Chikitsak Samuha's
Sir Sitaram and Lady Shantabai Patkar College of Arts & Science, and V. P. Varde College of Commerce & Economics.
(An Autonomous College affiliated to University of Mumbai)

accredited at the "A+" Level NAAC

WEEKEND CHRONICLE

EXPLORING THE WORLD'S MARINE RESOURCES

NOVEMBER 2021

– A BMS INITIATIVE –

Email Id - bmsperiodical@gmail.com

Dr. Mala Kharkar
Chief Education Officer

A MESSAGE FROM CHIEF EDUCATION OFFICER'S DESK

Dear Readers,

"Develop a passion for learning. If you do, you will never cease to grow." We live today in a world that is so very different from the one we grew up in, the one we were educated in. The world today is moving at such an enhanced rate and we as educationalists need to cause and reflect on the entire system of education. On-line learning provides new age technology to widen the educational scope. It prepares students to succeed in an increasing technology driven global economy. Technology makes life much easier, most of all it saves time and energy. It is one of the fastest growing field right now and there is no sign of stopping anytime soon. It is indeed a great moment for all of us to bring forth this weekly E-Periodical "Weekend Chronicle". We are sure this E-Periodical will help to acquire knowledge and skills, build character and enhance employability of our young talented students to become globally competent. There is something for everyone here, right from the fields of Business, Academics, Travel and Tourism, Science and technology, Media and lot more.

The variety and creativity of the articles in E-Periodical will surely add on to the knowledge of the readers. I am sure that the positive attitude, hard work, continued efforts and innovative ideas exhibited by our students will surely stir the mind of the readers and take them to the fantastic world of joy and pleasure.

Dr. Shrikant B Sawant
Principal

A MESSAGE FROM PRINCIPAL'S DESK

Dear Readers,

As we know, "An Investment in knowledge pays the best interest."

Hence in this regard the E-Periodical Weekend Chronicle is playing a vital role in providing a platform to enhance the creative minds of our students of BMS Department. The E-Periodical that is online magazine drives us through varied genre containing- News related to Global affairs under departments like Business, Advertisement, IT and Science & Nature to intellectual news articles under Academics, Media and Library Departments. It also covers articles related to Food & Health care, Culture & Cuisine and Travel & Tourism which usually tops our "bucket lists" including article which address societal problems under Department of Social Issues. Lastly covering words and vision of our talented students as budding poets, writers and thinkers under Student's section Department.

Over all this vision of constructing E-Periodical by students will engage today's youth and the crafters of the youth (teachers) in their communities which is the necessity to overcome hurdles of present reality. We will strive to make a better world through our acts and thoughts. Rather it is a challenge to be met!

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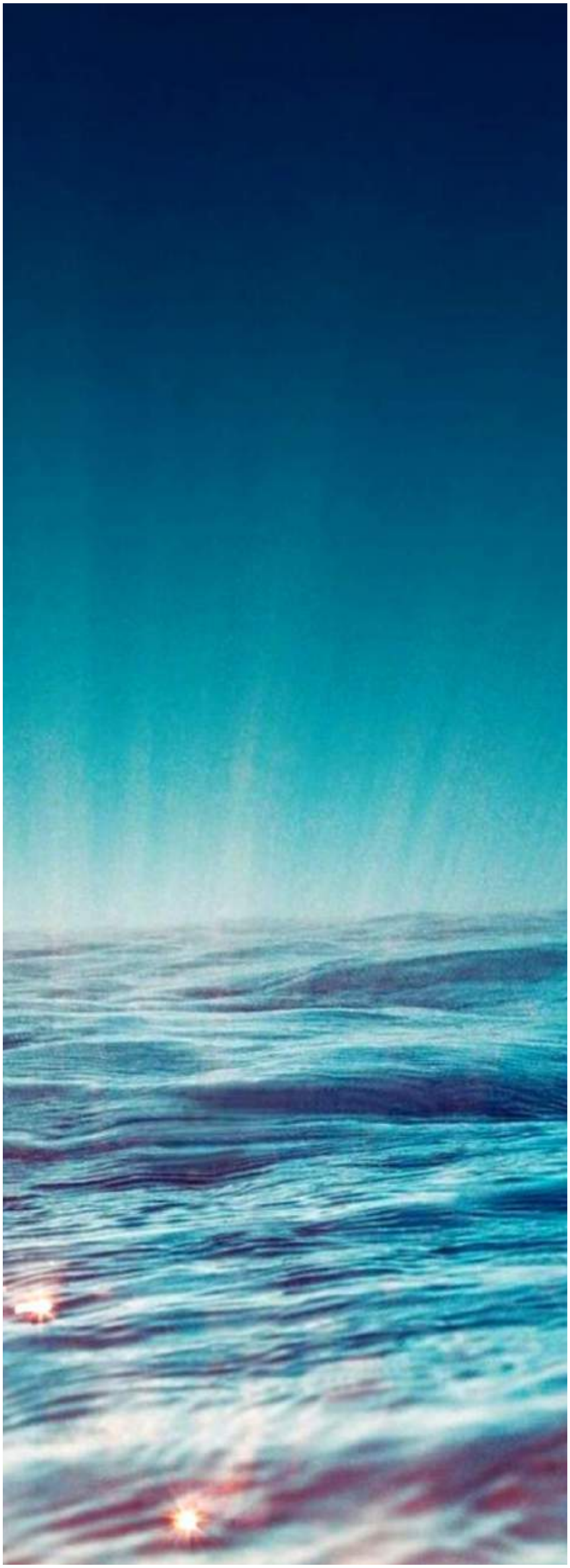

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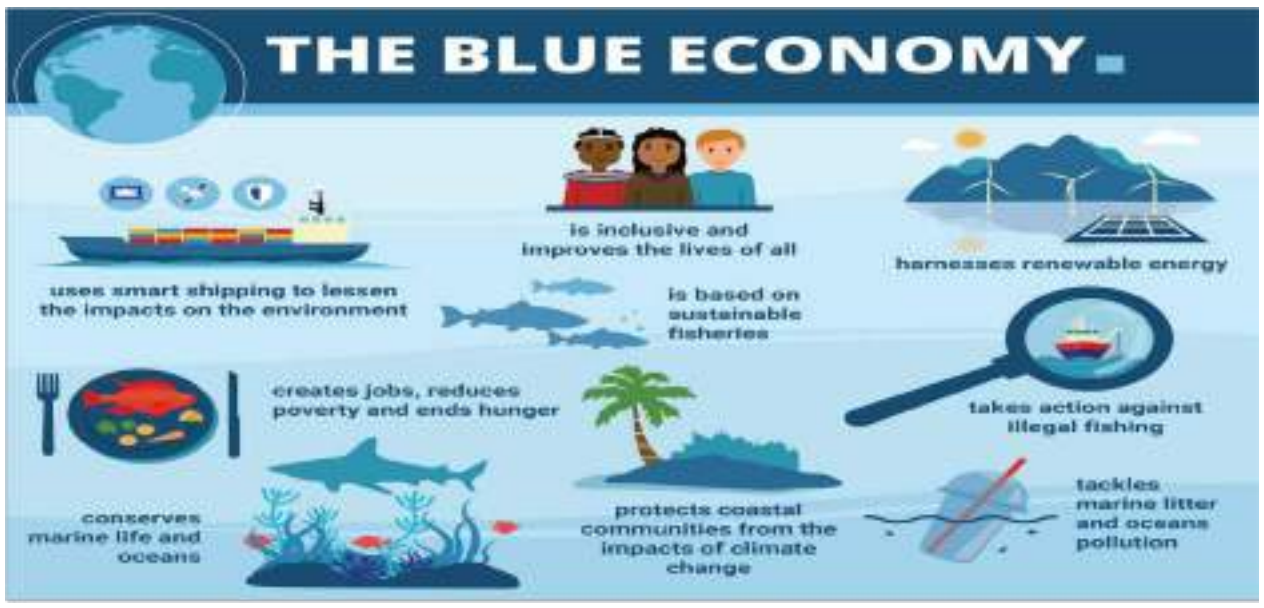
WEEKEND CHRONICLE

Business

Sunday, 28th November, 2021

EXPLORING THE WORLD'S MARINE RESOURCES



Definition
United States Secretary of Commerce, addressed in 2012 Capitol Hill Ocean Week that United State's sea area actually has always been a strong economic engine. Some people refer it as "blue economy".

Since the 21st century, the concept of the "Blue Economy" has become increasingly popular. International society believes that blue economy covers three economic forms: economy coping with global water crisis1 (McGlade et al., 2012)innovative development economy2 (Pauli, 2009) and development of marine economy3 (Behnam, 2012).

Blue Economy Is a Strategic Framework

Australia believes the essence of blue economy is to promote the development of marine industry which ecologically, economically and socially benefit from marine ecosystem and ensure that the ecosystem-based management model should be the core in decision-making process of industrial and community development (Australian Government, 2012).

Blue Economy Is a Kind of Policy

In 2009, Maria Cantwell, United States Senator of Washington State, pointed out in the opening statement of the hearing on "The Blue Economy: The Role of the Oceans in our Nation's Economic Future" that "The "Blue Economy" – the jobs and economic opportunities that emerge from our oceans, Great Lakes, and coastal resources – is one of the main tools to rebuilding the United States economy."

Blue Economy Is a Part of Green Economy

UNEP and other international organizations extract blue economy from green economy. They encourages to tackle climate change via low-carbon and resource-efficient shipping, fishing, marine tourism, and marine renewable energy industries (UNEP et al., 2012).

Blue Economy Is a Sustainable Marine Economy
"We assume, "blue economy" is a sustainable marine economic development model. It is a new development mindset and its essence is to develop marine economy while protecting marine ecosystem well and finally achieving sustainable utilization of resources."

Blue Economy Is Marine-Based New Technology Economy
In its research report, Commonwealth Scientific and Industrial Research Organisation (CSIRO) of Australia mentioned "blue GDP," stressing that while developing diversified ocean-based industries, the idea of social and environmental sustainability has been implemented in the development under the support from new marine technologies and emerging industries (Commonwealth Scientific and Industrial Research Organisation [CSIRO], 2008).

EU's Blue Growth Strategy and Blue Innovation Plan
In 2012, the European Union proposed the "Blue Growth" strategy, specifying that Blue Growth will be the core of marine policies and stating clearly key development areas and specific measures for the future. . In 2014, the Blue Economy Innovation Plan was launched, specifying that the plan will be executed from three aspects: (I) Develop sectors that have a high potential for sustainable jobs and growth, (II) Essential components to provide knowledge, legal certainty and security in the blue economy and (III) Sea basin strategies to ensure tailor-made measures and to foster cooperation between countries. In 2017, the EU issued the Report on the Blue Growth Strategy Toward More Sustainable Growth and Jobs in the Blue Economy, this report examines what has been learnt and what has been achieved since 2012, what is ongoing and what is still missing.

Newscaster : Gauri Chandanshive
Freelancer : Rohit pawar

WEEKEND CHRONICLE

Information Technology

Sunday, 28th November, 2021

TECHNOLOGY HAS BEEN AN INTEGRAL PART OF OCEAN EXPLORATION. BOB BALLARD DISCUSSES THE WAYS TECHNOLOGY HAS ADVANCED OCEAN DISCOVERIES.

Oceanography is an interdisciplinary science integrating the fields of geology, biology, chemistry, physics, and engineering to explore the ocean. Oceanography is a relatively young field of science. The era of formal oceanographic studies began with the H.M.S. Challenger Expedition (1872-1876), the first voyage to comprehensively collect data related to ocean temperatures, chemistry, currents, marine life, and seafloor geology. The average depth of our ocean is over 3,600 meters (2.23 miles), and scientists require special equipment that is capable of visiting these regions of crushing pressures, extreme cold, and darkness. Over the last few decades, submersible technology has been developed and refined, allowing us to visualize, sample, and survey our planet's deep-sea environments.

Submersibles are underwater robots that are deployed from the ship to the sea, where they record and collect information from the ocean's water column and seafloor for scientific analysis. Three main types of submersibles have been used on recent NOAA Ocean Exploration-supported missions: human-occupied vehicles (HOVs), remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs).

Human-occupied vehicles (HOVs) transport a small team of scientists and pilots directly to the seafloor for a limited amount of time. Similar to the other submersibles, HOVs are equipped with tools such as lights, cameras, sensors, manipulator arms, and collection instructments. However, HOVs are unique in their ability to bring scientist's own eyes and knowledge as deep as thousands of meters underwater to explore, observe, collect samples, and conduct research first-hand. With seven reversible thrusters, it can hover in the water, maneuver over rugged topography, or rest on the sea floor. It can collect data throughout the water column, produce a variety of maps and perform photographic surveys. Alvin also has two robotic arms that can manipulate instruments, obtain samples, and its basket can be reconfigured daily based on the needs of the upcoming dive.

Remotely operated vehicles (ROVs) are tethered underwater robots used for research, exploration, and imagery collection in the water column and on the seafloor. ROVs are tethered to the ship, allowing control signals to be sent and received directly between topside operators and the subsea vehicle. Many ROVs can also collect samples via a manipulator arm operated by a pilot; later analysis of these samples can reveal even more about the seafloor.

Autonomous underwater vehicles (AUVs) are pre-programmed robots that can drift, dive, or glide through the ocean without real-time control by human operators. AUVs collect high-resolution sensor data, which provides detailed information for researchers. Once deployed, AUVs operate on their own, guided by a pre-planned route, which permits scientists to conduct other research while the AUV is surveying the surface or deep ocean.AUVs constitute part of a larger group of undersea systems known as unmanned underwater vehicles, a classification that includes non-autonomous remotely operated underwater vehicles (ROVs) – controlled and powered from the surface by an operator/pilot via an umbilical or using remote control. In military applications an AUV is more often referred to as an unmanned undersea vehicle (UUV). Underwater gliders are a subclass of AUVs.
While each vehicle is unique in its application, they all work to connect people with the deep-ocean realm.
A total of 10 Submersible were built and are representative of late 1960s deep-ocean submersible design. Two (Pisces IV and Pisces V) are currently operated by National Oceanic and Atmospheric Administration and the first production vehicle is on display in Vancouver. Pisces VI is undergoing retrofit.

Reference link:-
https://en.m.wikipedia.org/wiki/Submersible#:~:text=Submersibles%20have%20many%20uses%20worldwide,and%20recovery%2C%20and%20underwater%20videography.

WEEKEND CHRONICLE

Science & Space

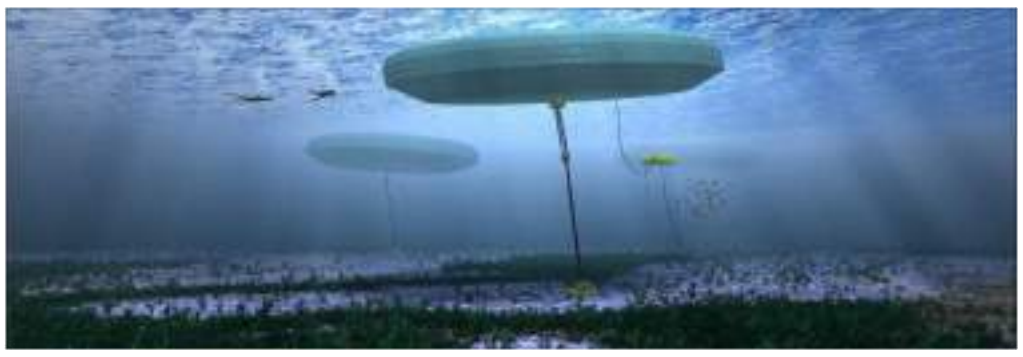
Sunday, 28th November, 2021

SCUBA Droids: SCUBA divers working at extreme depths often have less than 15 minutes to complete complicated tasks, and they submit their bodies to 10 times normal pressure. To overcome these challenges, a Stanford robotics team designed Ocean One: a humanoid underwater robot dexterous enough to handle archaeological artefacts that employs force sensors to replicate a sense of touch for its pilot. Highly skilled humanoid robots may soon replace human divers in carrying out deep or dangerous ocean research and engineering tasks.

New waves of ocean energy: The Ocean is an enormous storehouse of energy. Wave energy alone is estimated to have the technical potential of 11,400 terawatt-hours/year (with sustainable output equivalent to over 400 small nuclear power plants). Technological innovation is opening up new possibilities for plugging into the power of waves and tides. A commercial project in Australia, for example, produces both electricity and zero-emission desalinated water. The next hurdles are scaling up and making ocean energy harvest cost-efficient.

Deep sea mining: Portions of the seafloor are rich in rare and precious metals like gold, platinum and cobalt. These marine mineral resources have, up until now, lain mostly out of reach. New 300 tonne waterproof mining machines were recently developed that can now travel to some of the deepest parts of the sea to mine these metals. Over a million square kilometres of ocean have been gazetted as mining claims in the Pacific, Atlantic, and Indian oceans, and an ocean gold rush may open up as early as 2018. Mining the seafloor without destroying the fragile ecosystems and ancient species often co-located with these deep sea mineral resources remains an unsolved challenge.

Outlook



Our fate is inextricably linked to the fate of the oceans. Technological innovation on land has helped us immeasurably to clean up polluting industries, promote sustainable economic growth, and intelligently watch over changes in terrestrial ecosystems.

We now need ocean tech to do the same under the sea.

As the marine industrial revolution advances, we will need to lean heavily on innovation, ingenuity and disruptive tech to successfully take more from the ocean while simultaneously damaging them less.

Newscaster: Priyanka Vengurlekar.

Freelancer: Naima Bhatta

WEEKEND CHRONICLE

Nature

Sunday, 28th November, 2021

SAVE OUR OCEAN! SAVE OUR SEA LIFE!

The ocean is one of Earth's most valuable natural resources. It provides food in the form of fish and shellfish—about 200 billion pounds are caught each year.It's used for transportation—both travel and shipping. It provides a treasured source of recreation for humans. It is mined for minerals and drilled for crude oil.The ocean plays a critical role in removing carbon from the atmosphere and providing oxygen. It regulates Earth's climate. The ocean is an increasingly important source of biomedical organisms with enormous potential for fighting disease. These are just a few examples of the importance of the ocean to life on land. Explore them in greater detail to understand why we must keep the ocean healthy for future generations.

Fishing Facts

The oceans have been fished for thousands of years and are an integral part of human society. Fish have been important to the world economy for all of these years, starting with the Viking trade of cod and then continuing with fisheries like those found in Lofoten, Europe, Italy, Portugal, Spain and India. Fisheries of today provide about 16% of the total world's protein with higher percentages occurring in developing nations. Fisheries are still enormously important to the economy and well-being of communities.

The word fisheries refers to all of the fishing activities in the ocean. Fishing activities resulting in fish not used for consumption are called industrial fisheries. Fisheries are usually designated to certain ecoregions like the salmon fishery in Alaska, the Eastern Pacific tuna fishery or the Lofoten island cod fishery. Due to the relative abundance of fish on the continental shelf, fisheries are usually marine and not freshwater.

Although a world total of 86 million tons of fish were captured in 2000, China's fisheries were the most productive, capturing a whopping one third of the total. Other countries producing the most fish were Peru, Japan, the United States, Chile, Indonesia, Russia, India, Thailand, Norway and Iceland- with Peru being the most and Iceland being the least. The number of fish caught varies with the years, but appears to have leveled off at around 88 million tons per year possibly due to overfishing, economics and management practices.

The amount of fish available in the oceans is an ever-changing number due to the effects of both natural causes and human developments. It will be necessary to manage ocean fisheries in the coming years to make sure the number of fish caught never makes it to zero. A lack of fish greatly impacts the economy of communities dependent on the resource, as can be seen in Japan, eastern Canada, New England, Indonesia and Alaska. The anchovy fisheries off the coast of western South America have already collapsed and with numbers dropping violently from 20 million tons to 4 million tons—they may never fully recover. Other collapses include the California sardine industry, the Alaskan king crab industry and the Canadian northern cod industry. In Massachusetts alone, the cod, haddock and yellowtail flounder industries collapsed, causing an economic disaster for the area.

Due to the importance of fishing to the worldwide economy and the need for humans to understand human impacts on the environment, the academic division of fisheries science was developed. Fisheries science includes all aspects of marine biology, in addition to economics and management skills and information. Marine conservation issues like overfishing, sustainable fisheries and management of fisheries are also examined through fisheries science

The two main questions facing fisheries management are:

1. What is the carrying capacity of the ocean? How many fish are there and how many of which type of fish should be caught to make fisheries sustainable?
2. How should fisheries resources be divided among people?

Fish populate the ocean in patches instead of being spread out throughout the enormous expanse. The photic zone is only 10-30 m deep near the coastline, a place where phytoplankton have enough solar energy to grow in abundance and fish have enough to eat. Most commercial fishing takes place in these coastal waters, as well as estuaries and the slope of the Continental Shelf. High nutrient contents from upwelling, runoff, the regeneration of nutrients and other ecological processes supply fish in these areas with the necessary requirements for life. The blue color of the water near the coastlines is the result of chlorophyll contained in aquatic plant life.

Most fish are only found in very specific habitats. Shrimp are fished in river deltas that bring large amounts of freshwater into the ocean. The areas of highest productivity known as banks are actually where the Continental Shelf extends outward towards the ocean. These include the Georges Bank near Cape Cod, the Grand Banks near Newfoundland and Browns Bank. Areas where the ocean is very shallow also contain many fish and include the middle and southern regions of the North Sea. Coastal upwelling areas can be found off of southwest Africa and off South America's western coast. In the open ocean, tuna and other mobile species like yellowfin can be found in large amounts.

In many countries, commercial fishing has found more temporarily economical ways of catching fish, including gill nets, purse seines, and drift nets. Although fish are trapped efficiently in one day using these fishing practices, the number of fish that are wasted this way has reached 27 million tons per year, not to mention the crucial habitats destroyed that are essential for the regeneration of fish stocks. In addition, marine mammals and birds are also caught in these nets. The wasted fish and marine life is referred to as bycatch, an unfortunate side-effect of unsustainable fishing practices that can turn the ecosystem upside-down and leave huge amounts of dead matter in the water. Other human activities like trawling and dredging of the ocean floor have bulldozed over entire underwater habitats. The oyster habitat has been completely destroyed in many areas from the use of the oyster patent tong and sediment buildup draining from farm runoff.

Newscaster- Divita Mhatre
Reference link- https://www.marinebio.org/conservation/ocean-dumping/ocean-resources/
Freelance reporter- Aditya Nikam

WEEKEND CHRONICLE

Research

Sunday, 28th November, 2021

RESEARCH ON WORLD'S MARINE RESOURCE

One discusses the importance of the ocean, its current state, and the key changes observed in 2019 and 2020. The global ocean covers 71% of the Earth's surface and is responsible for regulating the Earth's climate and sustaining life. However, the ocean is undergoing swift, stark, and severe changes from natural variations, overexploitation, and anthropogenic influences. Human-induced climate change has already contributed roughly 1.1°C to global warming [1], causing unprecedented changes which are affecting the ocean, its coasts, and its composition.

To track these changes, key Ocean Monitoring Indicators – a set of simple, easy-to-understand parameters for describing, measuring, and monitoring the state of the ocean – observe relevant ocean phenomena, such as sea level rise or sea ice decline. The summary draws on this catalogue of indicators to provide the data necessary to monitor current changes and predict future changes across the Blue, Green, and White ocean

Firstly, very little is known at present about the resources found in the world's oceans, and their exploration and especially their production pose immense technical challenges. Coral reefs are experiencing a dramatic loss of hard coral abundance and associated habitat structure from a myriad of local and global factors. Here, utilizing U–Th radiometric age-dating of coral death assemblages, we investigated patterns of coral mortality from the eastern margin of the Red Sea along a latitudinal gradient (Yanbu, 24o N; Thuwal, 22o N; Al-Lith, 19o N; Farasan Banks, 18o N) in 2018 and 2019. In all four regions, radiometric ages of in situ dead Acropora and Pocillopora colonies were largely confined to the late twentieth and early twenty-first century. During the early twenty-first century, coral mortality was found to be synchronous with previously documented bleaching events in 2010 and 2015 and, at one site (Farasan Banks), an outbreak of crown-of-thorns starfish (COTS) in 2009. The most northern site, Yanbu, had the highest relative percentage of live coral (42 ± 4%) and of living Acropora, and may serve as a refugium under climate warming scenarios. For the three southern regions (Thuwal, Al-Lith, Farasan Banks) benthic structure was mostly comprised of dead corals. The southernmost survey site, Farasan Banks, underwent a dramatic change in coral benthic structure associated with a COTS outbreak in 2009 and a bleaching event in 2015, and had the lowest relative percentage of live coral (6 ± 2%), comprised mostly of massive Porites, with no live Acropora or Pocillopora. Our results highlight the asynchronous impact of disturbance events on eastern Red Sea coral reefs and emphasize regional differences in recovery and ecosystem state.

And secondly, there is insufficient public awareness and debate about these resources and their utilization. Oil, gas, minerals and methane hydrates lie in the lightless depths of the oceans, and their extraction is hidden from sight. Even the products manufactured from them are not always obvious or tangible in our daily lives. This contrasts sharply with the large body of information available about the world's fish stocks and the fishing industry, and the public's justified interest in this topic. Obtaining food from the sea is fundamental to our lives and has formed part of our consciousness for thousands of years exploration and production of marine resources: not only oil and gas but also ores, in the form of manganese nodules, cobalt crusts and massive sulphides Microorganisms form symbiotic relationships with the majority of animals and plants on earth and are integral to their health and functioning in the ecosystem. Coral reefs in particular, one of the most productive ecosystems in the world, depend upon a plethora of organisms (e.g., corals, sponges, and macroalgae) and their microbial symbionts to exist. Yet, little is known about the metabolic basis of microbial symbiosis in these reef holobionts. A wide array of molecular techniques to characterise symbiotic microbial communities and map their metabolic interactions can now be exploited to reveal the extent to which microorganisms underpin both holobiont and ecosystem functioning.

Newscaster: Shubham Patil

Freelancer: Aakash bavdankar

Reference link: https://www.marinebio.org/conservation/ocean-dumping/ocean-resources/

WEEKEND CHRONICLE

Arts

Sunday, 28th November, 2021

ARTISTIC SCULPTURES FOUND UNDER-WATER

Over millions of years, the rising and falling of sea level created a layer-cake sediment pattern in which sandy and clayey layers alternated with thick peat layers. Ideal conditions for the formation of peat were present in large regions of central and northern Europe and in North America during a period from 290 to 315 million years ago. At that time these regions lay close to the equator. They were located in a warm, tropical zone, and were rich in vegetation. Not until later did these land masses drift several thousand kilometres northward to their present position. With time, the layer-cake structure of alternating peat and clay layers was also covered by new sediments and compacted by their enormous weight. However, no oil was formed from the old peat layers, but first lignite and later hard coal. At a depth of 4000 to 6000 metres and temperatures between 120 and 180 degrees Celsius, natural gas formed in the coal over many millions of years. For the formation of natural gas, higher temperatures are required than for oil. As a rule, natural gas contains around 90 per cent methane. This is accompanied by other gas-phase hydrocarbons such as ethane, propane and butane, as well as non-flammable gases such as carbon dioxide and nitrogen. An additional component is hydrogen sulphide, which has to be removed from the natural gas before it can be used. Hydrogen sulphide can convert to acid when the gas is burnt, which can lead to corrosion in power plants and heating systems.

Natural gas with an especially high content of hydrogen sulphide or carbon dioxide is called acid gas. If this is to be used it must undergo extensive cleaning. Natural gas also migrates gradually out of the source rock. If it is not trapped by dense rock layers then, like oil, it can rise all the way to the Earth's surface. The "eternal fires" in Iran are fed by rising gas and condensate, and were presumably lit initially by a lightning strike. There are many places around the world where fires fed by underground gas are still burning. Many of these were venerated by ancient cultures and have become sacred sites. Wherever underground trap structures were present, the natural gas, just like oil, could accumulate in reservoirs. Generally, the accumulations are only considered to be reservoirs when they are large enough and the rocks permeable enough to make production of the hydrocarbons economically feasible. This is equally true for both gas and oil. Gas or oil accumulations that are too small to be economically produced, however, occur much more frequently in nature.

According to recent studies, 481 larger fields were found in deep and ultra-deep waters between 2007 and 2012. They account for more than 50 per cent of the newly discovered larger offshore fields, i.e. fields with an estimated minimum 170 billion barrels of recoverable reserves, corresponding to around 23,800 million tonnes of oil equivalent (Mote). The deep water and ultra-deep water sectors are thus becoming ever more important. It is also interesting that the newly discovered offshore fields are generally around 10 times larger than newly discovered onshore fields, which makes deep water and ultra-deep water production an attractive prospect despite the higher costs. Globally, oil and gas extraction at water depths greater than 400 metres is currently limited in scale, amounting to just 7 per cent of production. This is partly because only 38 per cent of the proven deep water and ultra-deep water fields are currently in production. Most of these fields are still undergoing detailed surveying, while initial test drilling has already taken place in some cases.

Newscaster – Tejas Jayesh Kale.

Freelancer – Gauri Pawar.

WEEKEND CHRONICLE

History

Sunday, 28th November, 2021

MARITIME HISTORY

Maritime history is the study of human interaction with and activity at sea. It covers a broad thematic. Element of history that often uses a global approach, although national and regional histories remain. Predominant. As an academic subject, it often crosses the boundaries of standard disciplines, Focusing on understanding humankind's various relationships to the oceans, seas, and major waterways of the globe. Nautical history records and interprets past events involving ships, shipping, navigation, and Seafarers. Maritime history is the broad overarching subject that includes fishing, whaling, international Maritime law, naval history, the history of ships, ship design, shipbuilding, the history of navigation, the History of the various maritime-related sciences (oceanography, cartography, hydrography, etc.), sea Exploration, maritime economics and trade, shipping, yachting, seaside resorts, the history of lighthouses And aids to navigation, maritime themes in literature, maritime themes in art, the social history of sailors And passengers and sea-related communities. There are a number of approaches to the field, sometimes Divided into two broad categories: Traditionalists, who seek to engage a small audience of other academics, and Utilitarian's, who seek to influence policy makers and a wider audience. About 5,000 years ago, the first Major trade routes were formed between modern-day India and Pakistan along the Arabian Sea. Due to Bandits attacking caravans, land travel became dangerous and mariners began to travel on the sea.

They used an astrolabe to navigate the waters. The beginning of India's maritime history dates back to 3000 BC. During this time, the inhabitants of Indus Valley Civilisation had maritime trade link with Mesopotamia. The Excavation at Mohenjo-Daro and Harappa has revealed ample evidence that maritime activities flourished during this period.

The discovery of a dry-dock at Lothal (about 400 km Southwest of Ahmedabad) gives an insight into the knowledge of tides, winds and other nautical factors that existed during that period. The dry-dock at Lothal dates back to 2400 BC and is regarded as the first such facility, anywhere in the world, equipped to berth and service ships. Vedic literature has numerous references to boats, ships and sea voyages. The Rig Veda is the oldest evidence on record that refers to Varuna, the Lord of the Sea, and credits him with the knowledge of the ocean routes which were used by ships. The Rig Veda mentions merchants sailing ships across the oceans to foreign countries in quest of trade and wealth. The epics Ramayana and Mahabharata have references to ships and sea travels. Although Europe is the world's second-smallest continent in terms of area, it has a very long coastline, and has arguably been influenced more by its maritime history than any other continent. Europe is uniquely situated between several navigable seas and intersected by navigable rivers running into them in a way which greatly facilitated the influence of maritime traffic and commerce. The Maratha Empire was established by the Chhatrapati Shivaji Maharaj in 1674. From its inception, the Marathas established a naval force, consisting of cannons mounted on ships. Also 5 April is celebrated as National Maritime Day in India. On this day in 1919, navigation history was created when SS Loyalty, the first ship of The Scindia Steam Navigation Company Ltd., journey to the United Kingdom, a crucial step for India's shipping history when sea routes were controlled by the British. The Portuguese sailor Ferdinand Magellan is credited as being the first man to sail around the world. He was appointed commander of a fleet of five ships by King Carlos V of Spain at the beginning of the 16th. Now it's sixteenth-largest maritime country in the world.These are ships which employs stealth technology construction techniques in an effort to ensure that it is harder to detect by one or more of radar, visual, sonar, and infrared methods.

Newscaster- Nidhi Satam
Freelancer Reporter Ashutosh Keni

Ref: http://www.indian_maritime_history

WEEKEND CHRONICLE

Culture & Cuisine

Sunday, 28th November, 2021

UNDERSTANDING THE WORLD'S 'MARINE RESOURCES AND BAHAMAS CULTURE THROUGH IT'.

Marine resources are physical and biological entities that are found in seas and oceans that are beneficial to man. They include fish, coral reefs and crabs, fungi etc. A lot of conservation effort is required to protect these resources from human destruction activities like pollution and overfishing. Marine resources include both biological and physical resources. Let us understand both the forms of resources in detail.

Physical resources:-

Petroleum:- Petroleum + Latire oleum (oil) is a naturally occurring yellow-to-black liquid found in geologic formations beneath the Earth's surface, which is commonly refined into various types of fuels. Petroleum is recovered mostly through oil drilling. Petroleum is used in manufacturing a wide variety of materials, and it is estimated that the world consumes about 90 millions of barrels each day.

Manganese module:- Polymetallic nodules also called as manganese nodules are rock concretions on the sea bottom formed of concentric layers of iron and manganese hydroxides around a core. The core maybe microscopically small and is sometimes completely transformed into manganese minerals by crystallization. When visible to the naked eye, it can be small to test a phosphatized shark tooth, basalt debris or even fragments of earlier modules.

Biological resources:-

Benthos:- Benthos are bottom dwelling organisms that generally live a non-mobile lifestyle, though some mobile species such as crabs do exist. Some benthic invertebrates also live on hard substrates, which are much less common in the Bay compared to sedimentary habitats.Three major benthic species assemblages are present in the Bay area: fresh-brackish, estuarine,and marine assemblages.

Fish:-The oceans have been fished for thousands of years and are an integral part of human society. Fish have been important to the world economy for all of these years, starting with the Viking trade of cod and then continuing with fisheries like those found in Lofoten, Europe, Italy, Portugal, Spain and India. Fisheries of today provide about 16% of the total world's protein with higher percentages occurring in developing nations. Fisheries are still enormously important to the economy and well-being of communities.

Offshore gas and oil production began more than a century ago. With many shallow-
water fields already exhausted, these natural resources are now being extracted at ever greater depths. Production rates are higher than ever, while oil pollution is decreasing.

Culture and cuisine

Bahamian cuisine refers to the foods and beverages of The Bahamas. It includes seafood such as fish, shellfish, lobster, crab, and conch which are obtained from their seas as a resource.Bahamian cuisine is somewhat related to that of the American South, with dishes held in common such as "fish 'n' grits". A large portion of Bahamian marine foodstuffs are exported. International cuisine is offered, especially at hotels.

The Bahamas is blessed with a wealth of beautiful beaches and bays that provide us with seafood that is just as exquisite.

The Bahamas produced 11 400 tonnes from capture fisheries in 2017, with Caribbean spiny lobster and queen conch accounting for, respectively, 68 and 29 percent of total catches. Other important fishery resources include snappers, Nassau grouper and various mackerel species. Conch and fin-fishes are mostly consumed locally in restaurants, hotels and homes. However, significant exports of these also take place. Spiny lobster is the most important species in terms of weight and in value with over 90 percent being exported.

Another resource like different unique species of coral reefs attracts the tourist for their well diversified sea and also they are found helpful for medicinal use as well.

Reference:
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WEEKEND CHRONICLE

Travel & Tourism

Sunday, 28th November, 2021

MARINE TOURISM IN INDIA

The practice of marine tourism is not recent; it dates back to the late eighteenth and early nineteenth century when resorts and leisure activities at coastal areas were at their incunabular stage in many parts of Europe. By the late 20th century the development of coastal areas as sites for tourist attraction had spread along the coast of most developed and a few developing nations. Taking the examples of tourist impacts on marine habitats of the coastline of Andhra Pradesh, Coromandel Coast, Eastern coastal plains, Konkan, Malabar Coast and Western coastal Plains of India the need for development of a sustainable interaction mechanism between land, human and oceans occupies a pivotal stature.

What Are Marine Resources?

Grilled salmon is really good for you. It has omega-3s, protein, iron and lots of other good stuff. When you're in a healthy mood, you might drive to the supermarket to buy some. Getting there means keeping gas in your car, and driving along roads containing sand and gravel. What do salmon, gas, and gravel all have in common? They're all marine resources.

Marine resources are materials and attributes found in the ocean that are considered to have value. That value can be intrinsic, or monetary. They include a huge number of things: biological diversity, fish and seafood supplies, oil and gas, minerals, sand and gravel, renewable energy resources, tourism potential, and unique ecosystems like coral reefs.

Main tourism areas in India

Marine tourism industry has developed well along India's west coast – particularly around Goa along the Konkan belt, and in Kerala along the Malabar Coast. Goa – referred to as 'Pearl of the Orient' – is a tourist paradise, and has received 895 international charter flights in 2015.

Similarly, Kerala, which is promoted as 'God's own country', attracts international tourists for its beaches, picturesque backwaters, canals, and lagoons, which are home to abundant marine life.

The Andaman and Nicobar Islands are an excellent tourism destination, but have been selectively opened for tourism due to environmental and security concerns. The islands are closer to popular tourist destinations such as Phuket in Thailand and Langkawi in Malaysia, but have remained closed to international cruise liners.

Likewise, the Lakshadweep Islands offer the finest underwater marine life for scuba divers, but have remained insulated to tourism primarily due to security and controlled development reasons.

Future Pathways for India's Marine Tourism

The Indian government is conscious of infrastructure inadequacies and has a vision and plan for promotion of cruise tourism and increase sea arrivals to 1.2 million tourists by 2030-31. Cruise terminals are under development at Goa, Cochin, Mumbai and Chennai and these can potentially boost the domestic hospitality industry that is also developing infrastructure and services to support port city excursions and domestic tourism.

Another innovative marine tourism initiative by the government is lighthouse tourism. There are nearly 190 lighthouses along the Indian coast and the surrounding areas offer opportunities for development of hotels, resorts, viewing galleries, adventure sports, thematic restaurants and allied tourism facilities. The Directorate General of Lighthouses and Lightships have identified 78 lighthouses, and adjacent areas around 8 lighthouses are being developed for tourism.

-Payal Solanki
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Ref:- www.google.com
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WEEKEND CHRONICLE

Social Issue

Sunday, 28th November, 2021

THREAT TO OCEAN LIFE

The ocean is a beautiful, majestic place that is home to hundreds of thousands of species. These species have a dizzying array of variety and come in all shapes, sizes and colors. They include tiny, gorgeous nudibranchs and pygmy seahorses, awe-inspiring sharks and enormous whales. There are thousands of known species, but there are also many more still to be discovered as the ocean is largely unexplored.

Despite knowing relatively little about the ocean and its inhabitants, we've managed to screw it up quite a bit with human activities. Reading about different marine species, you often read about their population status or threats to the species. In this list of threats, the same ones appear over and over. The issues may seem depressing, but there's hope - there are many things each of us can do to help.

The threats are not presented here in any particular order, as they are more urgent in some regions than others, and some species face multiple threats.

Ocean Acidification

What Is the Problem?

A good metaphor for ocean acidification, developed for the National Network for Ocean and Climate Change Interpretation (NNOCCI), is osteoporosis of the sea. Absorption of carbon dioxide by the ocean is causing a lowering of the ocean's pH, which means that the ocean's chemistry is changing.

What Are the Impacts?

Shellfish (e.g., crabs, lobsters, snails, bivalves) and any animal with a calcium skeleton (e.g., corals) are impacted by ocean acidification. The acidity makes it difficult for animals to build and maintain their shells, as even if the animal can build a shell, it is more brittle. A 2016 study found shorter term impacts in tide pools. The study by Kwiatkowski, et.al. found that ocean acidification can affect marine life in tide pools, especially at night. Water already affected by ocean acidification can cause shells and skeletons of tide pool animals to disintegrate at night. This can affect animals like mussels, snails, and coralline algae. This issue doesn't affect just marine life - it affects us, as it will impact the availability of seafood for harvest and even places for recreation. It's not much fun snorkeling over a dissolved coral reef!

What Can You Do?

Ocean acidification is caused by too much carbon dioxide. One way to reduce carbon dioxide is to limit your use of fossil fuels (e.g., coal, oil, natural gas). Tips you probably heard long ago for reducing energy, such as driving less, biking or walking to work or school, turning off lights when not in use, turning your heat down, etc., will all help reduce the amount of CO2 that goes into the atmosphere, and consequently into the ocean.

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