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Commentary

A commentary on the oceans – our ontogeny of eternity

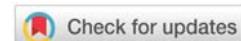
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Received: 31 March, 2021**Accepted:** 19 May, 2021**Published:** 20 May, 2021

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Introduction

All over the universe, earth is the only planet where living organisms are having existence. The entity of life on earth is the result of coordination and balancing of various simple or complex reactions. By the way, it is seen that the life on earth is possible due to the collaboration of three systems i.e. lithosphere, atmosphere and oceans. The oceans are symbol of life on earth. It was considered that first living organism was found in oceans only. Before we know about the relationship between life and oceans, we should first try to understand the birth of oceans. During the birth of our planet earth; about four hundred million years ago there was no ocean or living organism on it. At the initial stage of the birth of earth the temperature of the planet was so high that rain drops are immediately evaporated. As the temperature of earth gradually fell down, the surrounded humidity turns into water and started raining continuously. This process was going on for million years and due to which oceans are produced. In this way, our planet's one-third part was filled with water.

Our earth's about 70% part has surrounded by oceans. In the oceans, nearly 97% of water is run through the total water availability on earth. Mainly five oceans are there on earth. Those were The Pacific Ocean, The Indian Ocean, The Atlantic Ocean, The Southern Ocean and The Arctic Ocean. In fact, there is ground under the ocean like rocks and hills on earth. The ground level of oceans has different types. Under the ocean hills, rocks, plain rocks, dormant volcanoes, islands are included. The ground part of oceans has divided into three parts continental shelf, continental slope and abyssal plain. Continental shelf is adjacent to coastal area which is affected by soil. This area is nutritive by rich elements, which are flown by rivers. Due to availability of sunray and nutritive elements, this area is enriched with herbal plants and population. However, this area is badly affected by the unwanted activities of human beings. Now a day's continental shelf is the most polluted part of oceans.

From the very beginning to till date oceans are the part of living organisms. It not only spreads over a large part of the earth but also it gives shelter to many ecosystems inside and nearby it. Coral reef is one of the example such ecosystem. Oceans are act as a nursery for herbal plant like mangrove and many other essential herbal plants.

Relationship between oceans & climate

Oceans are one of the factors, which determine the climate of earth. The salinity and specific heat of the oceans affect the atmosphere of earth. As we know, the heating value of water on earth is always having the specific. Due to high specific heat, ocean water absorbs a large amount of sunray within it. That is the reason oceans are became the storehouse of heat for which the temperature is balanced on earth surface. On balancing of climate, the salinity of oceans is becoming a blessing. The changes of climate on earth and the alkalescent of oceans are interrelated. As we know, cold water is having more density than hot water. Inside the ocean at any place due to evaporation of water, temperature changes at thatplaceandside-by-side the difference will occur in the salinity too that is the reason ocean water became hot and ultimately created a pressure depression that produces heavy rain on earth surface.

Networks of tides

As we all aware that all the living creatures are survived by water. However, when the name of oceans is coming we all thinking about the big tides. The surfaces of the oceans are heated by sunray and it is churned by wind due to which tides are born at the coast of the ocean. The tides of water expressed the mobility of oceans. The tides in oceans are formed due to the air blown at the coastal area. Nevertheless, by the tides water is not transferred from one place to another like flow of water. Tides are nothing but the up and down motion of water. When the speed of the wind is normal, the tides are raise up to 2 to 5 metre whereas when the speed of wind is high it may



raise up to 10 to 15 metres high. Tides are the result of inter correlation between atmosphere and ocean. Due to the up and down motion of the water various types of nutrients are shifted from one place to another for which life is continuing in ocean.

The surfaces of oceans are best place for the living organisms. In this part by the help of sunray, phyto planktons manufactured their carbonic acid that is the first element of the food chain. Usually, the water oceans are divided into two types. The upper part of the ocean water is about 2% of the total ocean. This part is affected by the wind and direct sunlight that carries many vital activities of the ocean. Water evaporates from the surface of water and rain as potable water on earth. This water nourishing the life and again goes to the ocean by the river along with many vital minerals. The salinity of oceans is the results of these reactions over millions of years. The lower parts of the oceans are too cold and the temperatures of lower part of the oceans are nearly about -5°C. A study reveals that an atom of lower part of the ocean takes about a thousand years to come to the upper part. The source of this water is originated from the upper most part of the polar region, which is denser due to cold. The salinity of this water is constant. In between the upper and lower part of the ocean, there is boundary like region is present which prevents the intermixing of upper and lower part's water. In this middle part region the temperature of decreases very fast and as we know that the density of cold water is more than hot water that's why this middle region is preventing the intermixing of upper and lower part's water.

Life inside the oceans

Due to specific properties of ocean water, more number of living organisms exists than the surface of earth. Even though the density of animals is differ from earth but living organism are found both on lower and upper part of the ocean. Apart from this speciality of ocean, animals are varied from the animals on earth. Life in oceans can be divided into three parts. In the first part means about 200 metres of ocean due to sunlight and wind more animals are staying in this region. This region is fertile due to the carbon is converted into different types of product for which living organisms can easily arrange their food for survival. In the second part which is deeper than 200 metres, in this region the amount of living organisms are less than the first part. In third region means the denser ocean is also contains some amount of living organisms, which is a surprising thing. It is wonderful that in the dense ocean also life is available in different verities. The living organism present on the upper part of the ocean holds the nutrition of these organisms. The leftover parts of the upper layer's living organism are the food element for the dense part's living organism. In this region sunlight cannot be reached even tough phyto plankton's are also absent in this area but still some living organisms are present. In this region, the food chain starts from the bacteria that get energy from the chemicals of ocean water. This type of

organisms developed their alternative habitat where sunlight cannot reach. Sea animals can move up and down as well as in left and right motion also. Some animals are swims over the water where as some are float on water.

During the development, first sea animals are came to the earth surface then they returned. Whale, walrus like mammalian sea animals are some of the example of this type. But still some sea animals are there who are coming to the surface of earth for their basic needs.

Oceans and natural resources

The resources available in oceans can be divided into four categories. In the first category food elements which are necessary for humans and animals. In the second category salt and other minerals, chemicals, etc. In the third category petroleum and other gas sources. In the fourth category energy from tides.

Sea foods are the rich sources of proteins. The sea algae's are one of the sources of food. In some of the algae iodine is present and some algae are useful for the industry. Sodium sulphate which is abundantly used for soap, glass and paper manufacturing are obtained from ocean water. Every year after salt removal from the seawater about 70,000 metric tonne of potassium sulphate, magnesium sulphate and bromine metal can be extracted. Our country India is placed in the coastal area. It has longest coastal line. So oceans can be used as a land of biodiversity as well as for economic development.

Oceans are in threat

Now the development of human civilisation and industrialization is badly affecting the oceans. The coastal areas of the oceans are polluted day by day. If due to any reason, the temperature of the earth raises then oceans will lose their capability to absorb the carbon dioxide for which there will be a difference in gases in atmosphere, which will in turn, puts alarm over the living organisms. According to the survey of IPCC (Inter government Panel of Climate Change) due to industrialization and global warming the levels of oceans are gradually increasing for which all over the globe temperature is changing.

Conclusion

If any reason life will be stopped at ocean then amount of carbon dioxide is going to be thrice. Number of sea animals used carbon for their development for which the upper layer of the oceans is composed of 45% of carbon. In fact, oceans are our future development prospects. But we have to remember that we should nurture and care the oceans in a prospective way. Oceans are main factor of living organisms so we have to conserve and contribute in our own way so that its origin will be remaining uninterrupted.