Environmental Impacts in Aquaculture - The Study of Stratification and Stability of Qeshm Island West Coast Waterand Mangrove forest

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Abstract:

Persian Gulf is one of the most important bodies of water which has a very difficult and overwhelming dominant ecosystem due to severe environmental conditions such as temperature and salinity.Gheshm island has a fundamental role in the diversity of biological behavior as well as available dispersion.Characterization of ecological resources is the first step for any study to identify factors influencing the behaviors and conditions are in the sea.The Studying of circular parameters within the sight and physical concept,to clear up some of physical oceanography phenomena are so useful.The coefficient of equation of sea is the important parameter that limit the circulation of the ocean.

The observation data in2006,within atmospheric data that refer to Qeshm island station in commendation answer of sea   coefficient on equation of condition and permanent,Water temperature and local wind are studied. Thedefined physical quantity diffrencies with use of spectrum graph has been analyzed.

At the beginning of hot days,the weather change in column of water,Thermocline layer has appeared.The existence of Thermocline layer in Summer in effect of hot water capacity and penetration hot water in Winter into the lower layers.

Statistical system related to interrelationship of studied parameters represents that: in most time of year, salinity an density of water increased and temperature is decreased by depth increase. Surface and deep temperature of water has a negative interrelationship with salinity and density. According to pirson interrelationship coefficient between temperature, salinity and surface density ,we concluded that water surface temperature in surface density has more effect than salinity.

To make sure that the best pattern is fullfield and the highest accuracy is available, generalized linear analyzer with level security of 99%is used .output result provided with linear relationship which is independent from place and dependent on time (month).

Depth, temperature and density of independent parameters and density of dependent quality and affected by parameters are considered in these relationships.

Shallow water borne figure of Khuran gulf (Qeshm) is severely affected by barren lands around .because eastern region is located between coasts next to each other, it does not represent survival changes .so in western region with 5 sampling stations, 3 stations are located as monitoring stations. The reason of selecting monitoring station is more surrounding than region and making distance to Hara forests . Characteristics of monitoring stations are mentioned .

A program is written in Mepel 12 software to determine the coefficient of case equation in order to obtain coefficient of 3 equations. in order to obtain coefficient of 3 equations . gained results are mentioned below:

$$\beta = 0.721 (kg\ /m^3 .psu)\quad \kappa = 4.1\ \times 0^{\ -3}(kg\ /m^3 .dbar)\quad \alpha = -0.143(kg\ /m^3 .°c)$$

By comparison of these coefficients with source ocean, we can state with a very good estimation that there is a simple linear relationship between the degree of temperature ,salinity, pressure, and density of sea water in Khuran gulf region (Qeshm) . Gained results of CTD data capture to last depth (21/4 meters) represent layer structure in some seasons of a year. The formations manner of layer structure is always a question. Most of layer structures are assigned to two_sided

Dispersion syndrome phenomenon . Formation of two_sided dispersion syndrome relates to the difference in molecular dispersion of salinity and temperature of seas that has a special state dynamically.

For example the difference of coefficient of salinity molecular dispersion is 100 times lesser than the coefficient of temperature molecular dispersion.

$$KT = \frac{8}{10}, KS = \frac{8}{1000} = 0.01$$

This factor causes instability and formation of syndrome, as decrease of potential energy in water column, causes increase of density gradient in water column. If current is weak, amount of salt penetration in other words two-sided dispersion and mixture for sea water will follow below equation:

$$F_S = -\rho X_S \frac{\partial S}{\partial n}$$

Negative sign of equation results from penetration in the direction of gradient desent. Salt molecular penetrability coefficient for sea water is as follow:

$$X_S = 1/5*10^{-9} m^2/s$$

By attention to verified data, salt penetration or in other words movement of salt molecular amount is very low. By attention to the same amount lines of temperature in sampling months in winter 1384 , changes of water column are small and fixed from surface to bed that determines the mix layer of water in winter during this season , the degree of temperature of eastern parts has been always lesser than western parts. The process of changes in average degree of temperature during these periods decreased to 21/3 from east to central part (about 21/7 C) and again decreased to 20/29 C toward west.(except in Esfand that difference of degree of temperature in east and west is 0/07 C) .
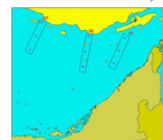
We see Theabovegraphshowsthatthe regime'ssalinity and temperaturestation2winterlayer(double diffusion) atdepths greater than35meters.
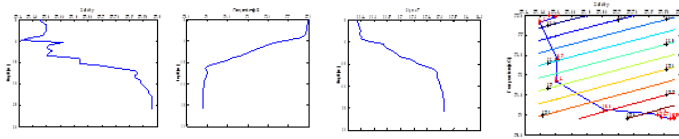
Ocean areas are bynatuie have a Double-diffusion converction,because of the existing salinity and temperature differences in variausdepths. As part of the ocean has a temperature inversion (temperature increasing with depth).In the Island,there are two procedures of dual diffiusionconvection;including finger and diffusive regime,which have a conventional role in creating temperature inversion.Effects of bottom topography and coastline drastic changes influence the double diffusive convection.

The time series of Air and Water could be analyzed by the relation of each other.And the spread of the time series and Richardson Numbers in layers of water and the result of Regression.

Environment's action like Mangro Jungle and the result of tide near the Hormoz Strait the flow of sweet waters from the Ocean due to Salinity and rich materials have been analyzed.