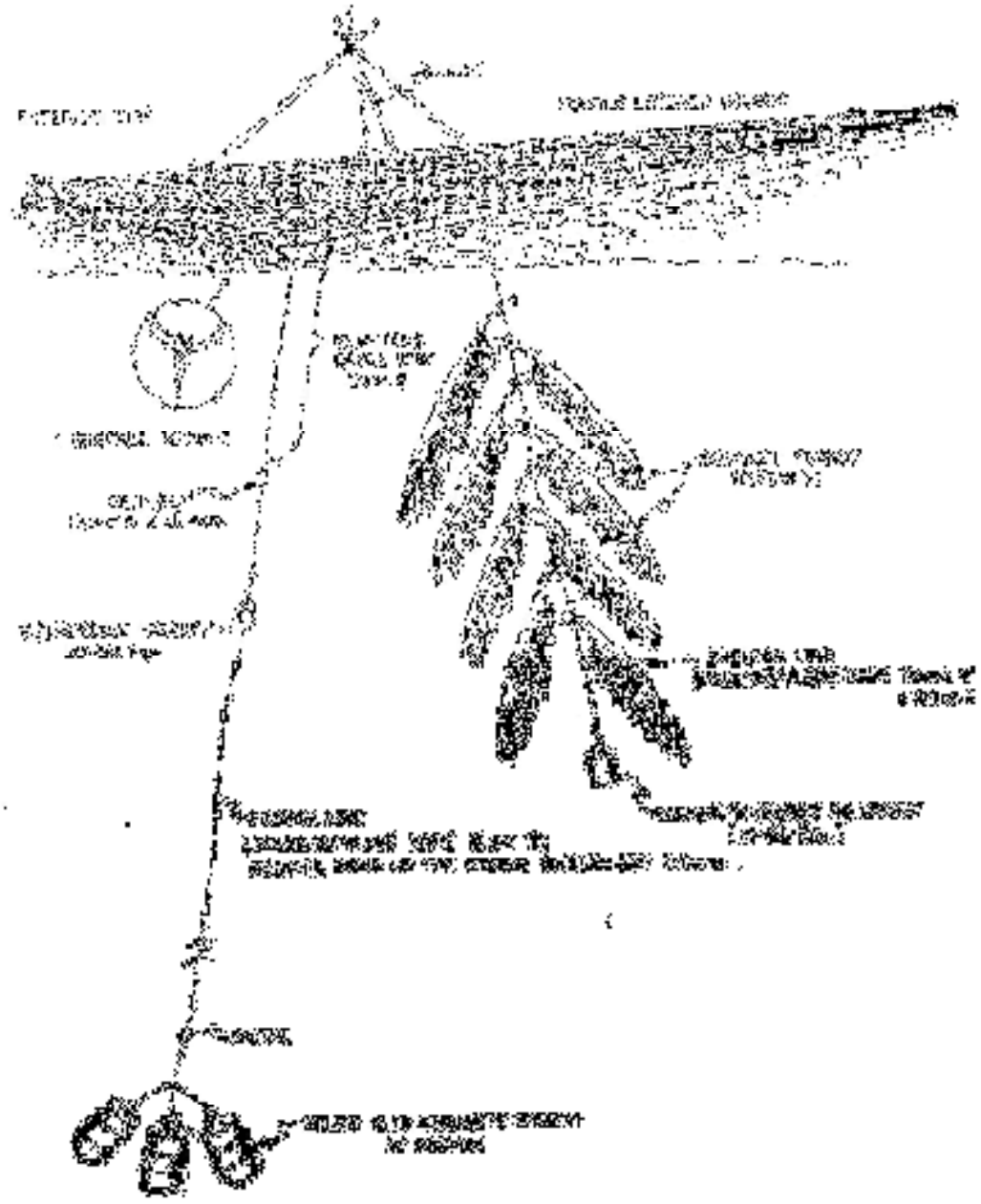
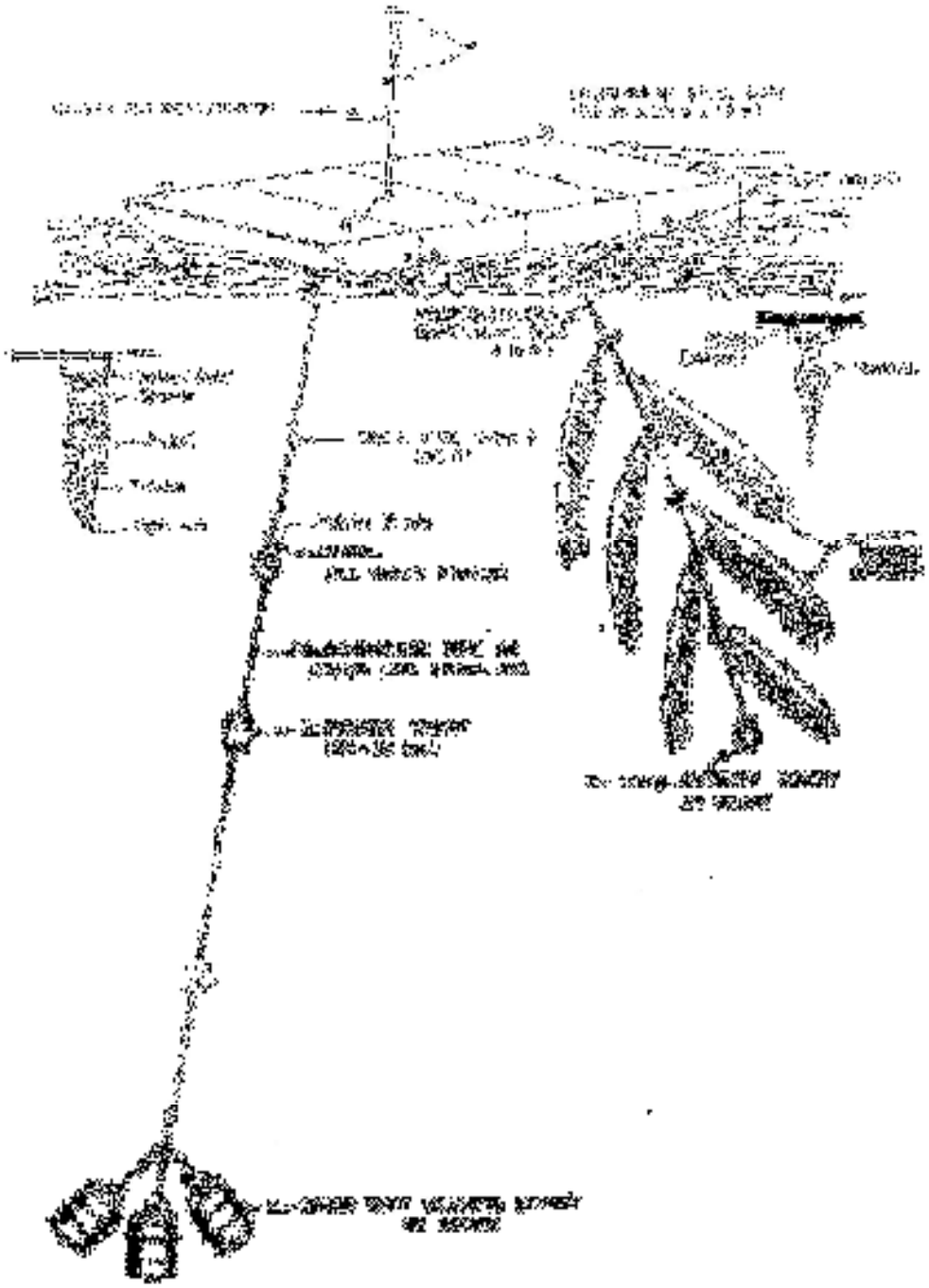
Alat Bantu Penangkapan Ikan

Rumpon :

sebagai alat bantu penangkapan ikan





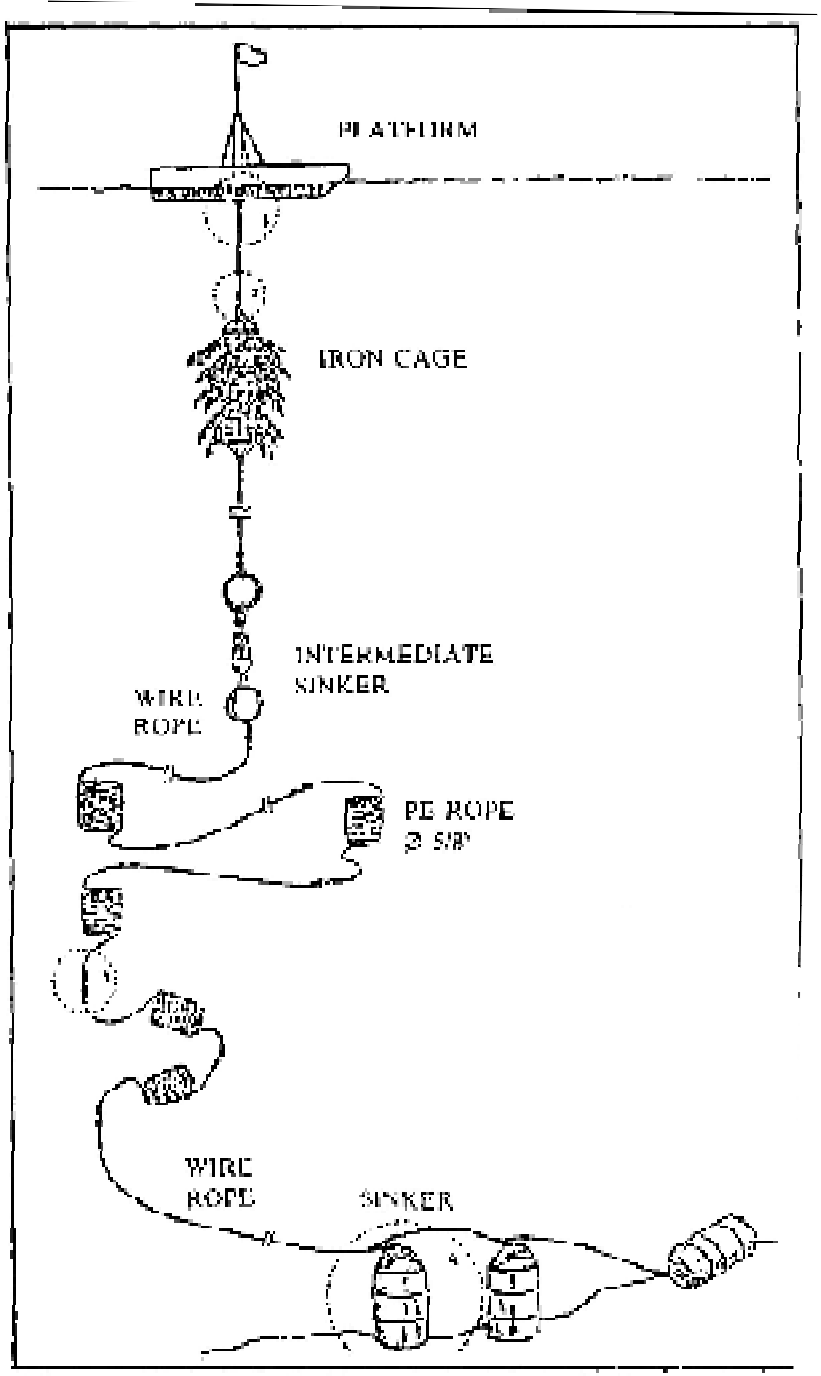
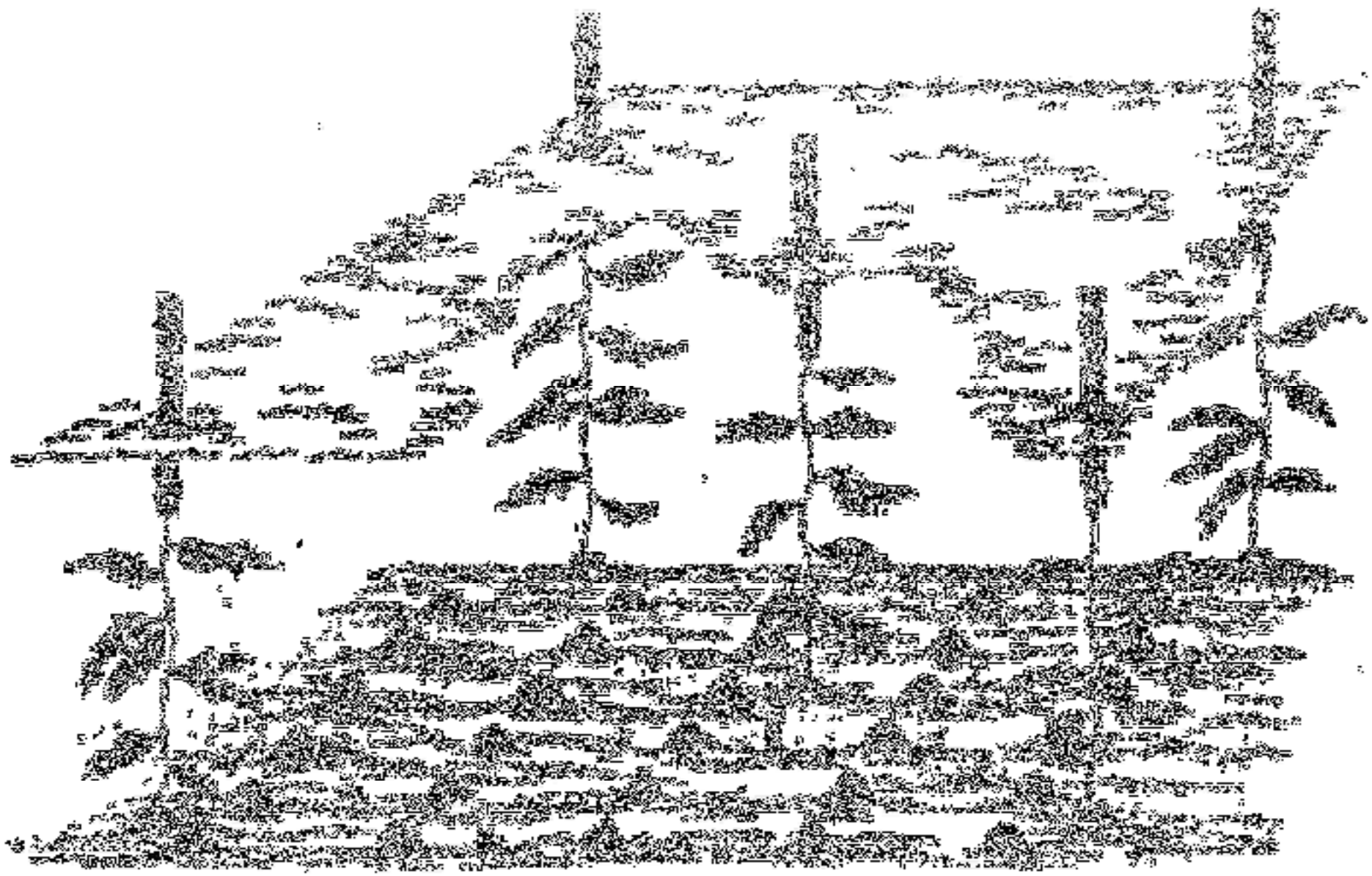
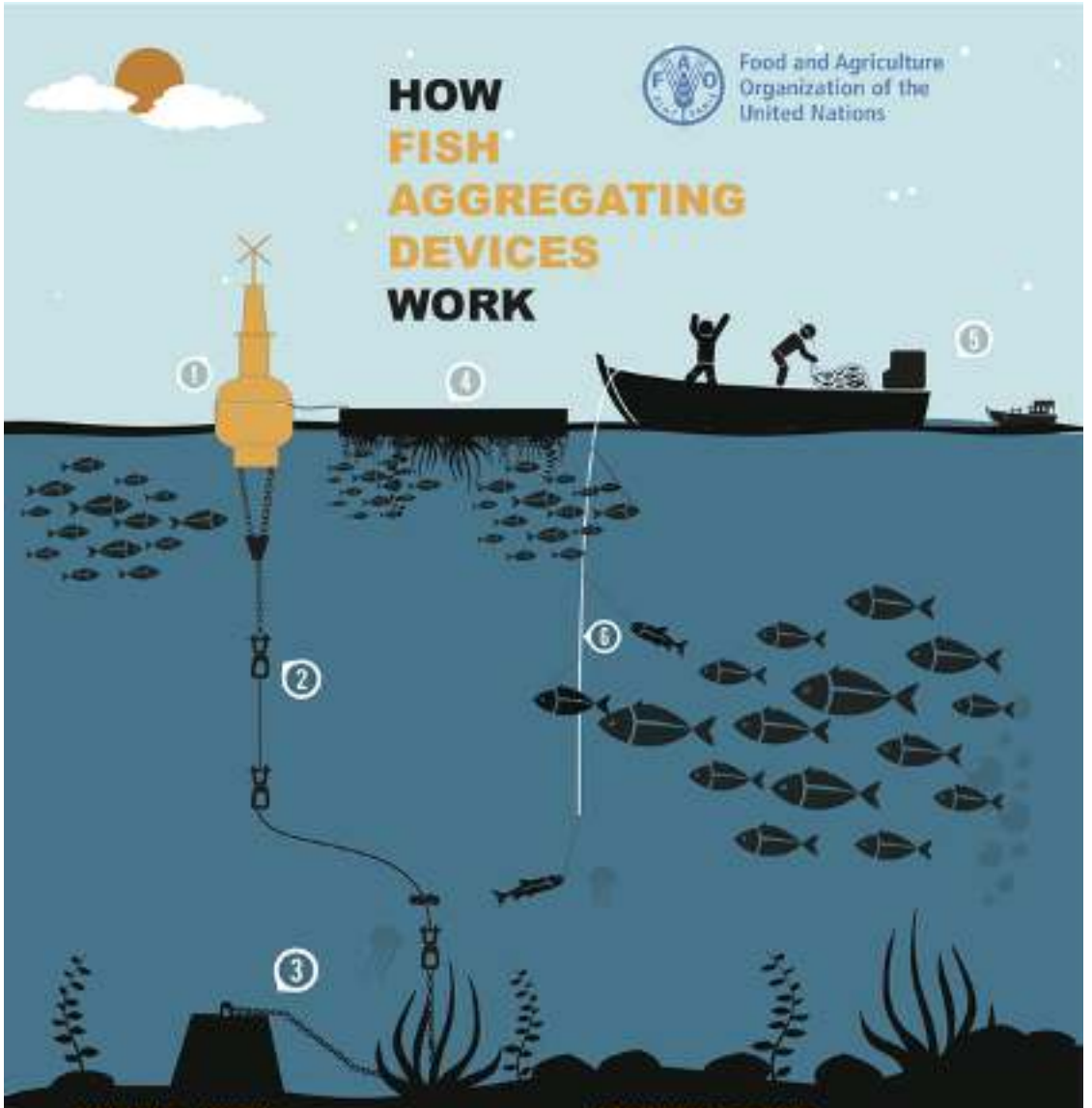


Figure 6. Bagan used by PT. Cenba Mina, Sorong, Irian Jaya.



HOW FISH AGGREGATING DEVICES WORK

Food and Agriculture Organization of the United Nations



HOW FADs WORK

Fish Aggregating Devices (FADs) are man-made or anchored buoys or rafts that attract and aggregate fish helping fisherfolk to catch more fish, more effectively.

FADs

1. **FAD buoy:** a large floating yellow structure attached to a floating "habitat mat" and anchored to the seabed.
2. **FAD anchorline:** a galvanized chain, marine swivels and floaters attached to a concrete block on the seabed.
3. **FAD anchor:** a concrete block that anchoors the buoy to the seabed.
4. **"Habitat mat":** where plant life quickly grows and attracts a large number of fish – acting as a "fish magnet".
5. **FAD fisherfolk:** Somali artisanal fisherfolk catching nutritious and high-value oceanic fish species, at low cost and in greater quantity.
6. **Vertical longlines:** a mid-water handlining which uses a weighted mainline rigged with a number of branch lines carrying baited hooks.

BENEFITS OF FADs

Somalia's small-scale artisanal fisherfolk will be catching more fish in the coming years thanks to the Food and Agriculture Organization of the United Nations deployment of 25 FADs along Somalia's 3,300km coastline.

FADs will:

- Increase fishing efficiency;
- Increase catch per unit effort (CPUE);
- Reduce fishing costs greatly fuel) due to reduced search time;
- Lead to greater earnings for fishers;
- Improve food security and nutrition from high quality fish;
- Lead to possible development of fish exports;
- Improve safety at sea;
- Reduce pressure on coastal ecosystems by transferring fishing efforts from the coast to offshore; and
- Promote the organization of fishing communities and cooperatives.

The FAO programme was funded by:

Implemented in partnership with:

Fish Aggregating Devices—From Logs to Satellites

Pre-1980s

Tuna purse seine vessels set nets around floating objects, such as logs, that they chanced upon, setting their nets up around the log to capture the fish underneath.

1980s

Tuna fishermen began attaching radio beacons to floating objects so they could relocate them, with signals ranging from 500 to 1,000 nautical miles and operating for up to six months.

1990s to Today

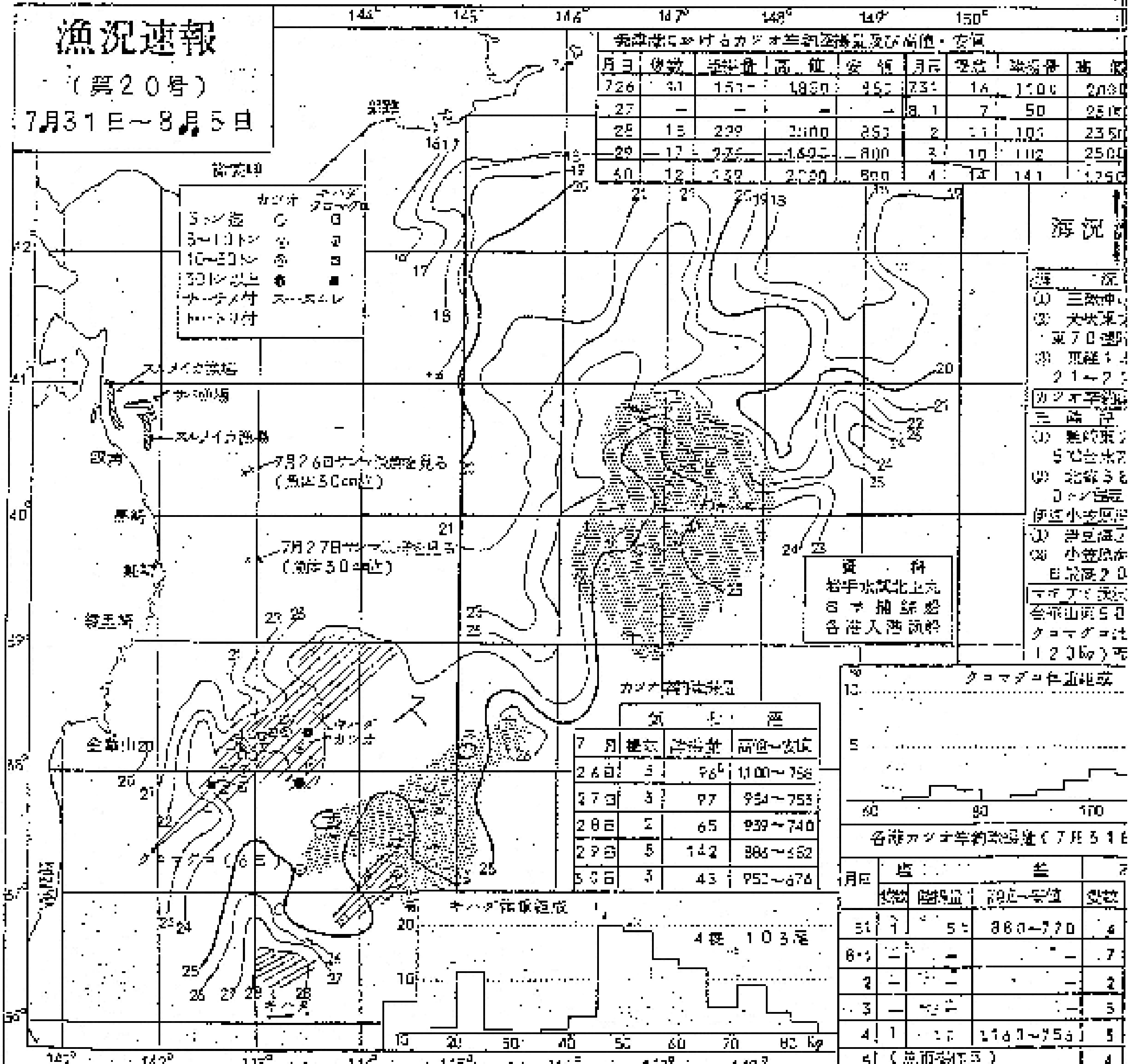
Tuna fishermen developed artificial floating objects attached to satellite beacons that could be tracked from anywhere, operated for years, and were able to monitor marine life around the FAD.

PETA DAERAH PENANGKAPAN IKAN

漁況速報

（第２０号）

７月３１日〜８月５日



…におけるカツオ竿釣水揚量及び高値・安値

月日	隻数	水揚量	高値	安値	月日	隻数	水揚量	高値
7.26	41	151	1850	952	7.31	16	110	2030
27	—	—	—	—	8.1	7	50	2510
28	15	229	2100	853	2	11	103	2350
29	17	225	1695	800	3	10	112	2500
30	12	132	2020	800	4	14	141	1250

海況

資料
岩手水試北上丸
各港入港漁船

カツオ竿釣水揚量

7月	隻数	水揚量	高値〜安値
26日	3	96	1100〜756
27日	3	97	954〜753
28日	2	65	939〜740
29日	5	142	886〜652
30日	3	43	952〜676

各港カツオ竿釣水揚量（7月31日…

月日	隻数	水揚量	高値〜安値	隻数
31	1	55	880〜770	4
8・1	—	—	—	7
2	—	—	—	2
3	—	—	—	3
4	1	17	1160〜756	5
5	（休市）			4

1963・8・6
石巻市門脇… 東北区水産研究所石巻…

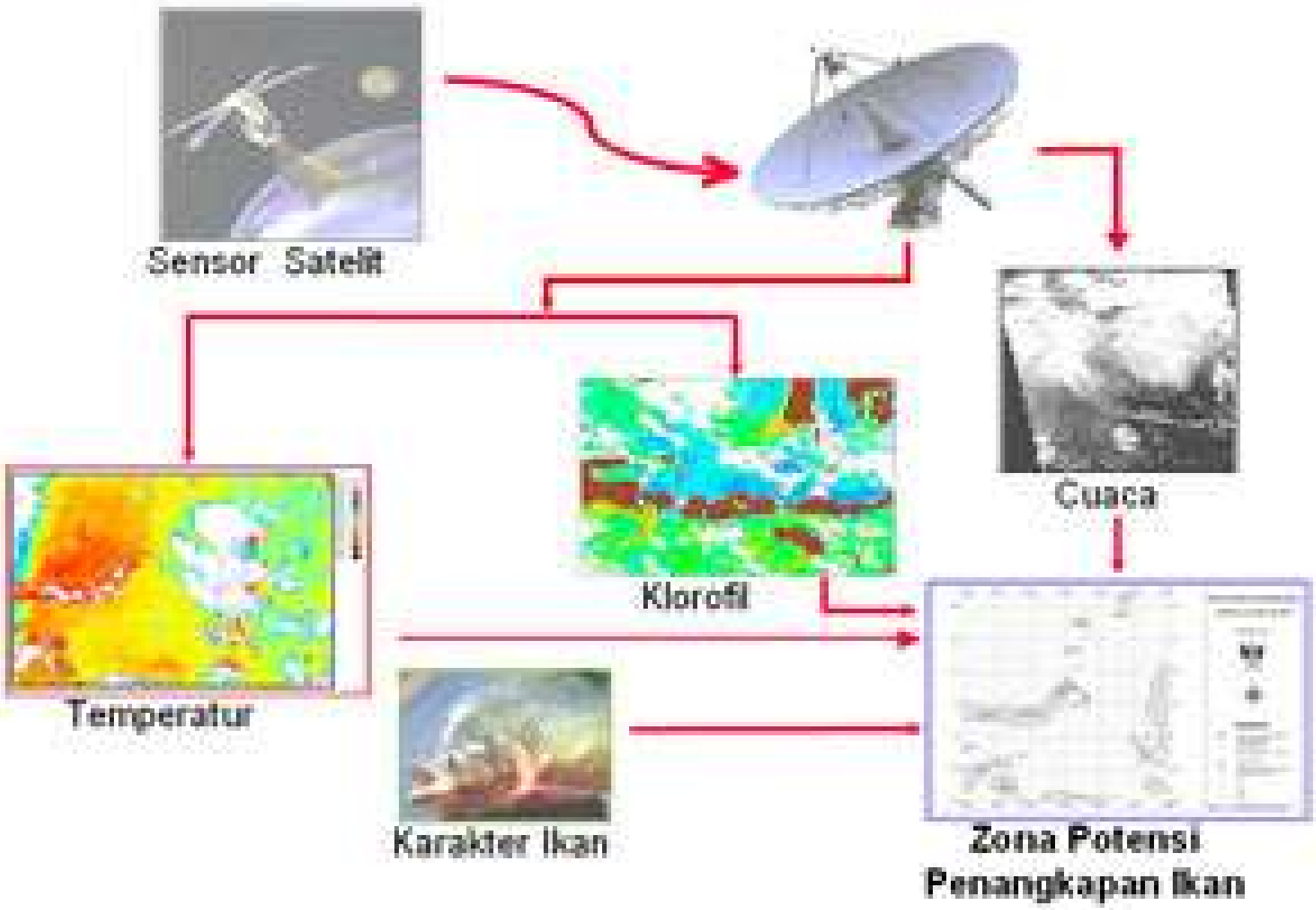
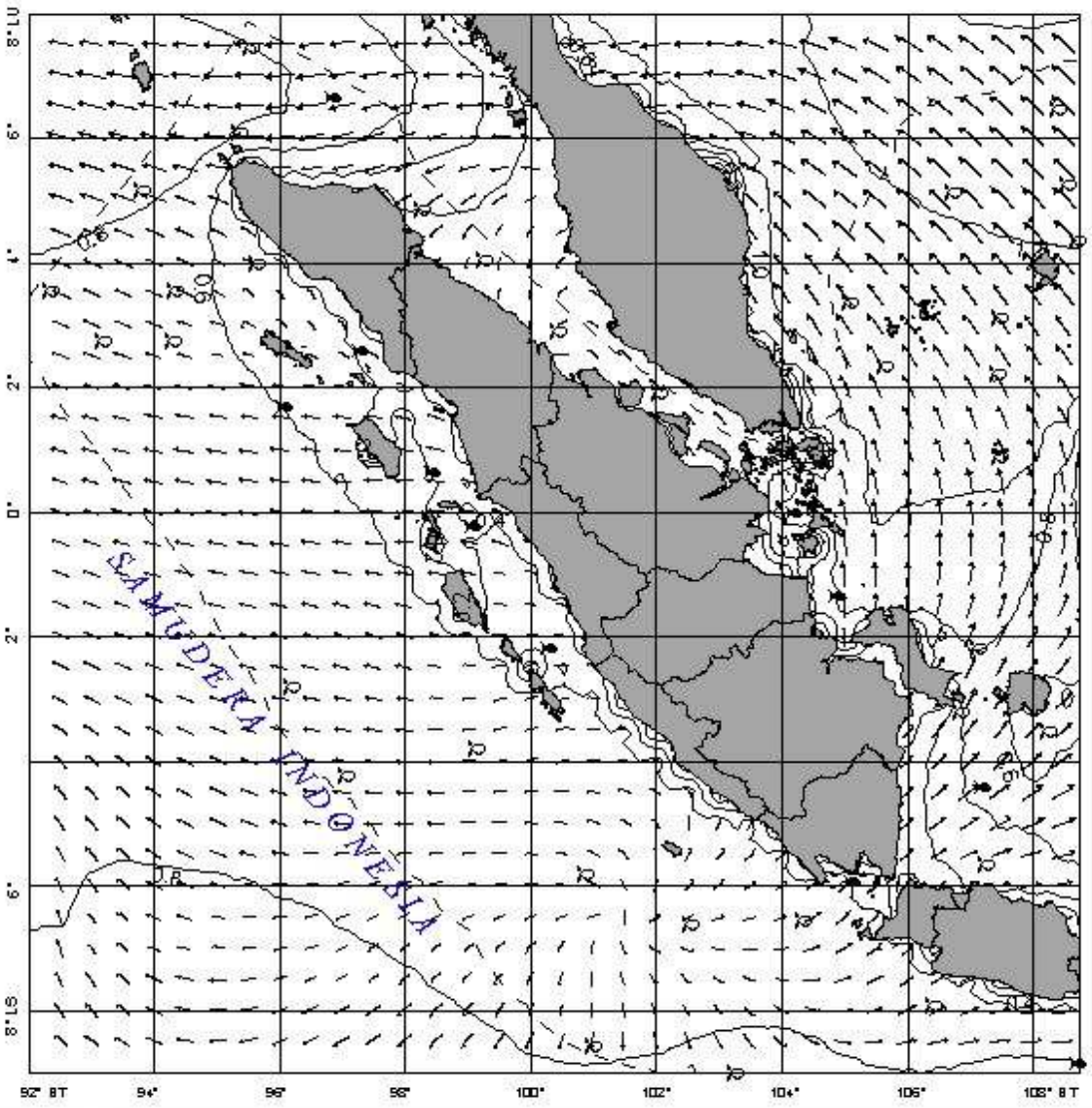


Diagram Alir Pengembangan Informasi Zona Potensi Penangkapan Ikan

PETA PRAKIRAAN DAERAH PENANGKAPAN IKAN DI WILAYAH PERAIRAN SUMATERA DAN SEKITARNYA TANGGAL 19 - 25 JANUARI 2005



KETERANGAN :

- Daerah penangkapan ikan
- Daerah potensi ikan
- Batas ZEE
- Garis kontur tinggi gelombang maksimum dengan interval 0.2 meter

Kecepatan Angin (knot)

- 0.1 - 3.1
- 3.1 - 5.9
- 5.9 - 10.1
- 10.1 - 14.1
- 14.1 - 19.5

Lokasi Penangkapan Ikan

Bujur	Lintang
96.0789	1.7016
96.8461	6.6680
97.2903	2.5899
98.4208	0.6517
99.0669	-0.2366
100.2782	-2.1747
104.1949	0.0057
104.8813	-1.3268
105.1236	-5.9298
107.1828	-4.3955
108.7172	-8.8370

Lokasi Potensi Ikan

Bujur	Lintang	Bujur	Lintang	Bujur	Lintang
92.3642	3.5590	101.0050	-8.5544	108.2327	-3.5072
93.1717	2.7514	102.0549	1.9035	108.3942	6.4662
93.8178	5.1741	102.5394	-6.6163	108.5557	5.2548
94.3023	2.7514	103.2662	-8.9986	108.7172	4.3665
94.3427	3.5590	104.3564	-6.5355		
95.3521	6.1028	105.0832	3.3571		
95.5540	7.4756	105.6485	2.3476		
95.6348	4.0031	106.4157	-7.9084		
96.2001	-2.7804	106.7387	5.1337		
97.0480	-4.2340	106.8598	-3.1841		
98.2593	4.8510	107.1425	-2.1747		
99.1476	-3.7898	107.2636	-5.6472		
99.2688	4.0435	107.4251	2.2265		
100.4397	2.9129	107.4655	3.1148		
100.8839	-5.8087	107.4655	0.8940		

Catatan : tanda minus (-) menunjukkan posisi di Lintang Selatan

- Untuk meningkatkan akurasi informasi daerah tangkapan ikan, diharapkan agar para nelayan mengirimkan kembali hasil tangkapan berikut koordinat lokasinya kepada kami.
- Saran dan kritik dikirimkan ke fax. 021-79180188 atau email seacorm_secretary@yahoogroups.com

U

100 0 100 200 Mil

Skala 1:13.000.000

Sumber :
Hasil analisis Citra Satelit
NOAA-AVHRR dan Topex

Tim Penyusun :
Tim PRTK - BRKP
Tim BMG - JAKARTA

PUSAT RISET TEKNOLOGI KELAUTAN
BADAN RISET KELAUTAN DAN PERIKANAN
DEPARTEMEN KELAUTAN DAN PERIKANAN
Jl. MT Haryono Kav 52-53, Tel : 021-79180303 ext 4033, Fax : 021-79180188
Fax On Demand : 021-79180162

SEACORM

ALAT BANTU ELEKTRONIK:

- Fish Finder (dg sistem hidroakustik)
- GPS (global positioning system
- VMS (Vessel Monitoring System)
- Alat Komunikasi

PERALATAN HIDROAKUSTIK

Cara kerja:

Didasarkan pada sistem gema, yaitu pemantulan kembali bunyi yg dipancarkan oleh sesuatu yg menghalangi

Getaran ultrasonik yg dipancarkan akan diterima kembali oleh alat penerima getaran (vibrator) setelah dipantulkan oleh suatu kelompok ikan, tubuh ikan besar, alat penangkap ataupun dasar perairan.

Tanda2 yg dipantulkan tsb diterima oleh alat penerima getaran suara (vibrator receiver) dan jarak yg telah ditempuhnya diterima oleh suatu alat pencatat ataupun dapat dilihat dari layar khusus.

Kegunaan alat ini:

- Mengetahui kelompok ikan
- Mengetahui pola tingkah laku ikan (migrasi, saat makan, dll)

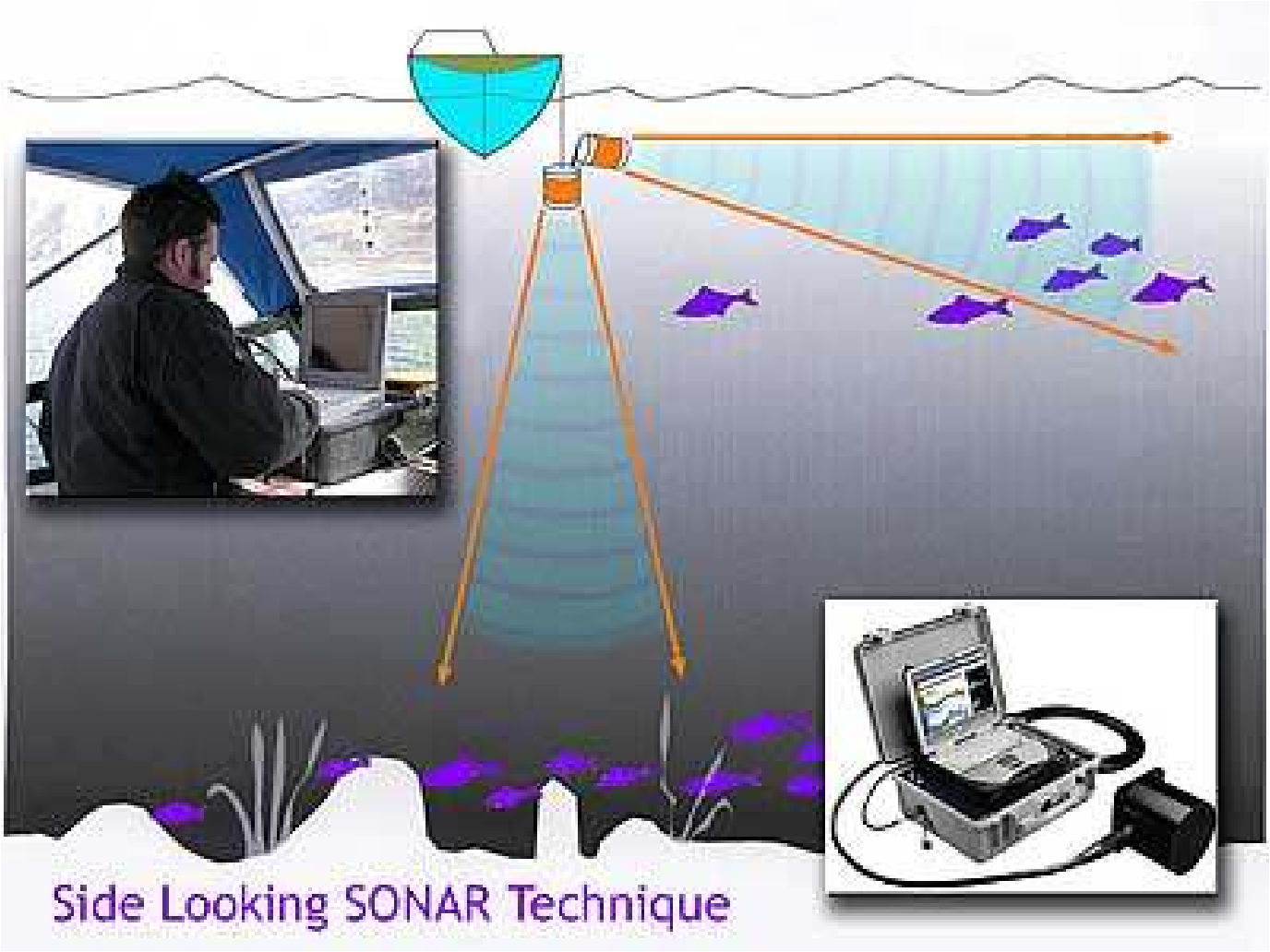
Ada 3 jenis alat hidroakustik yg umum dipakai dlm usaha dan penelitian perikanan:

- Sonar (horizontal sounders)
- Echo sounders (vertical sounders)
- Net sonde (net sounders)

- Sonar:
  - Kekuatan transducer: 1-5 kW
  - Frekuensi : 15-30 kc/s
  - Sudut suara: 10°-20°
  - Jarak jangkauan : 2.000-4.000 m
- Echo sounder:
  - Frekuensi: 30-50 kc/s
  - Sudut suara 30°-60°
  - Jarak jangkauan : 200-1.000 m
- Net sonde:
  - Merupakan peralatan elektronik pd trawl utk mengetahui bukaan mulut jaring

Kelemahan peralatan hidroakustik:

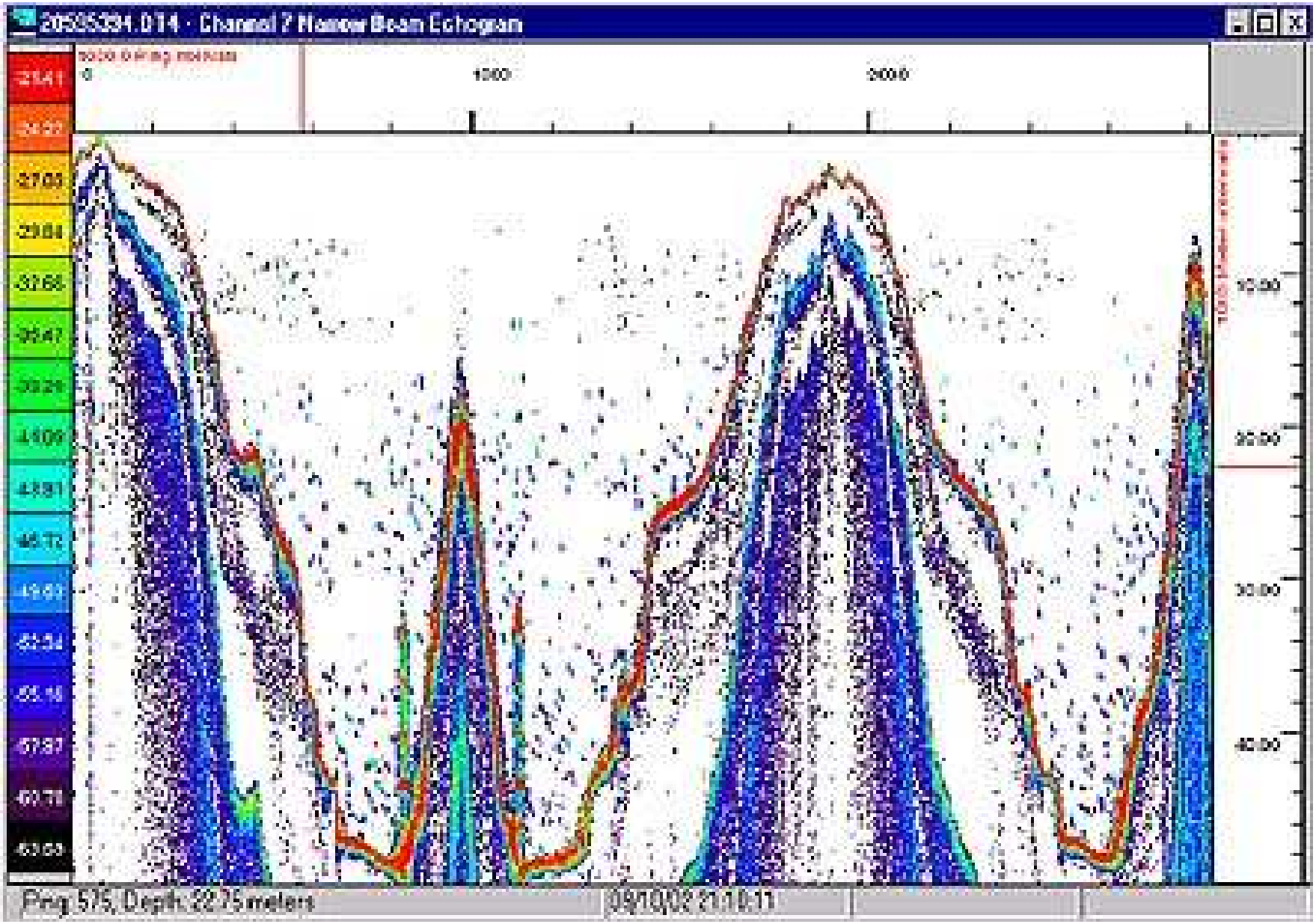
- Gambaran yg dihasilkan tdk menunjukkan keadaan suatu kelompok ikan secara jelas dan benar, shg harus diintepretasikan dahulu.



Hydroacoustic technology is a cost effective way to quickly perform fish population surveys and determine bottom topography in large bodies of water. Diagram showing how the dual beam hydroacoustic instrument works.

Inset Upper Left **:Biologist Juddson Sechrist monitors the output from the hydroacoustics sensor while the boat follows a transect path using GPS.**

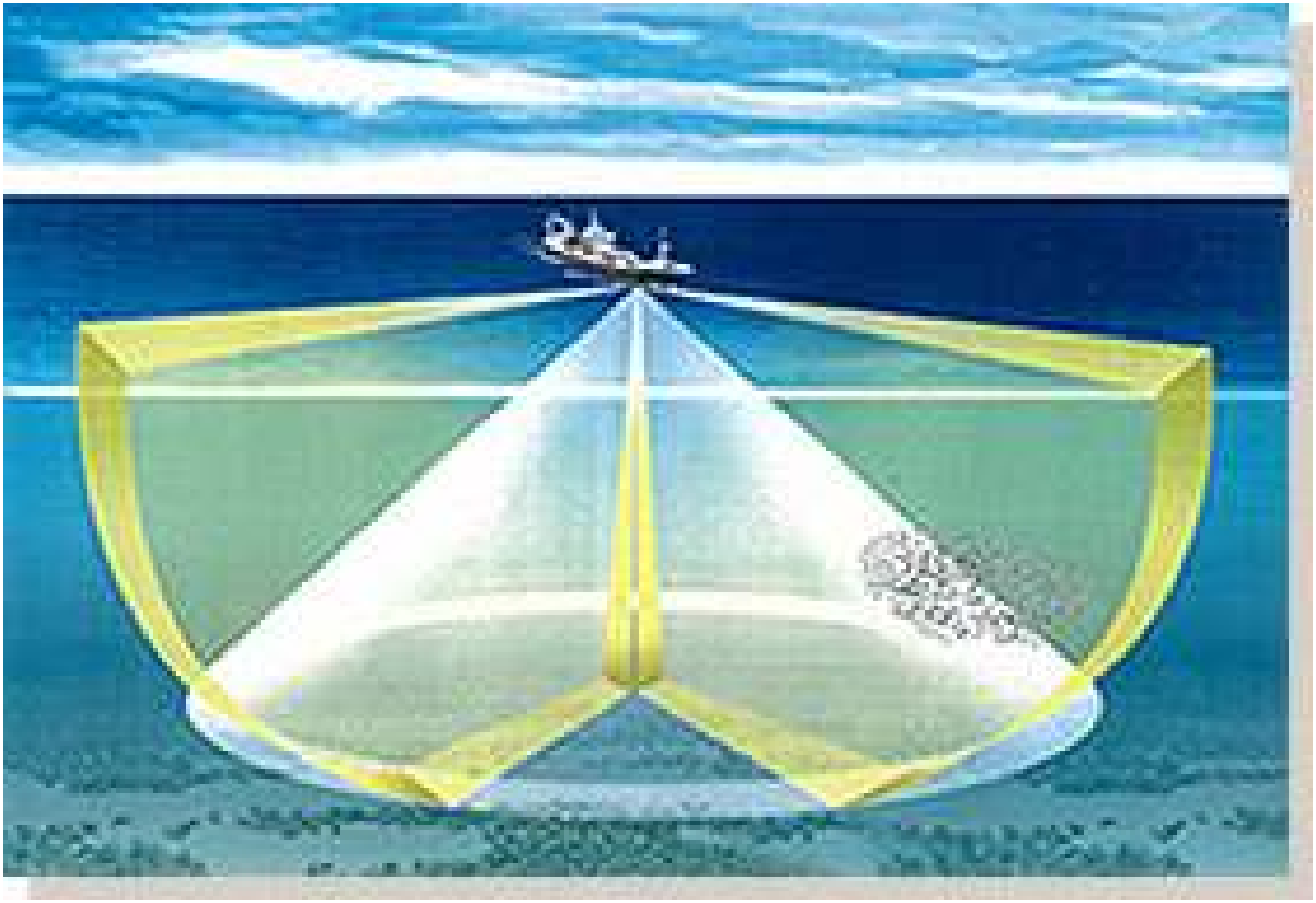
Inset Bottom Right : **The active BioSonics hydroacoustic sensor and receiver unit, usually mounted at the stern of the survey boat.**



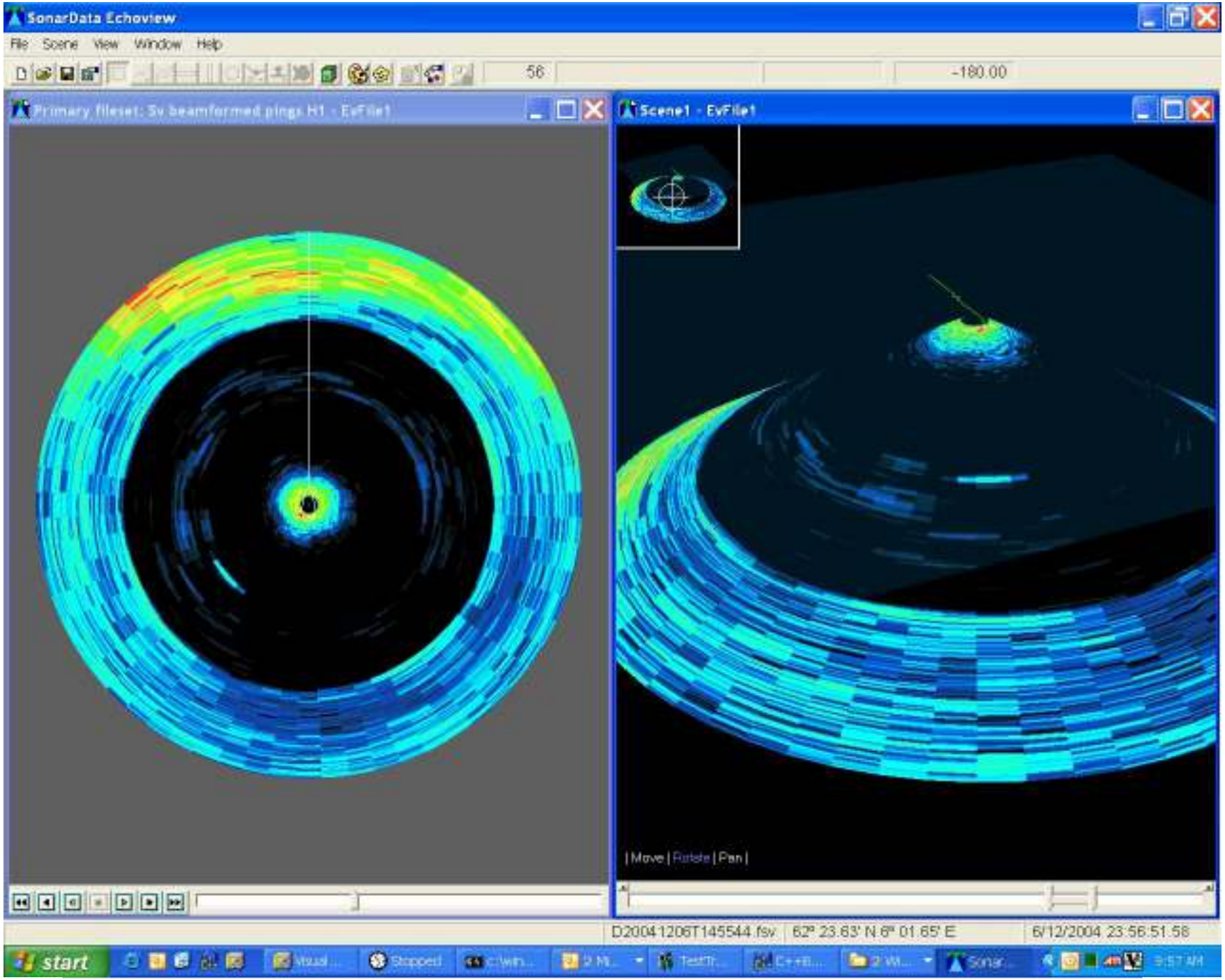
The BioSonics *Visual Analyzer* software screen output showing typical hydroacoustic data - the echogram used to estimate reservoir bottom topography and fish populations.

Contoh sonar modern

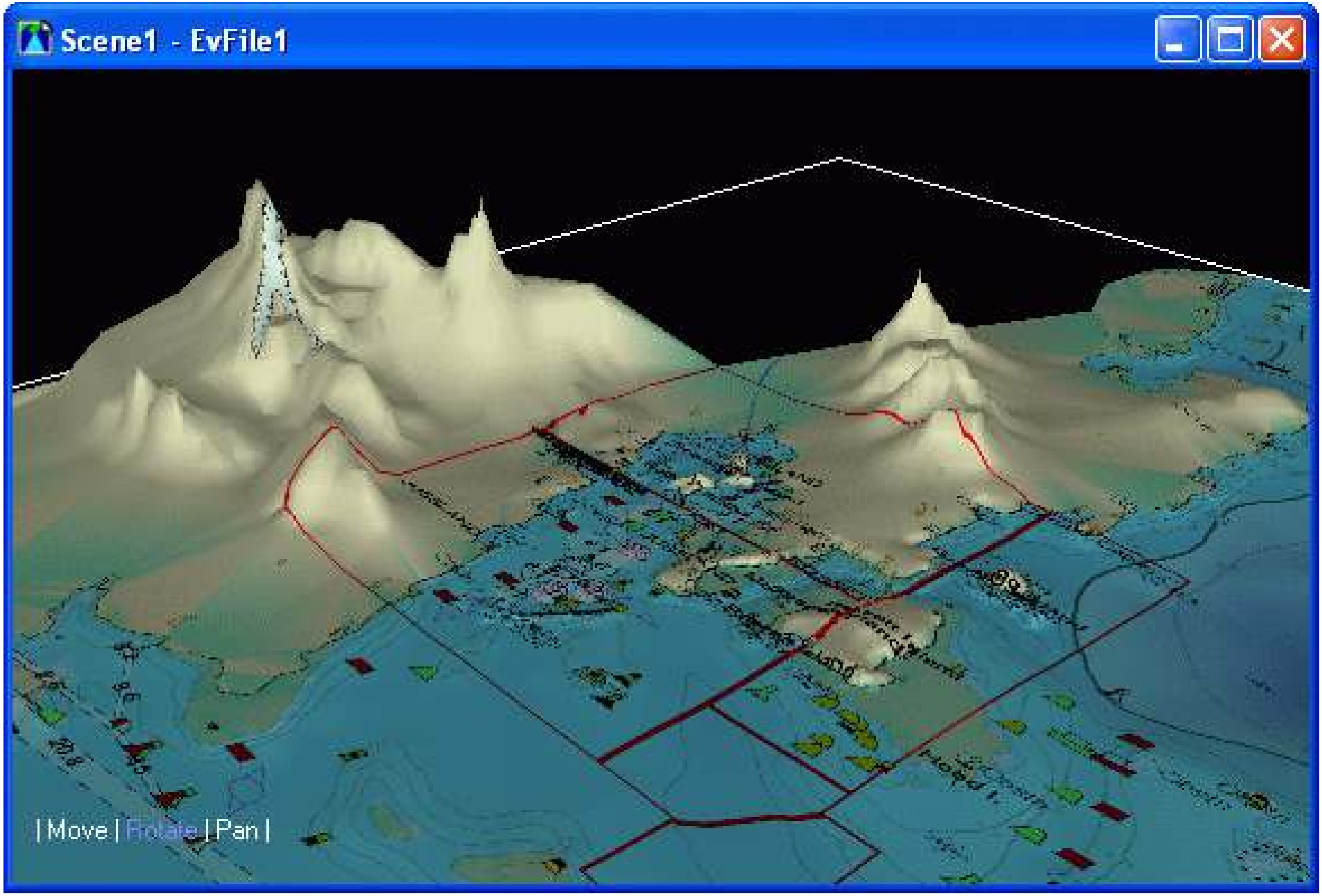
The Furuno FSV-30 (Research Version) is a scientific scanning sonar instrument based on the FSV-30 colour scanning sonar.



Combination of full-circle and vertical scans



H-mode ping in Echoview, and then the same ping as multibeam curtain in a scene



C-MAP is a global electronic chart service. Echoview can use C-MAP data to add 3D surfaces and charts to scenes.

Contoh fish finder keluaran terbaru (2022)


LUCKY


LUCKYLAKER
13.6M
2.7°C
4.7
3.2
5.2
10.4
ZOOM
MENU
MODE


LUCKY
FISH FINDER
9.8M
SETUP
ENTER