

Report N° ...

Research Vessel: RV Mtafiti

Date: 21 - 22 April 2016,

Region: South Mombasa Survey Area: Shimoni

Study of relation of physical parameters and biological parameters at coastal Shimoni region, Kenya

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Objective:

- To determine the variation of water salinity and temperature on depth;
- Determine the concentration of the phytoplankton, nutrients and determine the productivity of the area.

Method:

- i. Take CTD Profile
- ii. Take Niskin bottle for water sampling
- iii. Plankton Net at the surface
- iv. Take water Sampling from the Themosalinity (thermosalinograph)
- v. Drop Line:
 - i. 47 Hooks,
 - ii. Fishing from the bottom and up to 30m from the bottom,
 - iii. Bait: Mackerel
 - iv. Hook: Circular Hooks

Station Information:

Sampling	Series	Station	Date	Time Start (GMT)	Time End (GMT)	Lat	Lon	Max Depth (m)	Sample Depth (m)	Comment
CTD	1	2	21/04/2016	06:56	07:07	4° 38.076 S 4° 37.859 S	39° 28.224 E 39° 28.324 E	150	130	
Niskin	2	2	21/04/2016	07:01	07:07	4° 37.972 S	39° 28.268 E	150	130	
CDT	3	2	21/04/2016	07:42	07:53	4° 38.371 S 4° 38.070 S	39° 28.100 E 39° 28.326 E	150	80	
Niskin	4	2	21/04/2016	07:47	07:53	4° 38.226 S	39° 28.201 E	150	20, 80	
Surface Plankton Sampling	5	2	21/04/2016	07:53		4° 38.226 S	39° 28.201 E	150	Surface 3.5	From the Themosalinity Tap
Plankton Net	6	2	21/04/2016	12:29	12:43	4° 38.260 S 4° 38.144 S	39° 29.102 E 39° 27.955 E	150	Surface	Flow Meter Start: 276217 to 284940
Drop line	7	4	22/04/2016	07:30	08:43	4° 37.820 S	39° 28.732 E	180		47 hooks, Bait: Mackerel Fishing: From Bottom to 30m
CTD	8	4	22/04/2016	11:01		4° 38.485 S	39° 28.576 E	190	120	Blind CTD, Not Real Time

Sampling Preservation:

- Plankton Net we use Formalin 2%
- Phytoplankton we use Lugol
- Sampling from the Thermosalinity, we filter 10L of water and use Lugol

Weather Condition:

- Wind speed: 3 to 4 m/s
- Spring Tide
- Wave height: max 0.5m

Issues/Problem

- Slow speed of the vessel and the vessel was operating with only one engine. (Took us more time to get to the different Stations)
- CTD connection/communication
- Vessel was drifting a lot when at the station
- Hydraulic or winch issue. So we were not able to take vertical phytoplankton Sampling
- Van Veen Grab missing

Limitation:

- Bathymetry Information was not available

Acknowledge

- Crew of R/V MTAFITI
- KMFRI
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