



Latvia University
of Life Sciences
and Technologies



BIOR

INSTITUTE OF FOOD SAFETY, ANIMAL HEALTH
AND ENVIRONMENT

BATIMETRISKĀ KARTĒŠANA BIOR LAUKA DARBOS

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RĪGA, 2022

JĀNIS DUMPIS

PĀRTIKAS DROŠĪBAS, DZĪVNIEKU
VESELĪBAS UN VIDES ZINĀTNISKAIS
INSTITŪTS "BIOR"

- LU ĢZZF 2013 - 2018
- LU VBF 2018
- BIOR 2017 (Pētnieka amats)



IDEJAS UN SAPŅI

- iespēja apstrādāt batimetrijas datus bezmaksas
- Bezmaksas augstas kvalitātes batimetriskās kartes visai Latvijas teritorijai
- iespēja strādāt gudri nevis smagi
- Batimetrisko datu iegūšanas vienkāršošana



KO DARU BIOR

- Kartogrāfisko materiālu sagatavošana
- Batimetriskā kartēšana
- Zinātnisko rakstu sagatavošana un piedalīšanās konferencēs

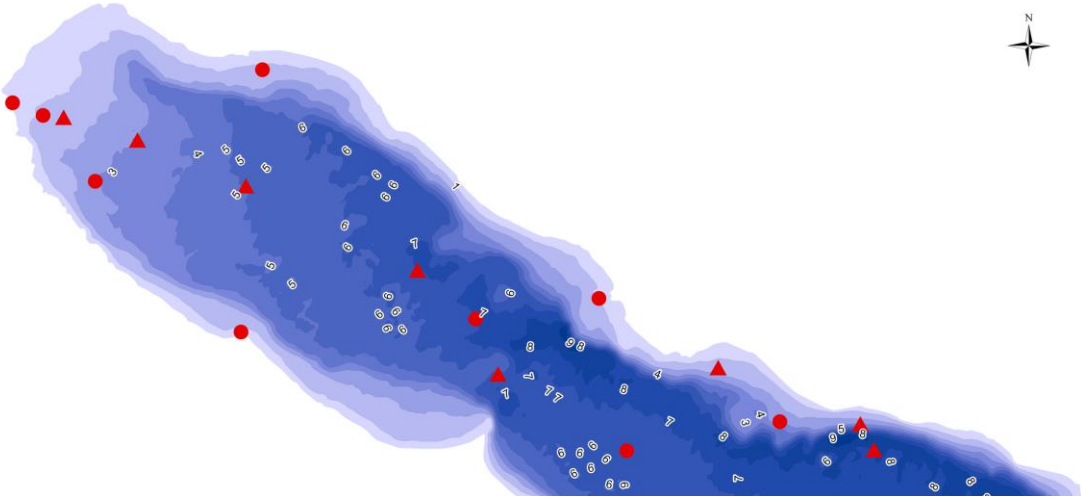


BATIMETRIJA BIOR



SEARCHERS ASSESS THE ELEMENTS OF
LITHUANIA AND SIX RIVERS

HOME ABOUT THE PROJECT ACTIVITIES LATEST NEWS PARTNERSHIP CONTACTS

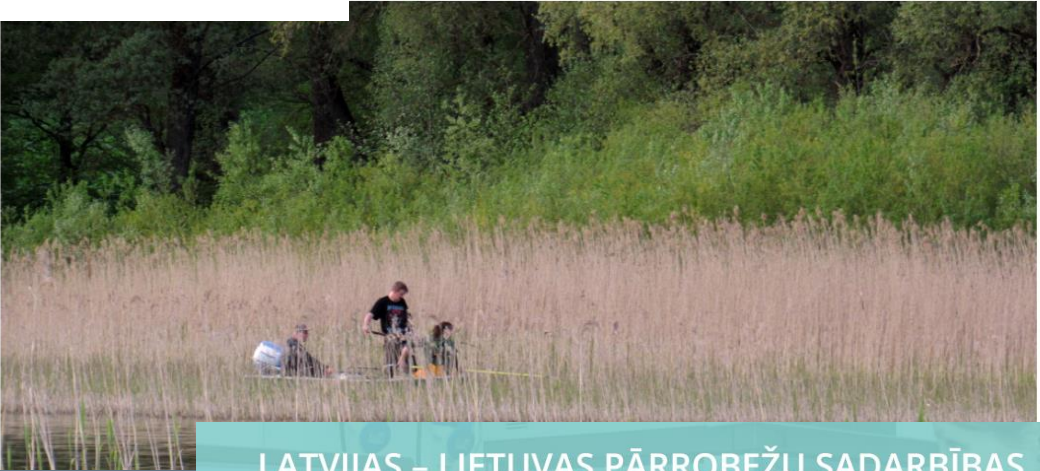
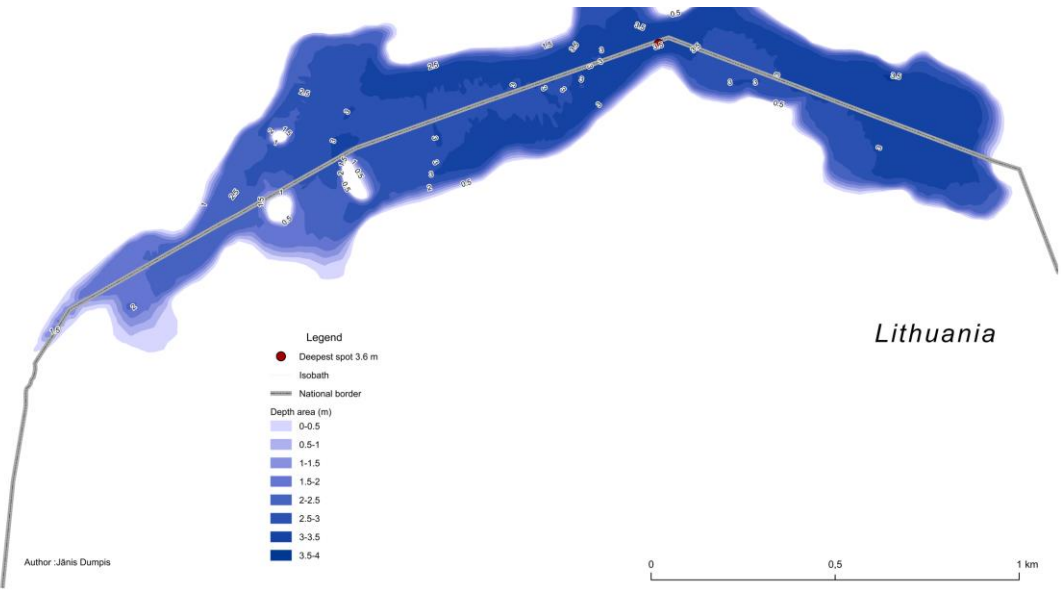


Legend
● Sampling sites for biological

CEN - EN 14757

Water quality - Sampling of fish with multi-mesh gillnets

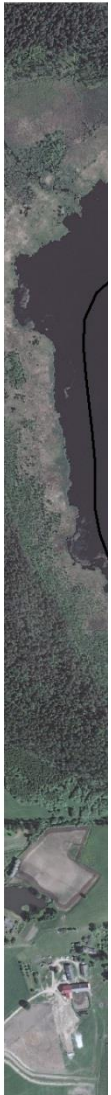
ments of biological quality in the Lake Sauka and six



LATVIJAS – LIETUVAS PĀRROBEŽU SADARBĪBAS PROGRAMMAS IETVAROS APSTIPRINĀTS PROJEKTS NR. LLI-533 "LATVIJAS-LIETUVAS PĀRROBEŽU UPJU UN EZERU ŪDENSĪBĒKŅU VIENOTA PĀRVALDĪBA" TRANSWAT

BATIMETRISKO PĒTĪJUMU NOZĪME

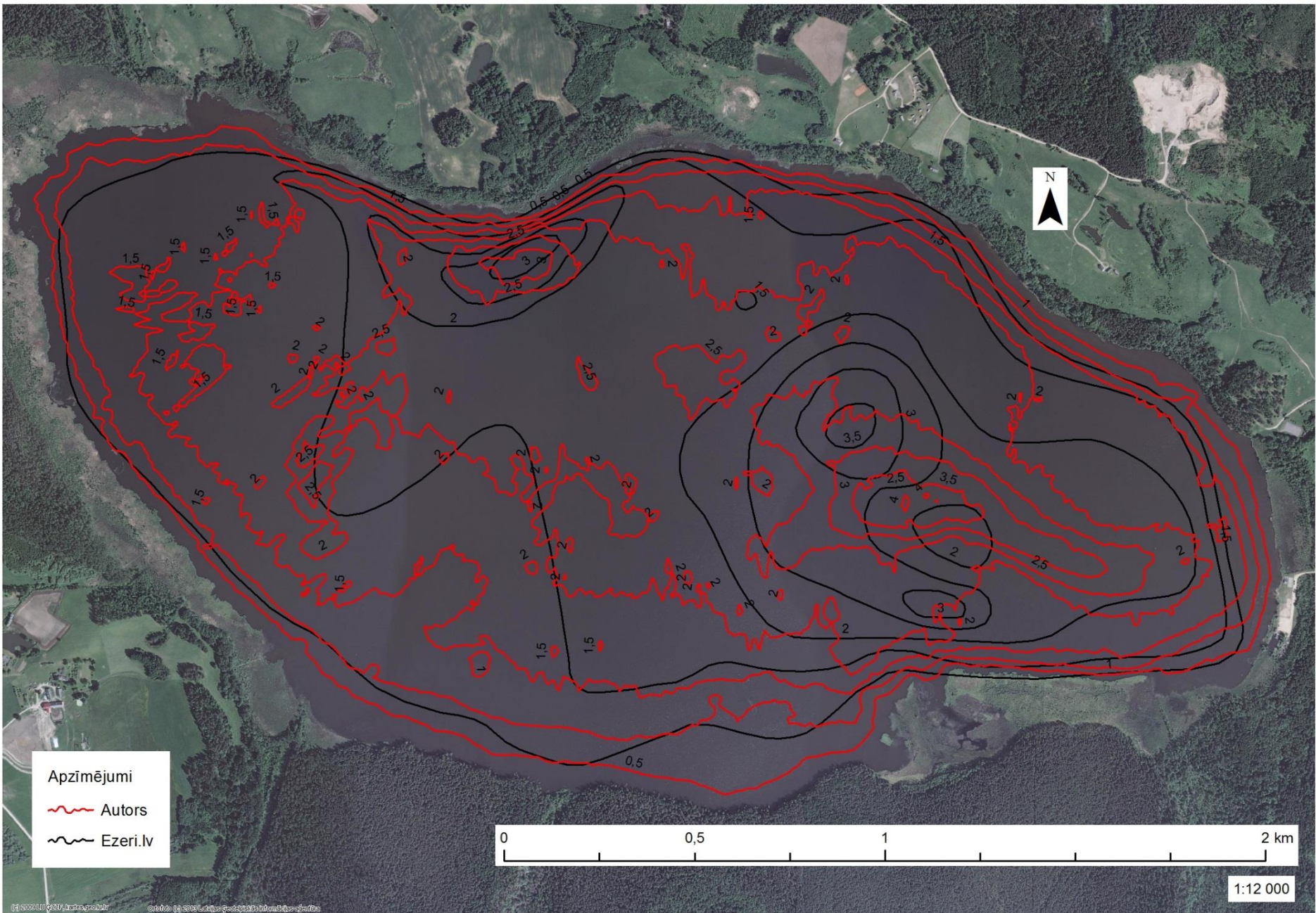




Apz



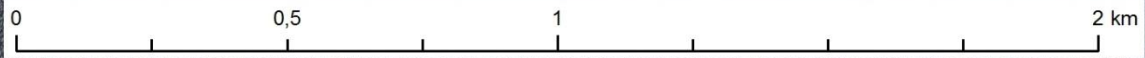
Aļ



Apzīmējumi

Autors

Ezeri.lv



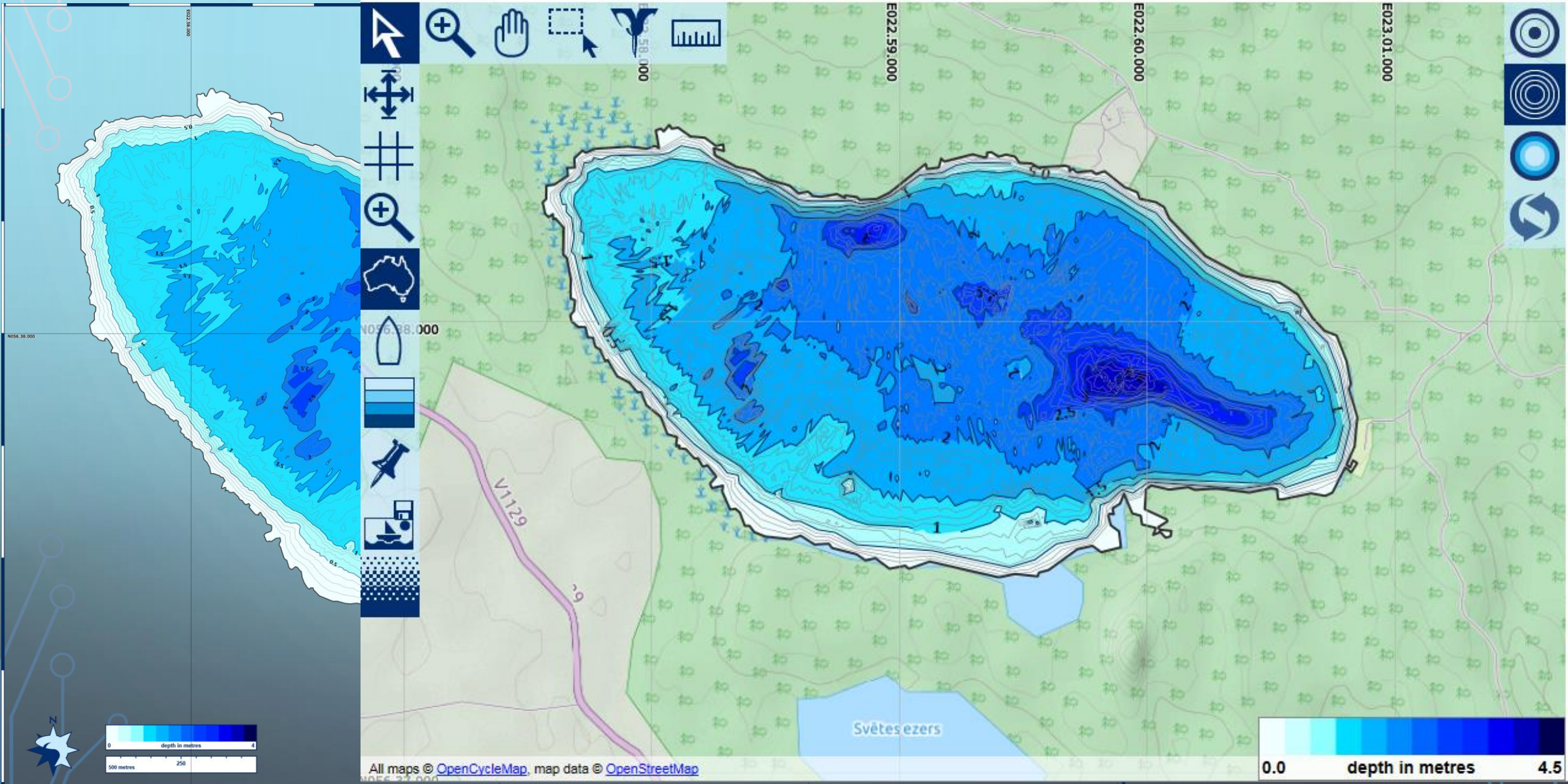
1:12 000

© 2009 LID ĢEAZ, ģimelneapzīmē

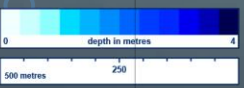
© 2009 LID ĢEAZ, ģimelneapzīmē

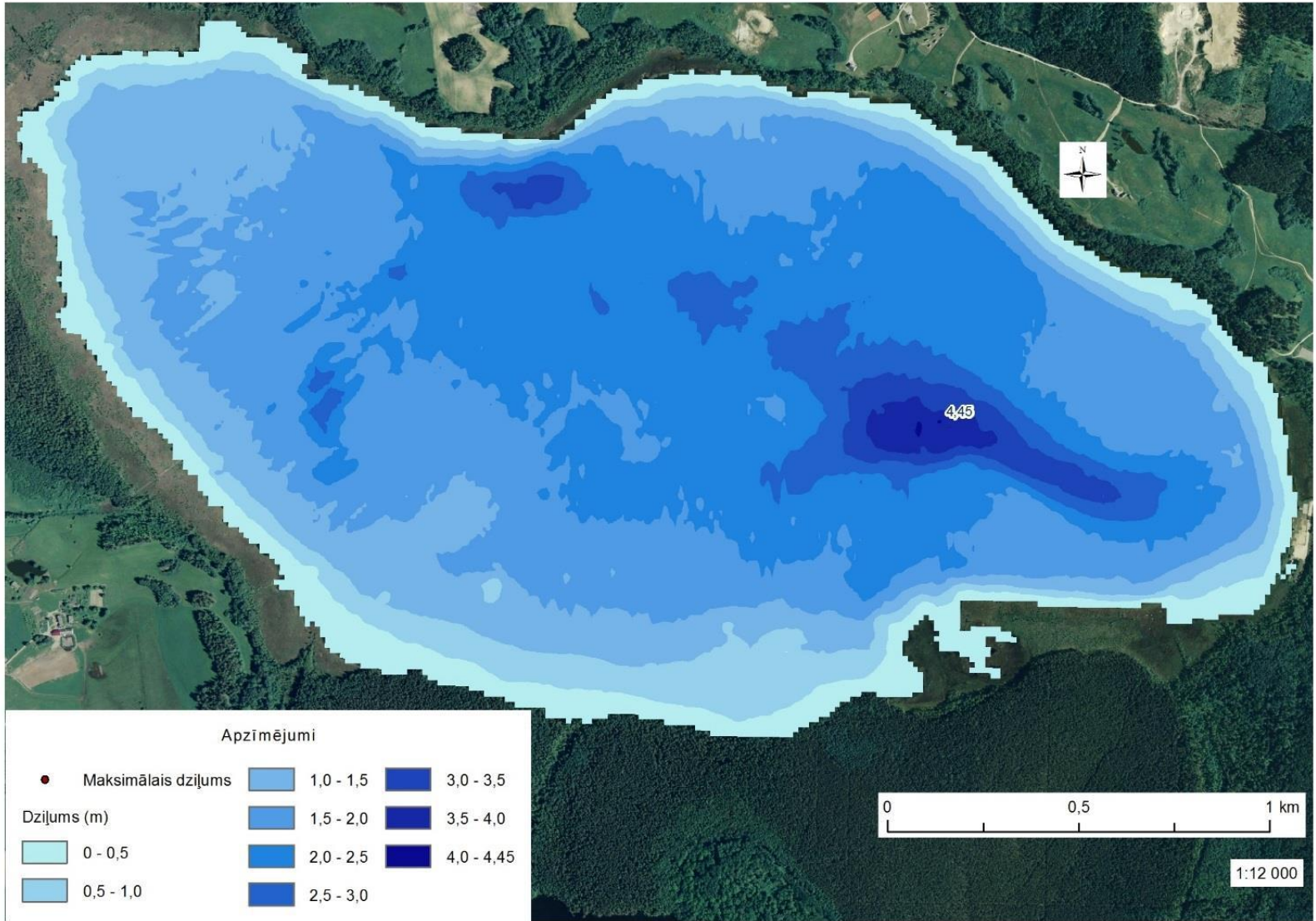
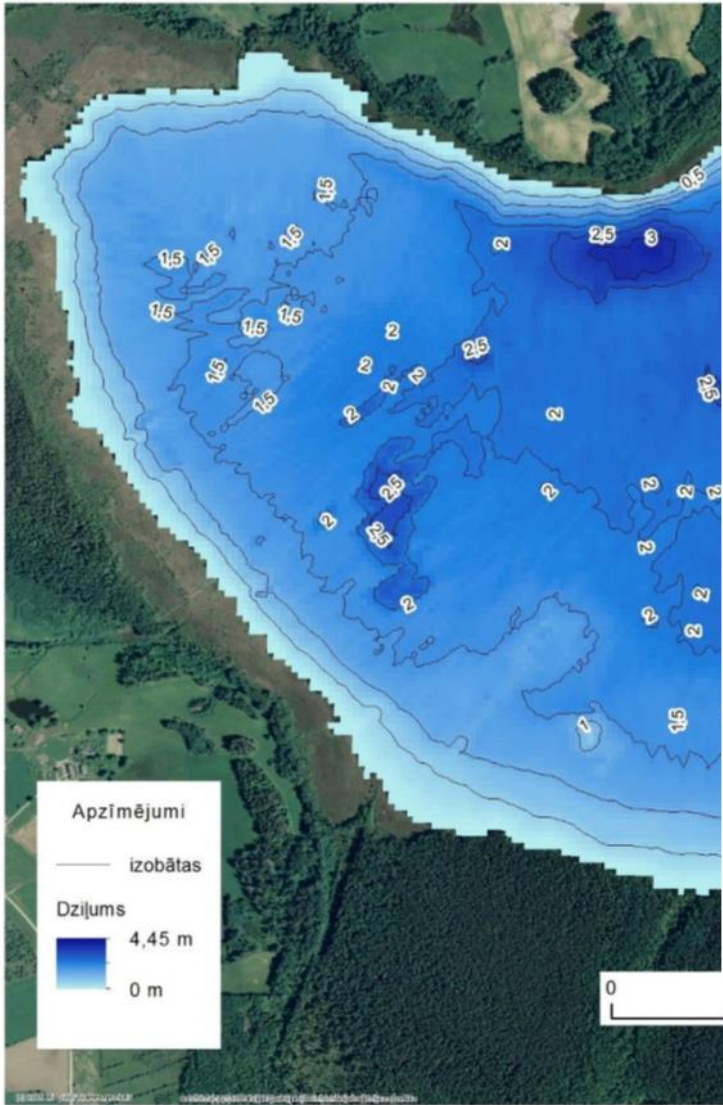
© 2009 LID ĢEAZ, ģimelneapzīmē

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All maps © [OpenCycleMap](#), map data © [OpenStreetMap](#)

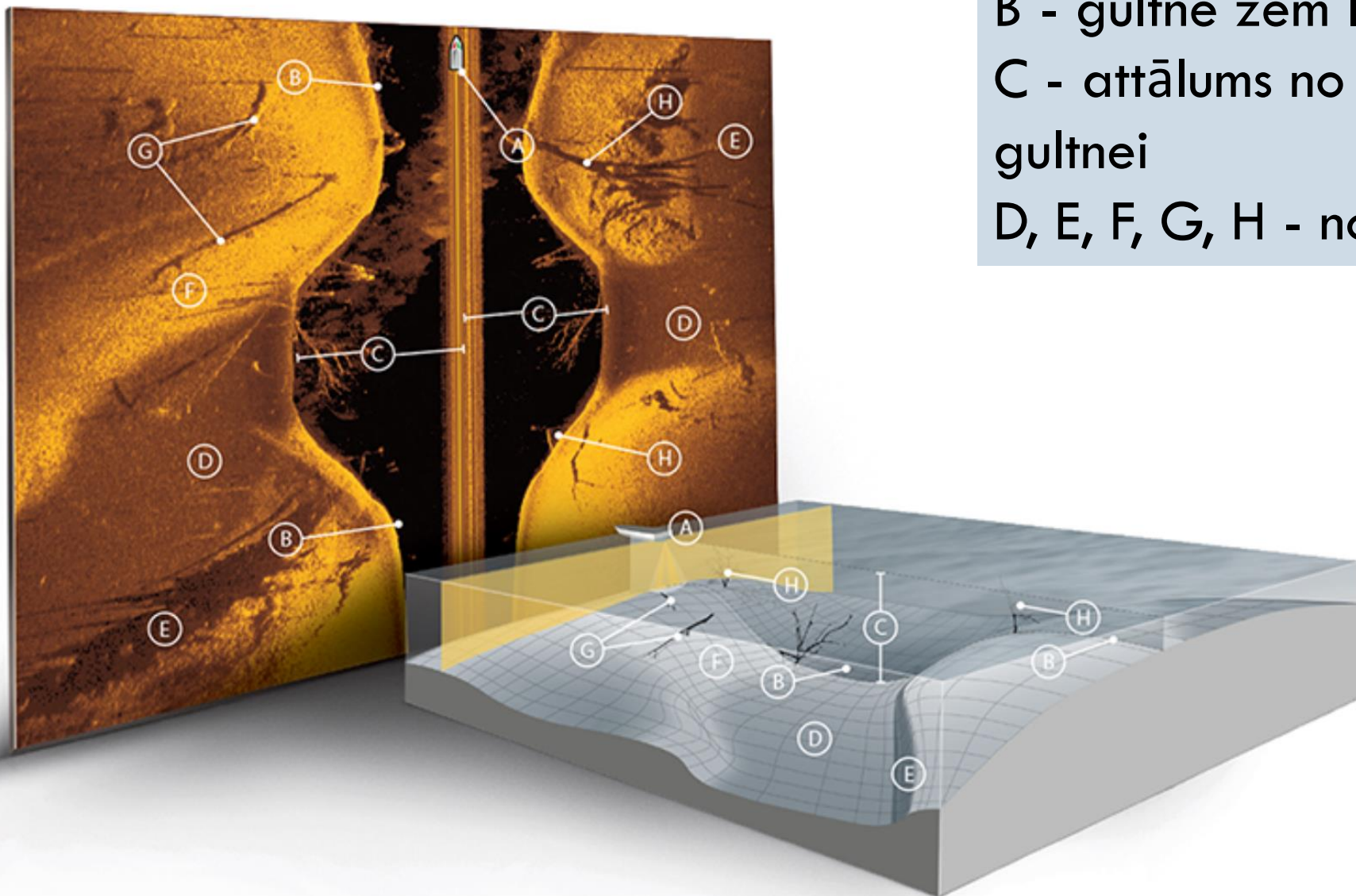




DARBS VIENKĀRŠI UN
EFEKTĪVI UN DARBS REDZOT
KATRU NIANSI. KO VĒLAMIES
SASNIEGT?



KAS IR SĀNSKATI?



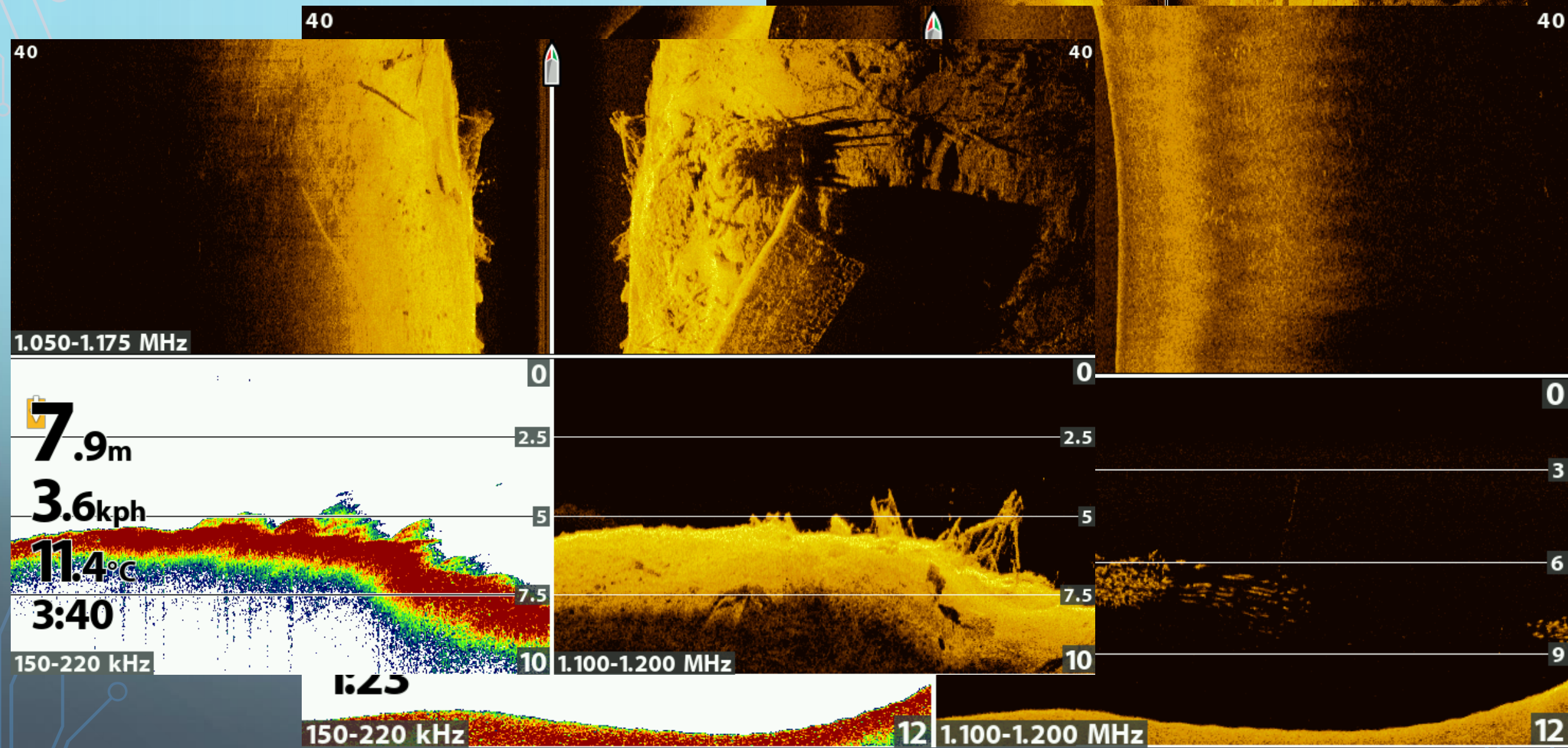
A - laiva

B - gultne zem laivas

C - attālums no ūdens virsmas līdz gultnei

D, E, F, G, H - nogrimuši objekti

KĀ TO LIETOT?

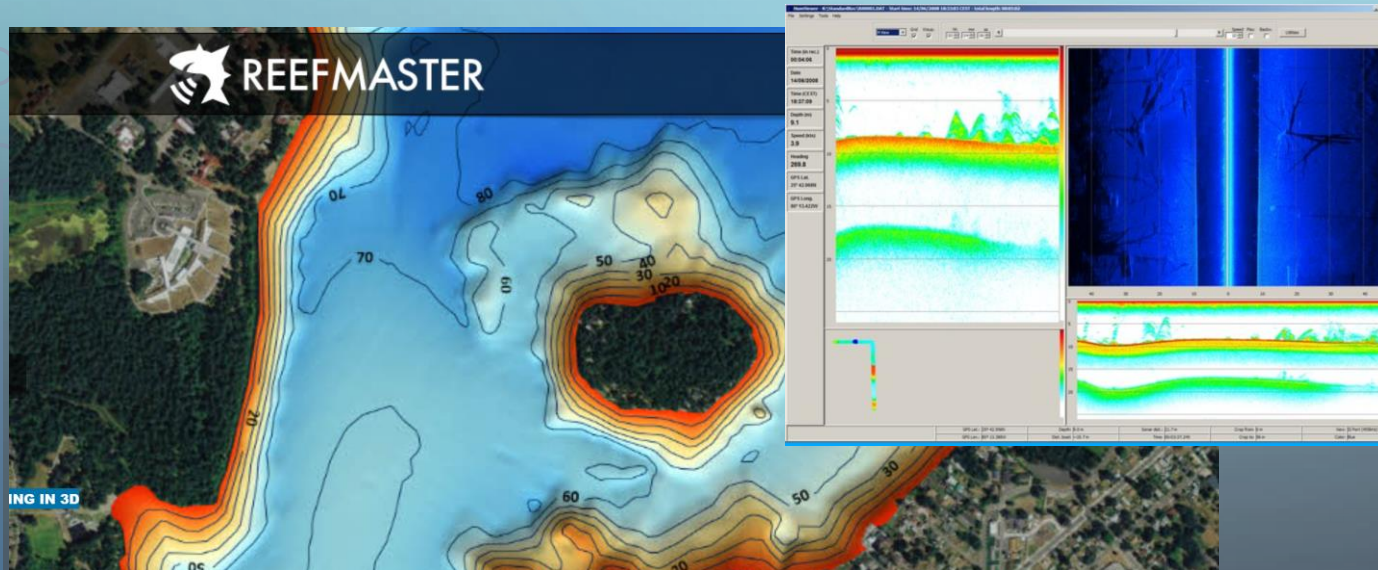


KAS NEPIECIEŠAMS

- Laiva
- Eholote
- Interneta pieslēgums
- Dators



<https://www.humminbird.com/learn/imaging/side-imaging>



<https://eholotes.lv/lv/eholotes-ziemai-vasarai-laivam/eholote-lowrance-hds-7-live-ar-latvijas-karti/>

VEICAMO DARBU SECĪBA

- Aparatūras sagatavošana
- Pētījuma dizains un mērķis
- Lauka darbi
- Datu apstrāde datorvidē



LAUKA DARBI

- Darba plāns
- Korekts datu ieraksts
- Pārdomātas darbības uz ūdens



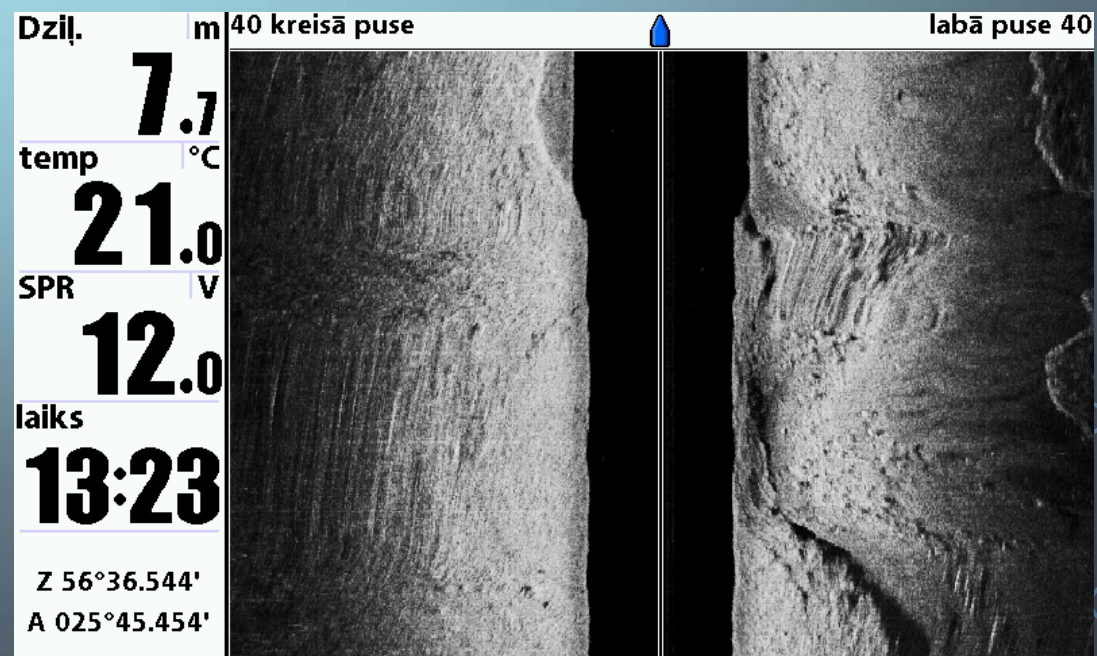
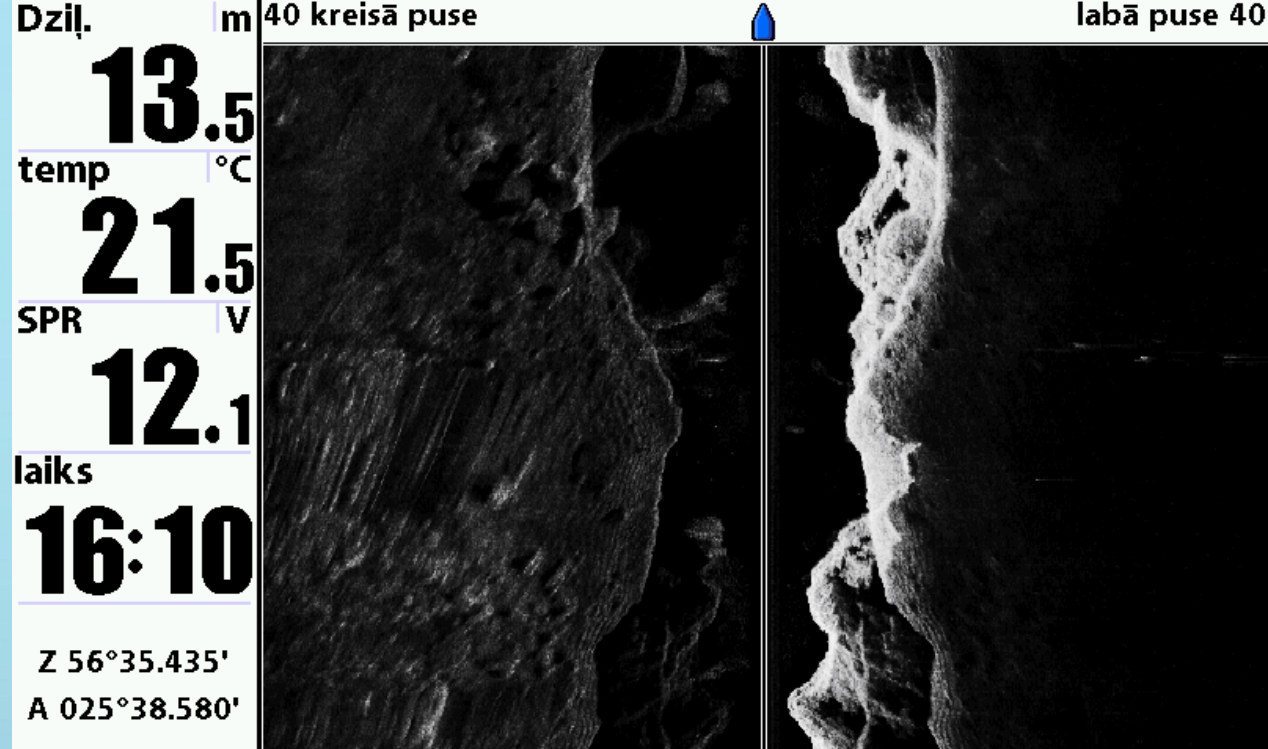
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https://www.google.com/search?biw=1920&bih=967&tbm=isch&sa=1&ei=gvWQXKCbDeesmwWp74DYBg&q=boat+on+plane&oq=boat+on+plane&gs_l=img.3..0i19j0i5i30i19.5465.5832..6099...0.0..0.62.115.2.....1....1..gws-wiz-img.....0i7i30j0i7i5i30j0i8i7i30j0i8i7i10i30.gIbN8geasKA#imgcr=7ZpvNZyw-wTjWM:

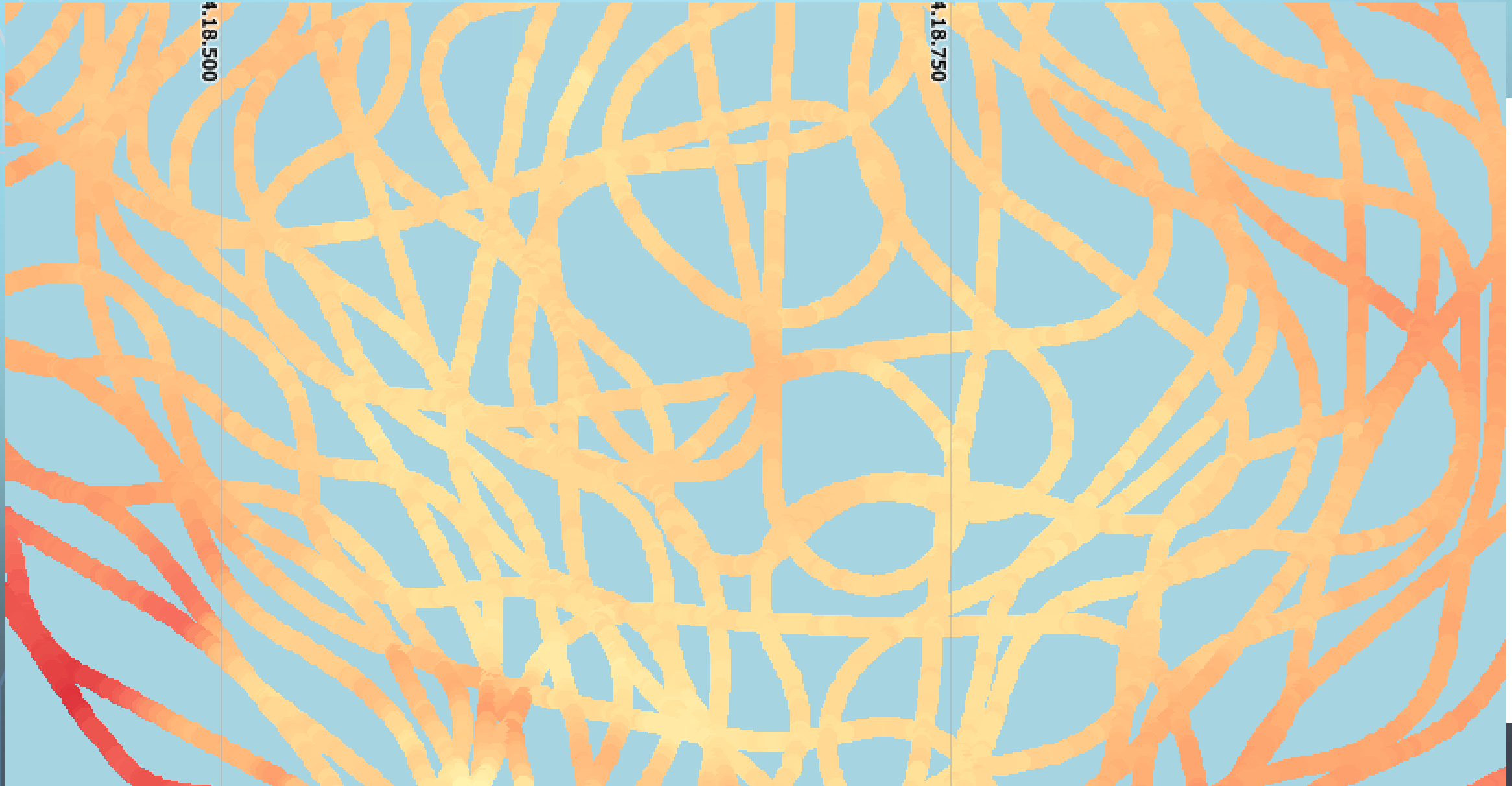
IERAKSTĪŠANA

- Domājam ko gribam ierakstīt
- Ierakstam formātā kuru mākam lietot
- Pārbaudam aparatūru, atmiņas kartes ietilpību
- Nerakstam visu vienā failā
- Pārvietojamies ar laivu plūdeni bez asām kustībām
- Novietojam devēju atbilstoši peldlīdzekļa specifikācijai

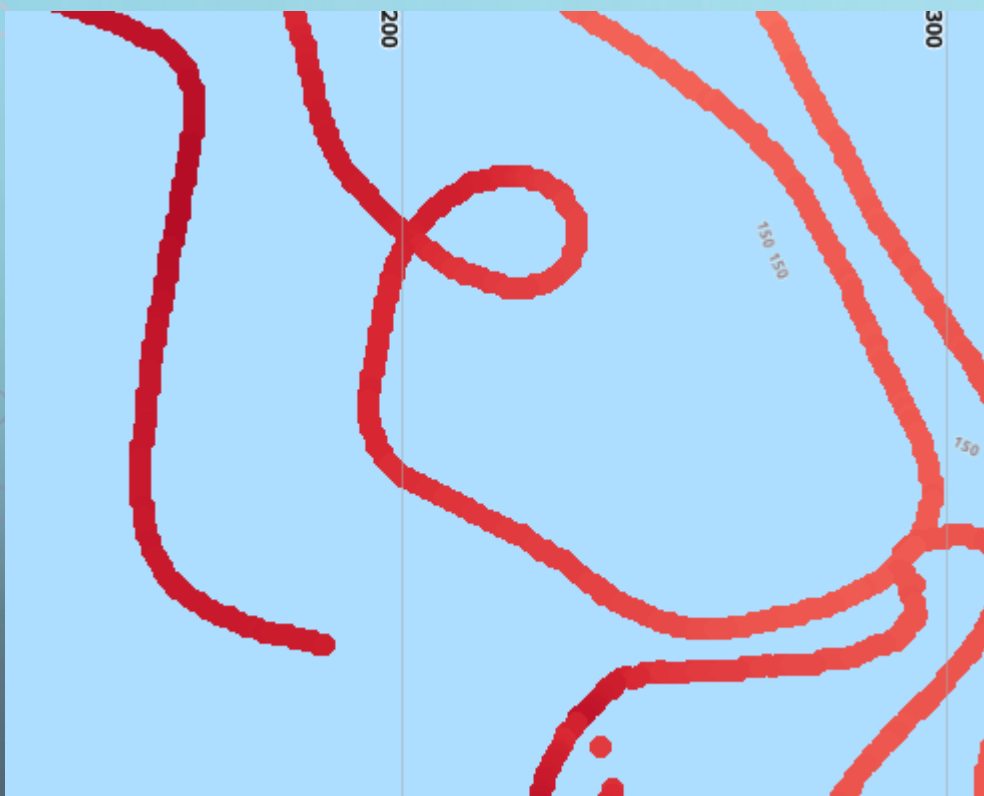
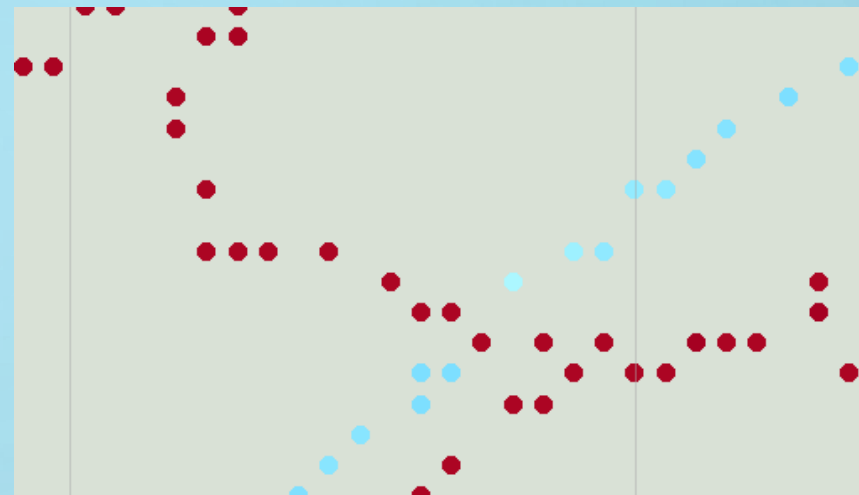


4.18.500

4.18.750

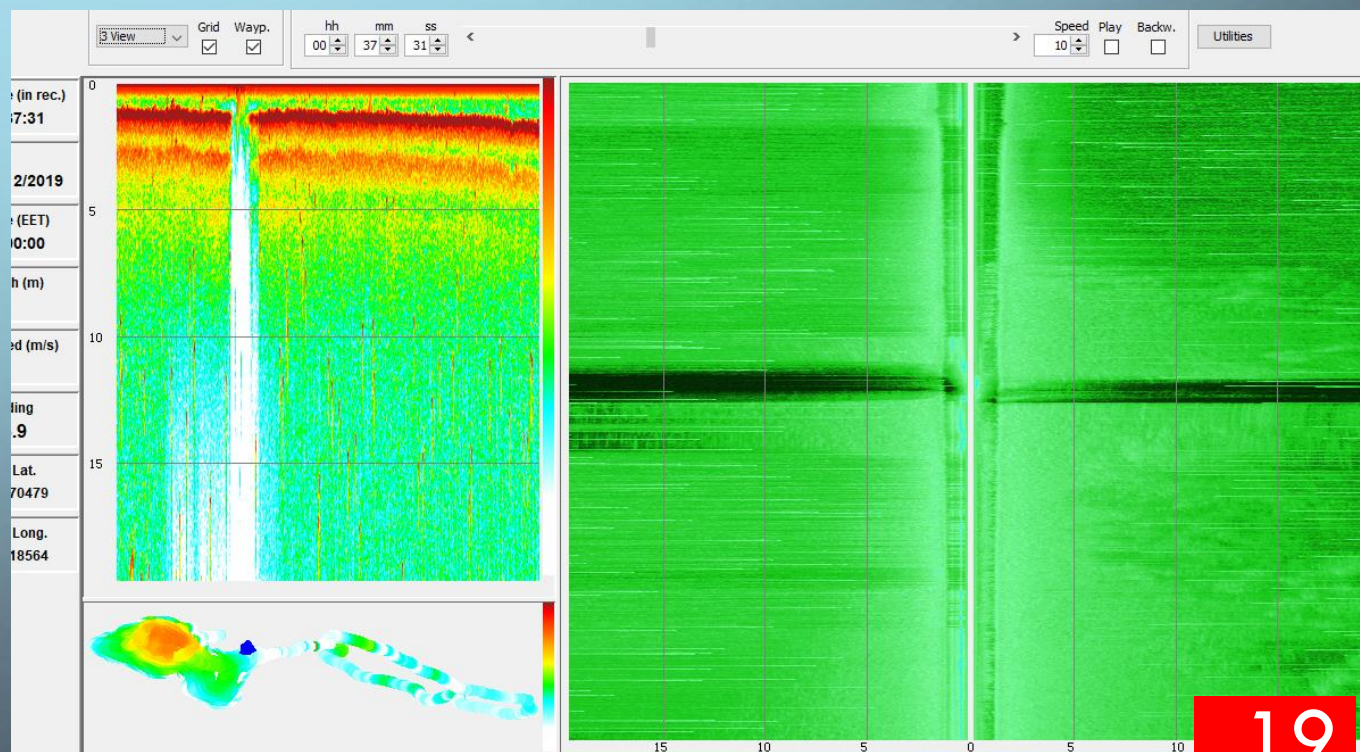
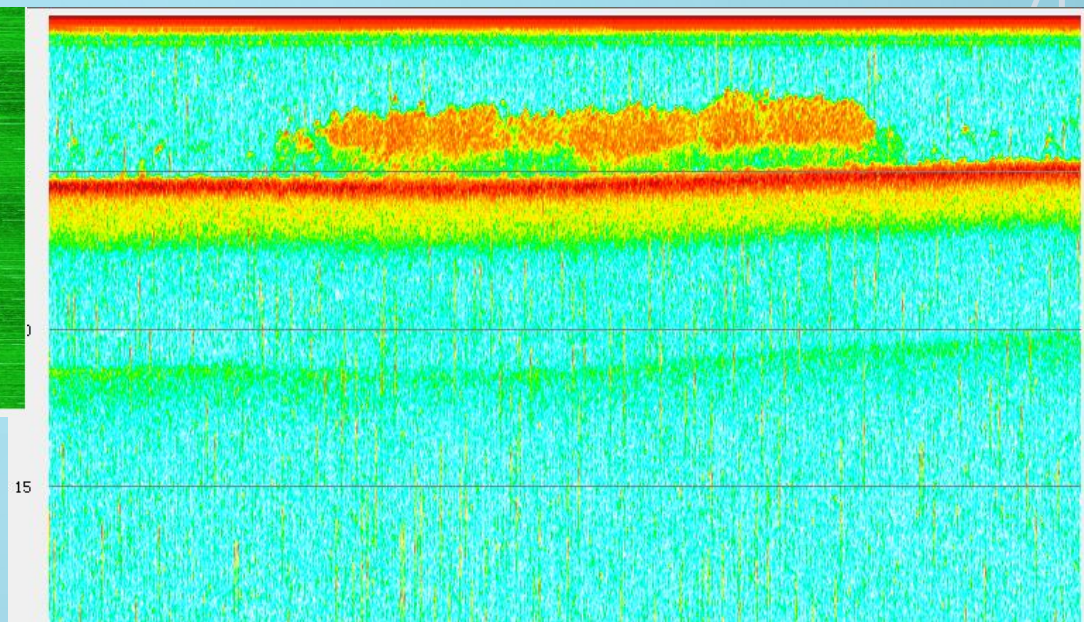
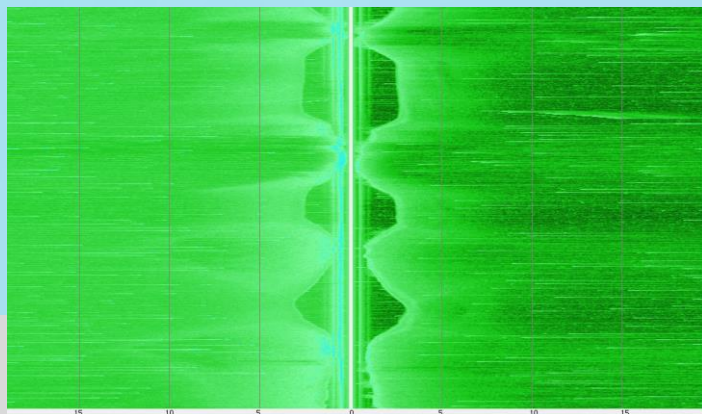


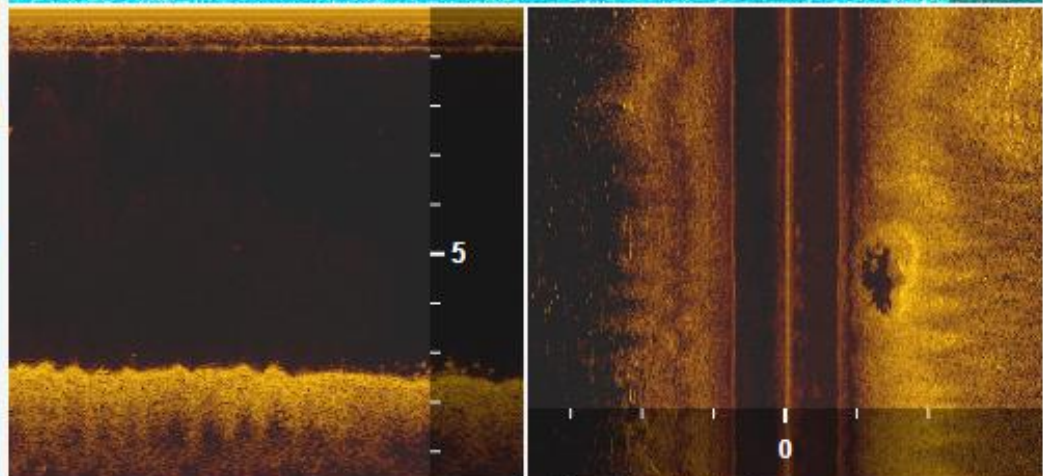
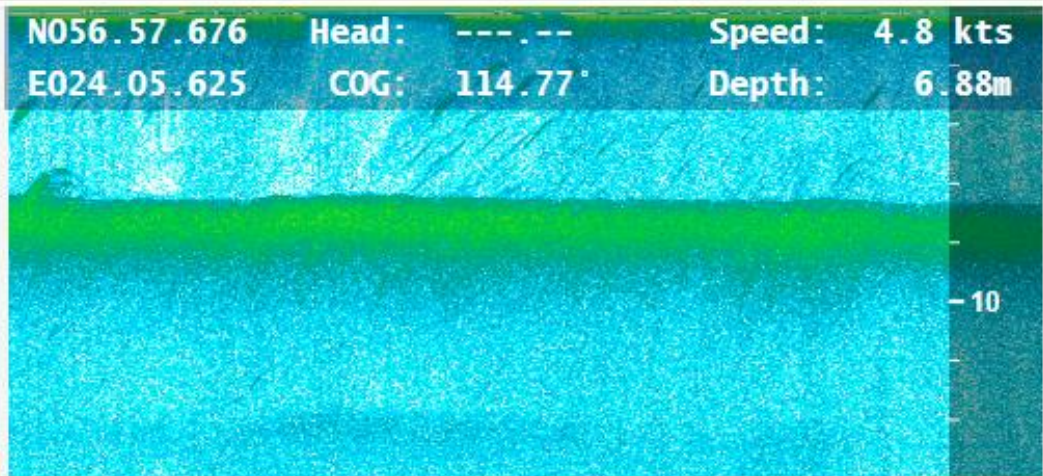
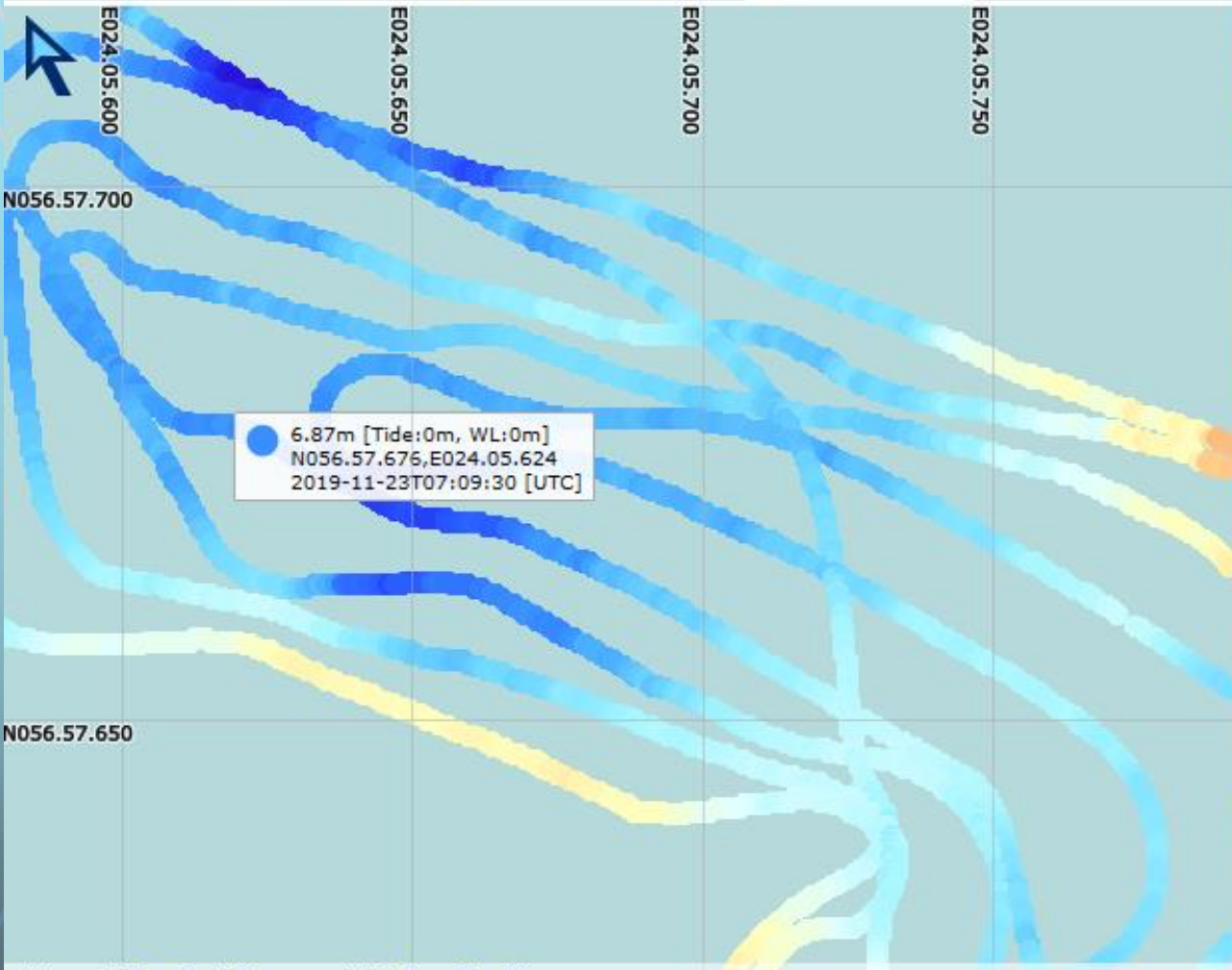
DATU REDIĢĒŠANA

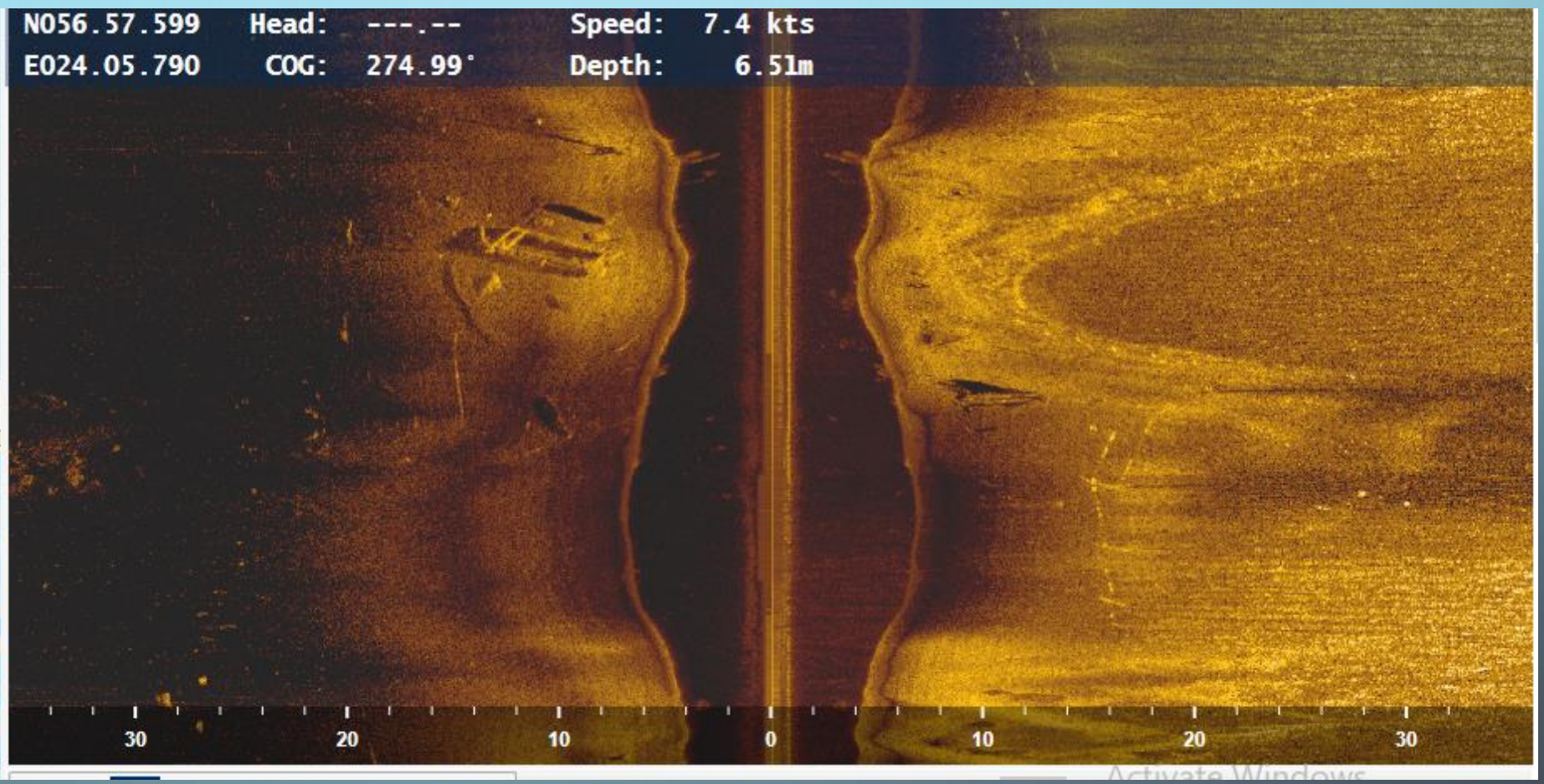
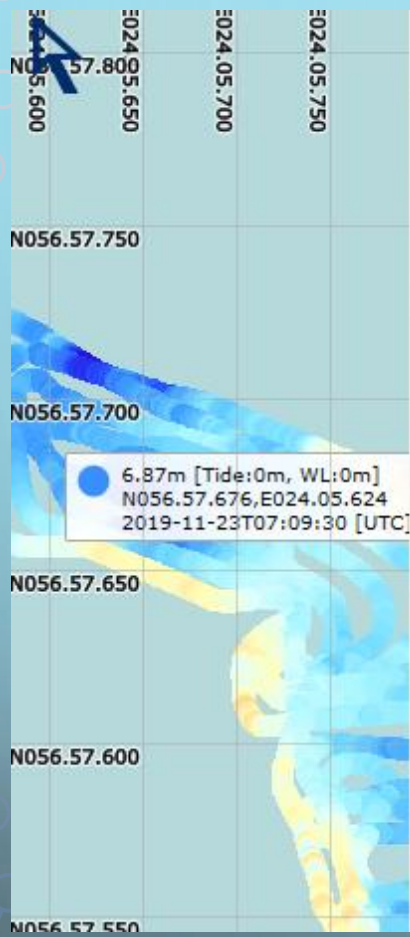


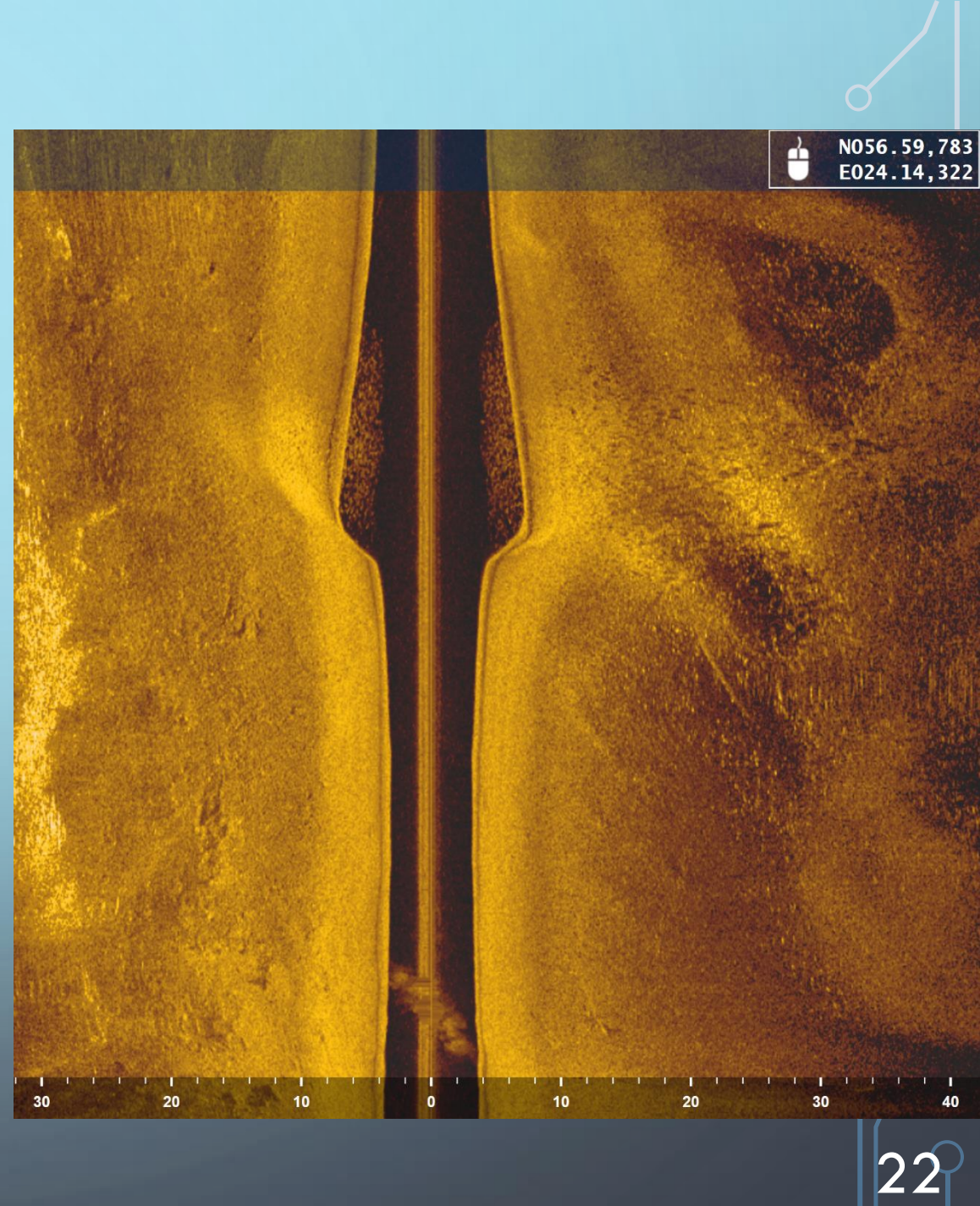
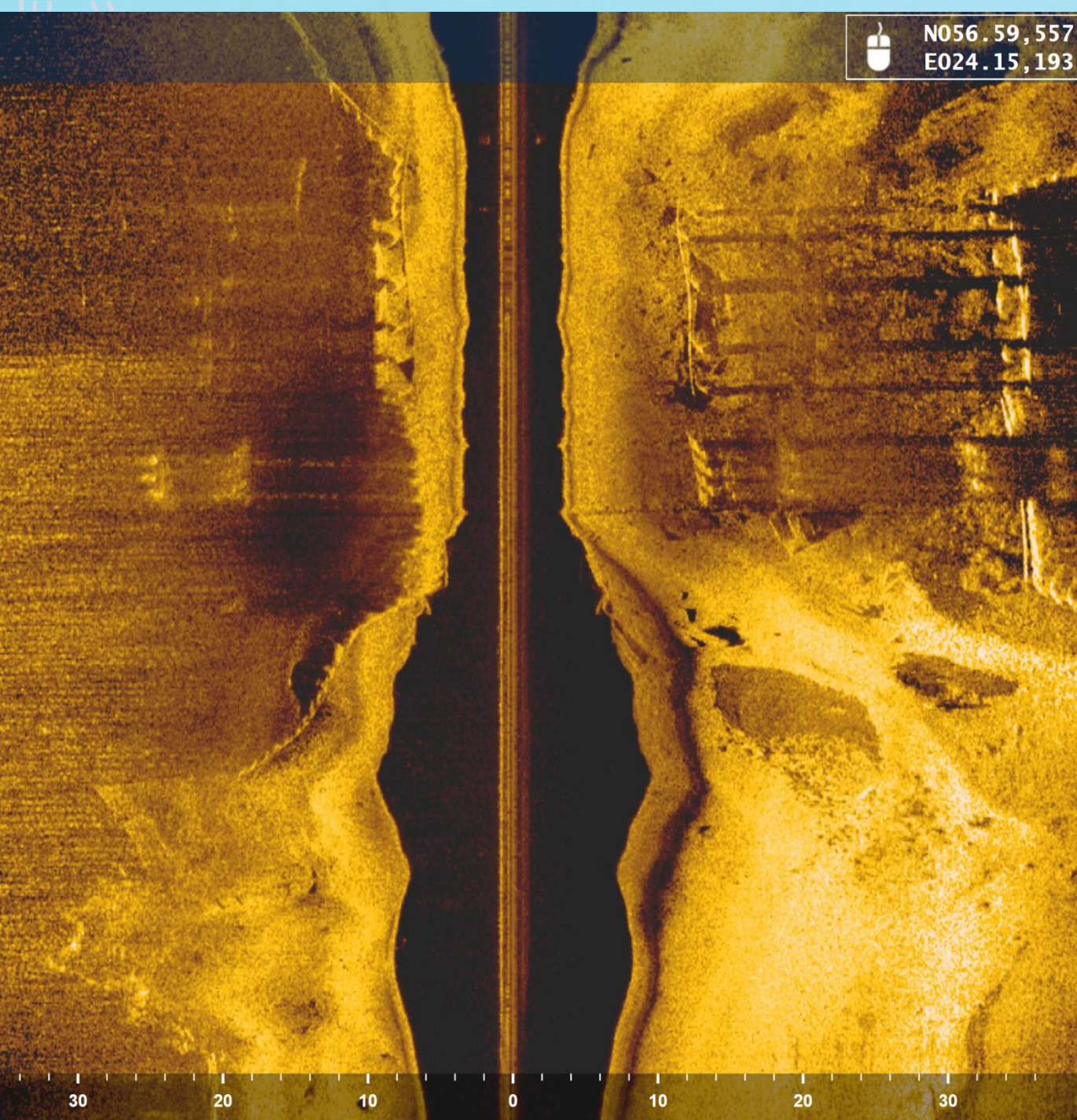
TRAUCEJUMI

- Ūdens temperatūra
- Pārvietošanās ātrums
- Nepareizā pozīcijā novietots eholotes devejs
- Ūdens dzidrība
- Dziļums
- Magnetisms, magnetiskais lauks



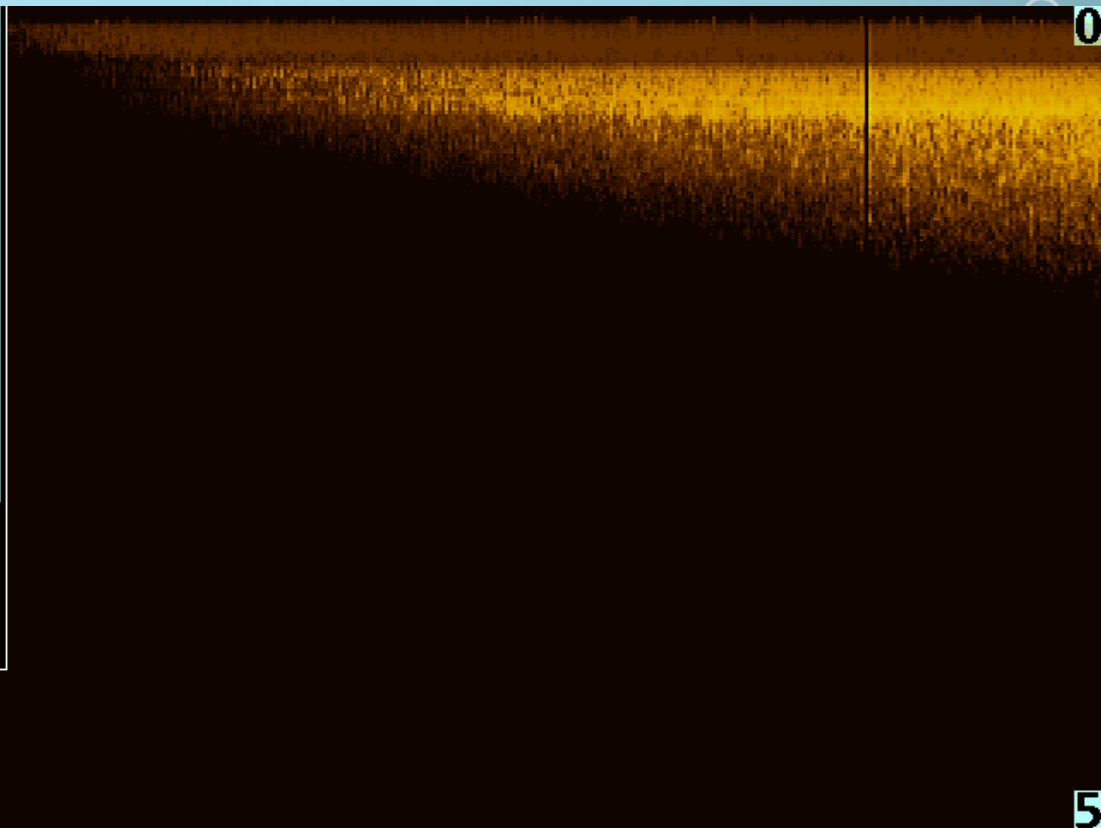
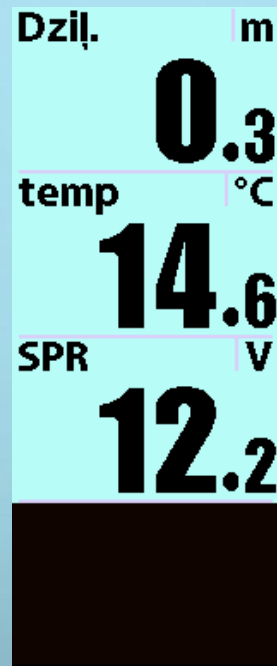






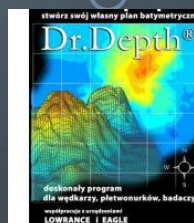
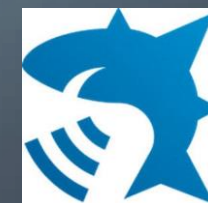
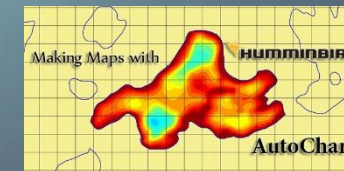
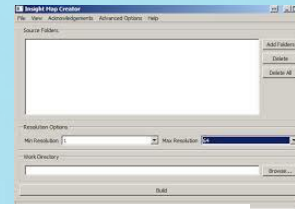
FREKFENCES UN FUNKCIJAS

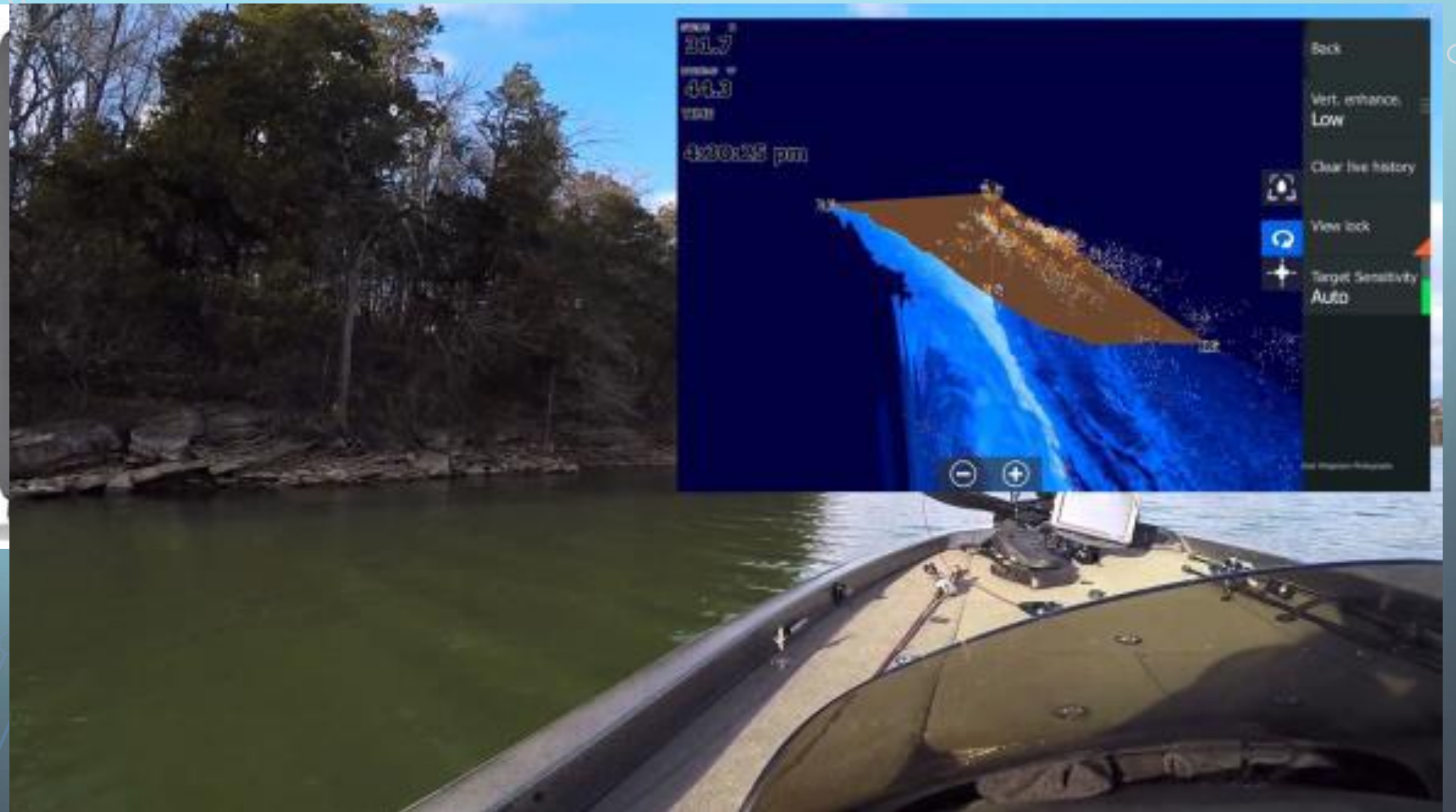
- Jo konkrētāk vēlamies saskatīt objektu tieši zem laivas jo mazāka frekfence 80-500 khz.
- Jo precīzāk vēlamies meklēt lietas ap laivu jo augstāka frekfence 1000 khz
- Datu ierakstīšanai (dziļuma dati) izmantojam pēc iespējas mazāku frekfenci



MATERIĀLI

- Sagatavota laiva;
- Eholoti, GPS, GNSS;
- Data;
- ArcMap, Grass Gis, Qgis;
- Insight Genesis;
- Mapcreator;
- Google Earth;
- AutoChart/DrDepth;
- ReefMaster
- R.

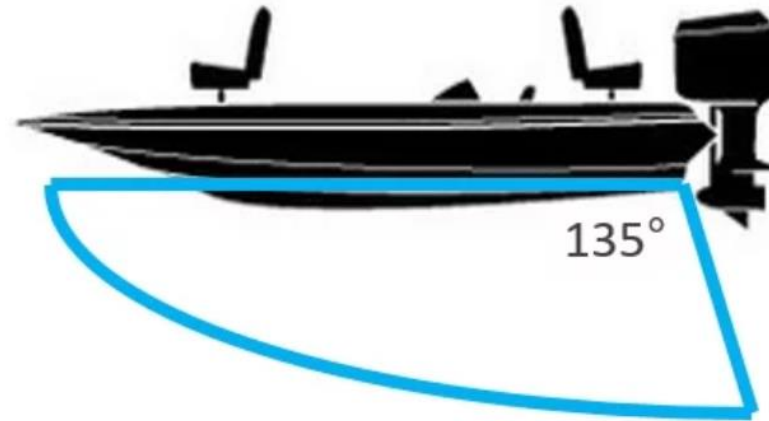
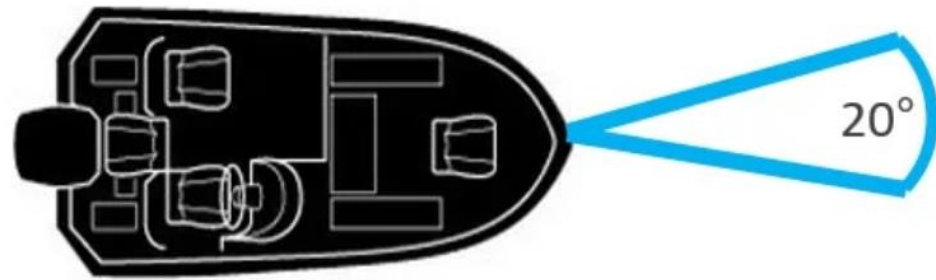


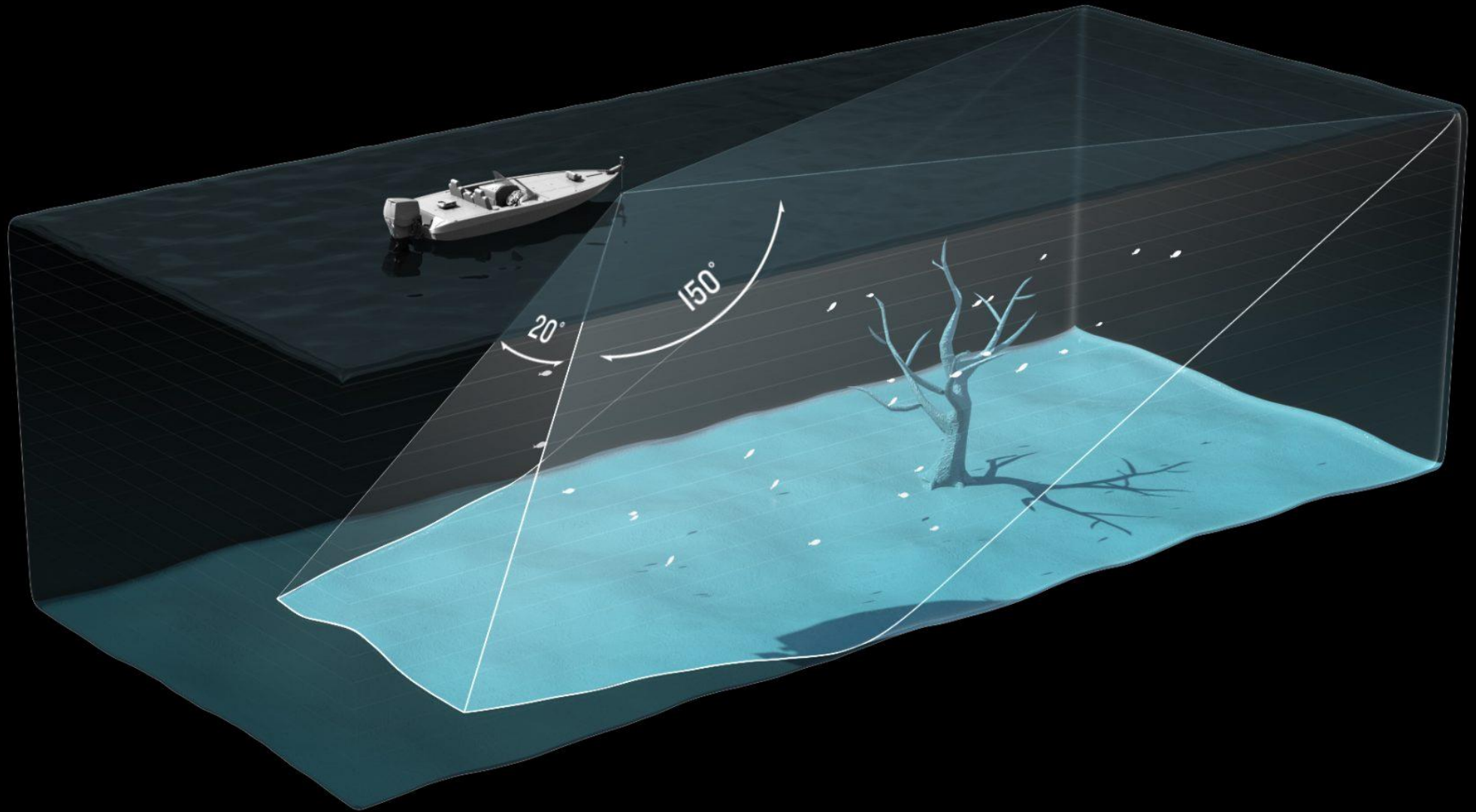


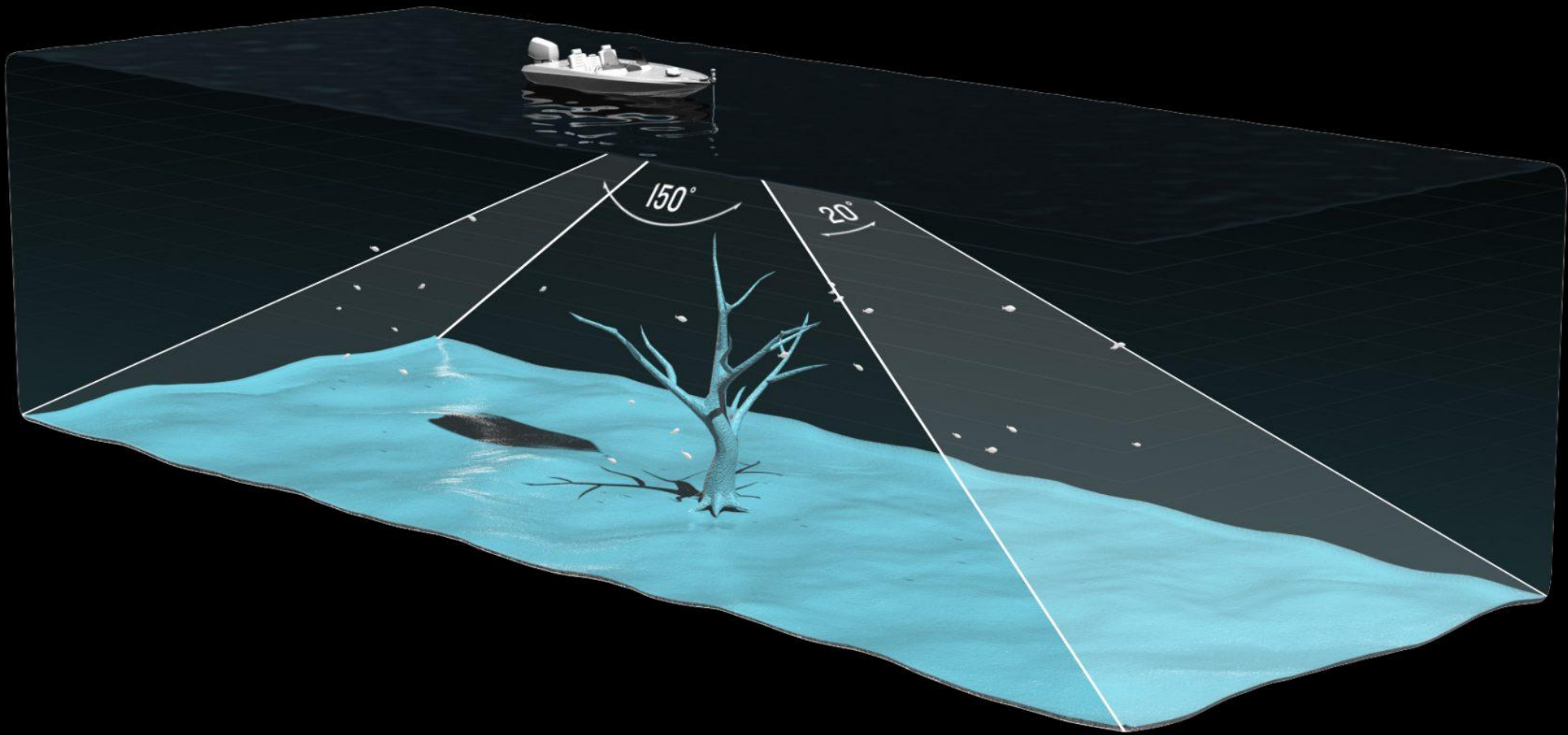
The background is a light blue gradient. In the corners, there are decorative circuit-like patterns. The top-left and bottom-left corners feature lines in a light orange color, while the top-right and bottom-right corners feature lines in a light blue color. These lines consist of straight segments connected by small circles, resembling a stylized circuit board.

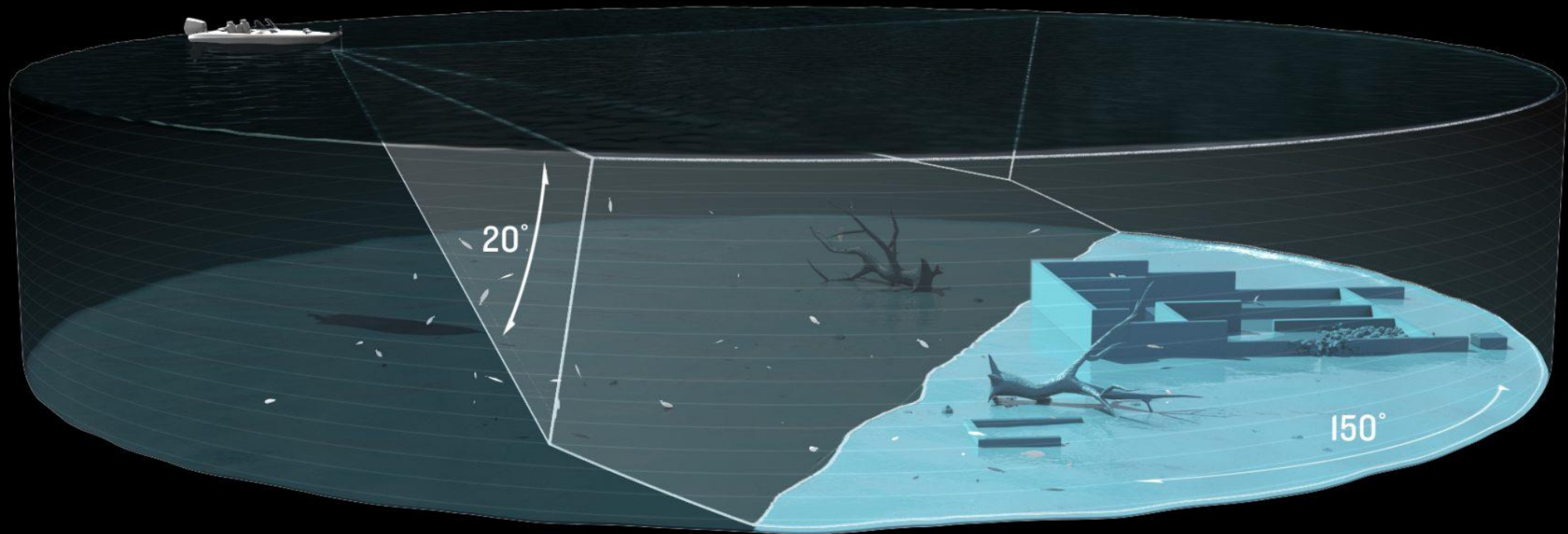
INTERESANTI

- Panoptix LiveScope coverage is 20° (Port to Starboard) x 135° (Bow to Stern)
 - Maximum Range is 200' (Forward or Down)
 - Frequency Range: 530 – 1100 kHz









PALDIES PAR UZMANĪBU!