

Imperialist Monopoly Capital - Appropriation of Space Resources

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The Indian Space Research Organisation (ISRO) has launched Chandrayaan-3 on July 14, 2023 which travelled at about 41 days and safely landed on the targeted place in the South Pole of Moon on August 23, 2023. All of us perceived that it is our own victory, therefore, we felt proud of it. India is fourth country in landing on Moon but first country on the South Pole of Moon. US claimed this victory and declared that it will be useful for future exploration on Moon. The big corporate entities who involved in this mission got immediate benefit in terms of rising their share value. Contrarily, the engineers, senior officers, workers who belonged to 'Heavy Engineering Corporation', a Central Public Sector Undertaking, which involved in this mission did not get their salaries for the past 18 months. Is this not a serious contradiction?

The focus of dominant countries who are advanced in space research and exploration, is especially on the Moon's South Pole. Because, they are searching for ways and means to utilise water, hydrogen, oxygen etc., so as to transform them into food and fuel. Then Moon will become the basis to continue their research and explore the valuable resources available on Sun, Mars and all the celestial bodies and appropriate them. No need to bring water and fuel from Earth. The Chandrayaan-3 mission is a part and parcel of trials of global nations to search for abundant valuable resources available on the surface and subsurface of the Moon. It is to be noted that the US, for the past four decades seriously inviting and encouraging corporate giants into the Space sector. The allied countries of US follow the same. In India, the formulation of laws and policies and establishment of relevant institutions in this direction have strongly been taking place for the past 6 years. The 'SpaceX' belongs to the US is the largest entity in Space sector. Elon Musk is its owner. In our country, it is stated that the main aim of privatising our Space sector is to search for an Elon Musk among our Private Space sector units. This clearly indicates that the aim of imperialist - capitalist exploitative system is to transfer even Space sector to monopoly capital. The policies of emerging economies will also be in the same framework. India is no exception to it.

However, the process of appropriation of abundant and valuable space resources by powerful corporate forces will be neither simple nor smooth. It is known to all that the differences in the distribution of global wealth led to the First and Second World Wars. Similarly, the process of appropriation of wealth of Space sector results in extreme conflicts among dominant countries and between dominant and emerging economies which may result in the occurrence of violent and destructive wars.

International Space

Agreements :

For the first time in the world, the then USSR could send Sputnik -1 artificial Satellite into the space as early as in 1957. In the same year it could send Sputnik-2 Satellite successfully. The affluent capitalist countries did not expect it. UNO feared that the success of USSR may result in the establishment of socialist domination in the Space sector. Hurriedly, formulated the "Committee on the Peaceful Uses of Outer Space" in 1958. This became a permanent committee in 1959. Further, it is organising one annual conference since 1962. This agreement states that no country will have sovereignty on Outer Space and its resources. Moreover, the exploration of Space resources should be peaceful and it should be with the international co-ordination and for the benefit of entire global people. In 1961, two subsidiary committees are created 1. Scientific and Technical Sub - Committee, 2. Legal Sub - Committee.

During the period of severe Cold War between US and USSR, they used to hide nuclear weapons in the Space and also used military satellites to know the rival military installations. Both used anti- satellite weapons to destroy the satellites of rival country. The ballistic missiles which are capable of using nuclear weapons are developed by US to destroy USSR even from long distance. This forced USSR to develop similar missiles.

UN has formulated 'Outer Space Treaty' in 1967. This Treaty clearly states that Outer Space should not be used to hide nuclear weapons. Further, it says that the aim of Space exploration must be for the benefit of all the countries. Moreover, it must be peaceful. 114 countries have signed on this treaty by August 2023. Though the Treaty says that the Space mining should be beneficial to all nations, it did not ban. Similarly, it did not ban military activities in the Outer Space. Moreover, the Treaty banned placing of nuclear weapons in the Outer Space but not weapons.

UNO has formulated 'Rescue Agreement' in 1968 for the safety of Astronauts, "Liability Convention" to regulate the activities on Moon in 1972 and 'Registration Convention' for the registration of Space vehicles in 1976. All these are complementary to Outer Space Treaty.

The Treaty is ambiguous about commercial mining on Moon. It also states that without sovereignty anyone can mine the resources. Therefore, it is acceptable to US.

The 'Moon Agreement' is formulated by UN in 1979 but it came into effect in 1984. It says that all the natural resources in the entire Outer Space is the common heritage of mankind. Further, the Moon is not subject to national appropriation by any claim of sovereignty by any means. The details of mining of resources on the Moon must be informed to UNO and to people of world. All the Nations together should establish 'International Regime' to decide the sharing of mined resources. Further, preference should be given to poor countries as well as the countries which have mined the resources. The agreement has nothing to say if the international regime is not formed. But the Agreement will not accept unlimited commercial exploitation of resources. Therefore, imperialist exploitative countries as well as

emerging economies that are ruled by the comprador bourgeoisie will not accept this treaty. US and India did not sign on this agreement. By January, 2022 only 18 countries have signed.

The "Prevention of an Arms race in Outer Space" which is established as an ancillary to the 'Disarmament Conference', has been discussing this issue since 1985. The concept of Disarmament itself became outdated now.

In 2008, China and Russia have formulated "Treaty on prevention of the placement of weapons in the Outer Space" and the threat or use of force against Outer Space objects and submitted to UNO. But US rejected it. Similarly, UNO's General Assembly passed the "Resolutions to prevent Arms Race in Outer Space" is also not accepted by US and Israel.

The framework of International Space Agreements did not embody the concepts of property, ownership rights, who is responsible if any problem arises, disputes solution, licensing, registration etc. which are seriously important in the present context where corporate forces are dominant and strong. Therefore, US says that these agreements are outdated.

The services pertaining to High-Speed Internet, Tele Communications, Navigation, Global financial transactions, weather mapping etc., are closely related to Outer Space. All these activities are under the domination of monopoly capital. Therefore, they pressurise for their domination of Space mining and engineering for their profits. In the private exploration and commercial usage of Space resources, the US and Luxembourg are more advanced. In order to rectify the deficiencies in the International Space Agreements, US said that domestic Laws are needed and in 2015, it has formulated "The Commercial Space Launch Competitiveness Act". It gives legal right to US citizens for commercial exploration and commercial mining of Space resources. This will strengthen the domination of monopoly capital/ corporate forces on Space resources.

In US, as early as in 1960s private entities entered in space sector. 'The Space Act', formulated by NASA in 1958 states that the NASA missions should encourage commercialisation in Space sector. The disintegration of USSR in 1990s resulted in the end of cold war. No tension for US. It can take measures to transfer entire Space sector to monopoly capital without any fear. Nobody confronts US when it deposits nuclear weapons in Space.

In 1998, US has introduced International Space Station in low Earth Orbit. Space Agencies of five countries are associated with it. They are - NASA of US, ROSCOSMOS of Russia, JAXA of Japan, ESA of Europe and CSA of Canada. US made agreements with respective national governments. The ownership and use of the Space station is established by inter - governmental treaties and agreements. The aim of this programme is to make Low Earth orbit as a base for possible future missions to the Moon, Mars and asteroids. Human presence is there in the station for the last 22 years. The US "National Space Policy, 2010" states that its functions should include commercial, diplomatic and educational

responsibilities. The 'NASA Authorisation Act, 2005' clearly says that NASA must work with private sector in the construction and launching of satellites while the "National Aeronautics and space Act, 2011" says that it is mandatory for NASA to work with private entities for commercial activities in Space sector. The startups started to send small satellites as early as in 2013. Few Giant companies openly declared that they will mine space resources. US Congress accepted 'Wolf Agreement, Act 2011' which restricts NASA to make any bilateral agreements with China. On the other China and Russia jointly proposed a project called 'International Lunar Research Station' and invited all the countries to join in it. So far China, Russia, Venezuela, Pakistan, UAE and South Africa signed on the agreement. The ILRS will be a comprehensive scientific experiment base which will be built on the Lunar surface or in Lunar Orbit to carry out multi - disciplinary and multi - objective scientific research activities and scientific experiments.

In April 2020, the then US president Donald Trump released an Executive order which clearly states that the US will not accept that the space is collective and common property of mankind. The participation of private institutions and commercialisation will be there on this sector. It is again affirmed by the present US President, Joe Biden.

Therefore, US says that all the International Space treaties formulated by UNO became obsolete and useless and will not be useful for the present context. In order to correct the deficiencies, it has released 'Artemis Accords' in 2020. Australia, Canada, Britain, Italy, Japan and Luxembourg are the founder members of this treaty. The bilateral agreements will be done with the Space Agencies of other Countries. At present 29 countries have signed on it. The treaty will function under the leadership of NASA. Further, they say that under this agreement, the exploration, science and commercial transactions will be done in the safe, secure and transparent environment so as to reach the benefit to entire humanity as stated in the 'Outer Space Treaty'. However, UAE withdrew from Moon Agreement in 2021.

Though oceans, seas and marine, including sea and ocean life are collective/ common property of entire humanity, still, marine fishing can be done by anyone depending upon their capacity. Similarly, they say, Outer Space and its resources are collective property but the corporate entities can utilise Outer Space according to their competence. Thus, distorted argument has been forwarded by US that the corporate forces possess the right for mining on the Moon as well as use and trade the resources. Consequently, many countries including Japan have formulated their own domestic space laws. India has formulated 'Domestic Space Policy' in 2023.

Thus, the Treaty totally differed with the International Space treaties formulated by UNO. Now, the Space is not at all a common heritage of humanity. No collective rights. This will accentuate the appropriation of common Outer Space by the powerful corporate forces for their commercial and political interests. This running race in future definitely leads to extreme conflicts and destruction.

However, it is wonder to notice that the UNO will neither protest nor control this cruel situation. Further, the member countries may or may not accept the agreements of UNO.

Even if they sign, they may or may not follow the principles of agreements. It is the will and wish of member countries either to sign or not, whether to accept it or not. Therefore, the US though signed on 'Outer Space Treaty' could distort it. Further, it has formulated its own domestic Space Acts and justified it by stating that it is filling up the gaps in International Space treaties. In fact, this kind of activities of dominant countries and dominant forces resulted in the destruction of environment on planet earth despite so many international conferences organised by UNO. This is called as "Tragedy of Commons". In future, there will be similar consequences in the Outer Space. No evidence is there to show about serious trials of UNO to curtail this trend. It behaves like a silent spectator.

Further, during the period of Covid-19 pandemic, majority people suffered from critical crisis in their lives. At the same time, the affluences of wealthy increased enormously. For their luxurious enjoyment 'space tourism' is started by monopoly capital. The duration of the trip is just 11 minutes. But the average pollution created is more than the pollution generated by a common person in his/ her entire life. Oxfam Report worried about it. Still, it is a great attraction to the corporate forces to enter into Space sector.

Space Sector in India:

In 1962, Indian scientists formed as a committee and seriously worked on Space Research. Gradually, in 1978, it became ISRO. Since then, it has been working critically for the interests of Nation and welfare of the people. After the entry of globalisation into India in 1992, 'Antrix Corporation of India' has been established as a subsidiary to ISRO to trade space products, to transfer technology developed by ISRO and to commercialise its technical consultancy services. With this, our Space Sector Commercialisation started. In June 2023, India signed on the US Treaty 'Artemis Accords'. The main aim of this treaty is to establish space sector on the foundation of privatisation and commercialisation. With this, the process of transferring Space sector to the corporate forces reached its peak in India. The sector is similar to the sectors of technology and fuel, those who dominates its development will be given guaranteed profits and future research.

In fact, our ISRO has been transferring its technology to small industries and purchasing their products. Because their prices will be cheaper as they give low wage to their workers. Therefore, cost of Chandrayaan-3 is just Rs. 615 cr. In 1980, various MNCs came into our country and worked with our small industries to sell their products. Since 2010, liberalisation of our Space sector is increased which resulted in the emergence of non - disclosure agreements. Various civil and military agreements signed by India have been favourable to private sector. Tele communications, Navigation, Broadcasting, Mapping etc., are dominated by corporate forces and they are satellite - dependent sectors. If they possess their own satellite, it will be more useful to them. All these factors severely attract private sector towards Space sector. The monopoly capital will get profits only when they seize the technology developed by ISRO with its dedication in the last several decades. Thus, the private sector's domination will be strengthened. As per economic survey, in 2012 itself as many as 100 private companies have been working in Space sector.

Despite the pressure of government by its privatisation and liberalisation policies to discourage the work of ISRO, it could launch more than 300 foreign satellites for 33 nations and 100 domestic satellites in 2019. With this, it could earn \$ 279 million. ISRO has MOUs for 6 agreements with four nations to launch foreign satellites during 2021-23. It's worth is \$ 141 million.

The formulation of policies that are necessary to commercialise Space activities in India has increased aggressively since 2017. The Draft 'Space Activity Bill' is released in 2017. Its main aim is to provide efficient governance for the commercialisation of Space activities and to see that there should not be any conflicts between private and public. The "Sivathanu Pillai Committee" constituted in 2018 has recommended that the ISRO should be confined to the building of Big Satellites, research and development and all the remaining activities must be transferred to Private players. Immediately, the finance minister declared in the Central Budget. In 2019, the 'New Space India Limited (NSIL)' has been established. This will work under the 'Authority of Department of Space'. It is mandatory duty of this organisation to see that relevant ISRO technology should be transferred to private to make SSLV and PSLV. The ISRO should build items only with Private partnership. The technology developed by ISRO with its serious commitment and devotion over decades should be handed over to private sector for its commercial goals. The Union Cabinet approved "private sectors participation in entire spectrum of Space operations including planetary exploration mission" as part of the 'Atma Nirbhar Bharat Abhiyan' in 2020. As a result, 'Indian National Space Promotion and Authorisation Centre (IN SPACe)' emerged in 2021. Its aim is to handover all the Space assets built by ISRO to private sector. For all the projects approved by IN SPACe, ISRO should give all the facilities it has to the private. The private sector is making launch pads in Sriharikota station. The necessary land should be given by ISRO to private. Thus, this programme involves land transfer also. ISRO should give its infrastructure, land, scientific and technical Space resources, entire data to private sector through IN SPACe. At present, the value of global space business is \$ 400 billion. Our share is 2 percent. The government will encourage private in space sector to raise our global share to 10 percent by 2030. This clearly shows the extent of benefits that are grabbed by private sector with the technology developed by ISRO.

The main function of NSIL is to bring commercial launch contracts for the Space Vehicles developed by ISRO.

In future ISRO's research should concentrate on the projects that will yield more profits to the corporate forces. ISRO will not be allowed to work for the interests of people. But the resultant pollution should be borne by people.

Chandrayan-1 could trace water on the Moon. US tried to discover Hydrogen on Moon to enable to work by making the Moon as the basis. The NASA instrument taken by Chandrayaan-3 will measure the distance between Earth and Moon. The information collected by Chandrayaan-3 will be useful to corporate forces by dominant countries to seize Outer Space.

Space Debris:

This is also known as space pollution includes non-functional space craft and abandoned launch vehicles, fragmentation debris from the breakup of the derelict rocket bodies etc. Their quantity is estimated to be 8000 metric tons by 2020. 'US Space Surveillance Network Report', states that in the Earth Orbit there are as many as 25,857 artificial objects including 5,465 operational satellites by November 2022. However, they are large enough to be traced. Another estimate in 2019 states that there are as many as more than 128 million pieces and their size is less than 1 cm, while 9 lakh waste pieces of 1-10 cm size and 34 thousand pieces which are bigger than this size.

Thus, Outer Space is filled with space garbage. Too much junk in the space will result in chain reaction where objects collide which creates new Space Junk. Consequently, the earth's orbit became unusable. It will further accentuate the issue of environmental degradation on earth. The cost of monitoring this problem is estimated to be \$ 2.9 billion. Already, the environment on earth is destroyed due to the military operations of dominant countries and profit-oriented activities of monopoly capital. The imperialist capitalist exploitative system severely pollutes even Outer Space.

Conclusion:

The ultimate aim of success of Chandrayan-3 is to transfer entire Space and valuable resources available there to monopoly capital. The process of seizing, the process of distribution lead to terrified wars and destruction. The building of socialist society is the only way to end the cruel exploitative appropriation on the earth planet and in Outer Space. The socialist system alone will focus on the interests of mankind which will enable them to live in peaceful conditions. For that, people of those countries must be consolidated. This process must be led by revolutionary forces.