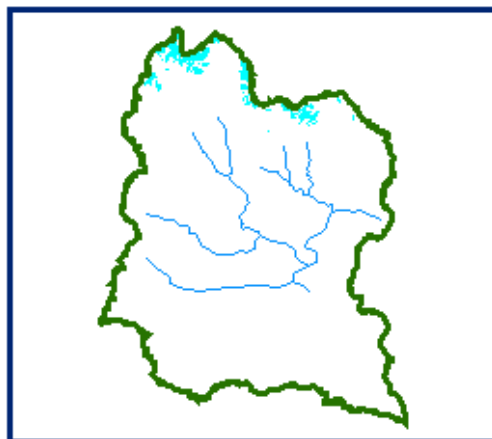
8 NOVEMBER 2009



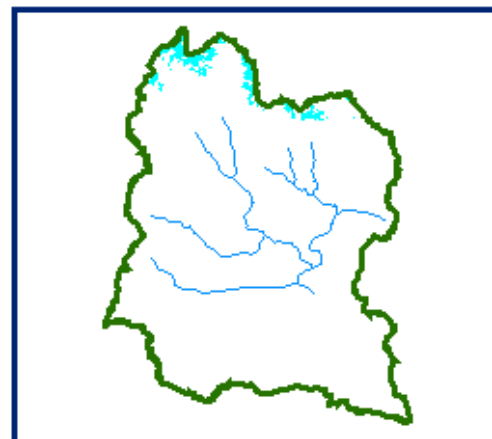
13 NOVEMBER 2009



18 NOVEMBER 2009



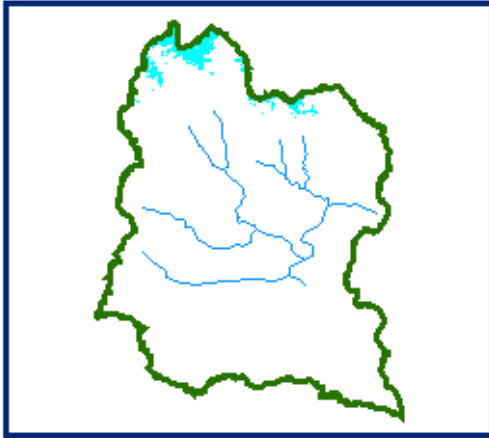
23 NOVEMBER 2009



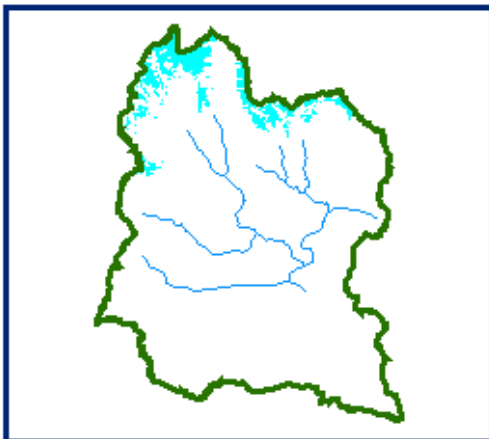
28 NOVEMBER 2009



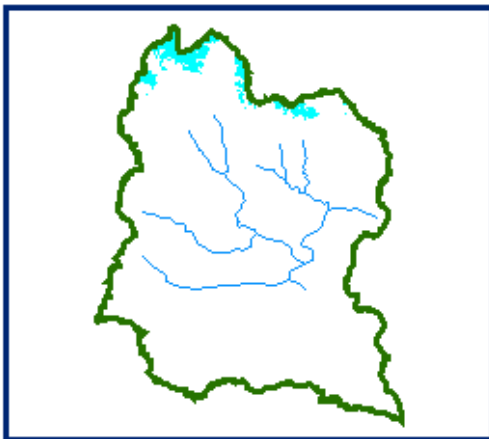
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
8 NOVEMBER 2010



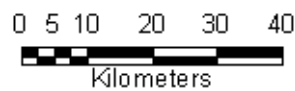
DATA USED
13 NOVEMBER 2010
18 NOVEMBER 2010



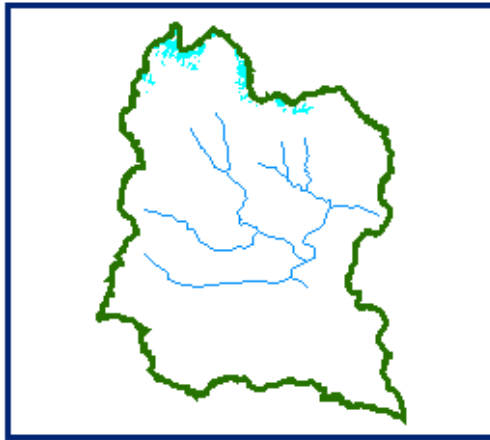
DATA USED
23 NOVEMBER 2010
27 NOVEMBER 2010
28 NOVEMBER 2010



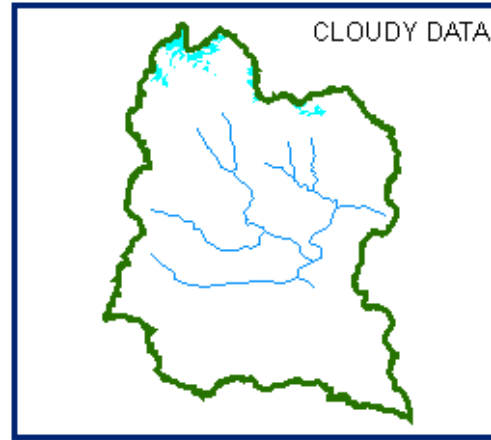
SNOW



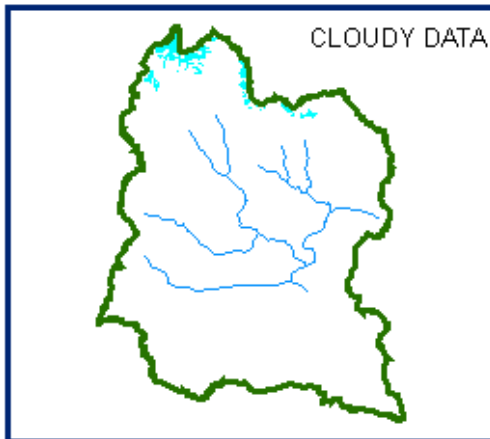
SNOW COVER MAP : RANJIT BASIN



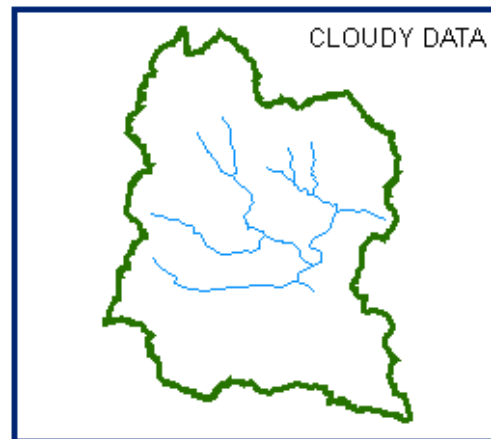
2 DECEMBER 2009



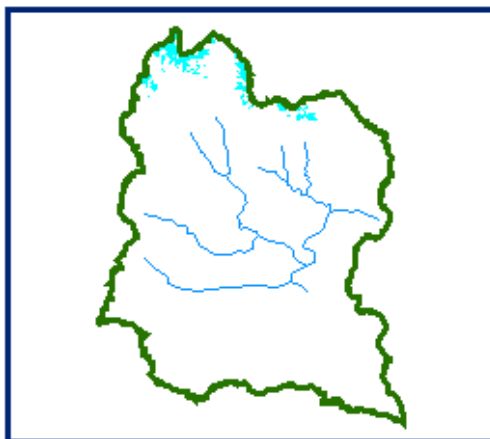
7 DECEMBER 2009



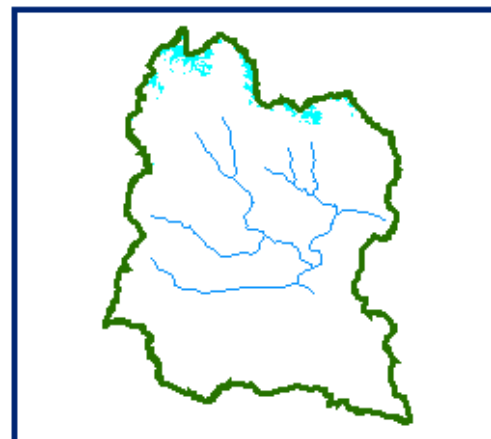
12 DECEMBER 2009



17 DECEMBER 2009



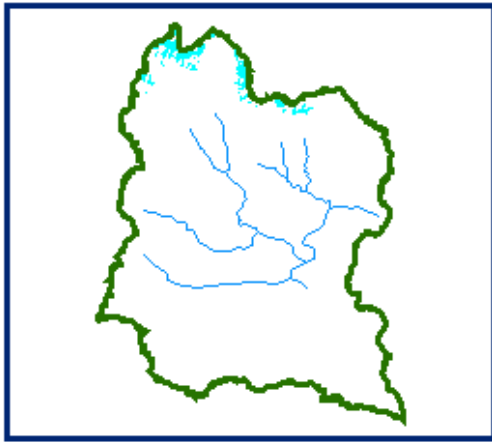
22 DECEMBER 2009



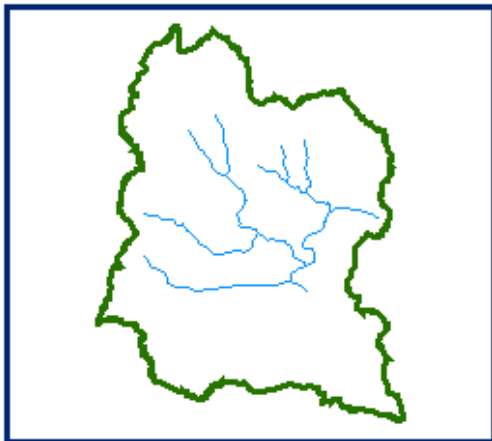
27 DECEMBER 2009



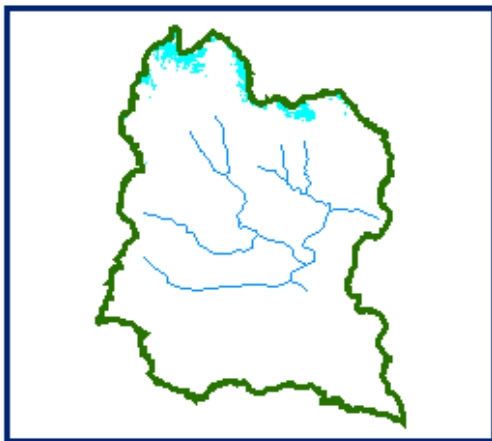
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
3 DECEMBER 2009



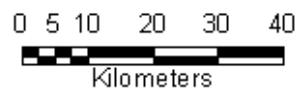
DATA USED
DATA NOT AVAILABLE



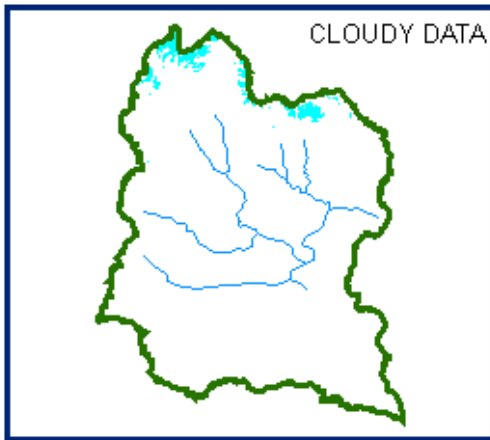
DATA USED
22 DECEMBER 2009
27 DECEMBER 2009



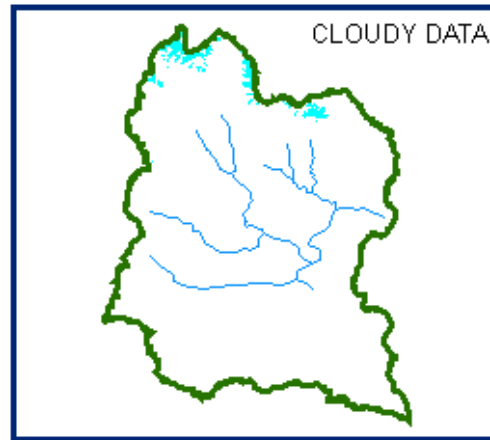
SNOW



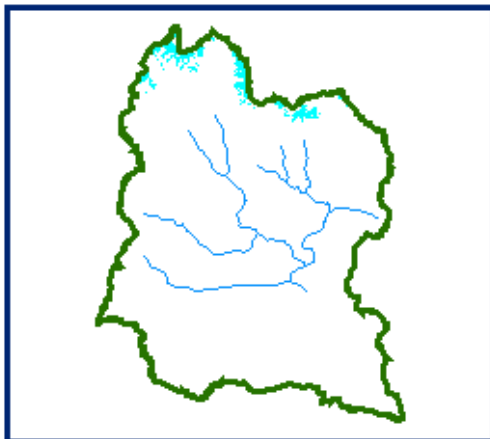
SNOW COVER MAP : RANJIT BASIN



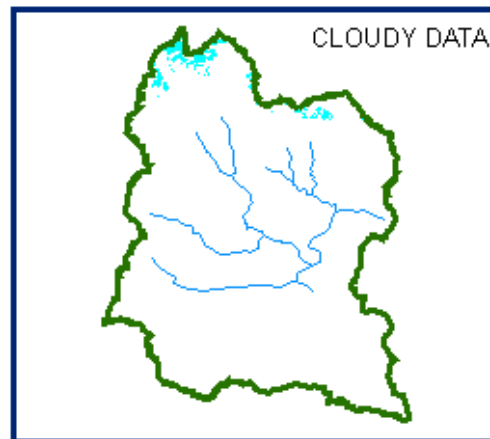
5 JANUARY 2010



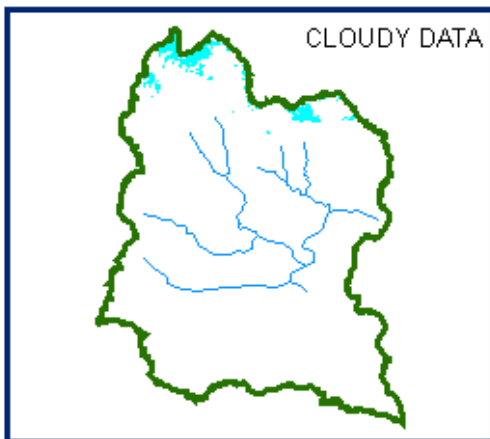
10 JANUARY 2010



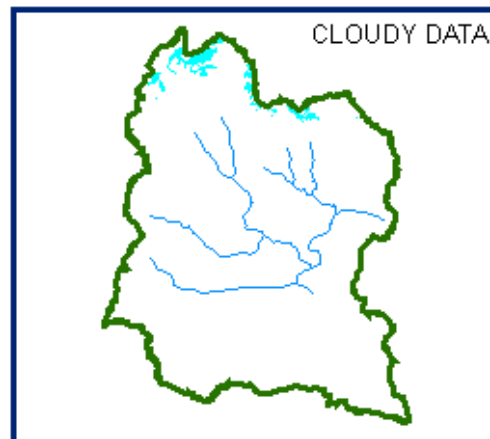
15 JANUARY 2010



19 JANUARY 2010



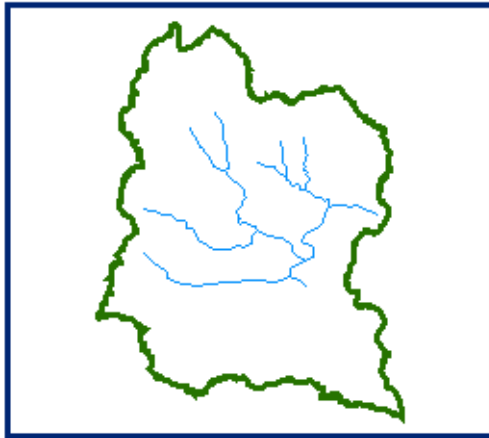
24 JANUARY 2010



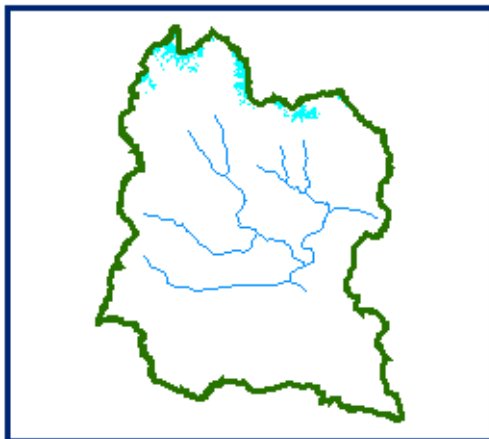
29 JANUARY 2010



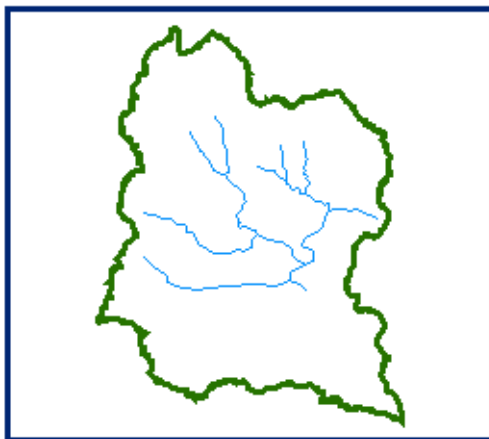
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
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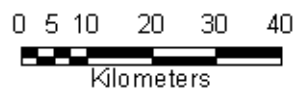


DATA USED
15 JANUARY 2010

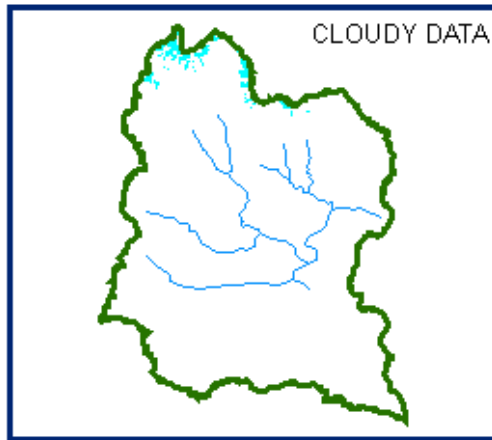


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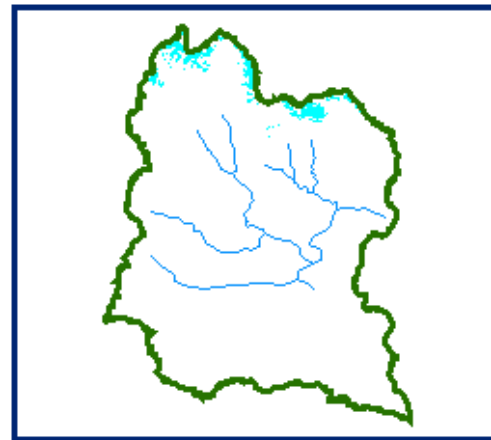
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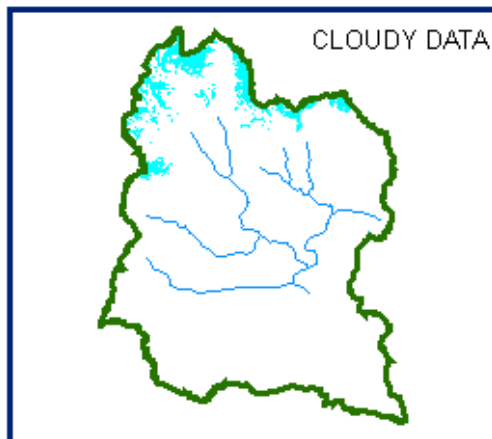
SNOW COVER MAP : RANJIT BASIN



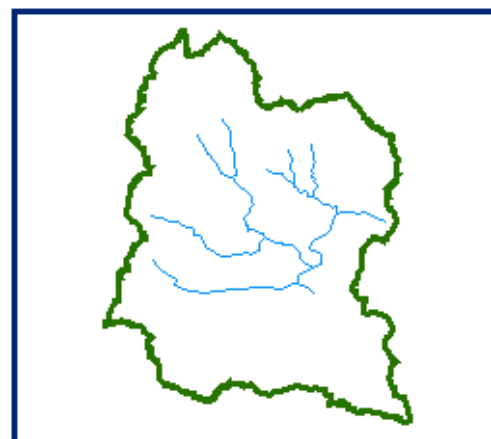
3 FEBRUARY 2010



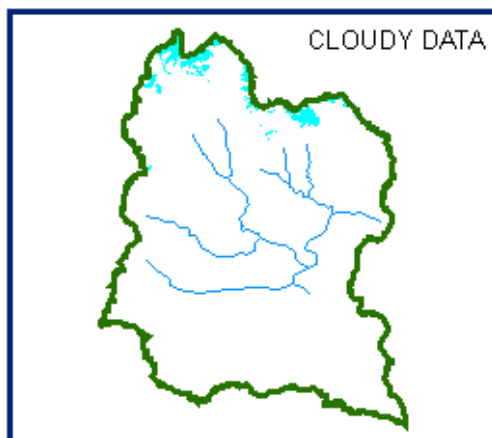
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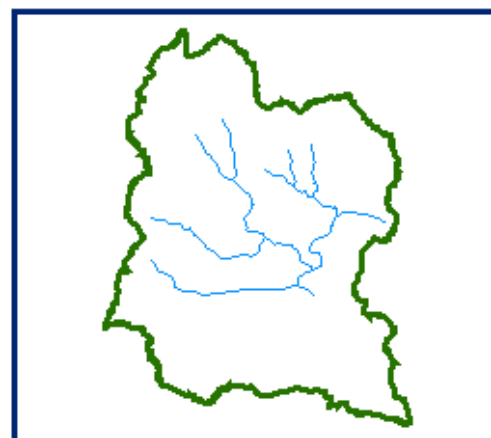
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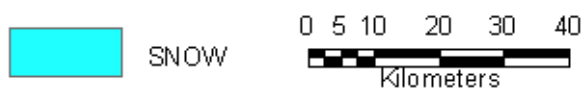
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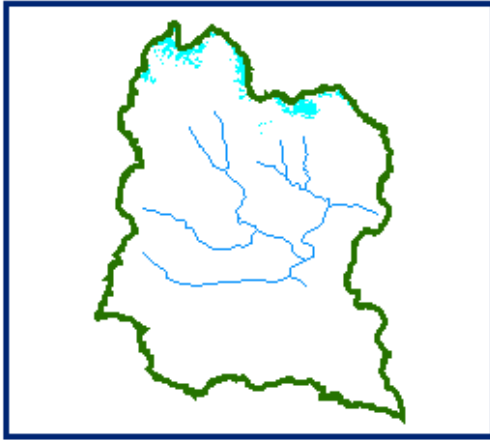
22 FEBRUARY 2010



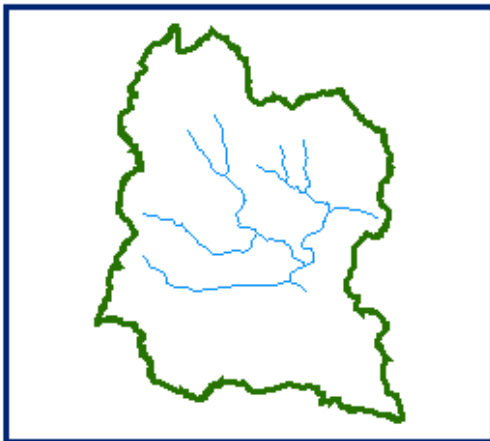
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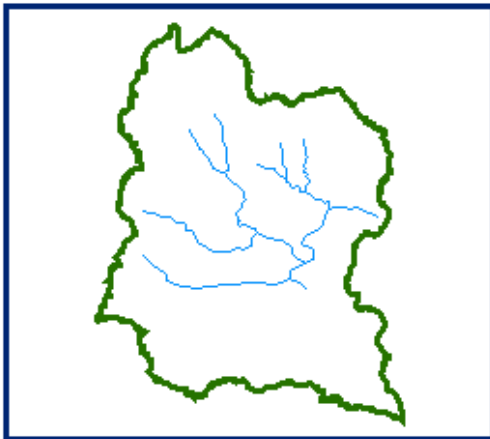
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
8 FEBRUARY 2010



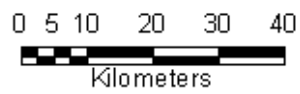
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DATA USED
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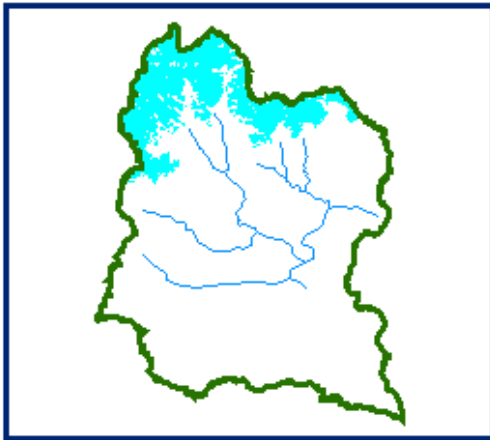
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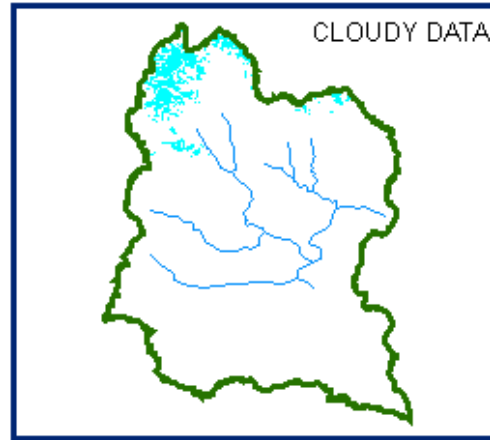
SNOW COVER MAP

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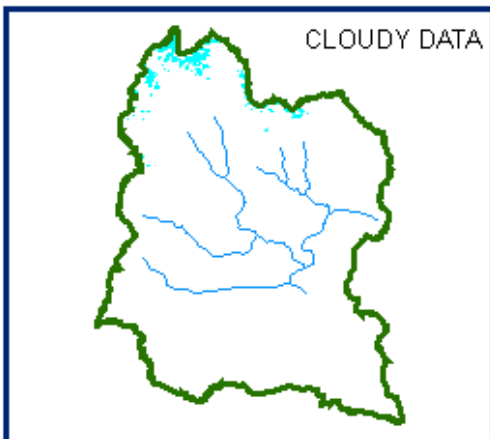
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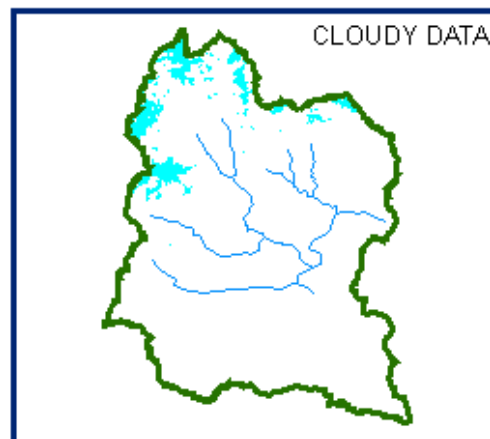
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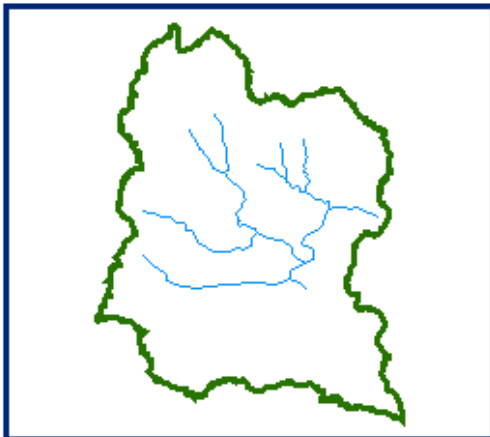
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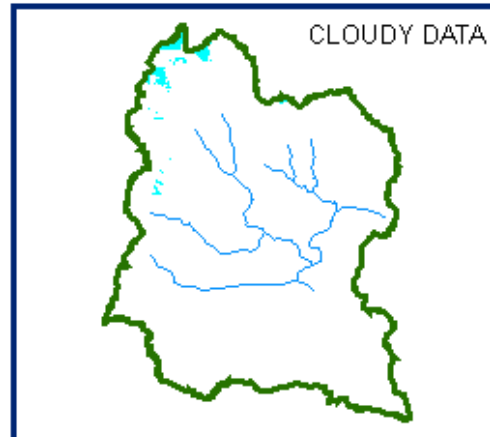
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18 MARCH 2010



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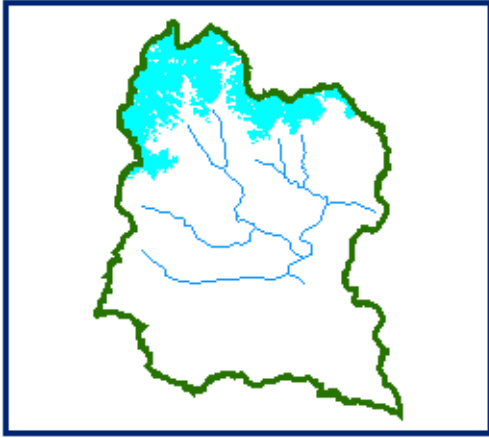
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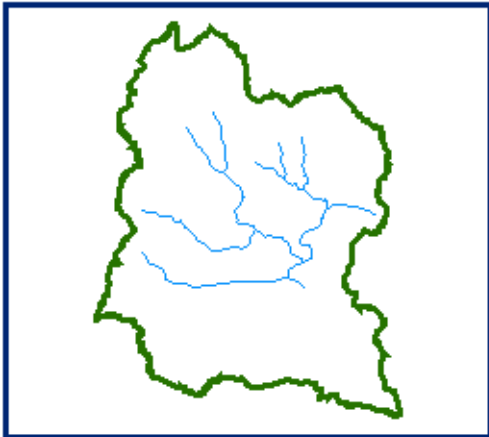
SNOW



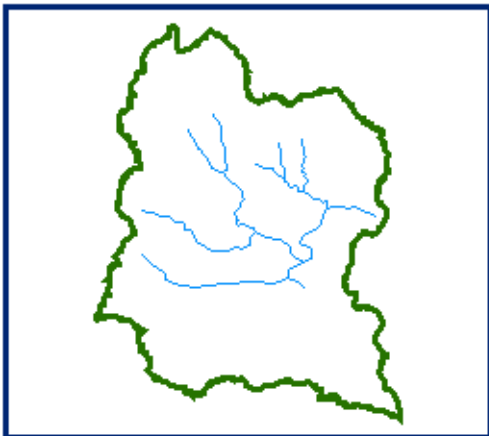
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
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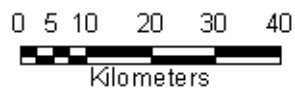


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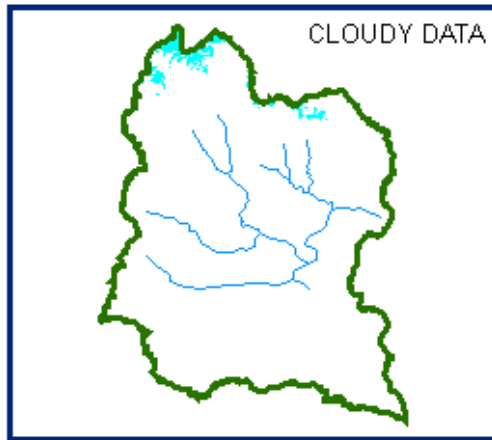


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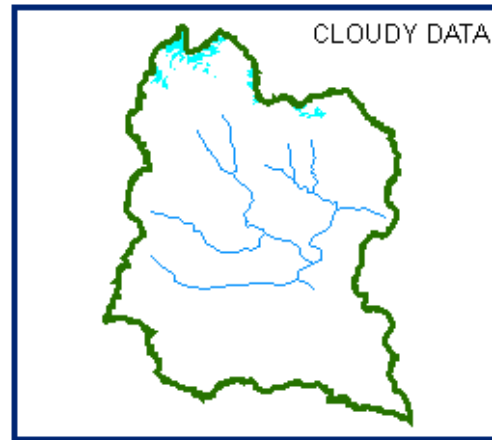
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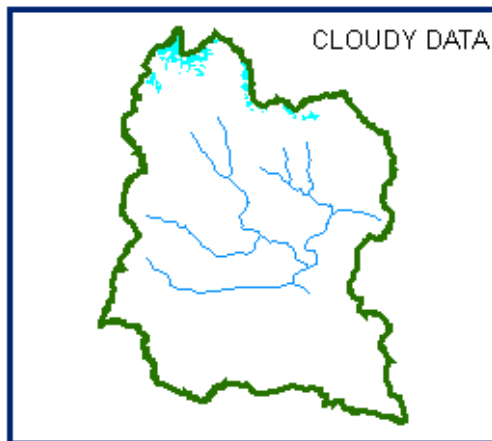
SNOW COVER MAP : RANJIT BASIN



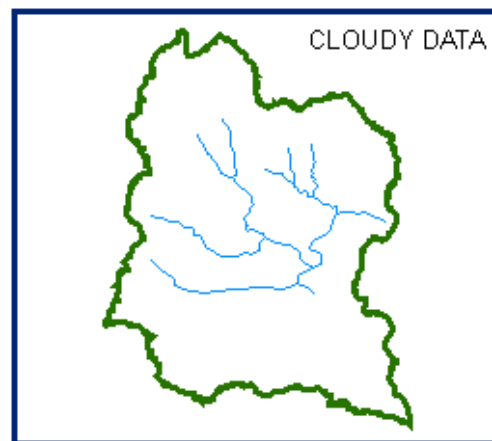
1 APRIL 2010



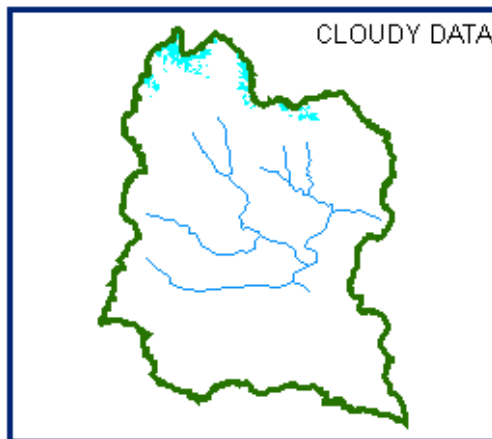
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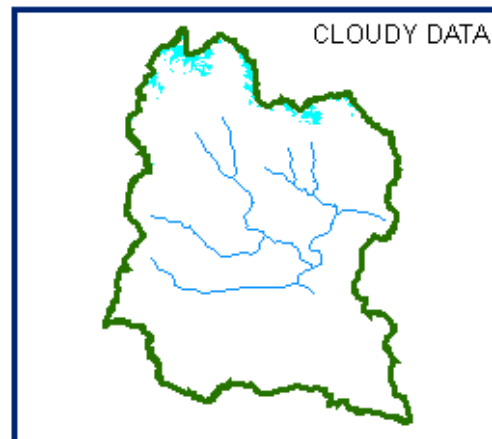
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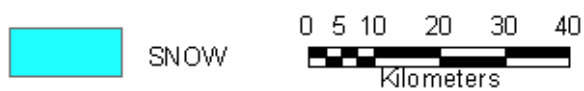
16 APRIL 2010



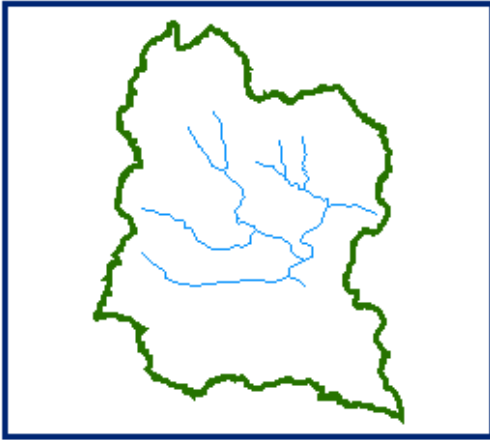
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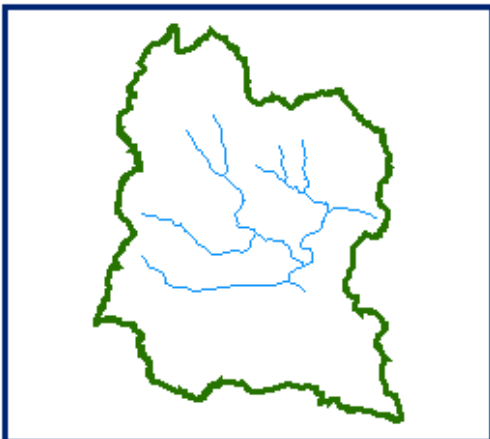
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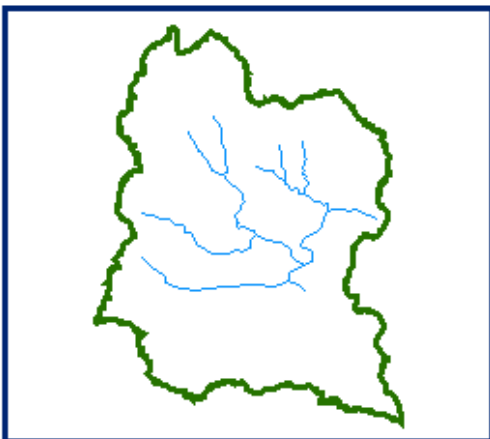
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
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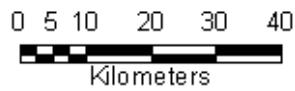
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DATA USED
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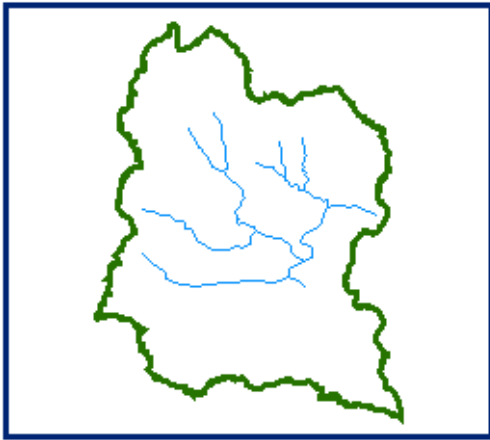
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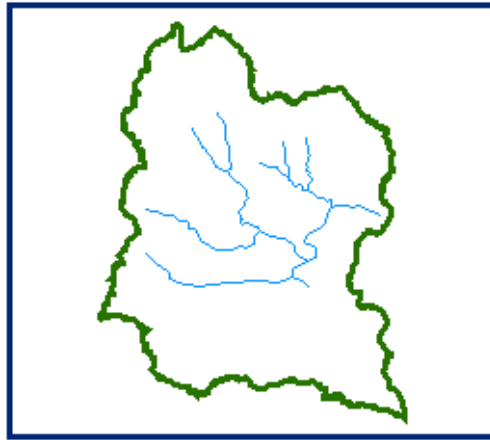
SNOW COVER MAP

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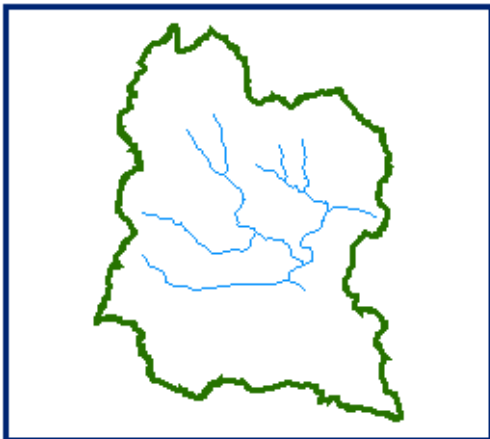
RANJIT BASIN



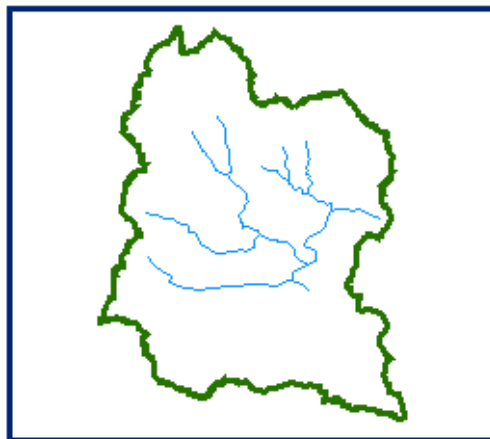
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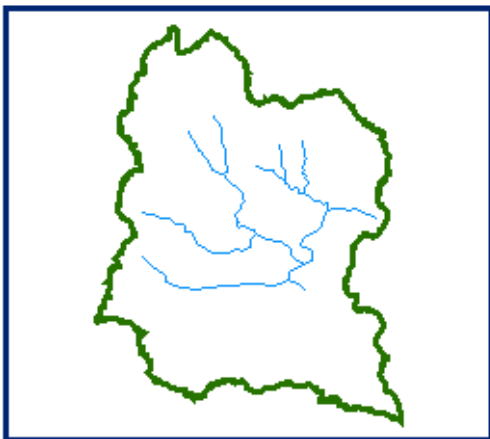
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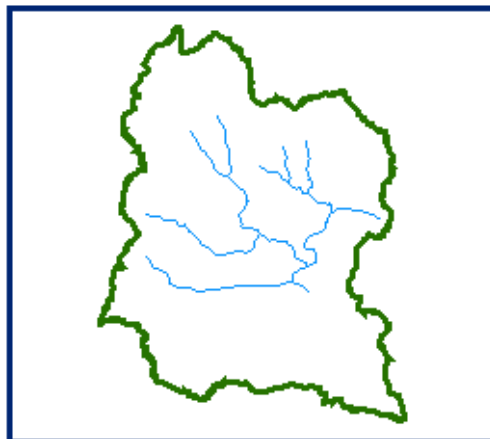
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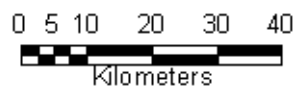


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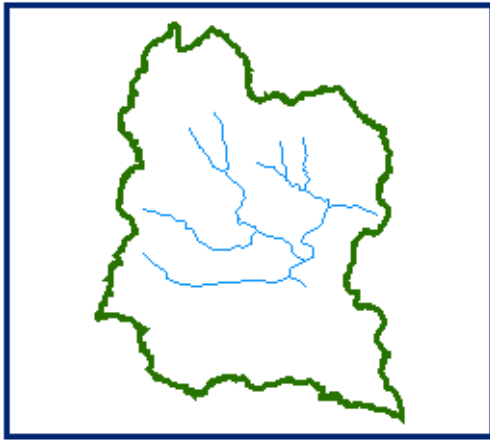


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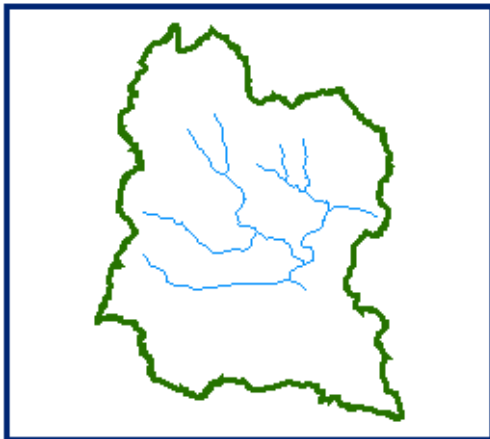
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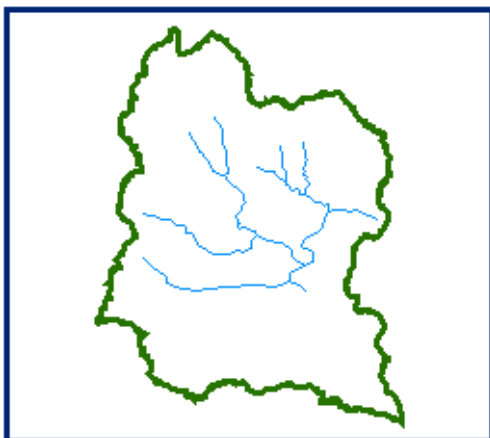
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
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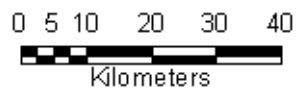


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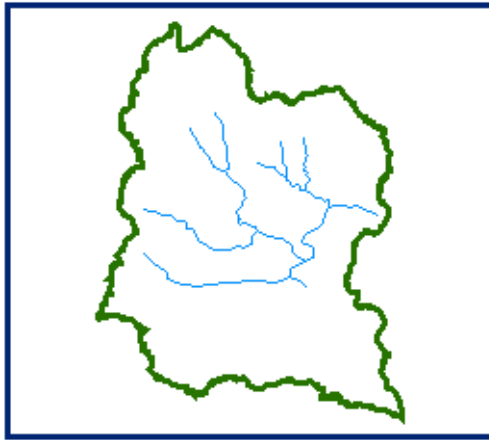
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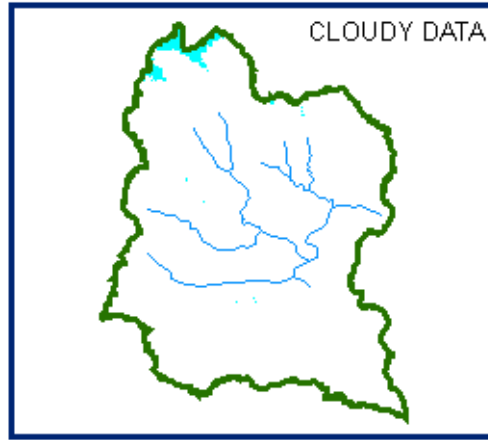
SNOW COVER MAP

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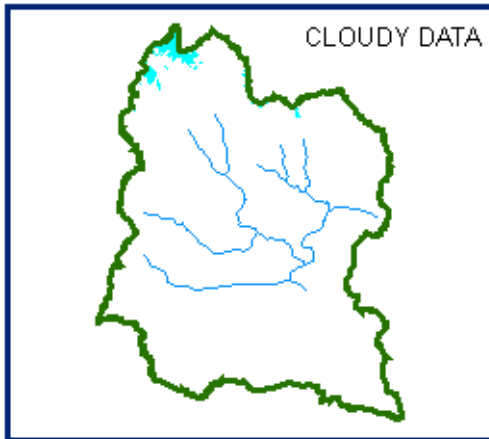
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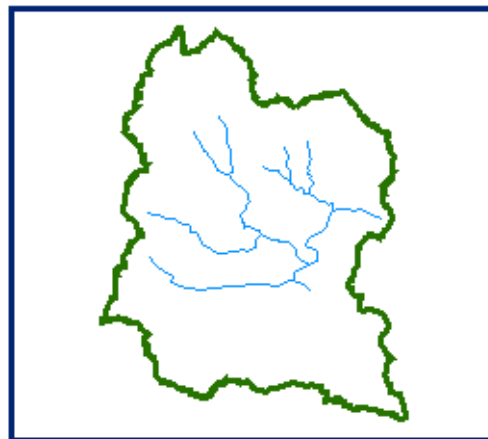
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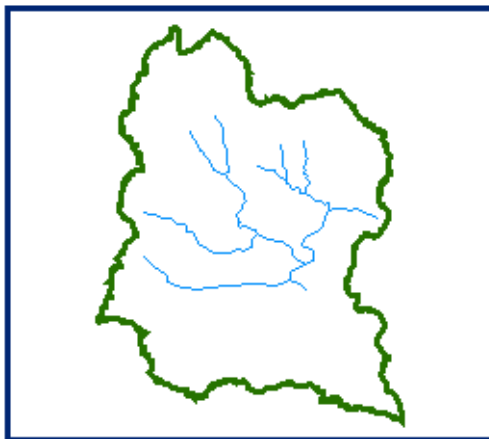
7 JUN 2010



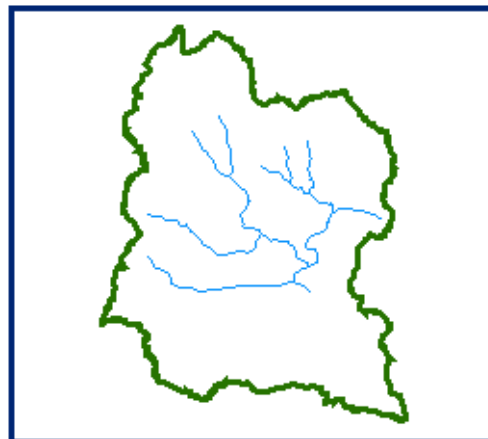
12 JUN 2010



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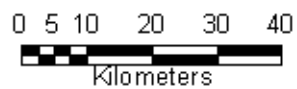
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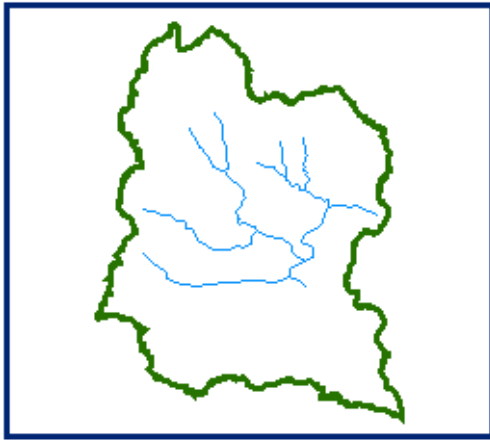
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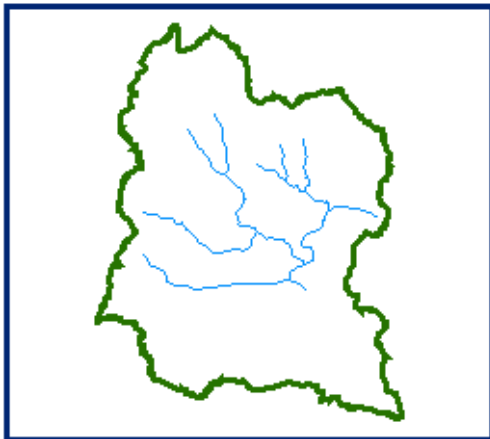
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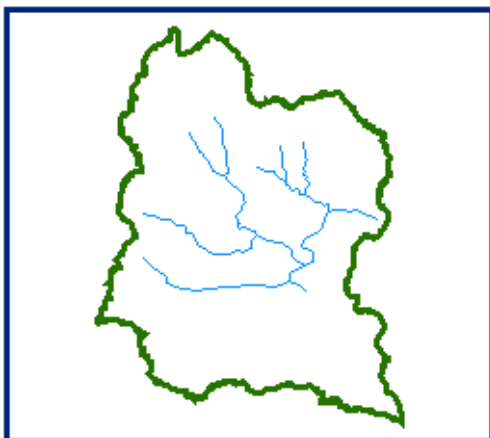
10 DAILY SNOW COVER MAP: RANJIT BASIN



DATA USED
DATA NOT AVAILABLE



DATA USED
DATA NOT AVAILABLE



DATA USED
DATA NOT AVAILABLE

 SNOW

