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A Short Note on Ocean Raw Materials and Its Chemical Elements

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Abstract

Oceans cover 70% of Earth's surface, host a vast variety of geological procedures conducted for the formation and concentration of mineral supplies, and are the ultimate repository of many materials eroded or disintegrate from the land surface. Hence, oceans contain vast quantities of materials that currently serve as main resources for humans. Today, direct removal of resources is limited to salt; magnesium; placer gold, tin, titanium, and diamonds; and fresh water.

Keywords: Shoreline; Ocean Raw Materials; Coastal Populations; Marine; Seaward; Sea Area

Discussion

Ancient ocean deposits of residues and evaporites now located on land were originally deposited under marine circumstances. These deposits are being exploited on a very large scale and in preference to modern marine material supplies because of the easier availability and lower cost of terrestrial resources. Yet the increasing population and the conservation of readily accessible terrestrial deposits undoubtedly will lead to broader exploitation of ancient deposits and increasing extraction directly from sea water and sea basins.

Covering large areas of the deep sea with masses of up to 65km per square meter, manganese nodules are lumps of minerals ranging in size from a potato to a head of lettuce. They are controlled mainly of manganese, iron, silicates, and hydroxides, and they grow around a crystalline nucleus at a rate of only about one to 3 mm per million years. The chemical individuals are precipitated from the ocean water or originate in the pore waters of the underlying sediments.

The greatest densities of nodules occur off the west coast of Mexico in the Clarion-Clapperton Zone, in the Peru Basin, and the Indian Ocean. Their concentration in this area can exactly be attributed to an increased input of manganese-rich minerals through the sediments deliver from the interior of the Earth at the East Pacific Rise by hydrothermal activity that is, released from within the Earth by warm-water seeps on the ocean floor and distributed over a large area by deep ocean currents. Seawater elements are rich source of various commercially important chemical elements. Much of the world's magnesium is recovered from ocean water, as are large volumes of bromine. In certain parts of the world, sodium chloride (table salt) is still originated from by evaporating seawater. In addition, water from the sea, when desalted, can furnish a limitless contribution of drinking water.

Conclusion

Many large desalination plants have been established in dry areas along seacoasts in the Middle East and elsewhere to relieve shortages of fresh water. The conversion in usage began to evolve prior to World War II and tended to be committed during that war, when the term Middle East was given to the British military command in Egypt. Subsequent events have tended, in loose usage, to enlarge the number of lands incorporate in the definition. The three North African countries of Tunisia, Algeria, and Morocco are closely attached in sentiment and foreign policy with the Arab states. In addition, geographic factors often essential statesmen and others to take account of Afghanistan and Pakistan in connection with the affairs of the Middle East.

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