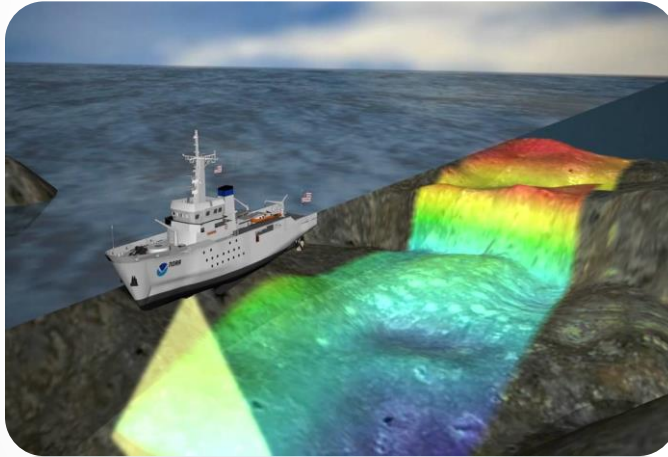




PENGINDERAAN BAWAH LAUT MENGUNAKAN MODEL AKUSTIK



Letkol Laut (KH) Dr. Gentio Harsono ST MSi
Dosen Tetap Prodi Strategi Kampanye Militer UNHAN RI

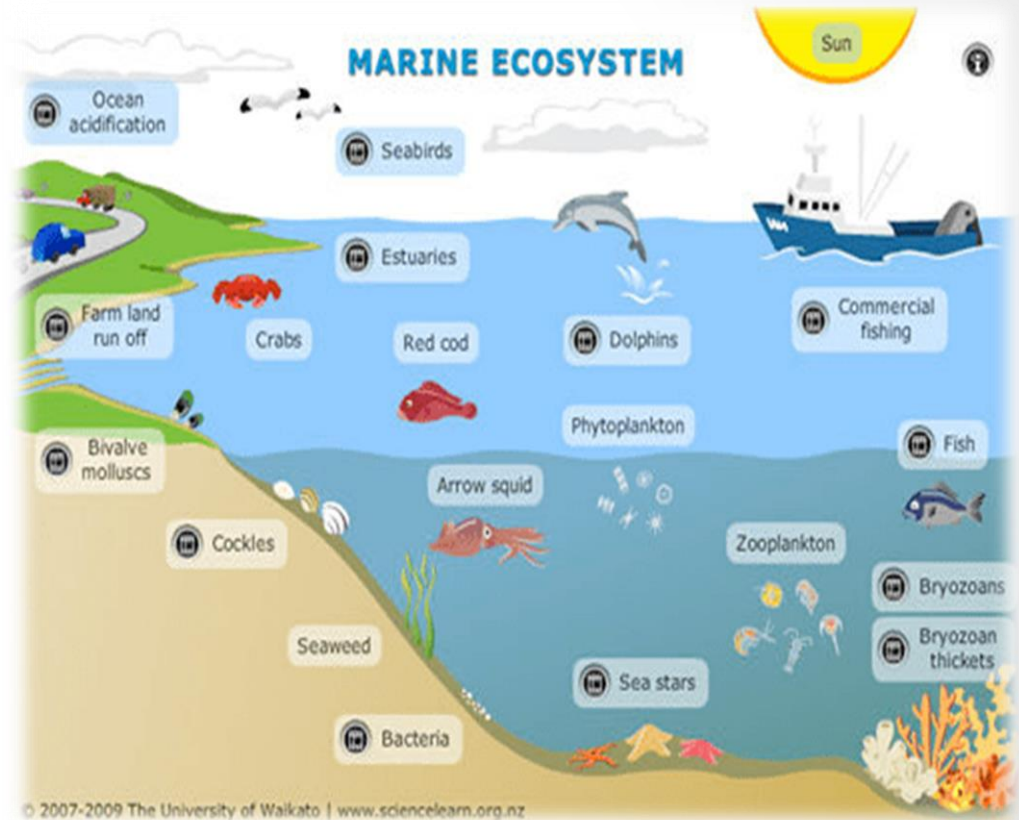
Disajikan pada Webinar
“Aplikasi Remote Sensing Untuk Sumberdaya Pesisir dan Laut”
Universitas Mulawarman Samarinda, 20 Juni 2020

PRINSIP DASAR GELOMBANG AKUSTIK

instrumen akustik
(echo sounder)

kolom air

dasar perairan



SINGLE BEAM ECHOSOUNDER

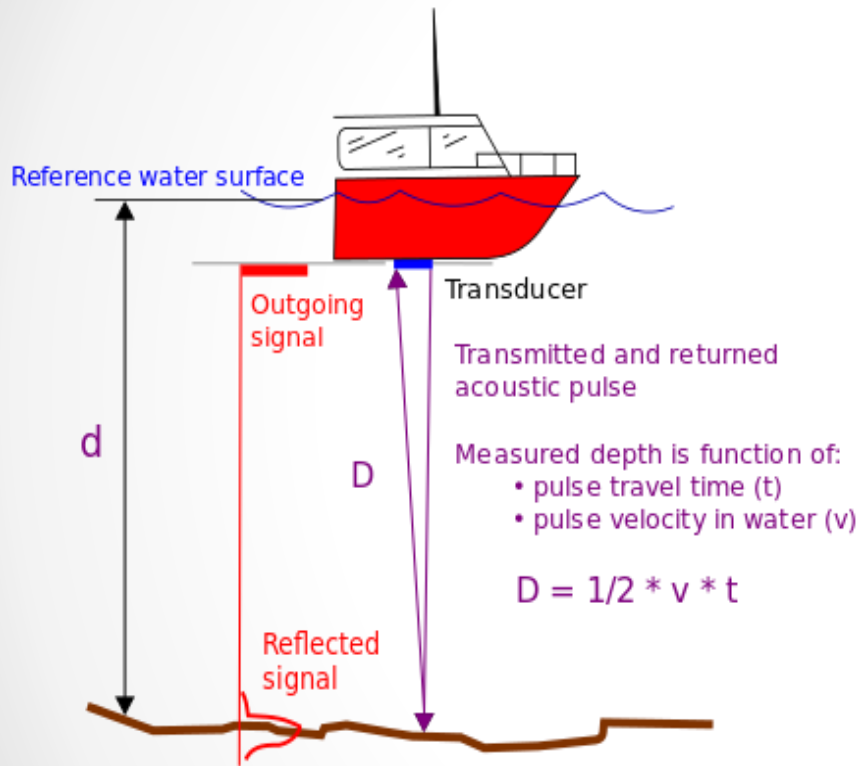
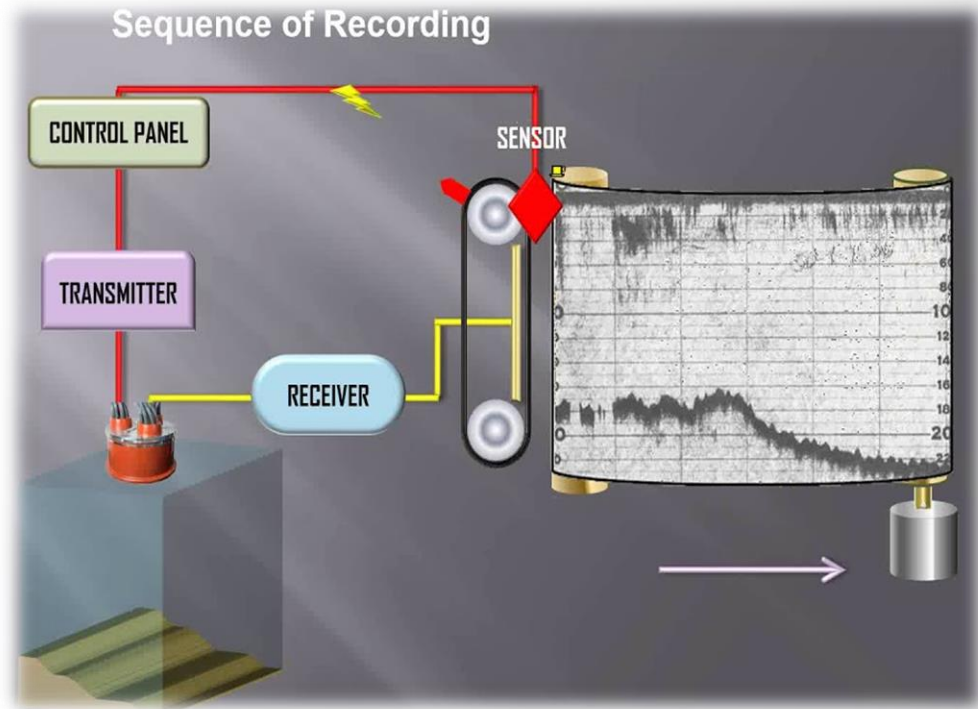
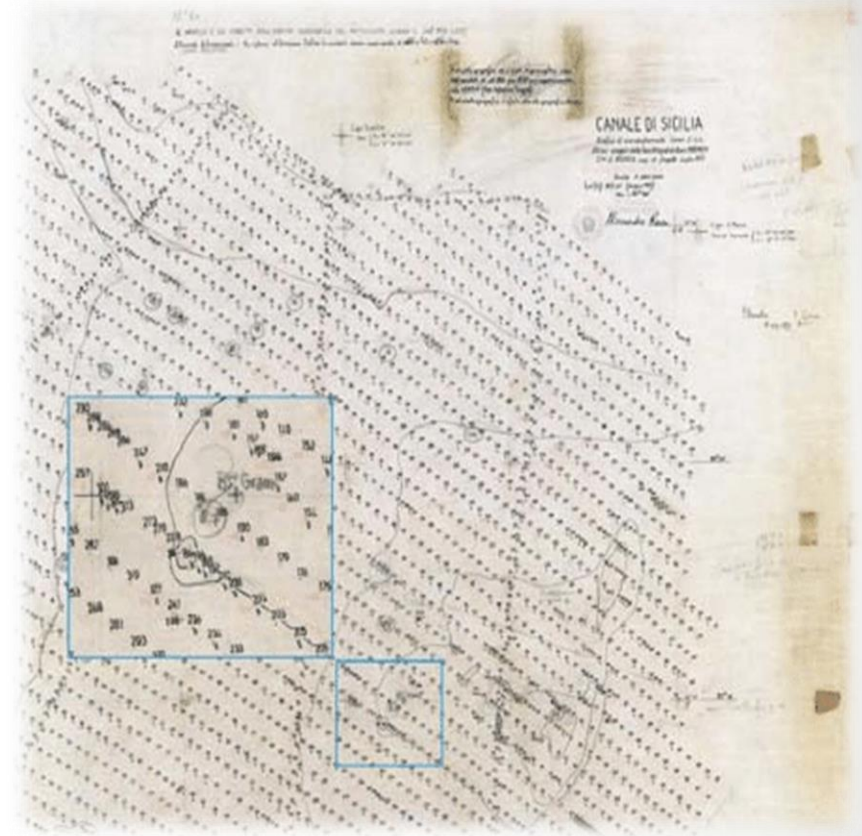
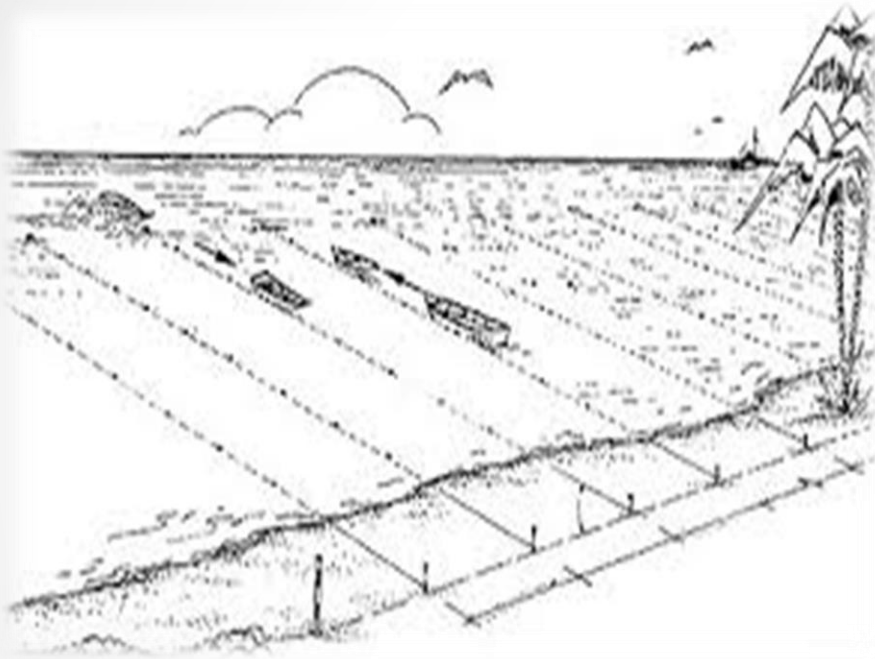


Figure 9-1. Acoustic depth measurement

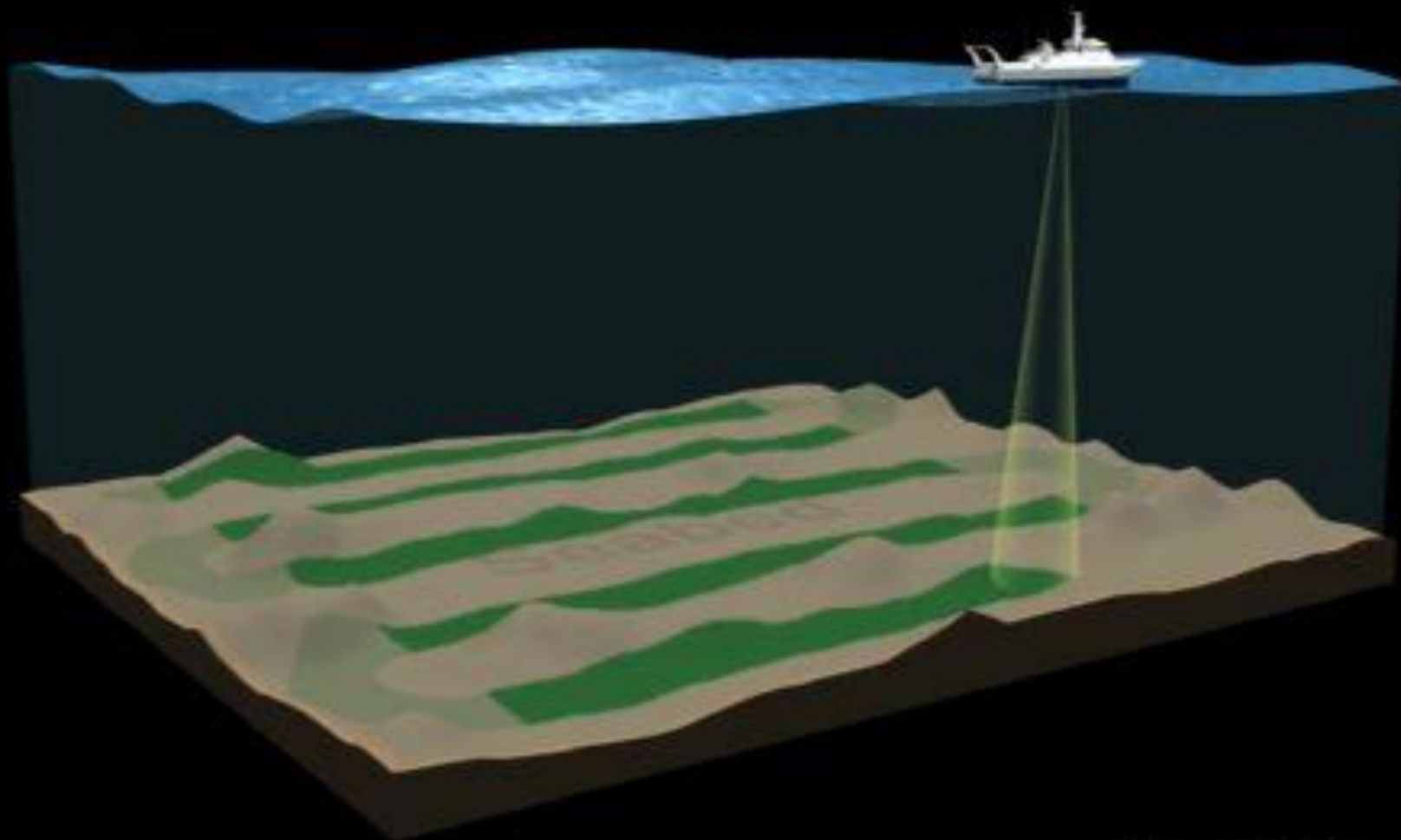


METODE PARALEL LINE



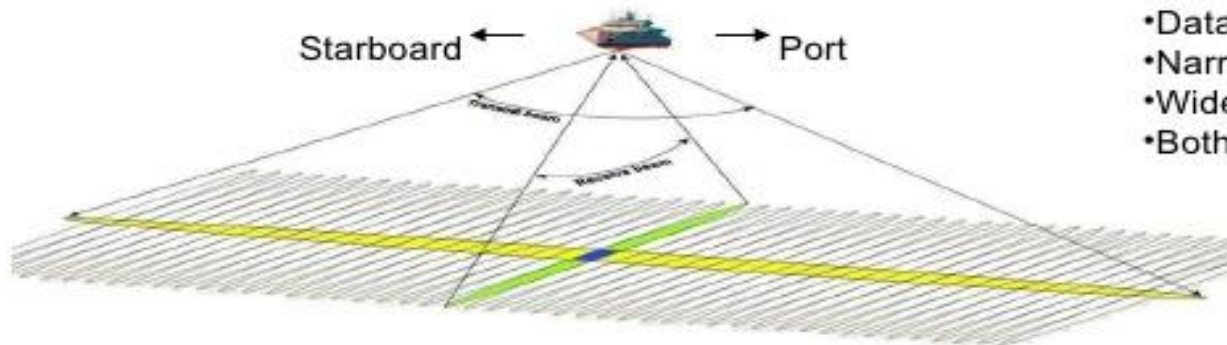
Tracks of a Single Beam Echosounder Survey

- Beam On
- Beam Off

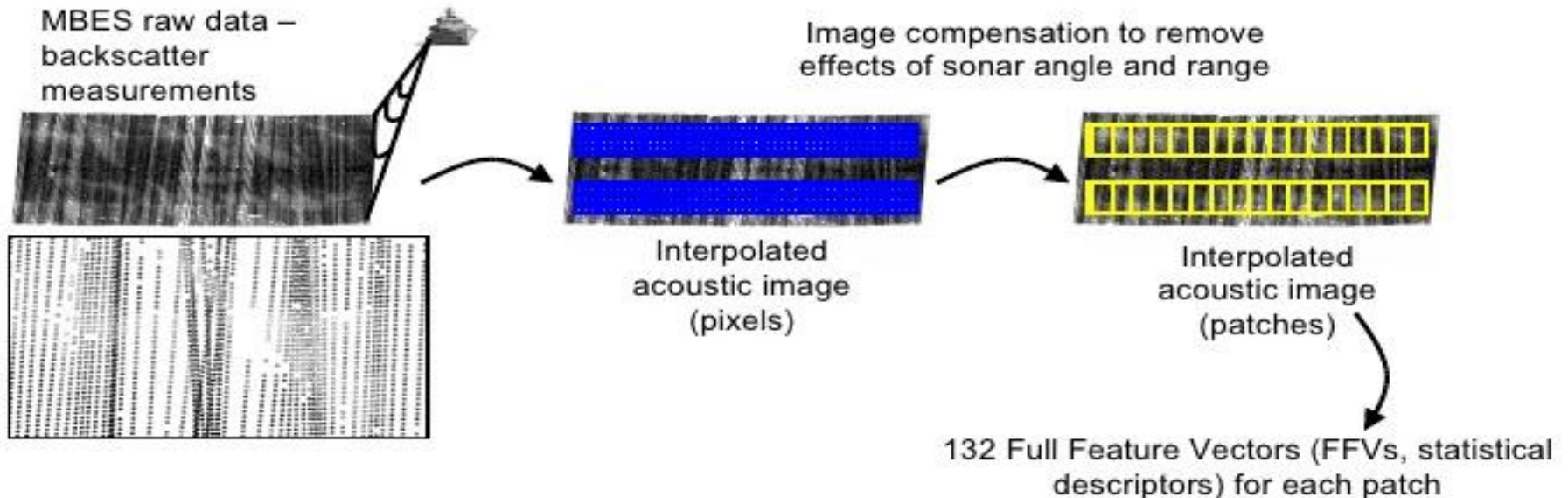


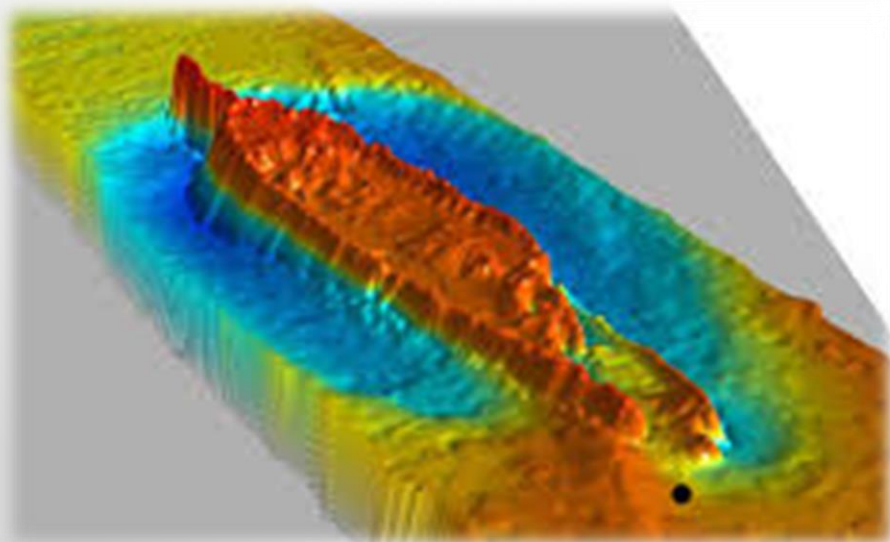
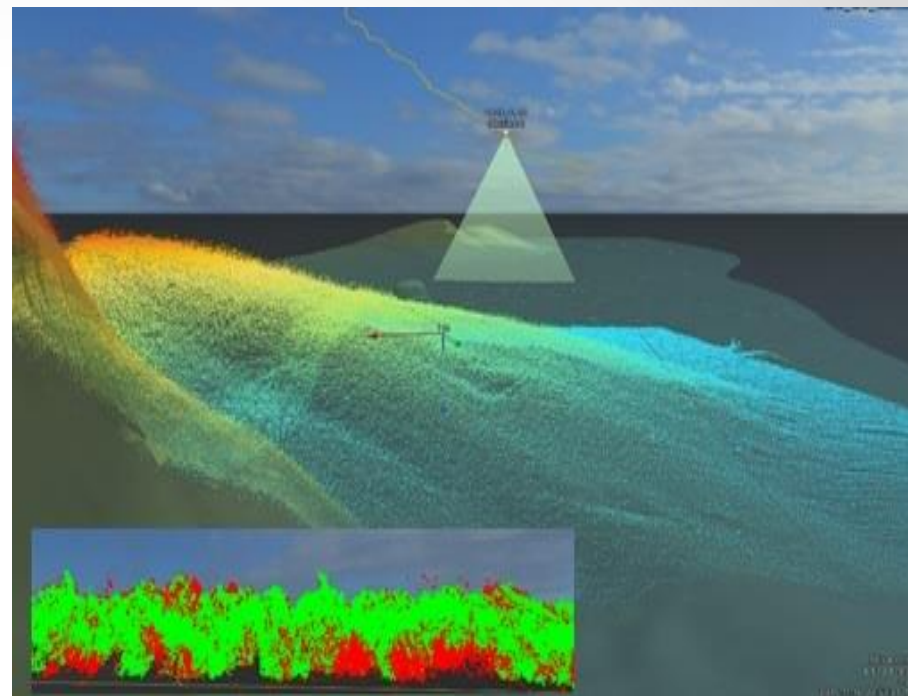
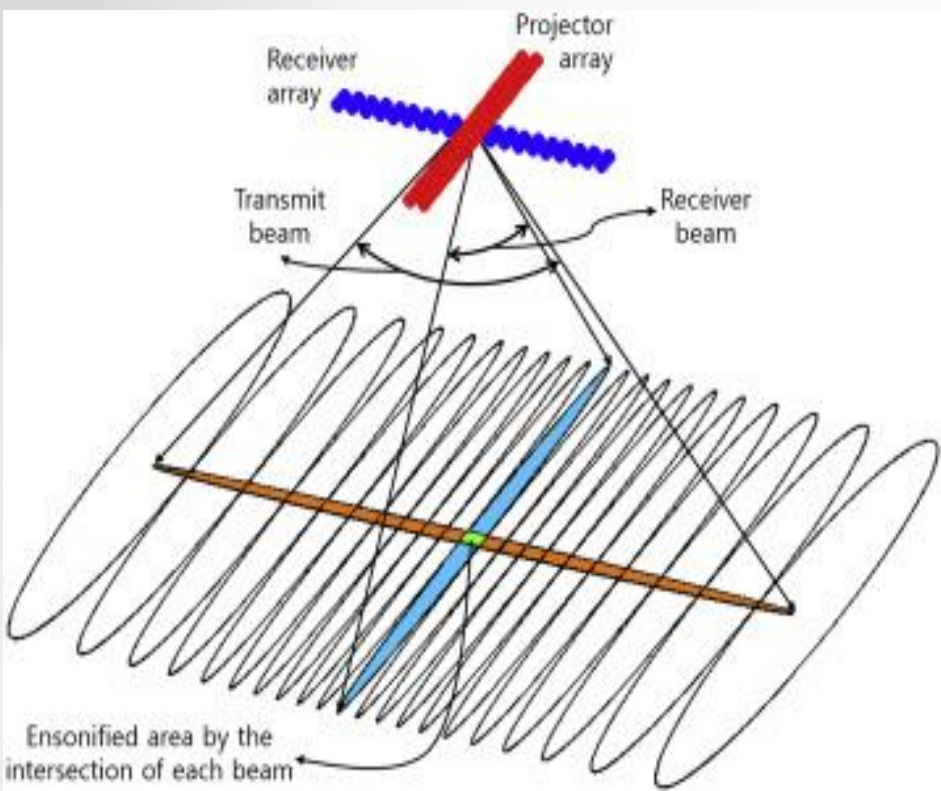
MULTIBEAM ECHOSUNDER

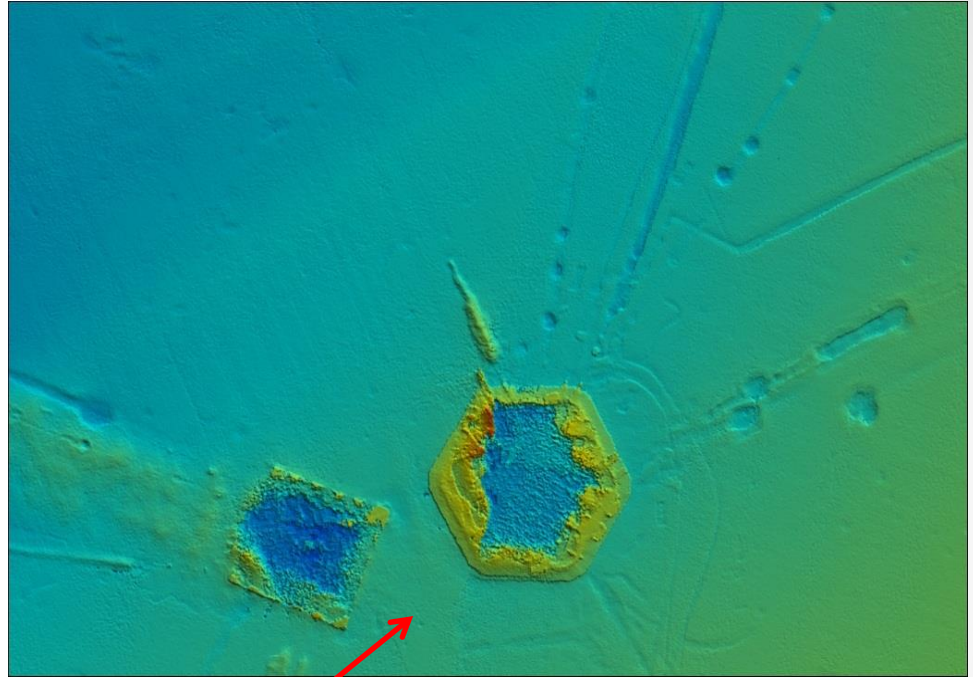
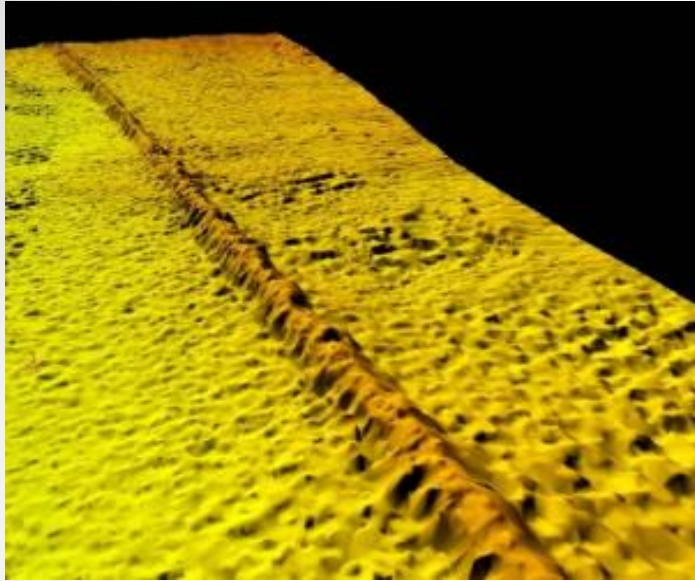
MBES Working Principles



- Data acquired on receiver
- Narrow beam width
- Wider swath
- Both Bathymetry and backscatter

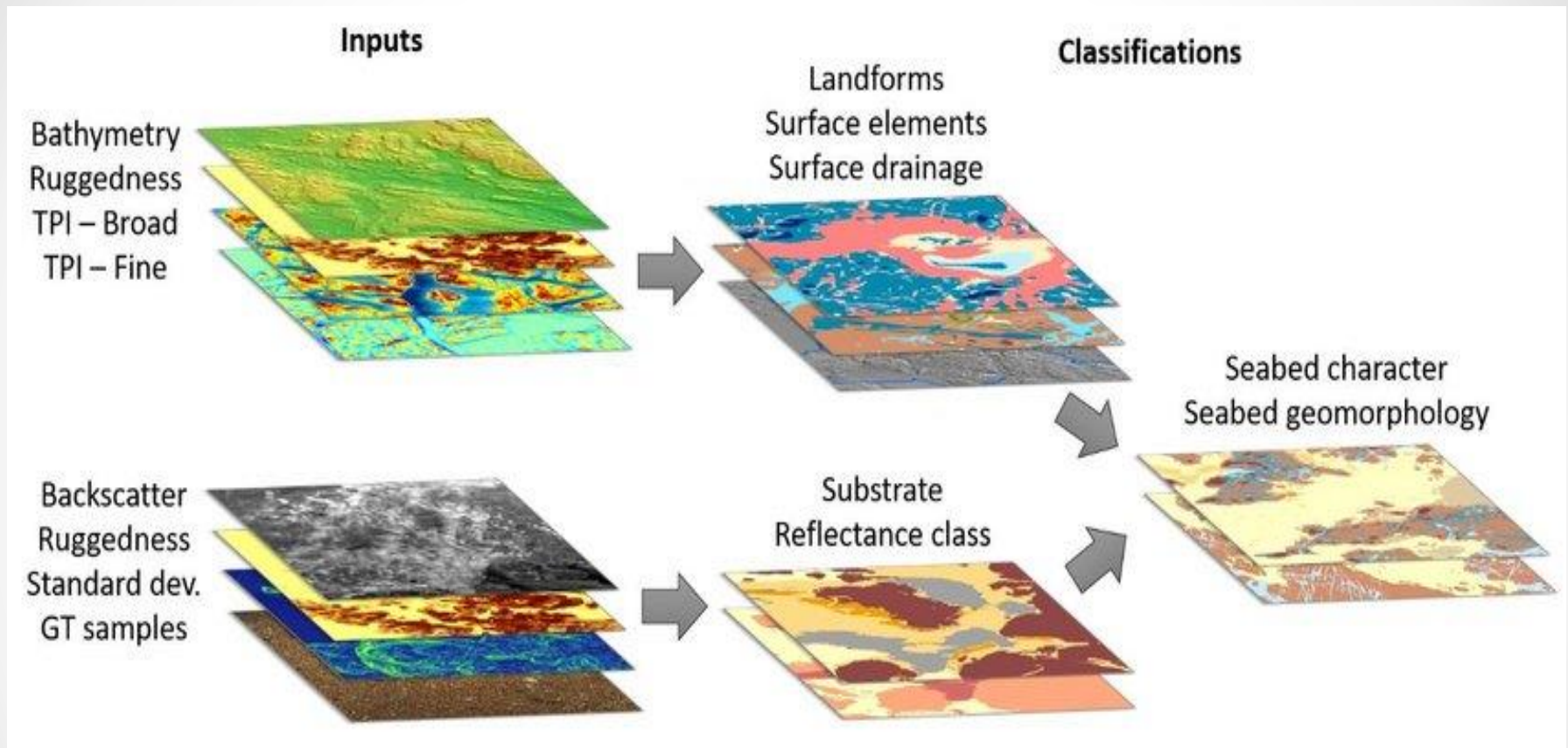




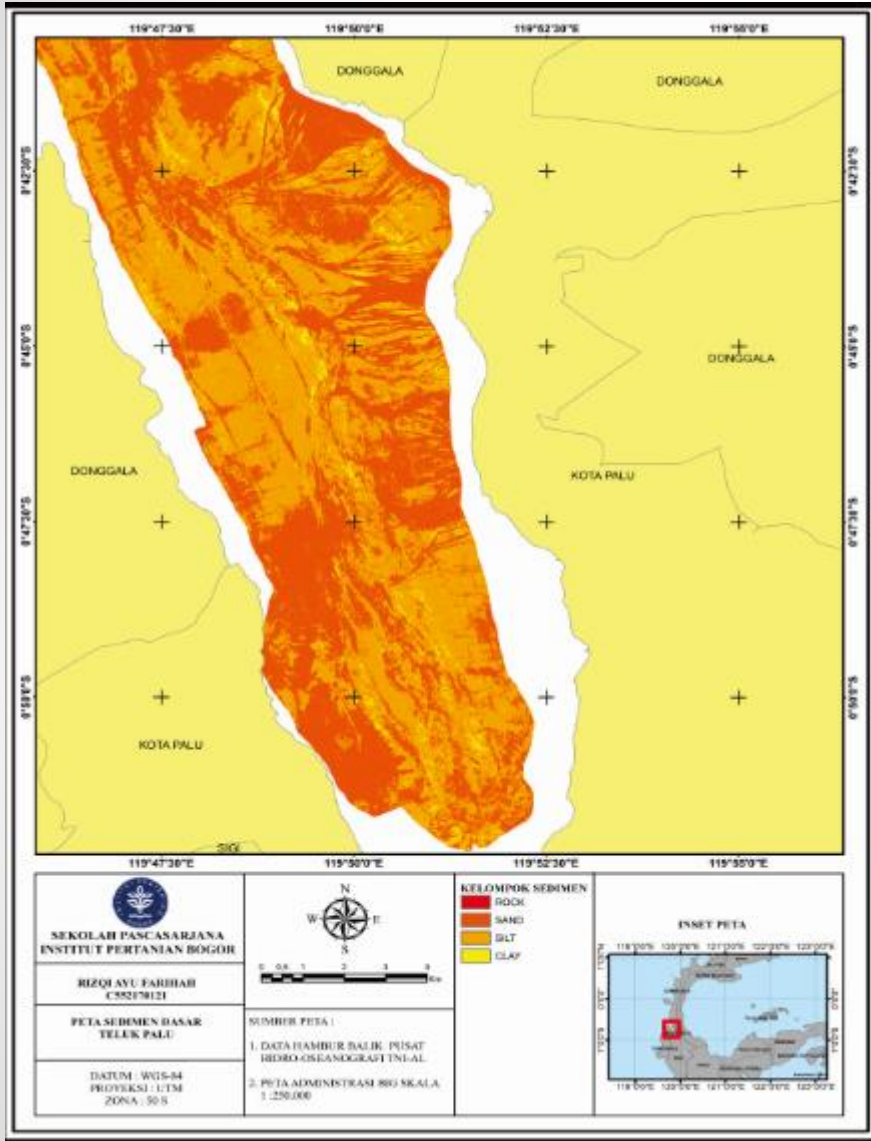


KABEL DAN PIPA BAWAH LAUT

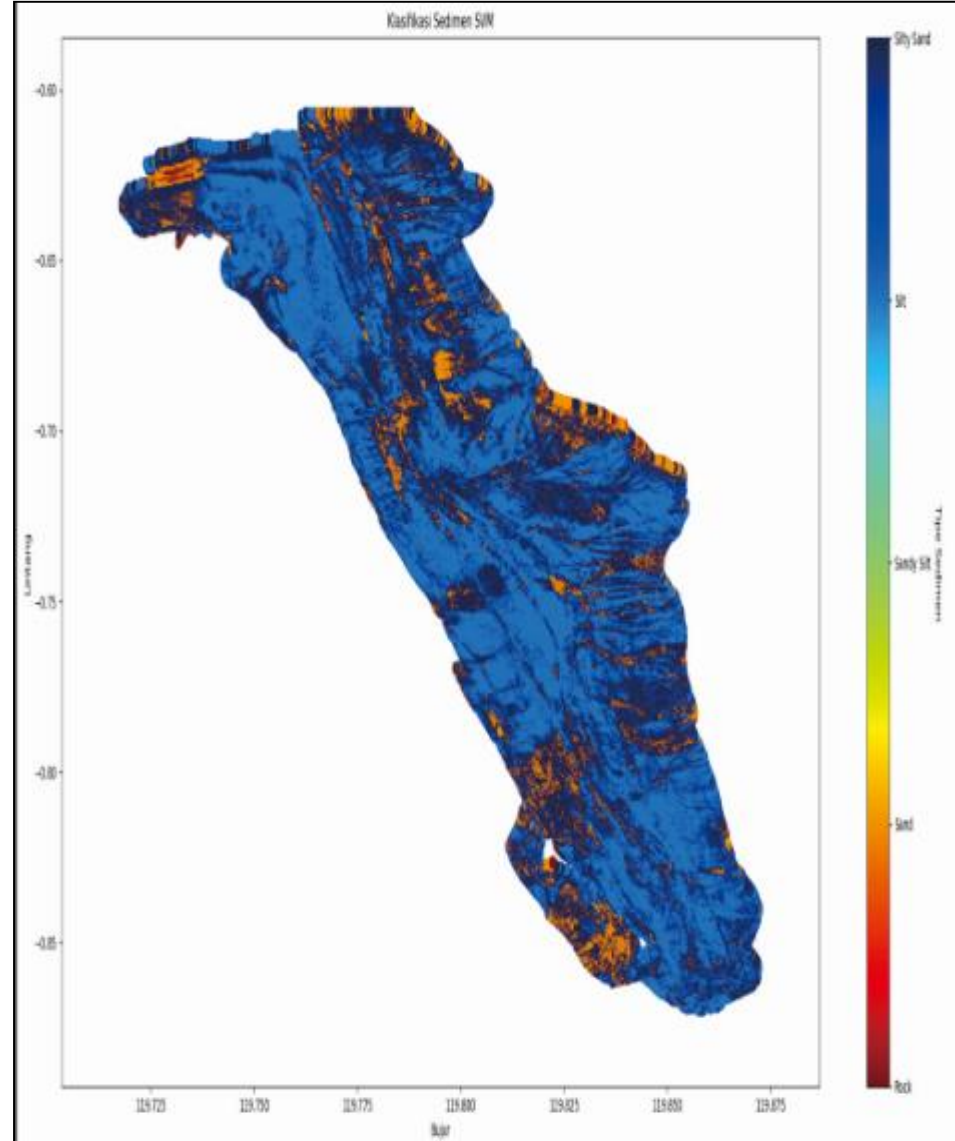
BACKSCHATTERING STRENGTH



Tipe Sedimen Dasar Laut



METODE ARA



METODE SVM

Status “Particularly Sensitive Sea Area” Untuk Raja Ampat

MV Caledonian Sky



“Particularly Sensitive Sea Area (PSSA)”

1.Kepentingan ekologi laut.

Ekosistem Raja Ampat unik dan sangat langka. Keaneka-ragaman ekosistem g sangat rentan terdegradasi oleh aktivitas pelayaran

2.Kriteria sosial, budaya dan ekonomi.

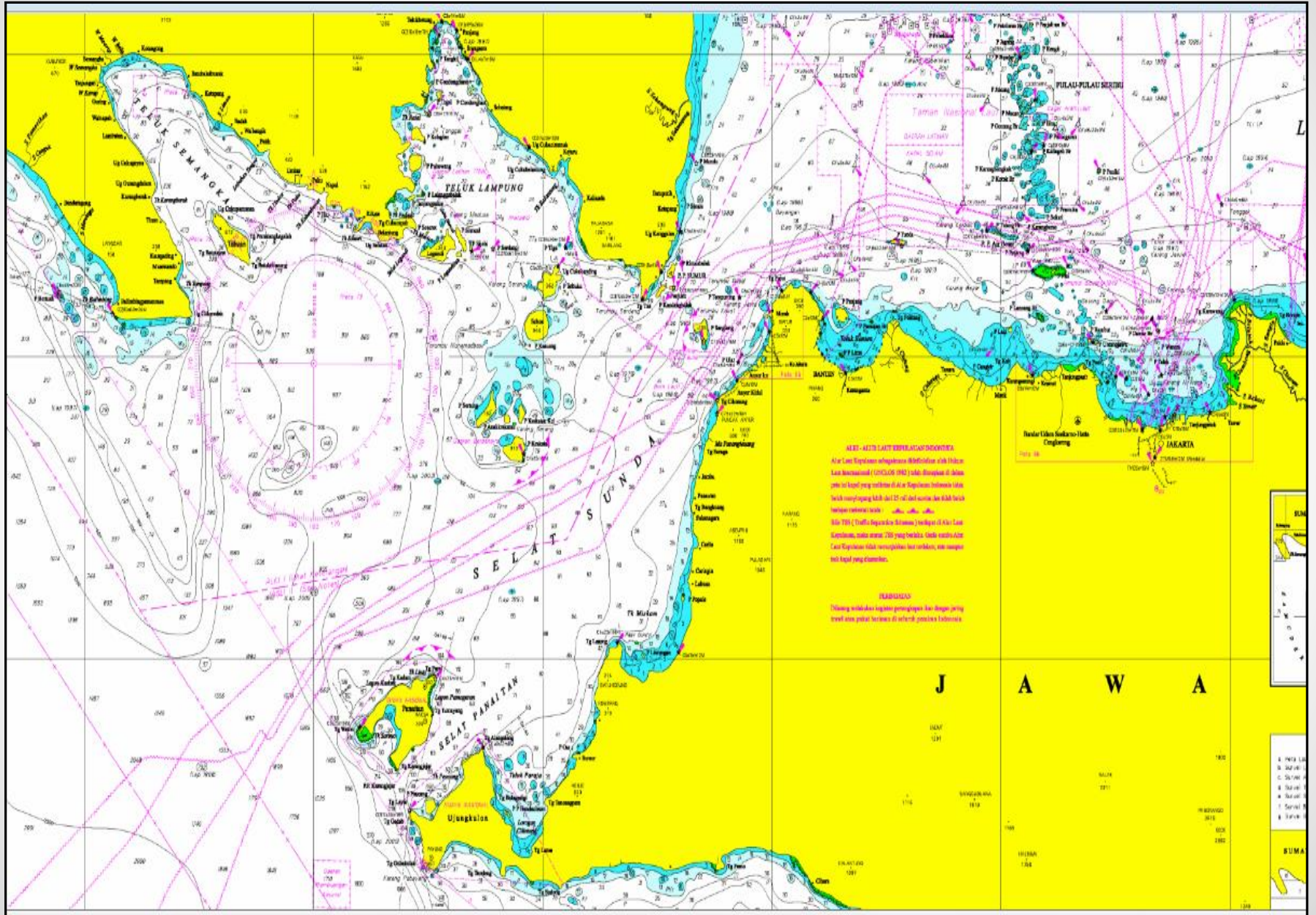
Secara ekonomis menjadi sumber pendapatan masyarakat lokal.

3.Kriteria ilmiah dan pendidikan.

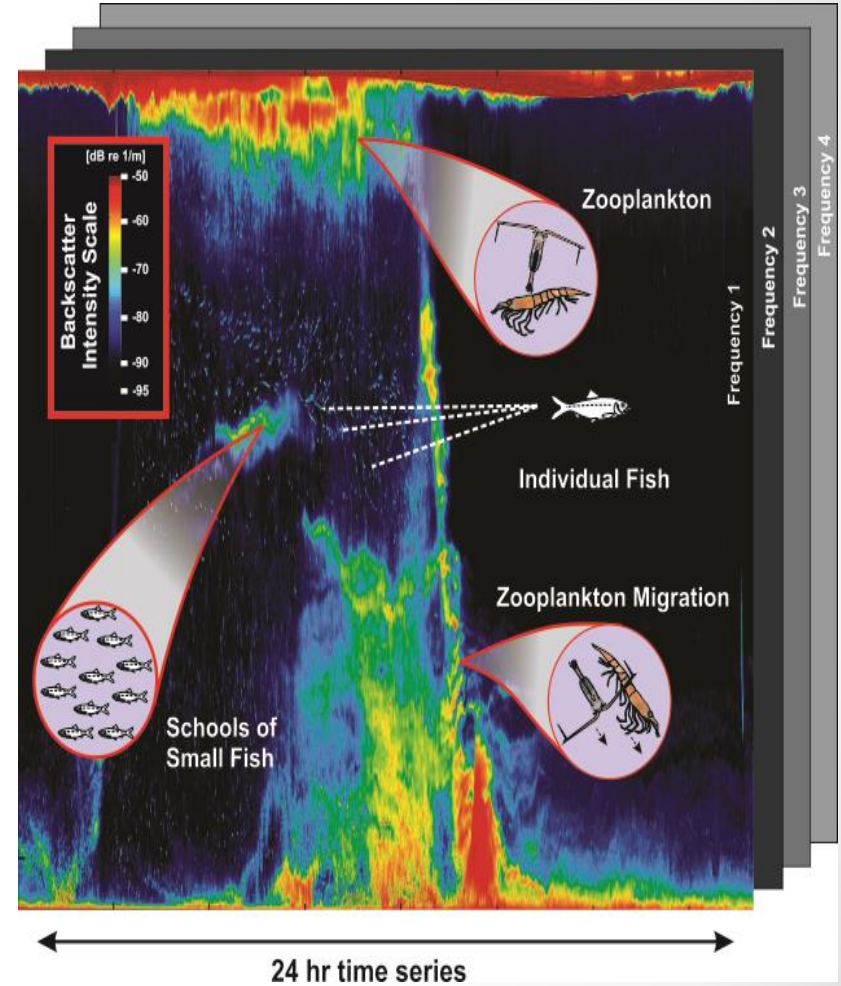
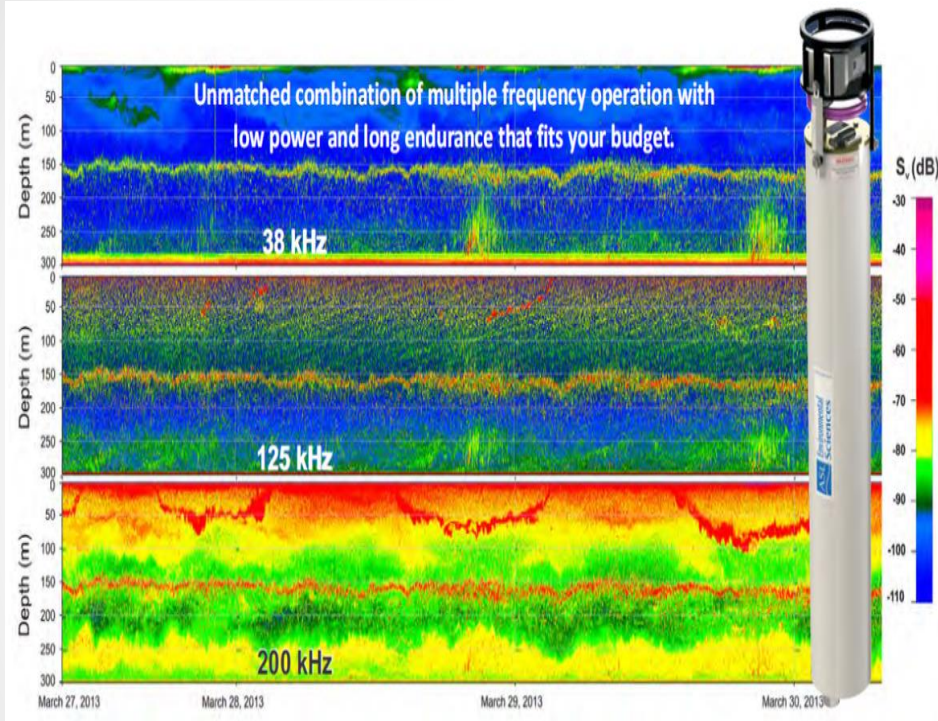
Keanekaragaman biota laut Raja Ampat sebg laboratorium hidup bagi kepentingan penelitian dan pendidikan.



PETA PERAIRAN SELAT SUNDA

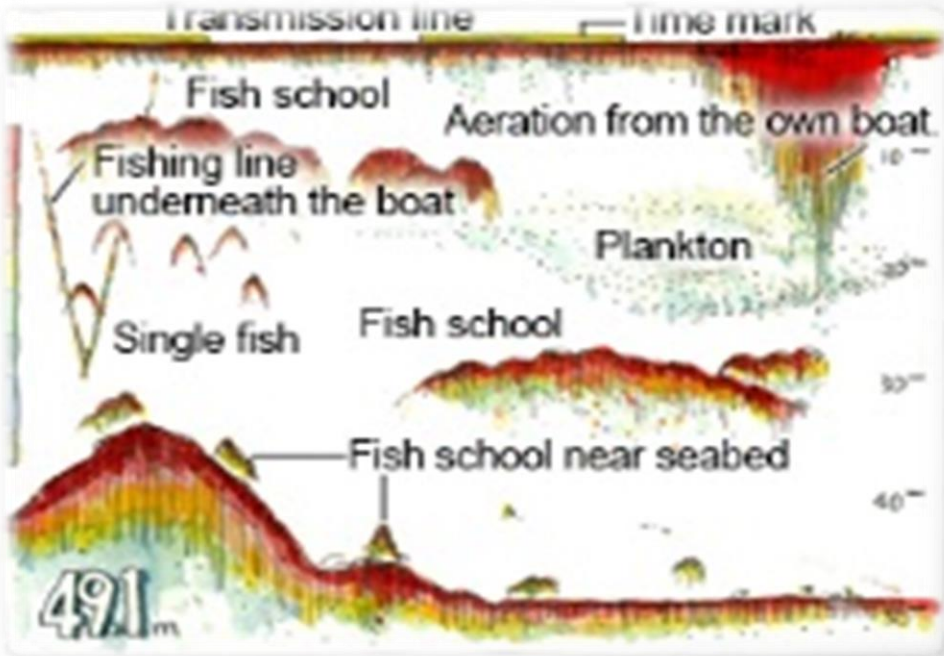
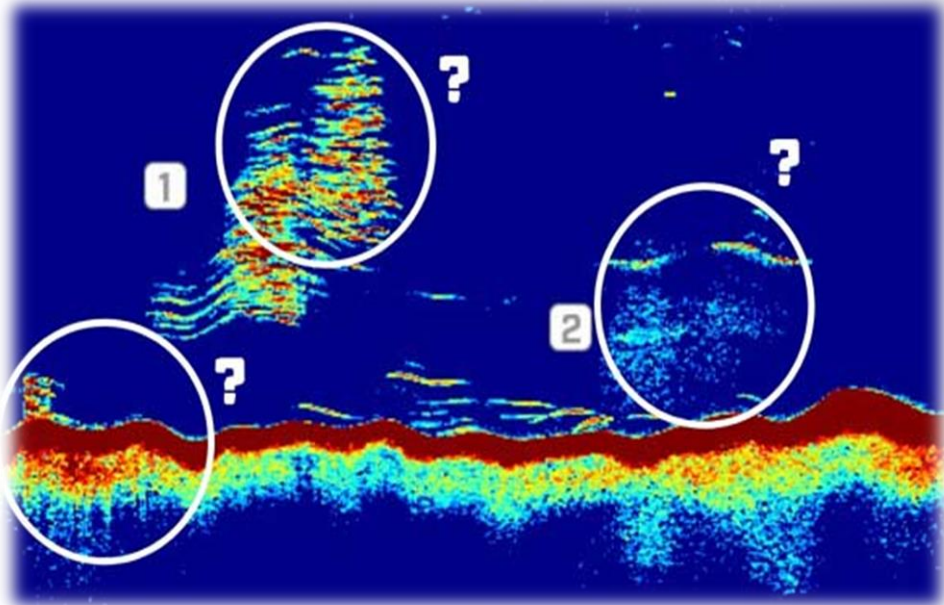


KUANTIFIKASI MIGRASI PLANKTON

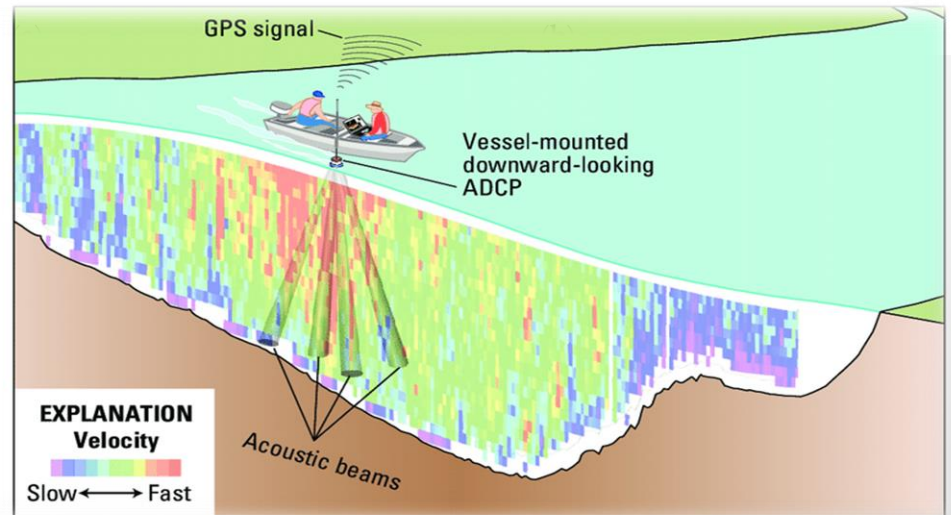
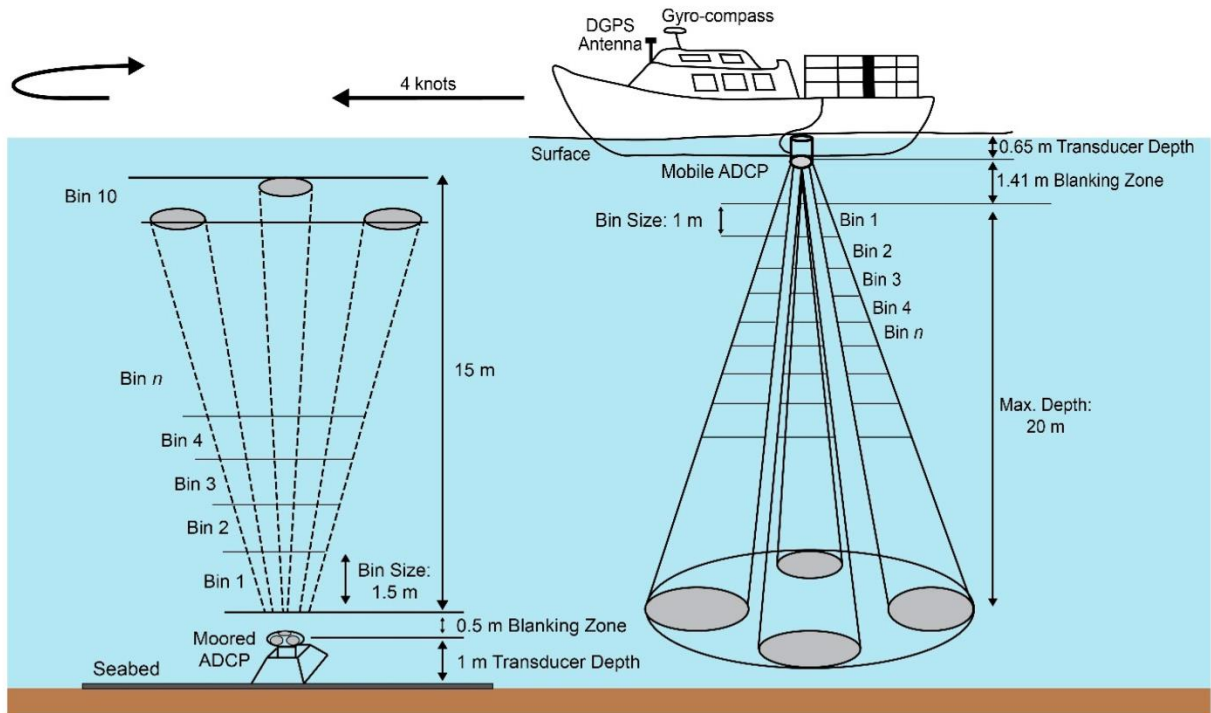
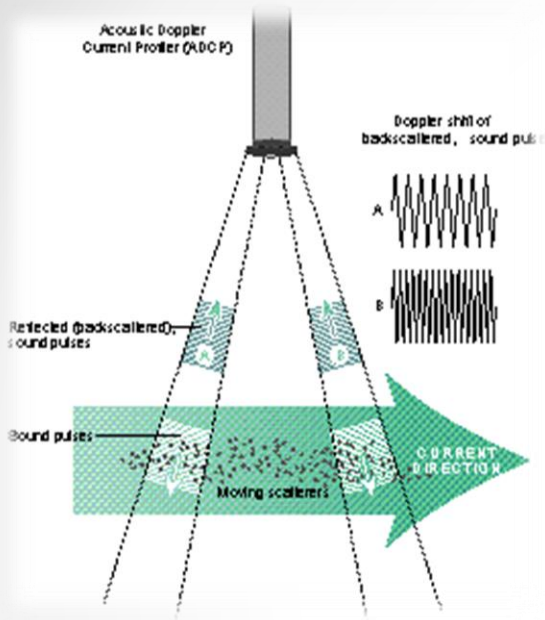


(Dwinoviyanto, 2018)

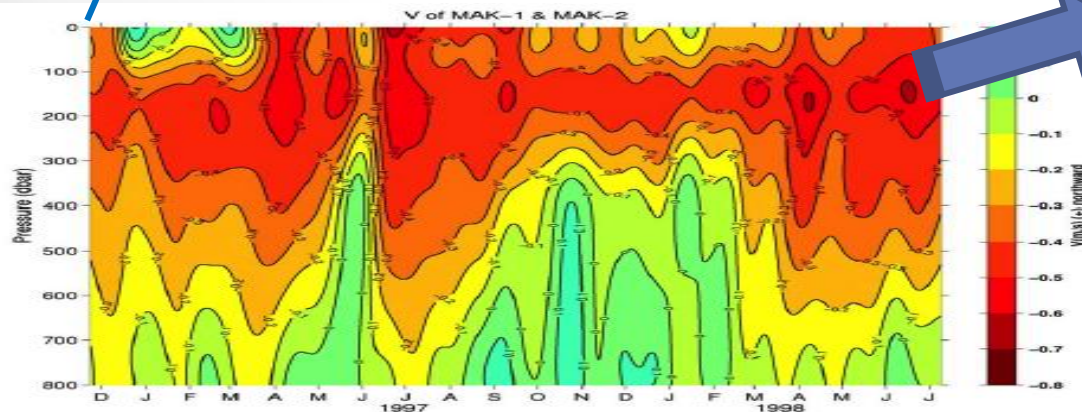
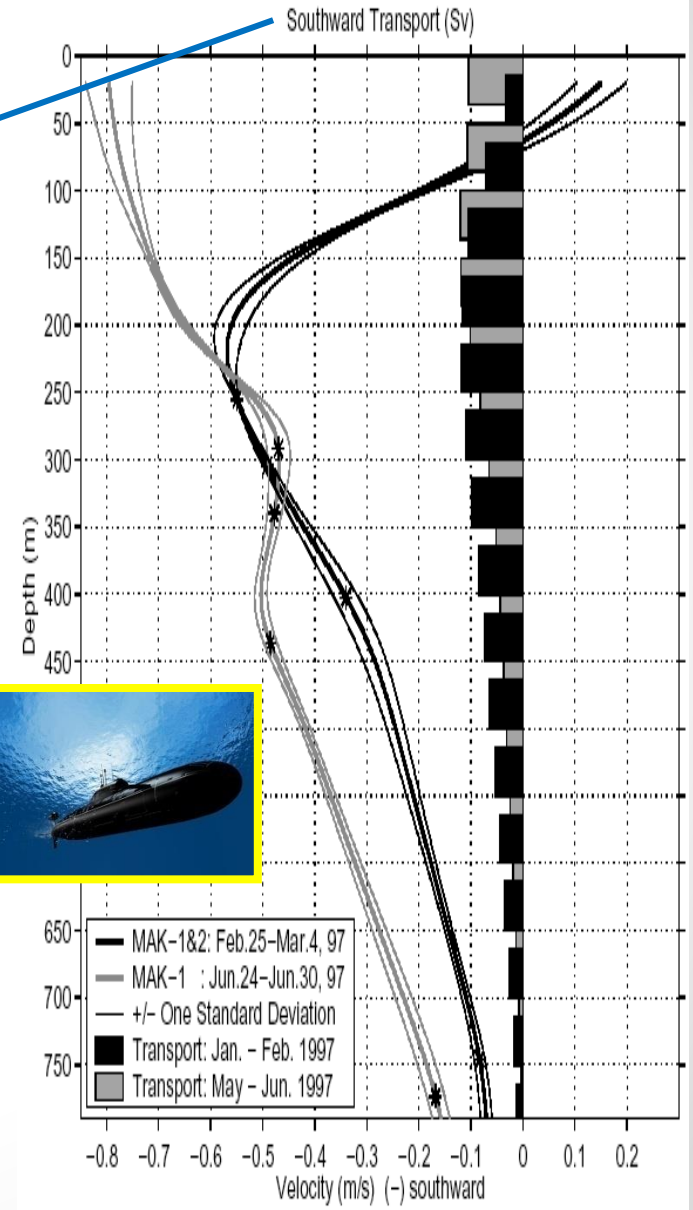
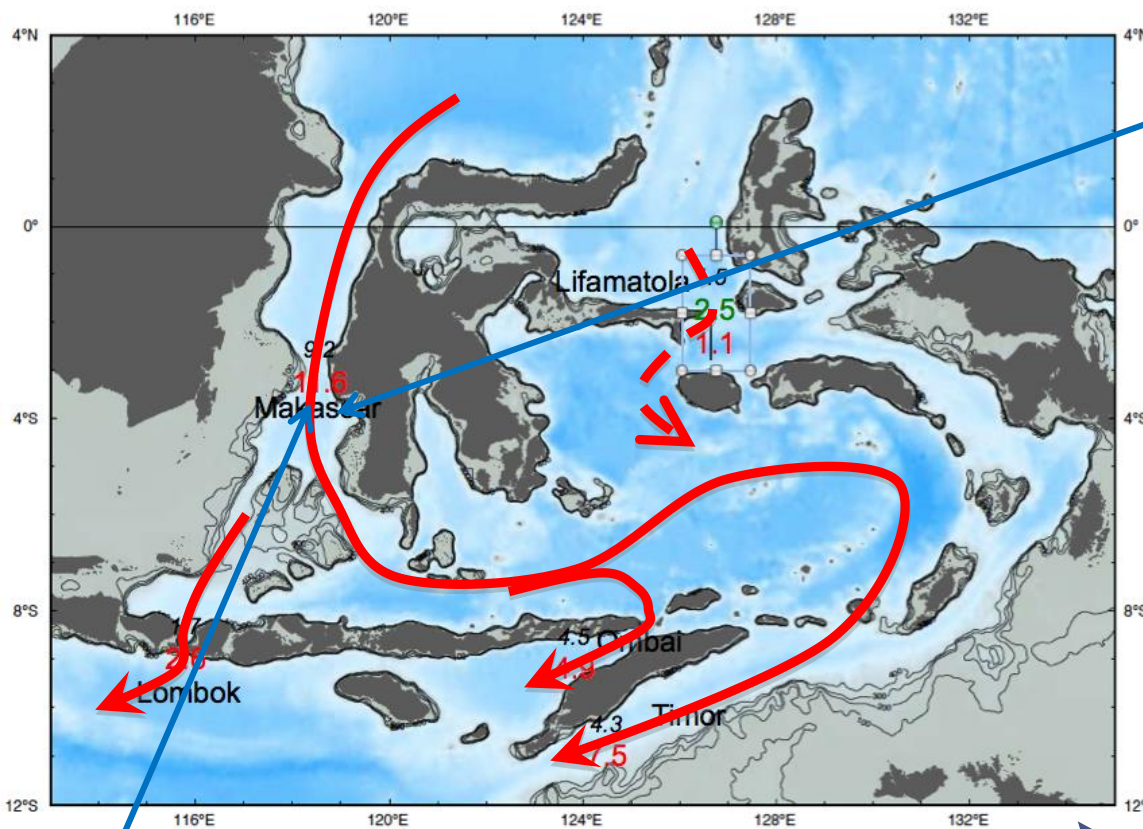
FISH FINDER

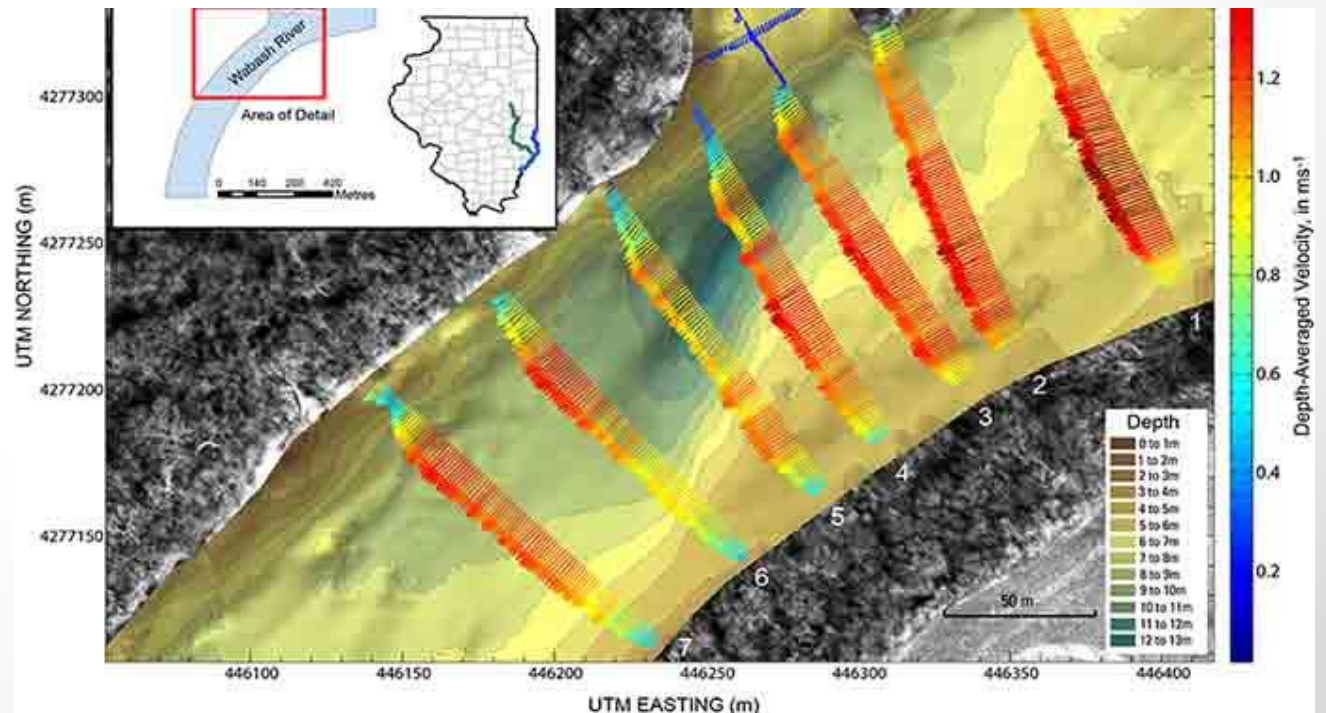
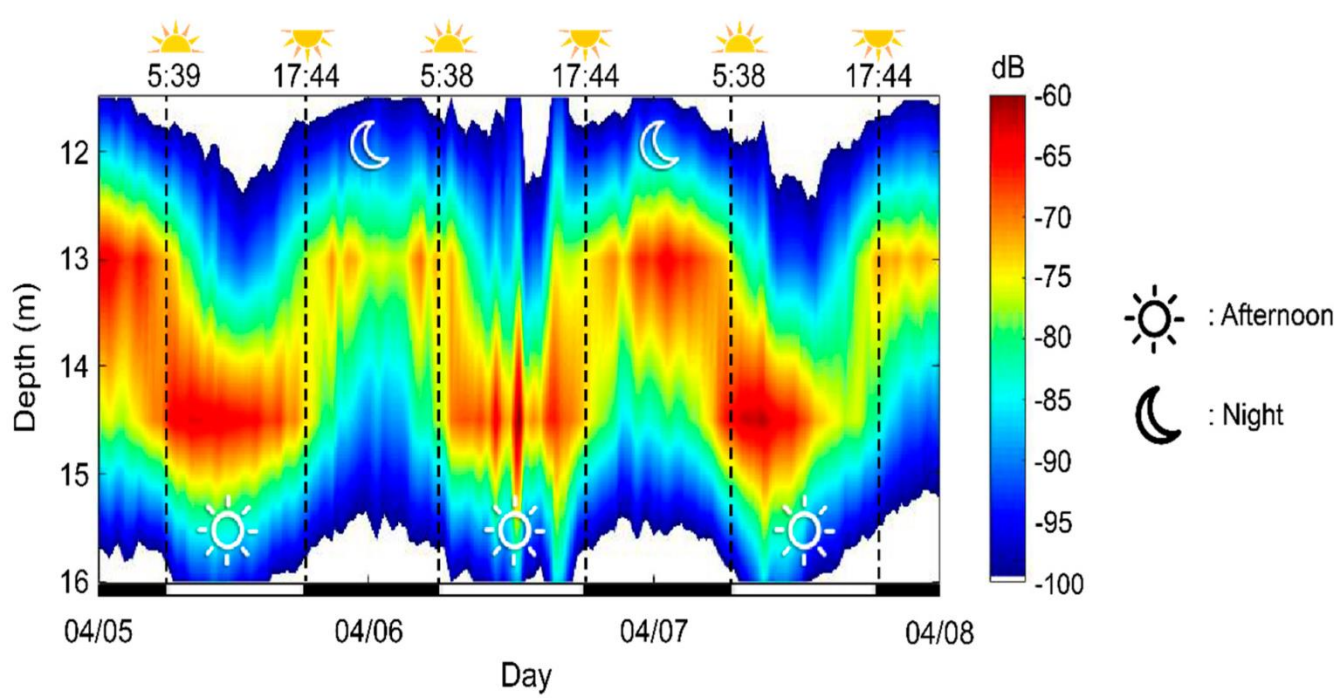


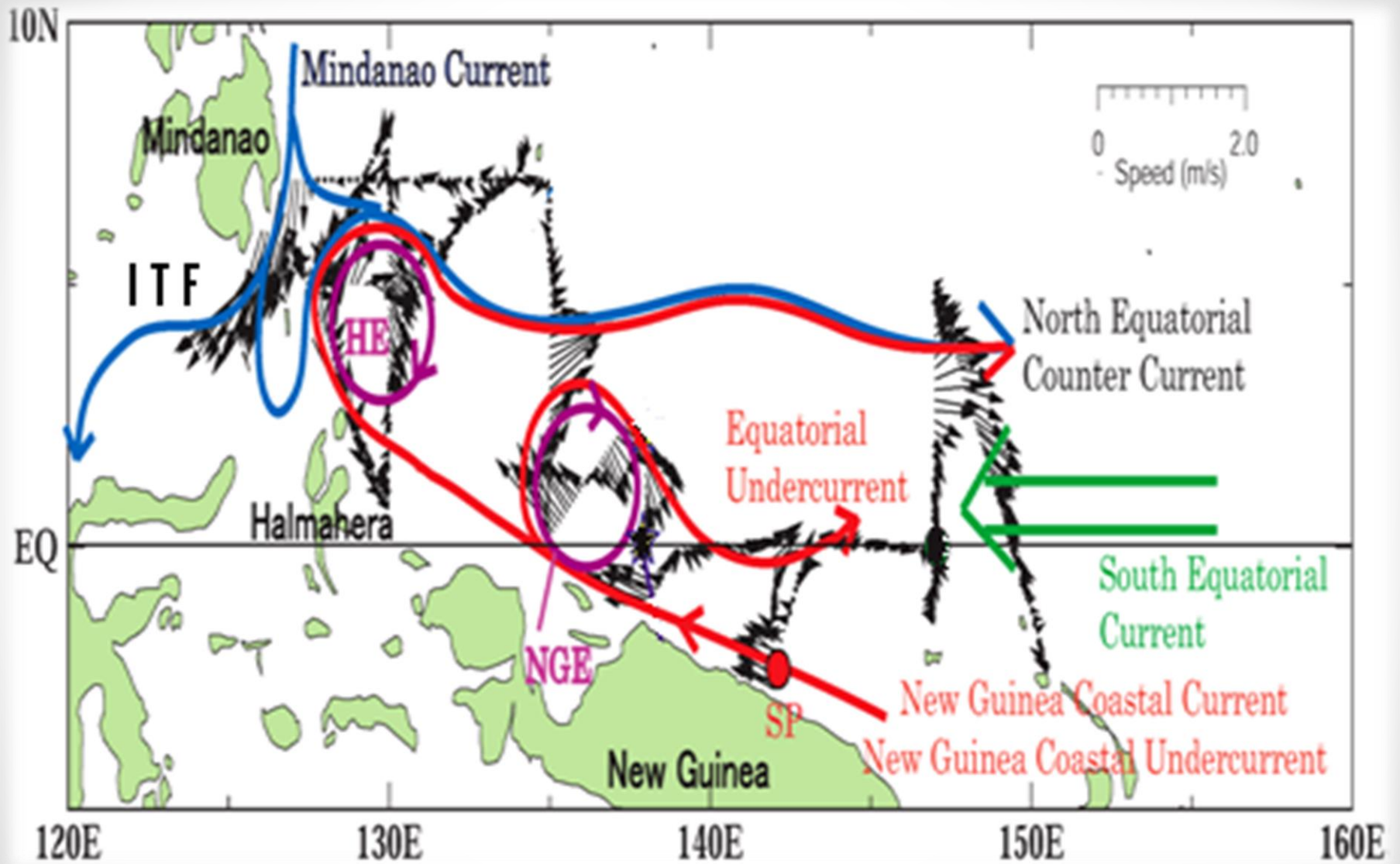
ACOUSTIC DOPPLER CURRENT PROFILER

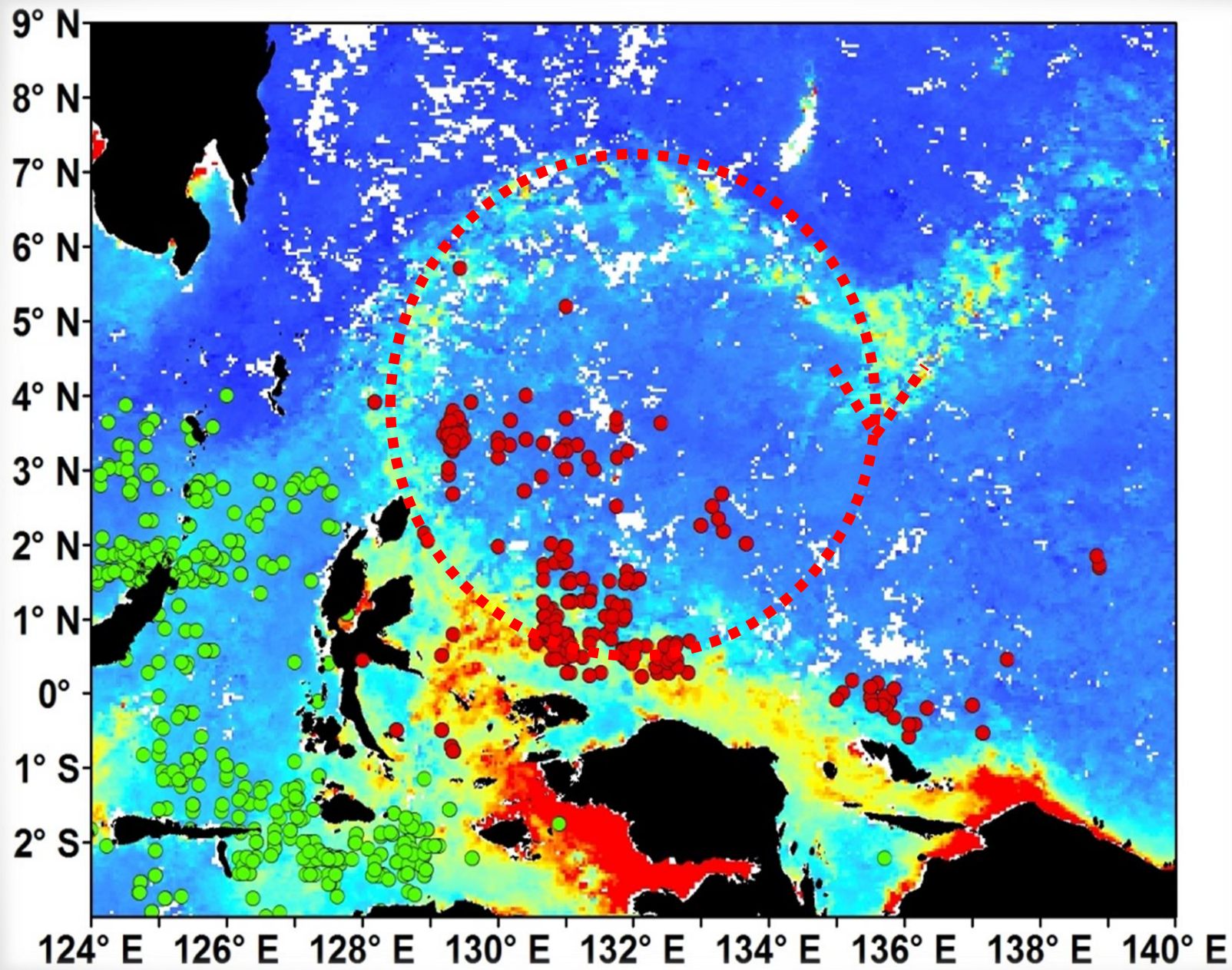


INDONESIAN THROUGH FLOW/ ITF ARUS LINTAS INDONESIA (ARLINDO)

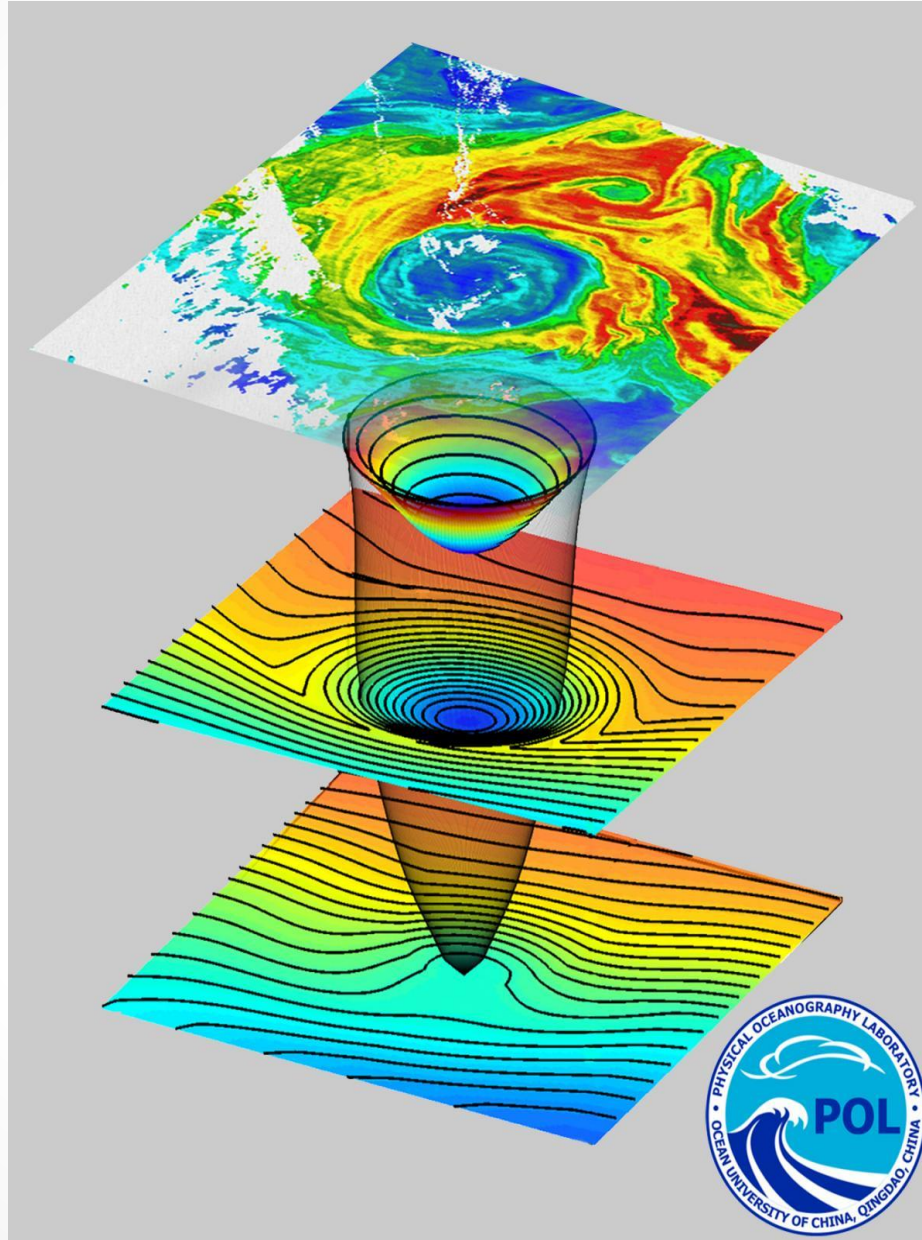








SYCLONIC



TERIMAKASIH

