Sentinel2 satpics

Reading guide in 10 steps for Nordic Skating

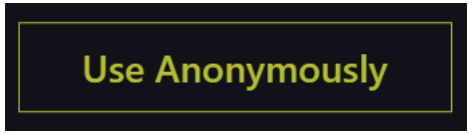
HLSK

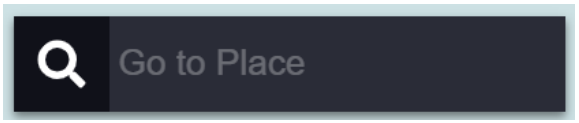
ACADEMY FOR NORDIC SKATING

Step 1

Knowing where to find the satpics

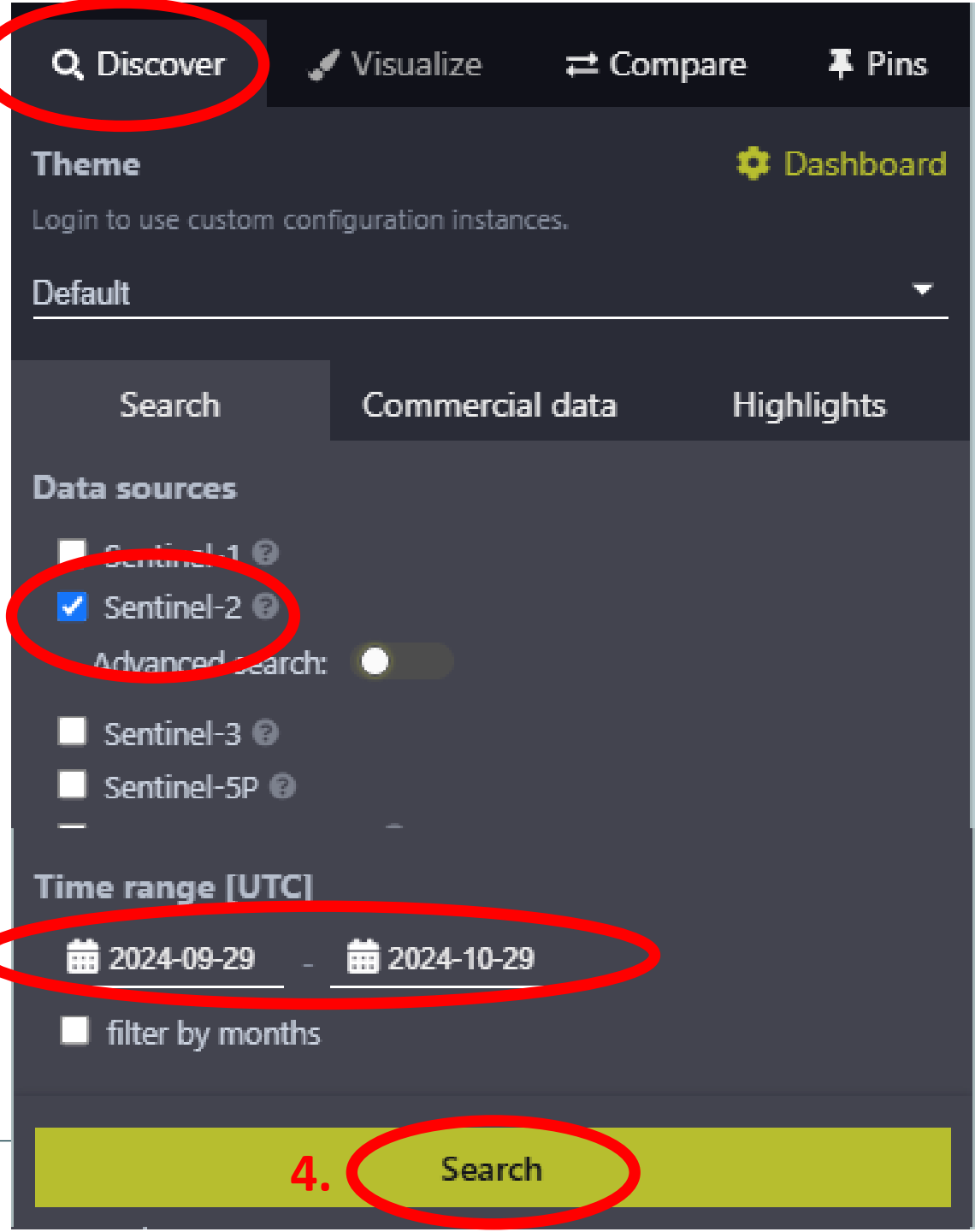
Browsing Sentinel2 satpics

1. Open any internet browser
2. Go to https://apps.sentinel-hub.com/eo-browser
3. Choose:
   - Click on 

   - Or create a trial login via Login and then choose Sign up here
   - Or use your already existing login
4. Type any place in 

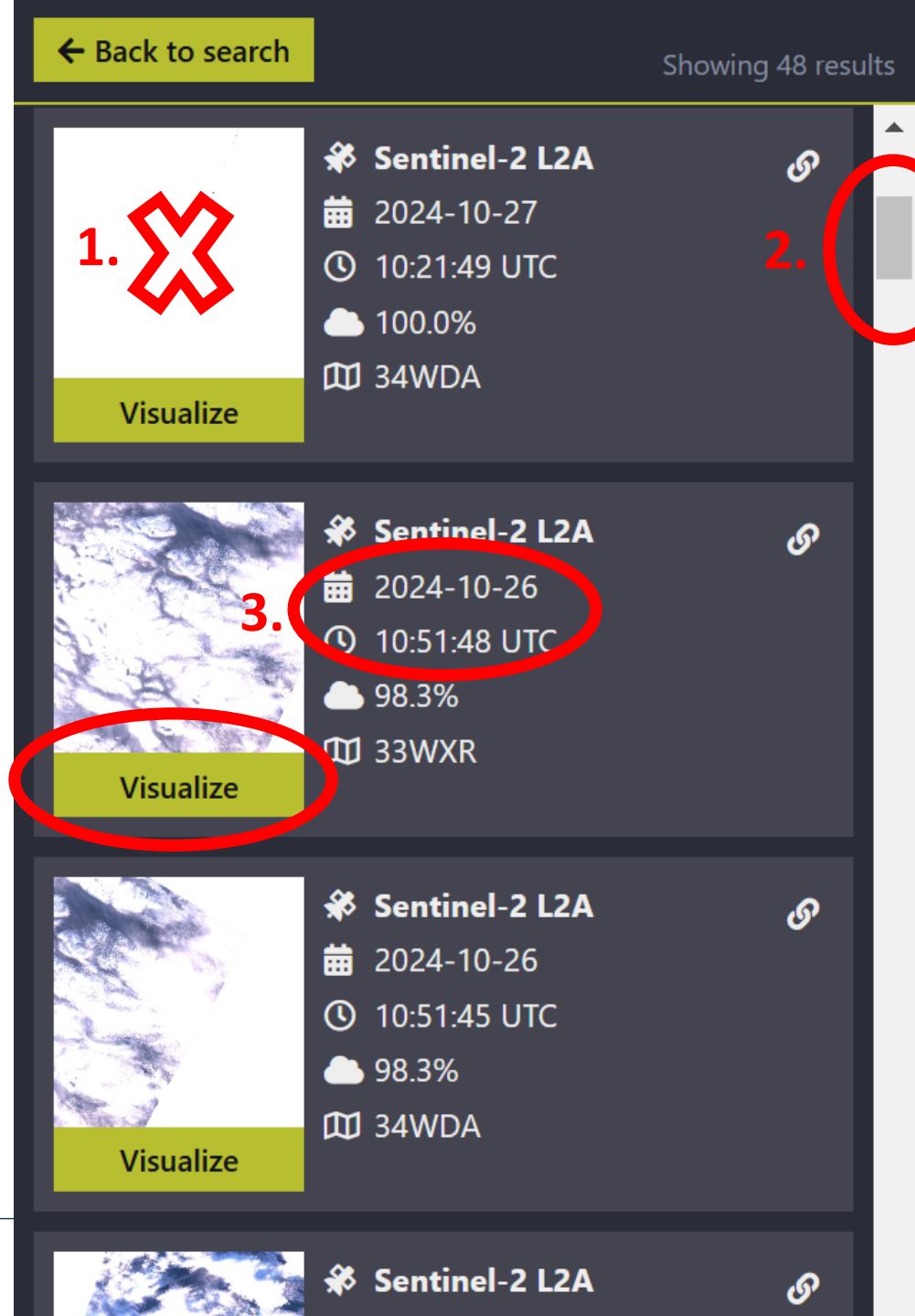
Asking for images

1. On the left side, click on Discover
2. Make sure Sentinel-2 is clicked
3. Enter the period you want
4. Click on Search

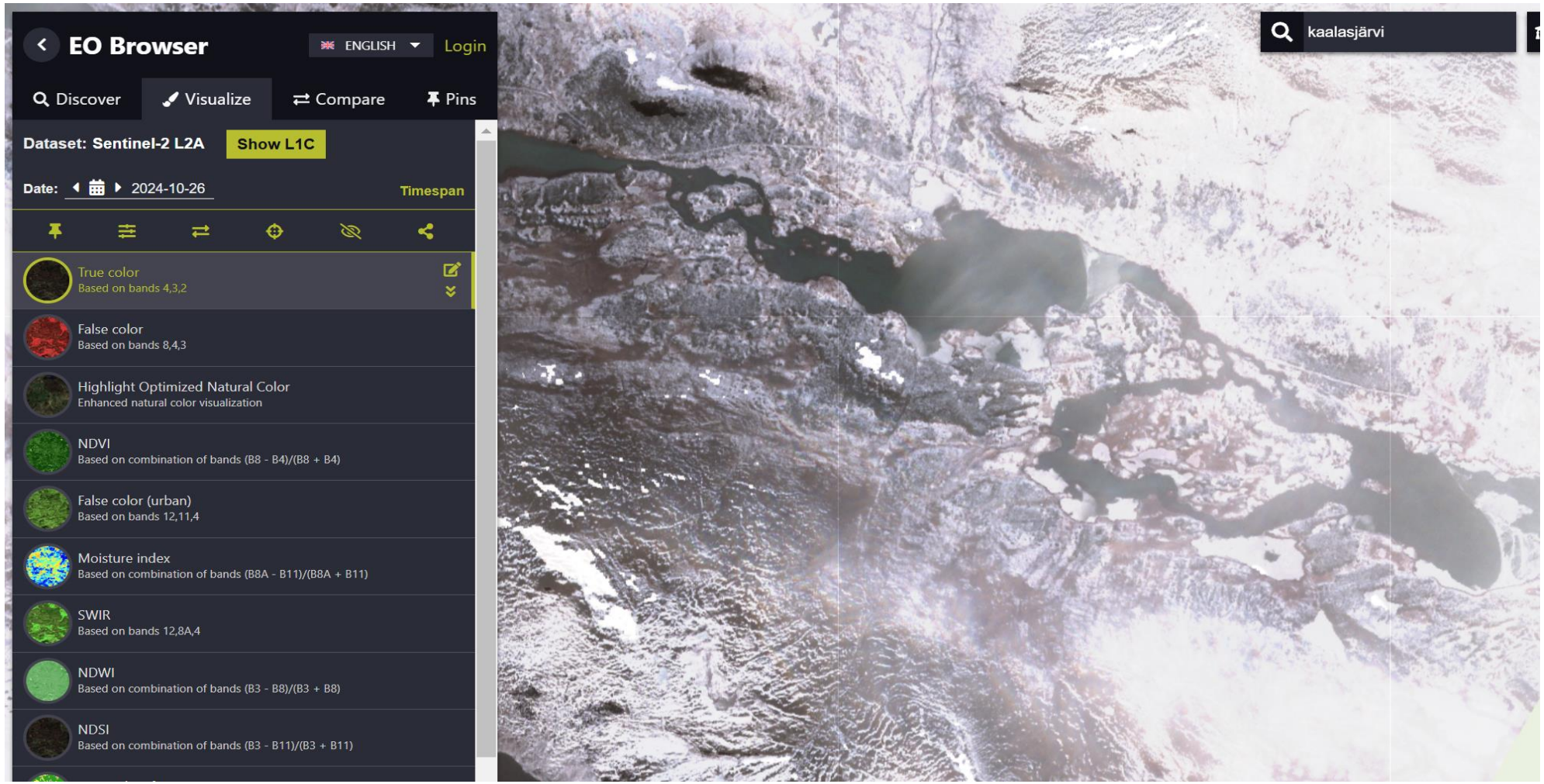


Selecting a specific image

1. Forget the all white pictures (cloudy day)
2. Scroll to a picture you want to see
3. Look at the date (and time if needed)
4. Click on the picture



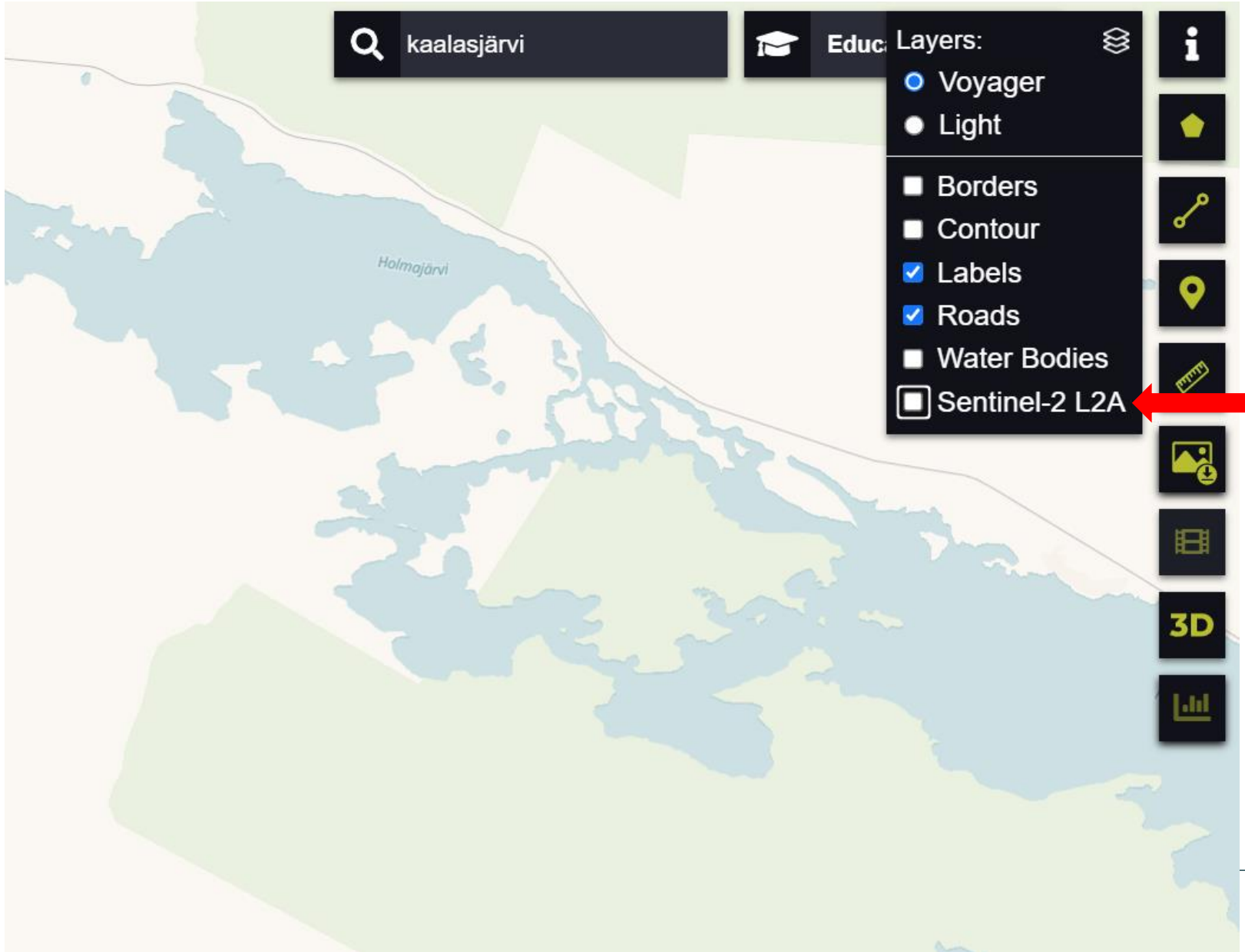
There it is!


EO Browser
ENGLISH
Login
Discover
Visualize
Compare
Pins
Dataset: Sentinel-2 L2A
Show L1C
Date:
2024-10-26
Timespan
True color
Based on bands 4,3,2
False color
Based on bands 8,4,3
Highlight Optimized Natural Color
Enhanced natural color visualization
NDVI
Based on combination of bands (B8 - B4)/(B8 + B4)
False color (urban)
Based on bands 12,11,4
Moisture index
Based on combination of bands (B8A - B11)/(B8A + B11)
SWIR
Based on bands 12,8A,4
NDWI
Based on combination of bands (B3 - B8)/(B3 + B8)
NDSI
Based on combination of bands (B3 - B11)/(B3 + B11)
kaalasjärvi

Step 2

Navigating on the map and identifying lakes

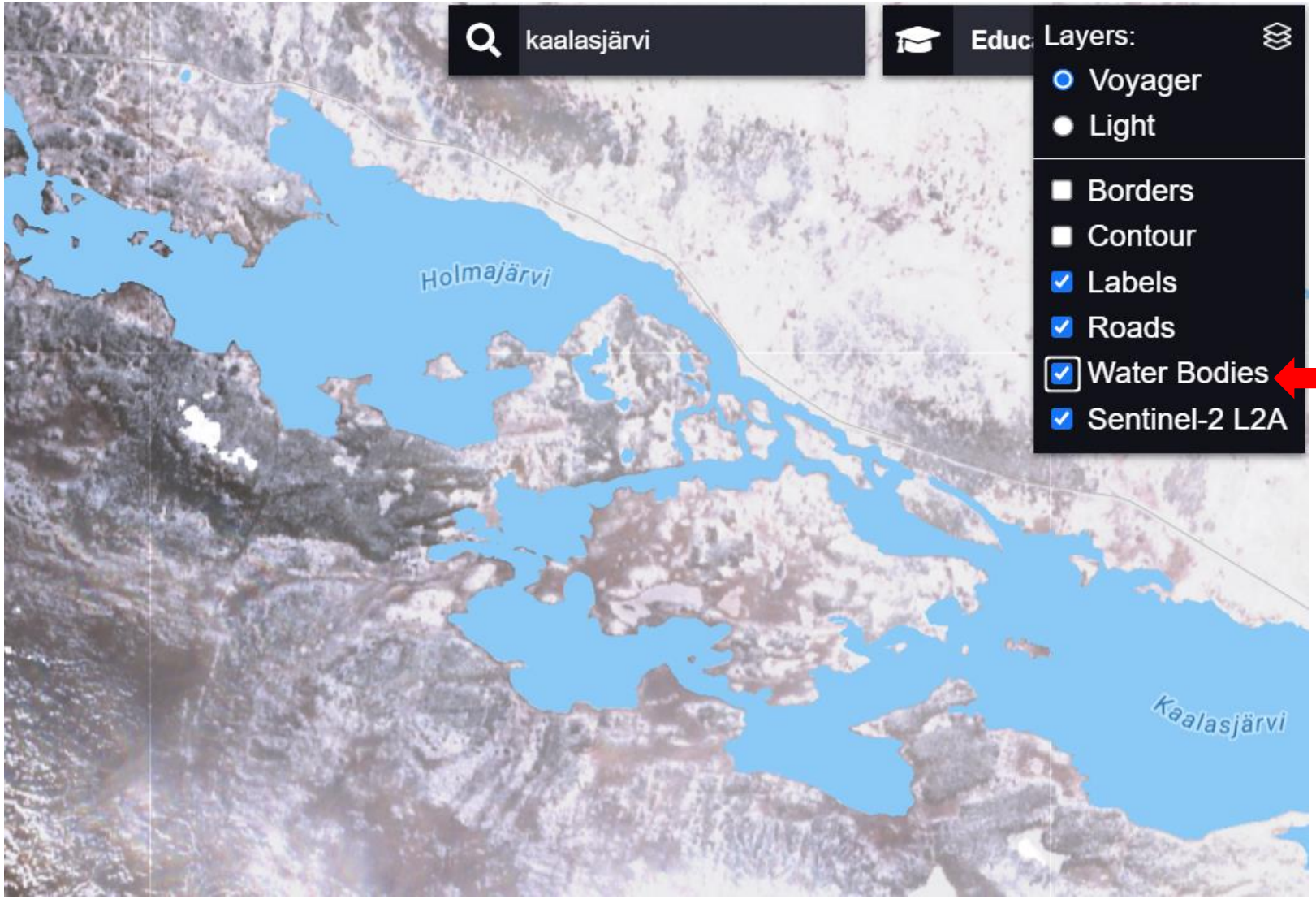
Switch between the map and satpic



By unclicking Sentinel2 L2A, you will see the underlying map.

By clicking again, the satpic will return.

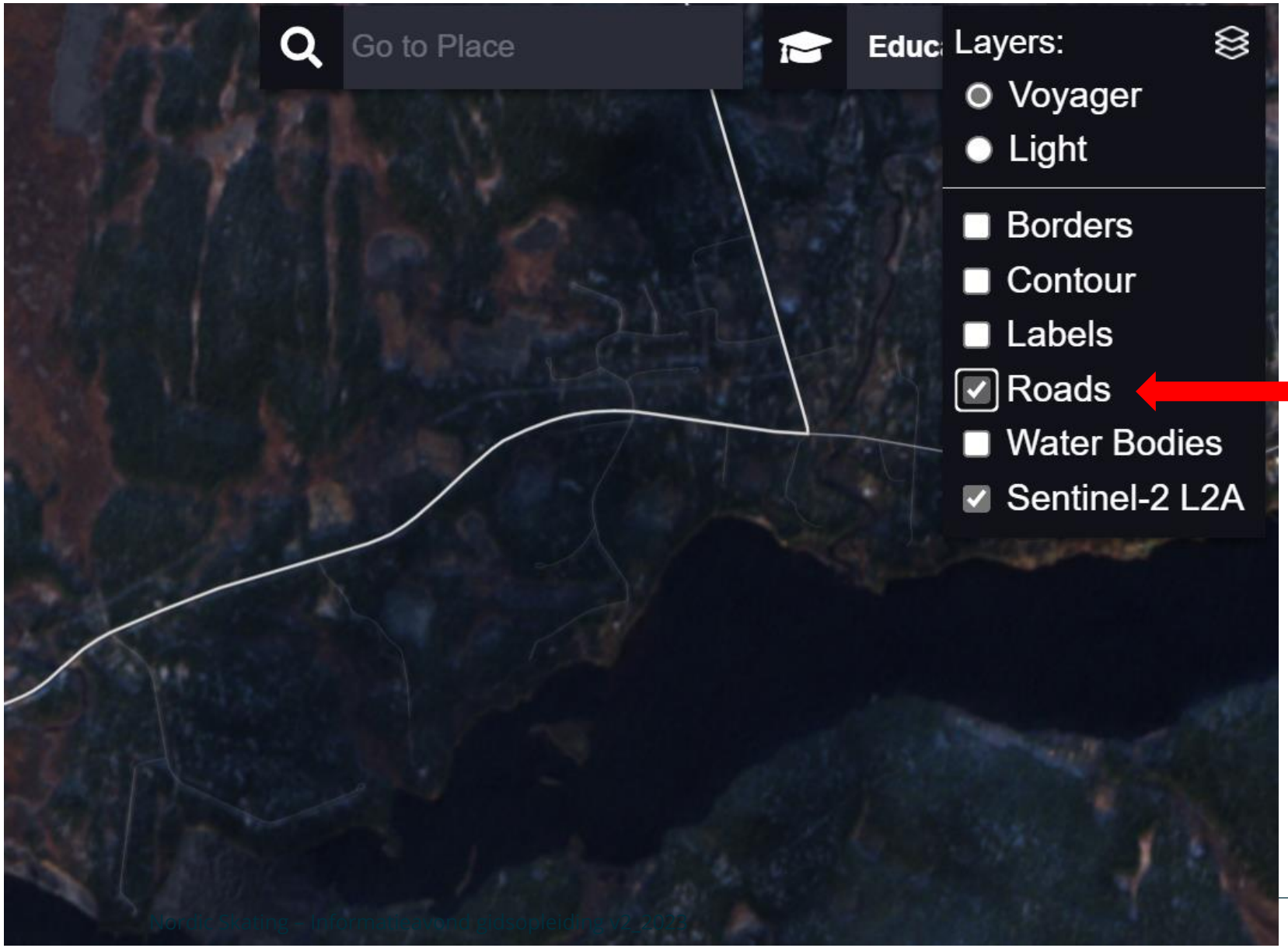
Showing lakes and waters



By clicking Water Bodies, the lakes and waters appear.

By clicking again, the waters disappear.

Using roads for navigating



By clicking Roads, the roads appear.

By clicking again, the roads disappear.

Use time at home to practice

Navigating on Sentinel2 pictures will take you about two hours to learn. For instance, areas with snow on half-clouded pictures are hard to deal with. Finding a lake between dozens of lakes too.

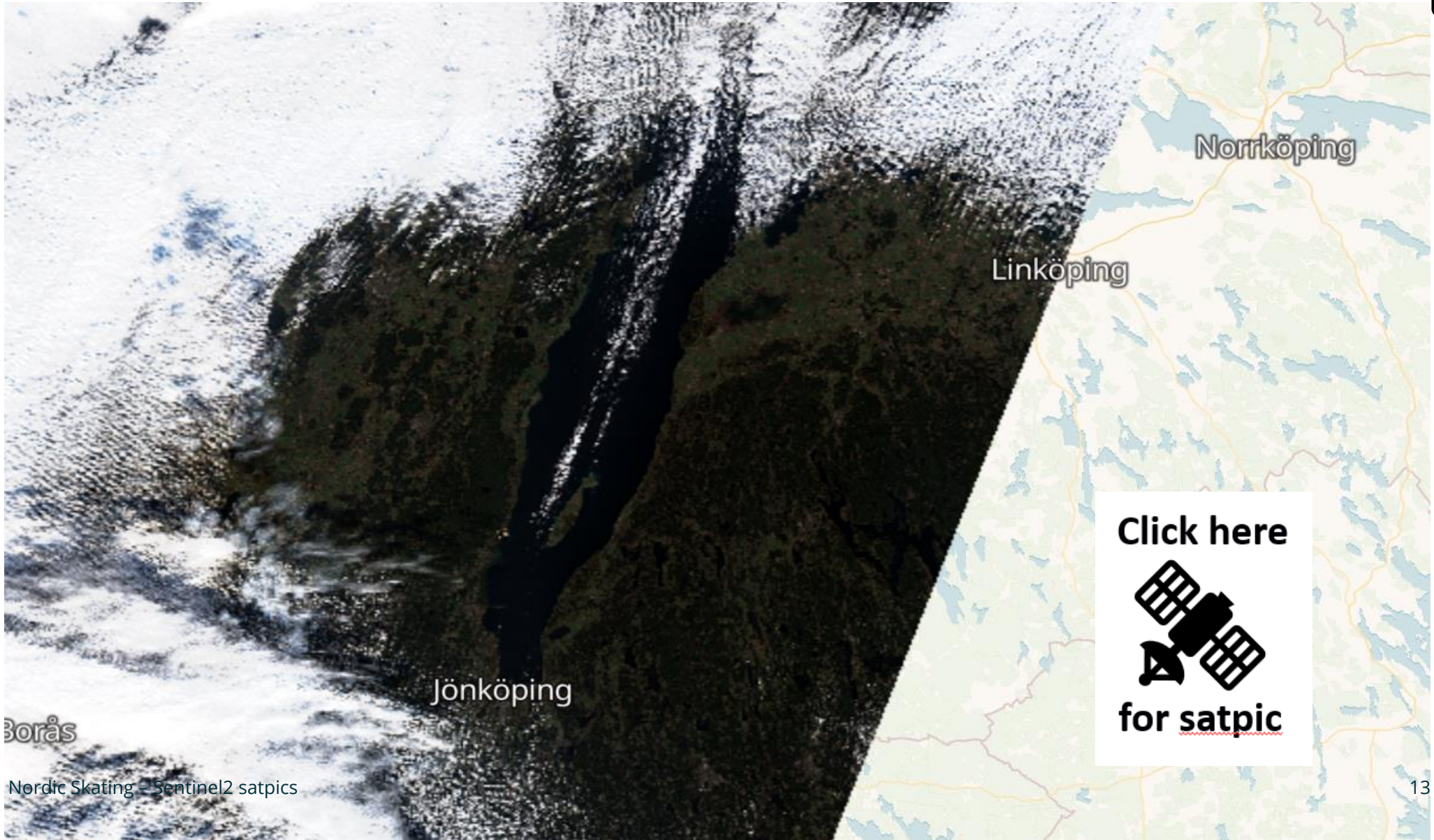
Make a jumpstart by practicing 15 minutes on eight days in a row. Take daily fresh isobs from SN and try to find the latest picture of the lake(s) mentioned.

Switch regularly between the map and the satpic. Zoom in and out. Use multiple dates. Move around. Look back at areas where you skated. Build a mental map in your head of the (start of) the season. Put a Scandinavian paper map on your toilet wall. Do everything that’s needed to learn.

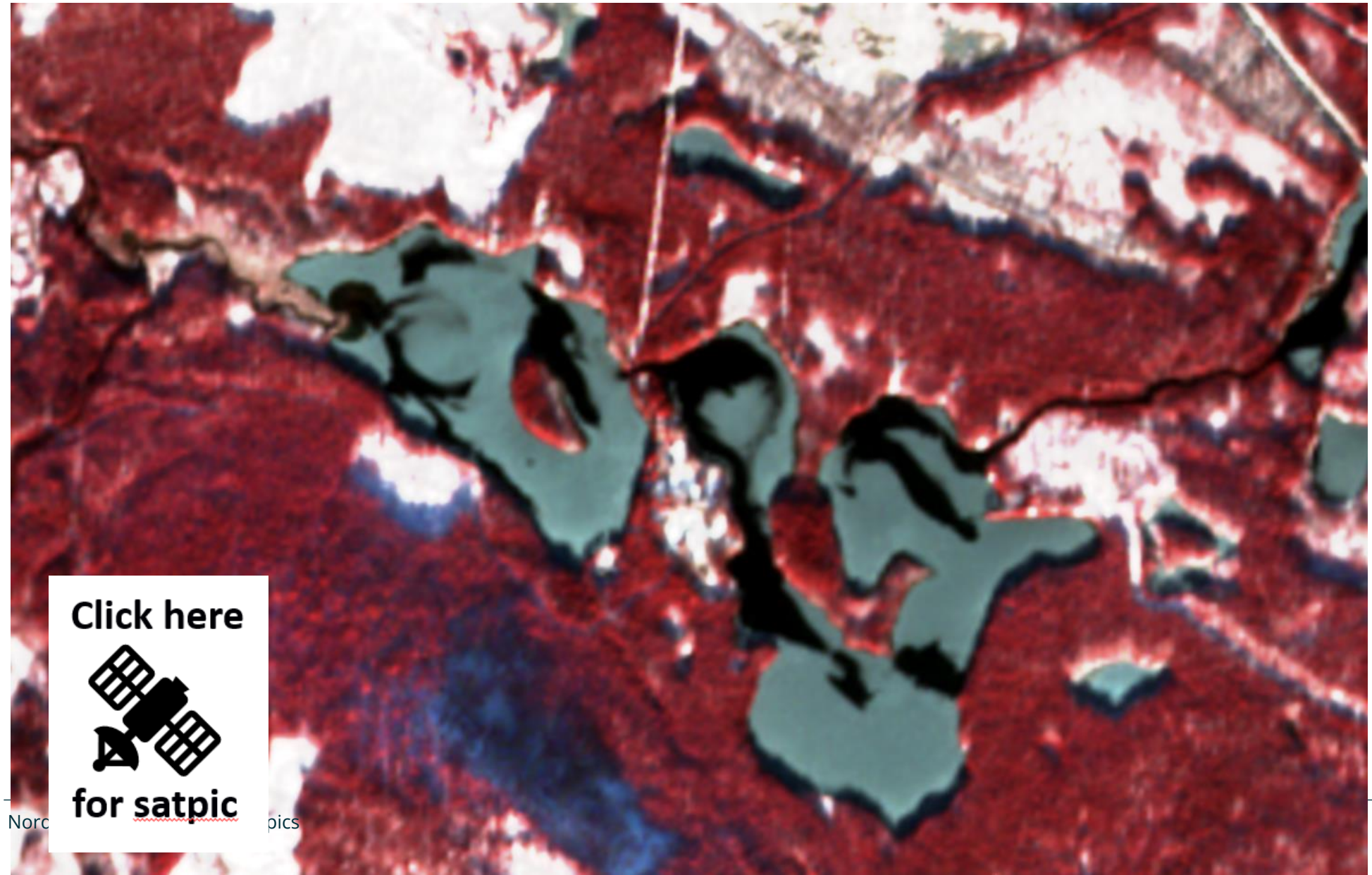
Step 3

Recognize clouds, shadows, land, water, snow and ice

Clouds and shadows – Vättern 25-10-24



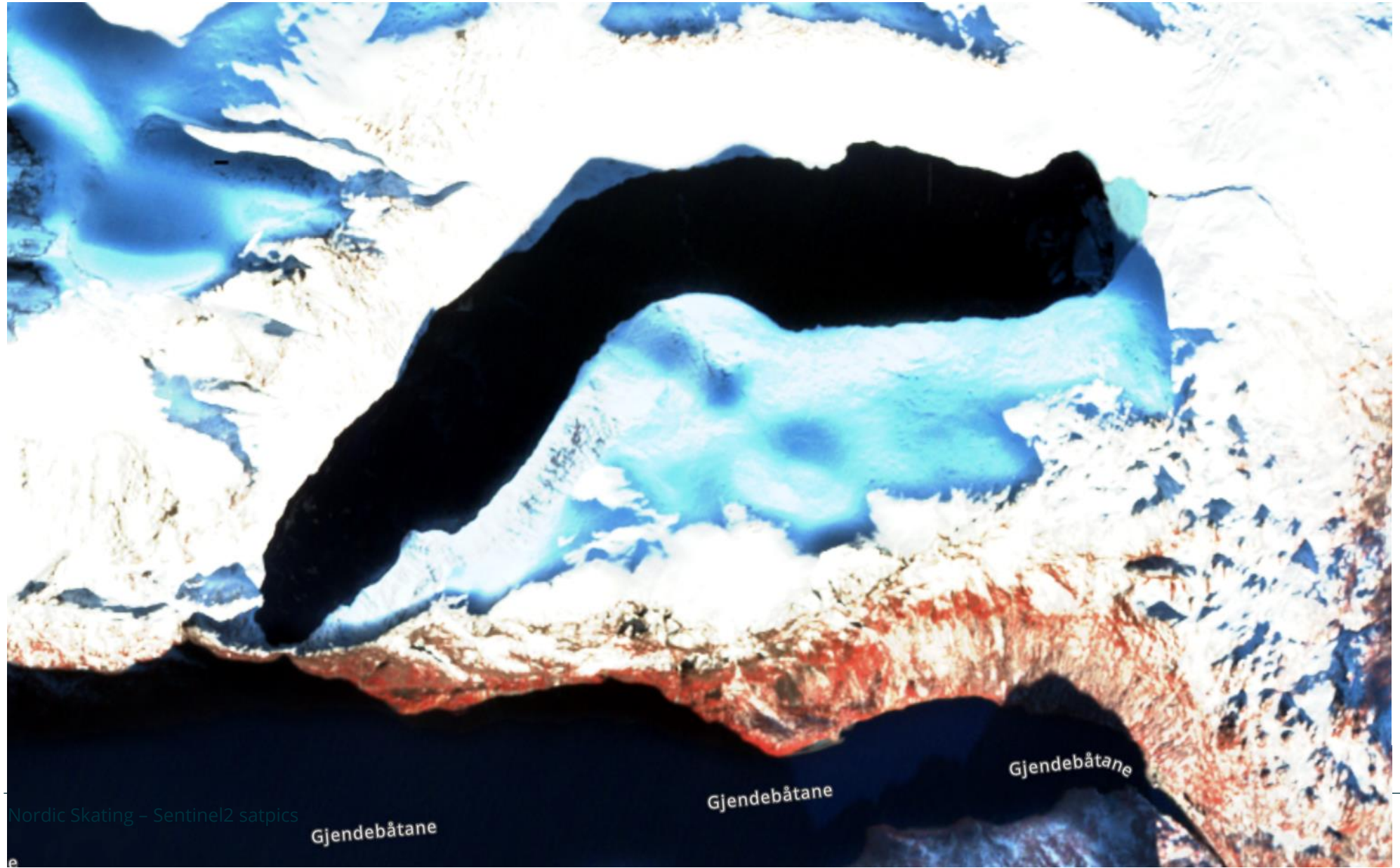
Land, water, snow, ice – Rovajärvi 12-10-24



Step 4

Recognize different types of ice

Kärnis (black ice) – Bessvatnet 20-11-2018



Click here

for satpic

Gjende

To the left, open

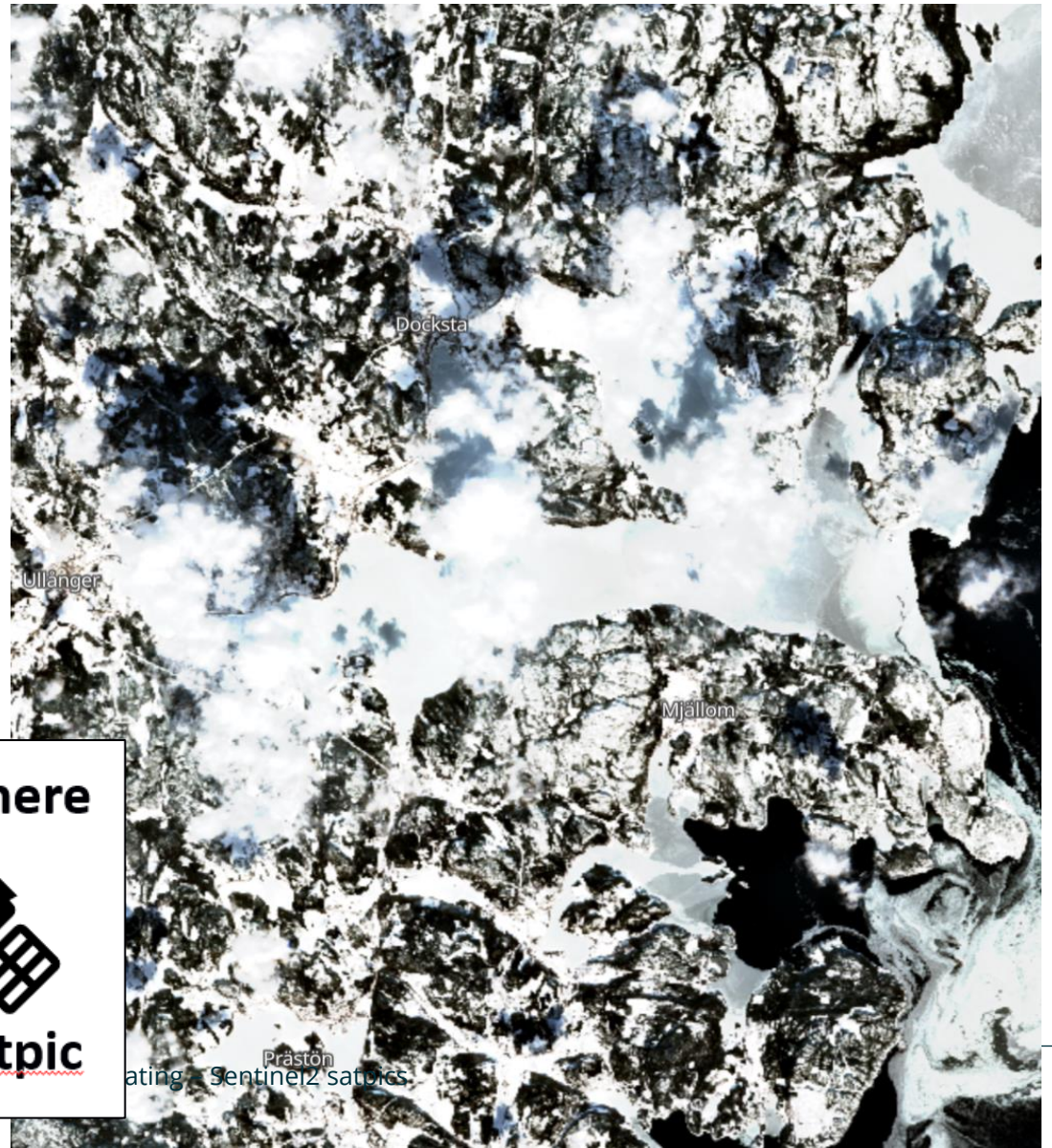
Bessvatnet

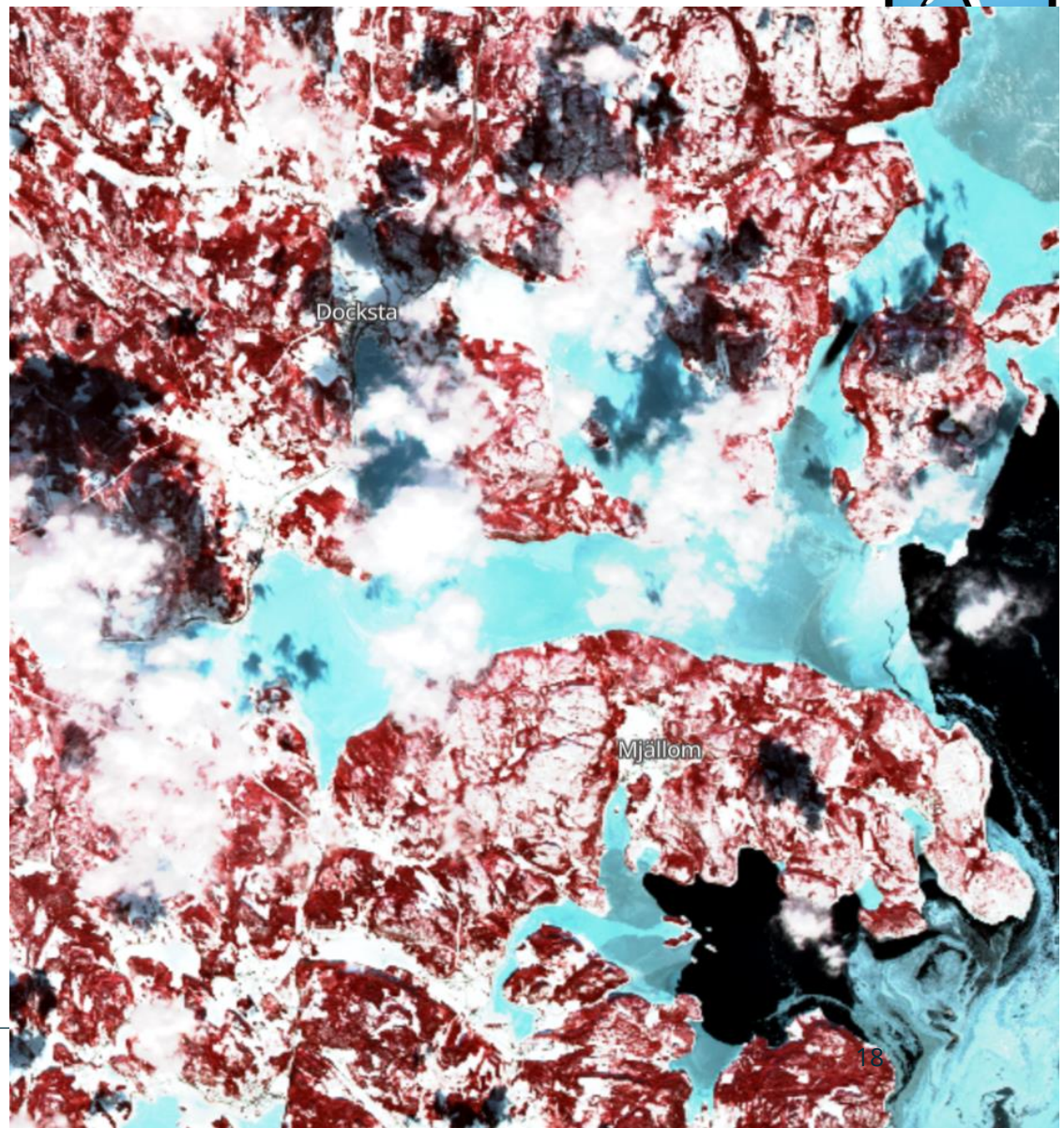
To the right, kärnis

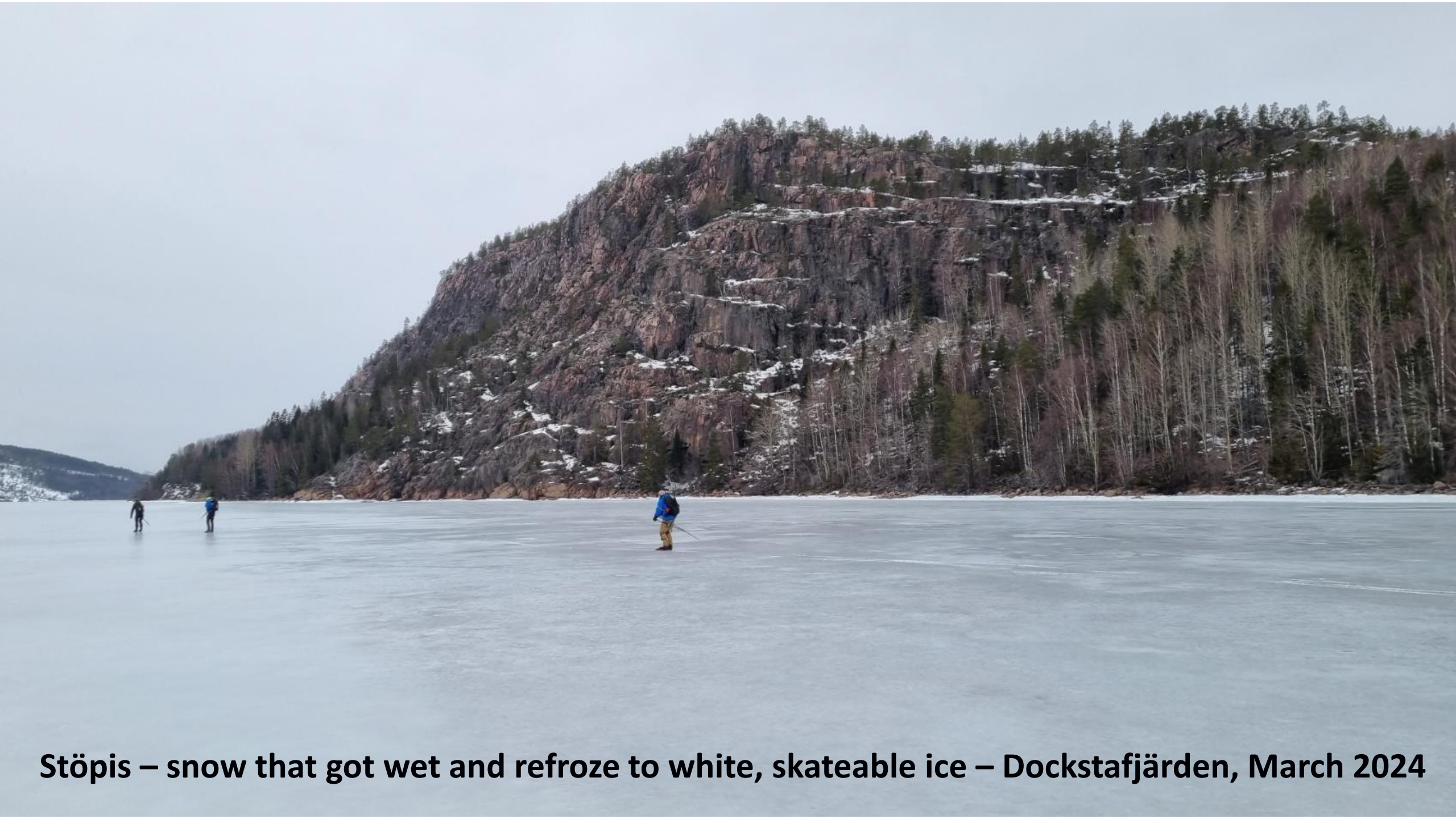
As found on

22-11-2024
Two days after
the satpic

Stöpis (frozen wet snow on top of kärnis)
Dockstafjärden 21-03-24







Stöpis – snow that got wet and refroze to white, skateable ice – Dockstafjärden, March 2024

Snöis – snow fell in water and didn’t melt
Nuoalajärvi 12-10-24

Click here

for satpic

Snöis - characteristics

Movie while snow falls in cold water and doesn’t melt

https://youtu.be/79Kidjnj0lw?si=Qf-M1-Jv77m6YPJ_

Stöpis and snöis are hard to distinguish

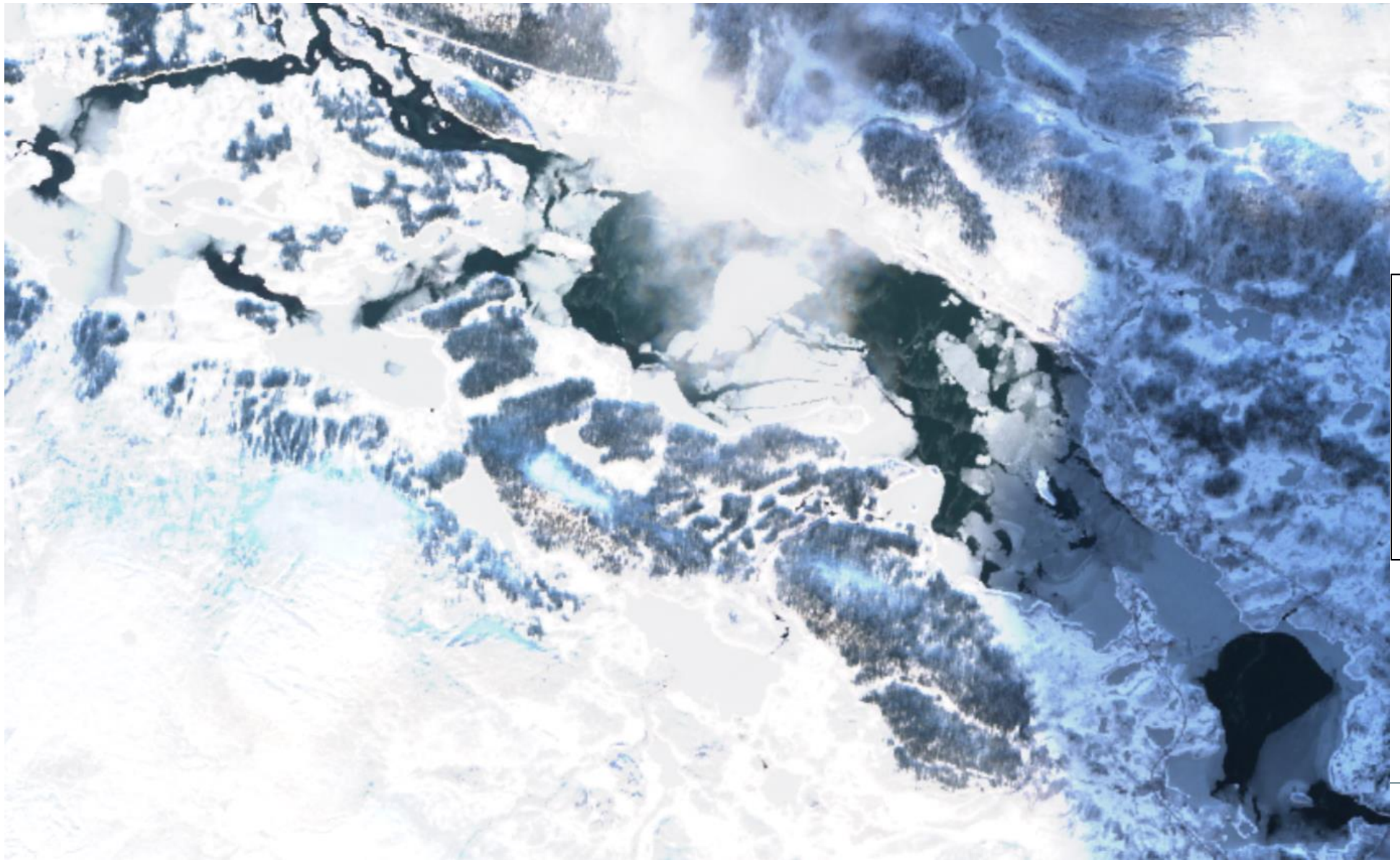
Ice type	True color	False color
Stöpis		
Snöis		

And after a cold period, it doesn’t matter, since kärnis froze under snöis then as well.

Step 5

Combine satpics with other info

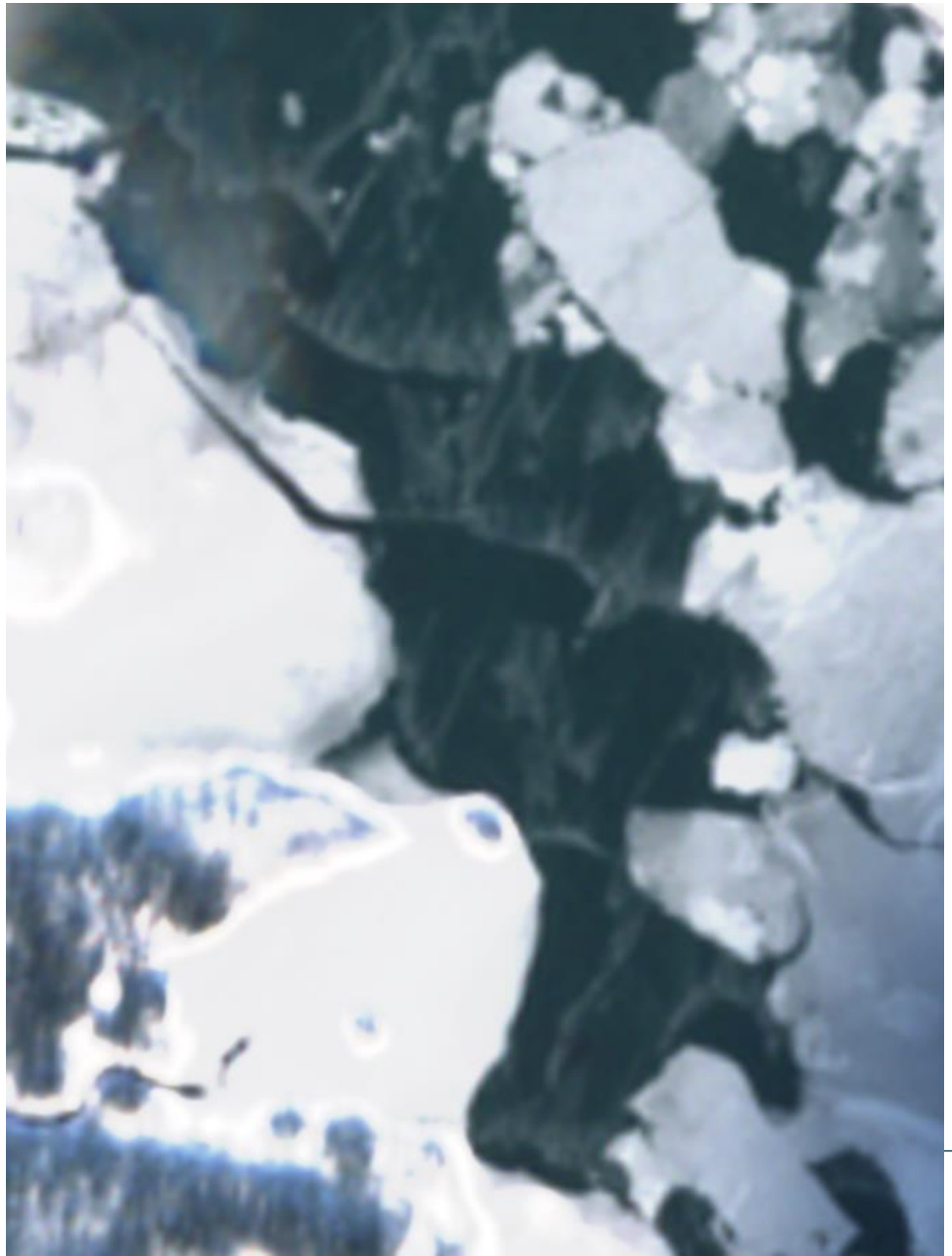
Mix of ice types – Kaalasjärvi

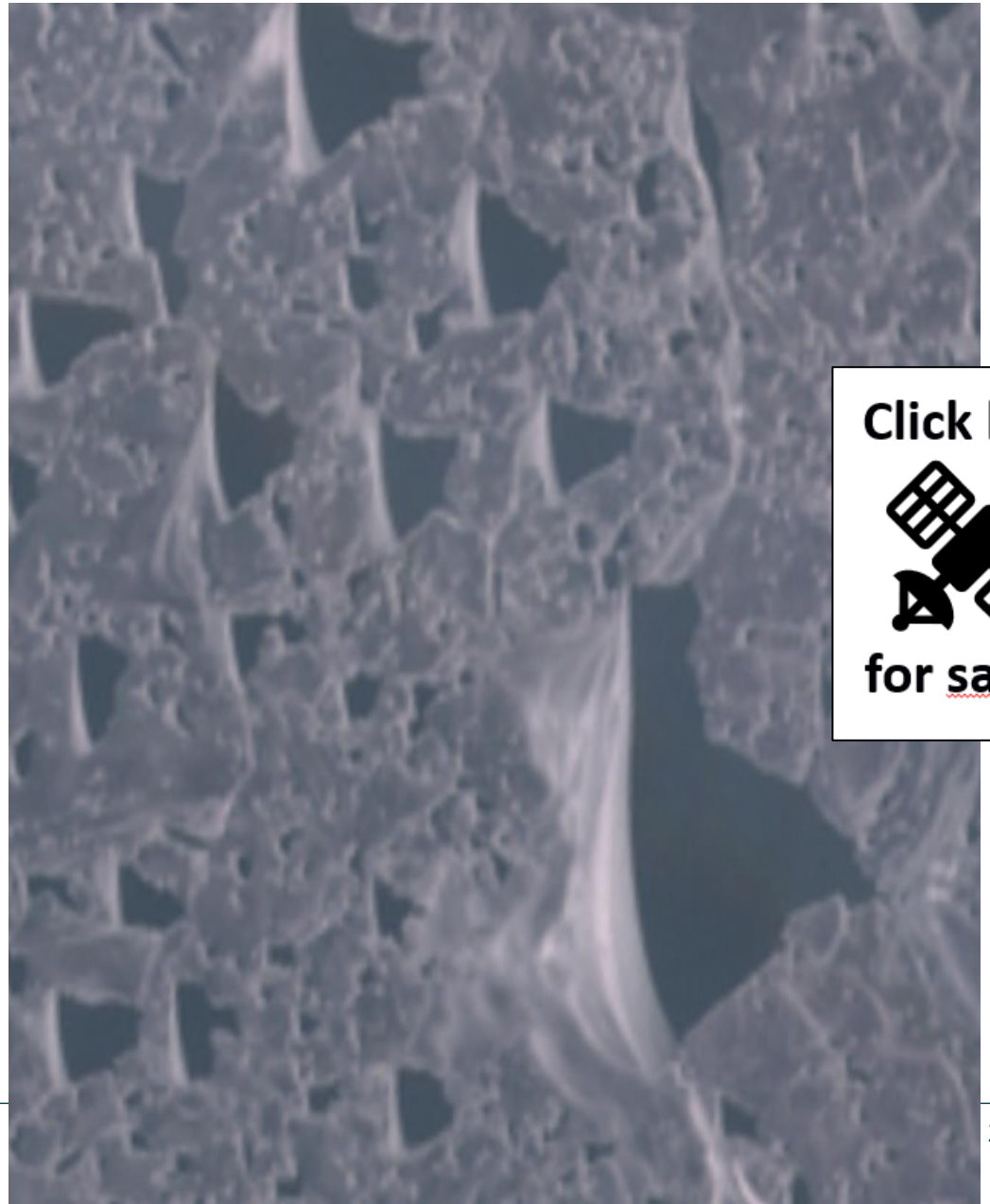


Click here

for satpic

Something that you have seen earlier





Click here

for satpic

Kaalasjärvi on SN

Early?

Kaalasjärvi [Lappland (Sv)]

Watertype: Insjö, typ B

Positie: 67.7789 19.9250 (WGS-84)

Berekende ijsdag: 19 Oktober, gebaseerd op 11 seizoenen. Toon ijsbedekkingskaart

Details

Prognose gemiddelde bevriezing: Maand=, Dag= Opslaan

Kustlijn: 30.6 km **Hoogte:** 459.7 m

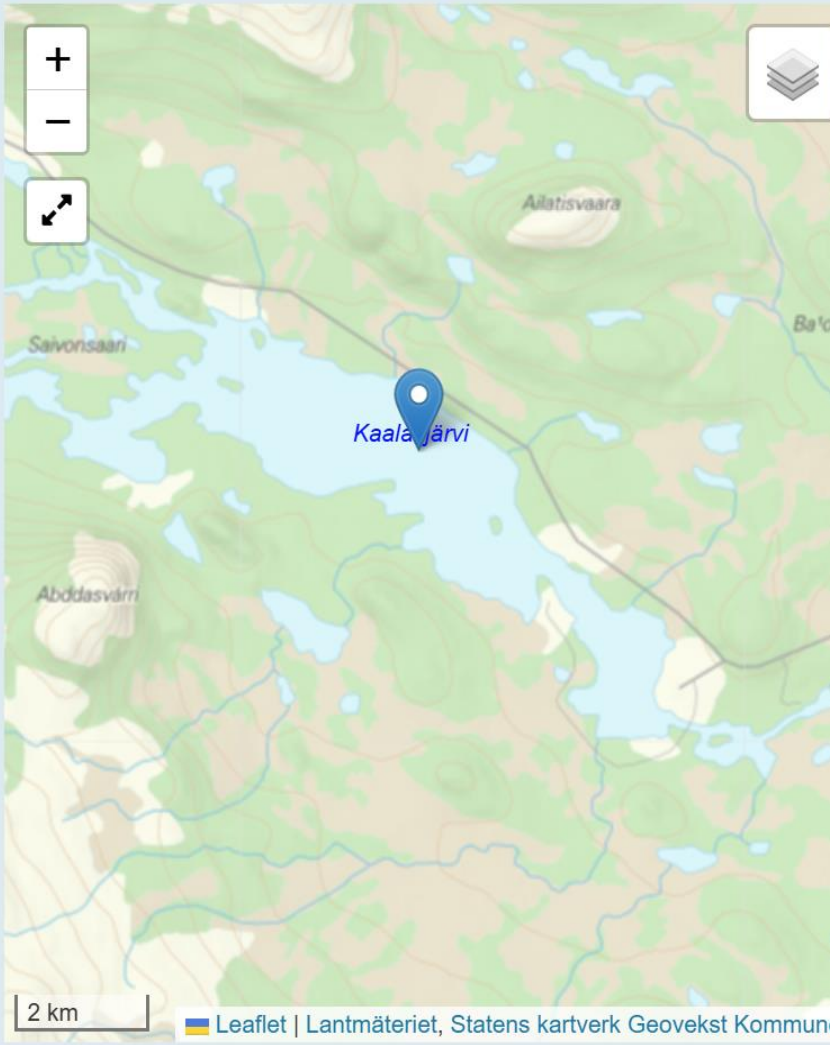
Gebied: 14.39 km^2

Watergegevens volgens SMHI

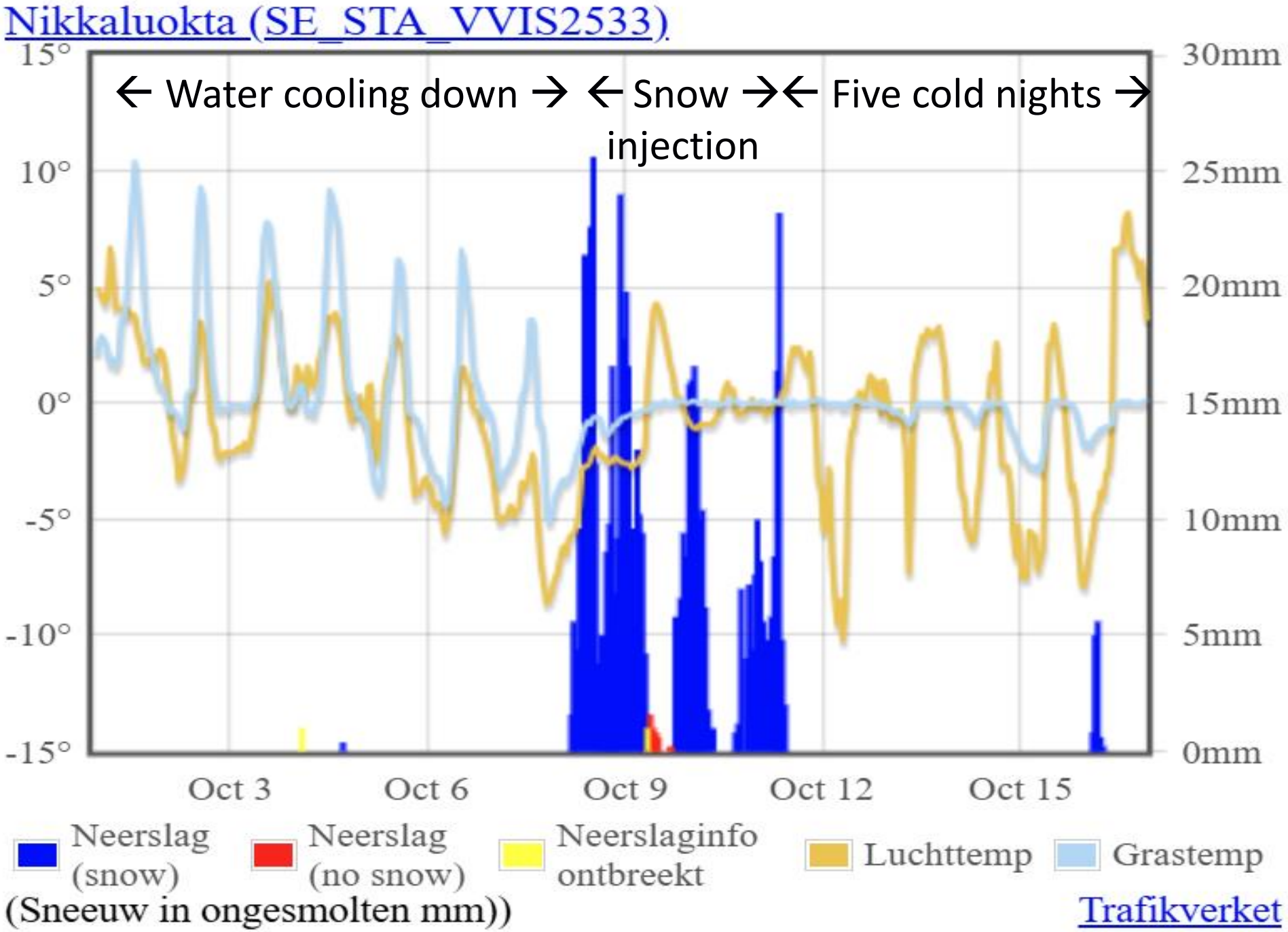
Gemiddelde ijsdagen:	233	**Meetperiode:**	1947-2011
Gemiddelde ijsbedekking:	16/10	**Gemiddelde ijsverdwijning:**	5/6
Vroegste ijsbedekking:	1966-09-25	**Vroegste ijsverdwijning:**	1959-05-19
Laatste ijsbedekking:	1990-11-19	**Laatste ijsverdwijning:**	1955-06-25

Tochtrapporten:

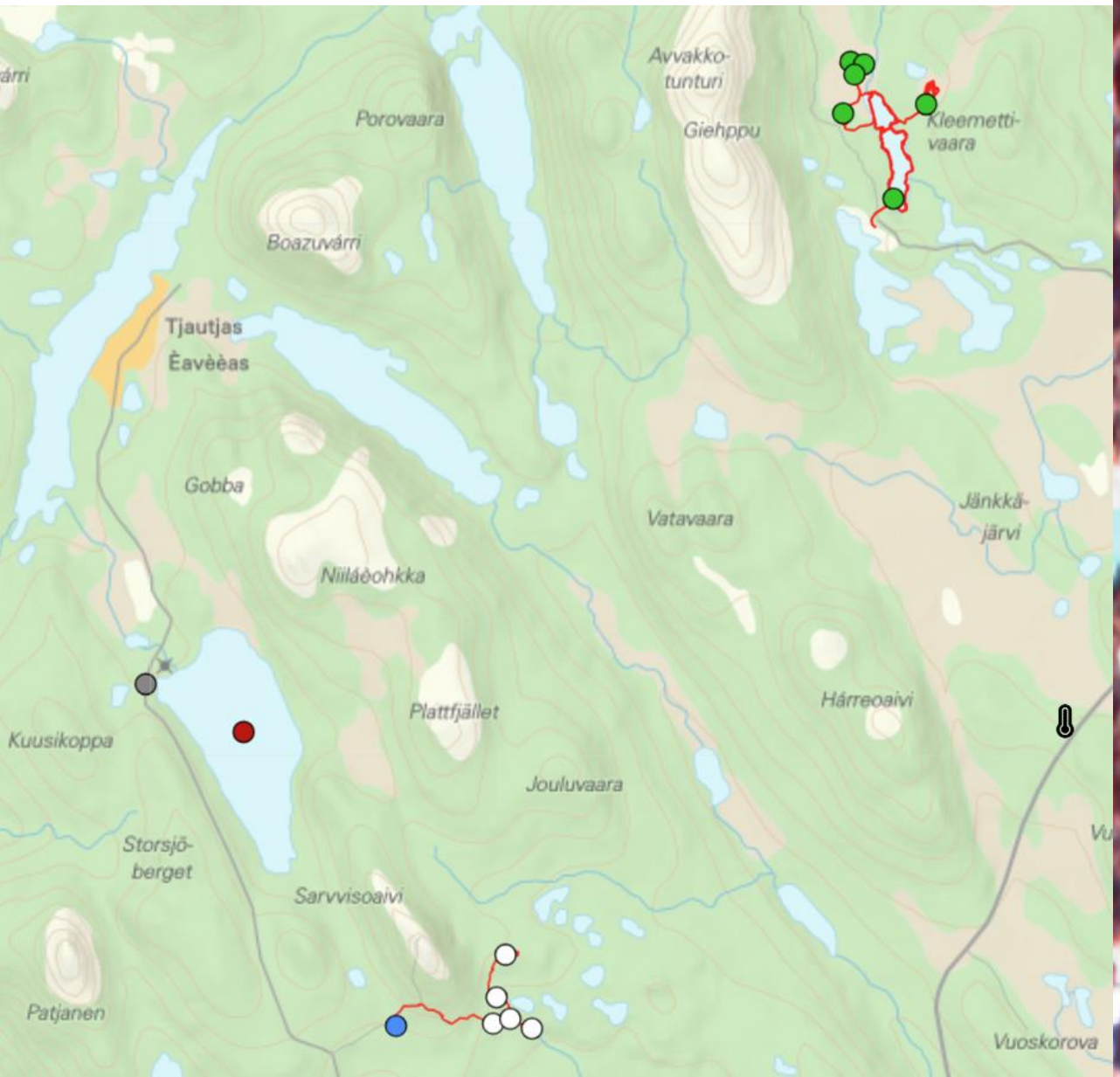
Så speciellt på Kaalasjärvi	Woe 2024-10-16	HLSK
Tuntureiden syleilyssä Kiirunassa - Omfamnad av fjällen i Kiruna	Vri 2020-11-20	SRL
Kalaspremiär på Kaalasjärvi	Vri 2020-11-20	SSSK
Kaalasjärvi as the perfect education lake	Don 2020-11-19	HLSK
Black Ice Still Matters	Zon 2020-11-15	SSSK
From Kaalasjärvi to the west	Zat 2020-11-14	HLSK
Från Kaalasjärvi till Keb	Din 2018-10-30	SSSK
Kaalasjärvi med solnedgång över kebnekaise	Din 2017-10-24	SIK
Kalas att vistas på Lattjo-javri	Zon 2017-10-22	LLK
Premiär	Zat 2017-10-21	LLK
Från Kaalasjärvi till gruvan via Kiruna sjukhus	Zon 2016-10-23	SSSK
Nikkaloukta levererar	Zon 2014-11-02	SSSK
Paittasjärvi polka	Vri 2014-10-31	SSSK
Karins födelsedagskaalas på Kaalasjärvi	Vri 2014-10-17	SSSK

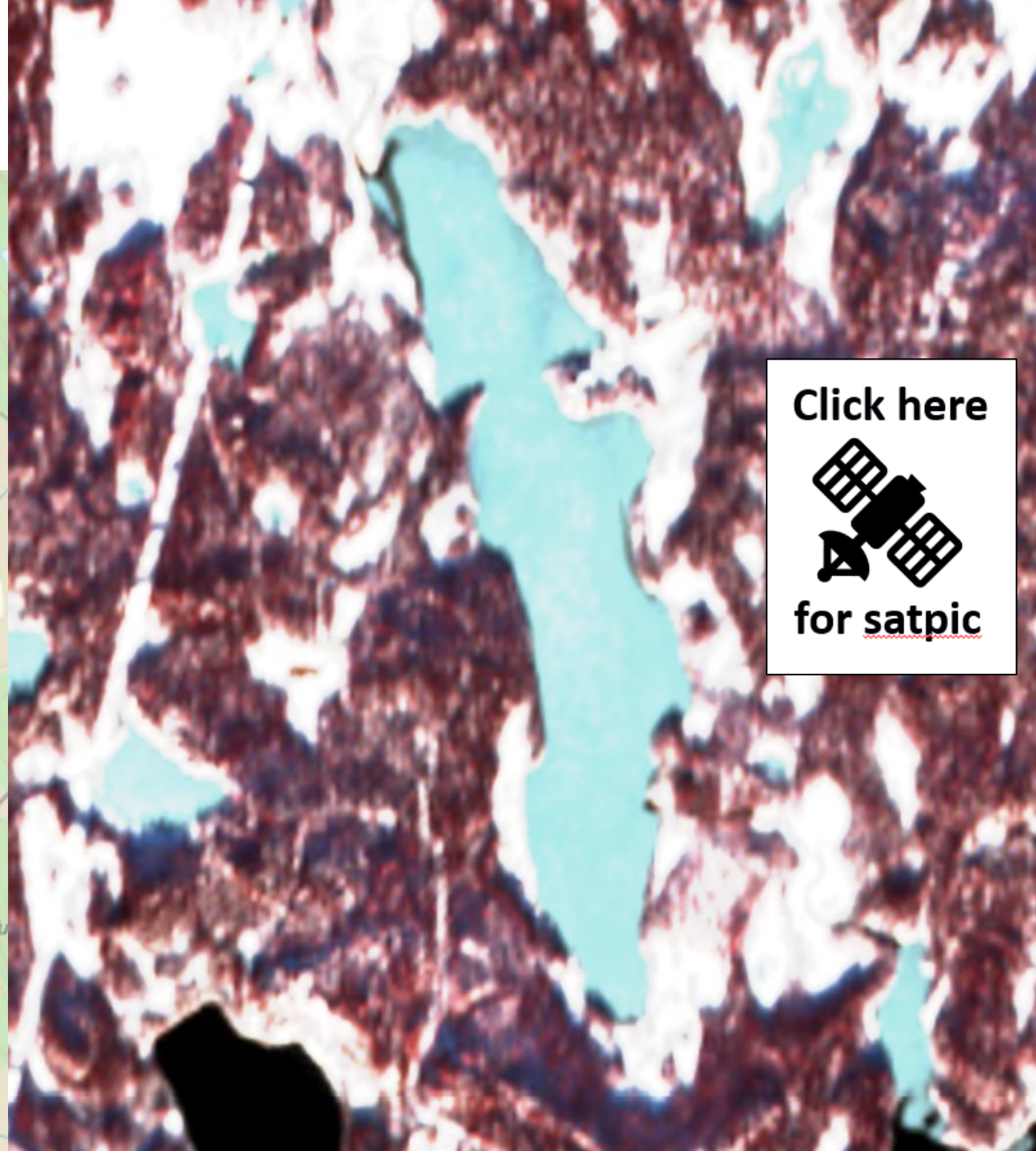


Weather actuals



Info from days before

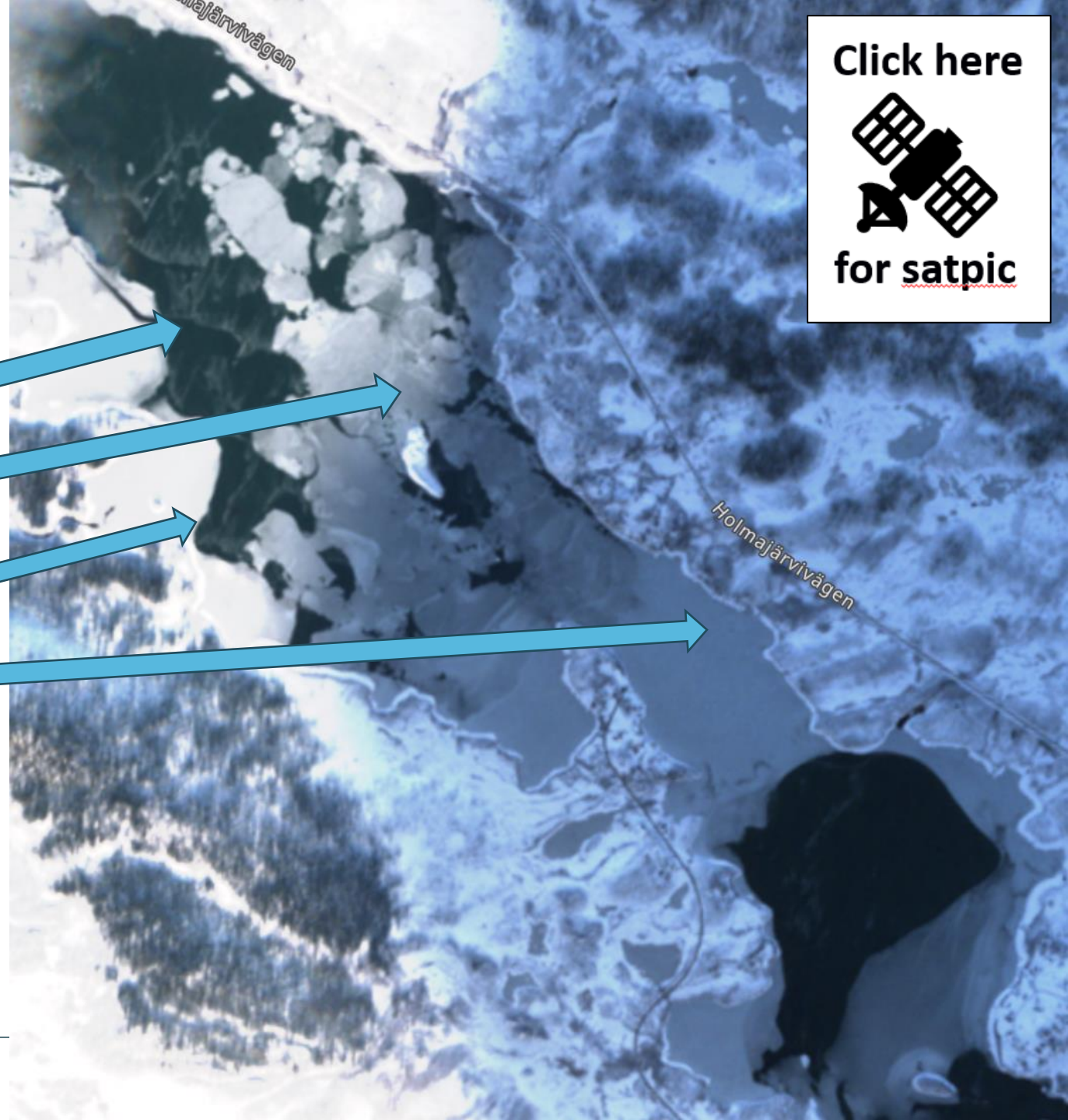




Then look again, in detail

1. Kärnis might work
2. Snöis probably ok
3. Not much ice drift signs
4. Stable stöpis area to start
5. Smaller lakes as plan B
6. Investigating = learning!

Yes, let's do it!



Step 6

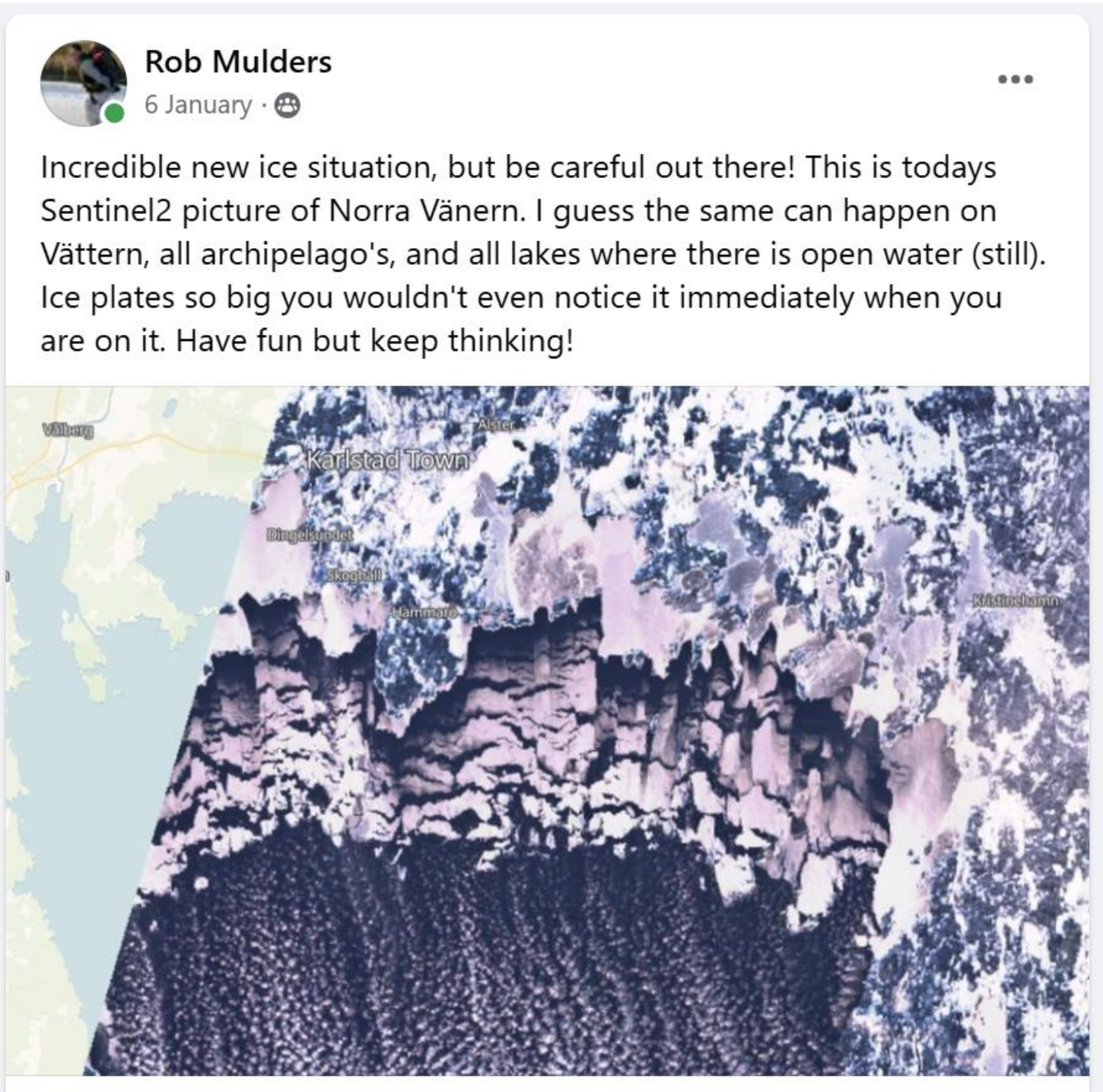
Learn to estimate drifting / degenerating ice

Risky business

There are two “major” risk situations possible in Nordic Skating:

1. *Ice drift*
Old satpics help to identify the “usual suspects” → places where ice may start to drift

2. *Massplurrning*
Newest satpics help to identify large areas of (thin) new ice and degenerated old ice → places where you might plurr, but can’t get out



Step 7

Extend the ice situation from old pictures,
using the weather actuals

Step 8

Predict the ice situation in the (near) future,
using the weather forecast

Step 9

Check your assumptions with satpics and SN data from previous seasons

Step 10

Put it all together for your trip
and tour planning

Questions?

Now or later to rob@fire.ly