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A study of Economic Development and Sustainable Environment between India and Japan in the 21st Century: Prospects and Concerns

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ABSTRACT

At the beginning of the 21st century, India & Japan relations became strong by P.M. Mr. Yoshiro Mori visits India in 2000, resulted in the construction of Global Partnership among India & Japan in the twenty-first century [2]. CEPA in 2011 that changed bilateral trade from \$13.4 billion (2010-11) to \$18.3 billion (2011-12). FDI inflows in India total of \$30.746 billion from Japan. All these resulted as a contributor to economic development between India-Japan. The Kyoto Protocol-1997, bounded common and different responsibilities on developed countries to curb the GHG emissions. India has ratified a second Kyoto Protocol commitment period (2013-2020). Paris Accord-2015 succeeded the Kyoto Protocol-1997 to give a green signal to all countries to reduce GHG emissions to improve a sustainable environment. India's target for renewable energy is 175-GW till 2022, while Japan's renewable energy (22%-24%) by 2030 and keen to reduce 26% carbon emissions by 2030, and 80% by 2050.

Keywords - Economic Development; Sustainable Environment, Kyoto Protocol, Paris Agreement, Official Development Association, Foreign Direct Investment, Comprehensive Economic Partnership Agreement, Global Partnership in the 21st Century

Introduction

India & Japan relations are governed by historical phenomena like Buddhism, Religion, Cultural Exchange, Economic and Political relations. Japan faced critical damage by the US dropped the Atomic Bombs, namely Fat Man, on 6 Aug 1945 at Hiroshima and on 9 Aug 1945 at Nagasaki, respectively resulted in the conclusion of the Second World War, in 1945. However, relations are tended by the way of Japan's helped India in Freedom struggle for independence as resulted in India got independence on 15 August 1947. India and Japan concluded a treaty of Peace in 1952 to restore sovereignty. Japan also started the Official Development Assistance (ODA) in 1958 to India. The cold war compelled them into different groups. India identified Japan as an essential source of both Investment and Technology. The economic development of India was indicated in the 1980s when Suzuki Motor Corporation took steps for investment in India that changed tremendously the automobile sector. There was a dramatic debate on climate change during the 1980s because Economic Development caused the problems of Climate Change. The "World Commission on Environment and Development" formed in 1983 by the U.N., to recognize as Environmental problems were globally by nature and to decide common planning and policies for sustainable development.

The government of India decided to open the door of a socialist economy to a capitalist economy in 1991 by adopting the Policy of Economic Liberalization that identified as the New Economic Reform Policy. It brought Japan close to interact with India, and Japan donated 300 million dollar support to India in 1991. India took steps to form the Look East Policy in 1992 for making relations with eastern countries, namely Japan. Both countries attended (for sustainable economic development and Environment) "United Nations Framework Convention on Climate Change is an International Environment Treaty" convened at the "UN Conference on Environment and Development", held at "Rio De Janeiro", Brazil in June 1992. Its prime goal is to maintain atmospheric GHG concentrations at a stage that would deter a harmful 'anthropogenic' invasion of the climate system. Agenda 21 is related to Sustainable Development and it emerged at Earth Summit that is a significant Blue Print of the actions taken globally, nationally, and locally by the U.N. India shared annual Global Emissions is 5.7%, while Japan was 3.8%. Kyoto Protocol was convened in Japan in 1997 to recognize CO₂ as a leading contributor to climate change and blame developed countries accountable for High Levels of GHGs emissions in the atmosphere. Due to heavy industrial activity, the Kyoto Protocol put heavy pressure on developing countries.

In the Post-Cold War period, India was bitterly criticized by Japan for conducting the Nuclear Weapons Test at Pokhran in 1998 resulted in sanctions imposed by the US along with Japan. At the beginning of the 21st century, Japan's P.M. Yoshiro Mori visited India during P.M. of India, Atal Bihari Bajpayee, in August 2000 and decided by both countries to establish "Global Partnership" in the 21st century between India & Japan [12]. Several visits were held between the P.M's of both countries to strengthen relations. Memorandum of Understanding (MOU) was signed by New Delhi and Tokyo for economic relations in 2005 and made joint statements by Indian & Japanese P.M. Dr. Manmohan Singh, and Koizumi mentioned that a stable, prosperous & vibrant India is in Japan's interest and vice-versa [2]. Both countries P.M. agreed in 2005 to form a Joint Study Group to study the scope of bilateral economic relations [2]. This group suggested the establishment of the CEPA- "Comprehensive Economic Partnership Agreement in 2010", became operative in Aug 2011. It involves trade in products, trade in services, inflows of investment, and forms of growing trade. Dr. Manmohan Singh referred to CEPA as a historical agreement, and a complementary relationship between India and Japan will be formed. [2].

P.M. Shri Narendra Modi officially visited Japan in September 2014 and a summit meeting with Mr. Shinzo Abe P.M. of Japan to upgrade "Special Strategic and Global Partnership" for the bilateral relationship. In Dec 2015, P.M. Mr. Shinzo Abe visited India and attended a summit meeting with P.M. Shri Narendra Modi to strengthen & transform "Special Strategic and Global Partnership between India & Japan". Together they announced "India and Japan Vision 2025 Special Strategic and Global Partnership Working for Peace and Development in the Indo-Pacific Region and the World". India has taken further measures to turn its "1992 Look East Policy into the 2015 East Asia Policy Act" [6]. Paris Agreement on Climate Change under UNFCCC was adopted by 195 Nations on 12 December 2015 at the 21st COPP in which agreement shifts from the Kyoto Protocol to focus on "Climate Justice and Sustainable Lifestyles". This puts all nations into a common cause for the first time. India has set a target of raising its strength of GDP emissions by 33% to 35% below 2005 levels by 2030. India will contribute 40% of its "Non-Fossil Fuel"-based energy by 2030 and increase its forest areas to absorb 3 billion tonnes of CO₂ by 2030.

India & Japan enhanced the New Era in its relationship by official visits of P.M. Shri Narendra Modi to Japan in Nov 2016. India-Japan Vision Statement was announced during a visit to Japan in Oct 2018 by P.M. Shri Narendra Modi and committed to working jointly towards a free and open "Indo-Pacific Region" [3]. There is bilateral trade has been slow down between India and Japan from 18.51 US Dollar (2012-13) to 17.63 US Dollar (2018-19).

1-A study of Economic Development between India and Japan in the 21st century in the Indo-Pacific Region:-

In the Post-Cold war era, at the onset of the twenty-first century, Japan's P.M. Mr. Yoshiro Mori visited India during P.M. Atal Bihari Vajpayee in August 2000. It was the beginning of the foundational bilateral relations of Economic Development between India and Japan. The P.M.s of each country agreed to set up a "Global Partnership" in the 21st century between India & Japan [12]. India's export to Japan in 2000 was \$1.79 billion, while Japan's export to India was \$1.84 billion, and total bilateral trade was \$3.63 billion.

J. N. Dixit Foreign Secretary of India expressed that Finance Minister Dr. Manmohan Singh was instrumental in forging economic relations with Japan. After Dr. Singh becoming P.M., he declared that economic relations ought to be the foundation of the Indo-Japan Relationship. The P.M. of Japan Mr. Junichiro Koizumi visited India in April 2005 and attended India-Japan Annual Summit meetings. There was trade from India to Japan at 352 billion dollars in 2005, while trade from Japan to India was 388 billion dollars in 2005. Foreign Direct Investment (FDI) from Japan was 29.8 billion dollars in 2005. The P.M. of India, Shri Manmohan Singh, In December 2006, visited Japan and strengthened the global and strategic partnership between India and Japan. P.M. of Japan Koizumi, along with Manmohan Singh, announced that "a keen prosperous and dynamic India is in the interest of Japan and vice-versa". The Joint Study Group was formed in 2005 by both P.M.s to engage in bilateral trade. The group prepared a proposal for mutual trade between India & Japan. The Comprehensive Economic Partnership Agreement was proposed as a way of substantially improving bilateral economic and commercial ties. Trade-in commodities, trade in services, investment inflows and avenues to increase their trade have been included. Initially, trade from India to Japan reached \$2.48 billion in 2005.

Dr. Manmohan Singh paid a visit to Japan in October 2010, where both countries agreed on CEPA for Economic relations. Finally, it concluded in August 2011. Indian P.M. expressed the conclusion of CEPA as a Historic Agreement. It is termed as a historic one in forging the complementary relationship between India and Japan. Dr. Manmohan Singh confirmed his opinion that India's booming Young People's Economy and a vast demand amalgamate well with Japan's "Technological Capacities", "Manufacturing Skills", and "Financial Resources" to create a win-win scenario for both of the Asian countries. He also noted that their complementary power must be synergized by both countries to give impetus to both Asian and global economic growth and prosperity. Currency swap upgraded by both the countries in 2011 from 3 Billion US Dollars to 15 Billion US Dollars, and it would manage short term liquidity problems-10 percent reduction in tariffs by India on 9000 imported Japanese industrial products through the CEPA. India under CEPA 17.4% of the tariffs lines has been provided for the possible reduction of tariffs to Zero percent while Japan has reduced its tariffs lines from 87% to 0%. CEPA not only covers goods but also services and investment trading. Bilateral trade between both the countries groomed under CEPA, there was trade between India and Japan about \$13.4 billion in 2010-11. By coming to CEPA into effect, trade had reached around \$18.3 billion in 2011-12. Since CEPA came into force, Indian Media reports hint that merchandise trade between India and Japan enhanced 38% from August 2011 to March 2012. India's export to Japan increased only 18.39% while Japanese export to India boosted up by 40.96%. One year before CEPA, Indian export to Japan had grown by 43% and import only 28%.

In Dec 2012, the P.M. of Japan, Shinzo Abe, announced Abenomics as his economic policy package. It boosted up to give the highest priority to strengthening the growth potential of the Japanese economy and overcoming deflation. It incorporated three main components, namely Bold Monetary Policy, Flexible Fiscal Policy, and a Private Investment Incentive Growth Strategy, to meet its target. In April 2013, the "Bank of Japan" took further steps under Monetary Policy to introduce Quantitative and Qualitative Monetary Easing (QQME). It has the main aim to achieve an inflation rate of 2 percent within two years.

The first Economic Dialogue at Ministers between India & Japan was conducted in New Delhi (April 2012). In 2011-12, India became one of the largest beneficiaries of “Official Development Assistance” from Japan, touching nearly 139.22 billion yen (approximately 8497 Crores Rs) [10]. This fund was spent on several projects in India, namely Metro Rail Projects in various metropolitan cities. Another ODA fund had released by Japan about 184.81 billion Yen (approximately 11000 Crores Rs) to 2 Projects like the “Dedicated Freight Corridor Western Projects Phase II” & “Chennai Metro Rail Projects”. The “Special Economic Partnership Initiative” was the successful outcome of the Indian P.M., Dr. Manmohan Singh's visit to Japan in Dec 2006 [12]. The SEPI includes various aspects namely, Dedicated Freight Corridor-West Projects, DMIC-Delhi-Mumbai Industrial Corridor Projects, and established various “Multi-Product Special Economic Zones”, Free-Trade, Areas of warehousing and investment by Japan’s companies in India, as well as support in SEZ and Industrial Estates infrastructure development. DFC-Dedicated Freight Corridor west between Mumbai & New Delhi had completed in 2017. The Delhi-Mumbai Industrial Corridor (DMIC) had approved 26% equity by Cabinet for “Special Purpose Vehicle” “DMIC Development Corporation” by the “Japan Bank for International Cooperation” on 23 Aug 2012.

P.M Shri Narendra Modi had participated in the Summit meeting with Shinzo Abe in September 2014. Both leaders agreed to strengthen their bilateral relationship with the Special Strategic and Global Partnership. Japanese P.M. Mr. Shinzo Abe affirmed that we would invest 35 U.S. billion dollars in Indian Private & Public sectors over the next 5 years and double the number of Japan’s Companies operating in India. India has fulfilled Japan's expectations of improving the market climate, including regulatory easing and framework stabilization. In October 2014, India developed the "Japan Plus" office at the “Ministry of Commerce and Industry” as a non-stop site for Japanese companies to resolve problems. Eleven candidates of Japanese Industrial townships were set up by sharing views between India and Japan around DMIC and CBIC sites in April 2015. Request made by PM Shinzo Abe, India should take an early decision to implement special incentive packages in December 2015 and November 2016 in the Japanese Industrial Township.

Shinzo Abe visited India to take participate in a summit meeting with Narendra Modi in December 2015, The “Special Strategic and Global Relationship” between India & Japan has been changed and transformed into a strong, “broad-based, & action-oriented partnership”. They announced that India & Japan Vision 2025 “Special Strategic & Global Partnership” working together for Prosperity & Peace of the Indo-Pacific Region and the World [11]. It would shape in India & Japan relations in the “New Era” [13]. In December 2015, India decided to introduce the “Shinkansen System”. It is the Japanese Supreme level of “High-Speed Railway System” throughout the globe in terms of security, safety & accuracy. In December 2016, the General Consultant got a green signal from India and Japan to start its work and Development would start (2018), and Railway function would begin (2023). Japan assisted India’s Delhi Metro Projects via the utilization of ODA. Japan will contribute to South Asia's strategic engagement with South East Asia by aligning the East Strategy Act with the Quality Development Alliance on human capital development in India's manufacturing industries. For the next ten years, Japan will provide training to 30,000 Indian citizens in the Japan & India Institutes of Manufacturing in which Japanese Style Manufacturing Skills and Practices will boost the Indian Manufacturing Industrial Base and help to “Make in India” and “Skill India” initiatives.

“India & Japan bilateral trade had reached total to the \$17.63 billion during 2018-19. India’s exports to Japan-\$ 4.86 billion, while Japan's exports to India were \$12.77 billion. Japan’s exports to India were 2.48% of total imports in India. India’s exports to Japan were 1.47% of total imports of India [7]. Foreign Direct Investment (FDI) of Japan had increased in India from \$2.61 billion to \$4.7 billion during 2015-16 and 2016-17, respectively. FDI in India had reached \$1.6 billion in 2017-18 and \$2.965 billion in 2018-19. Investments in India had been reached .746 billion from 2000 till 2019. In December 2018, Economic Dialogue was held in New Delhi. Make in India seminars, and India Investments

seminars were organized by the Embassy of India in Tokyo for promoting India's suitable destinations for starting a business and attracting investment from Japan. The 1st India-Japan Financial Dialogue started in 2015, and the 5th Financial Dialogue between India-Japan held in Tokyo on 26th-27th September 2019" [7]. High-level Strategic Economic Dialogue was first established in 2007 for Economic issues. The 9th Economic Dialogue was held in Japan on 29 March 2018. Japan is the 3rd largest economy, while India has the fifth-ranked in the world. In October 2018, Narendra Modi visited Japan and both leaders committed themselves to work together in the Indo-Pacific Region for trade [6].

1.1-Trade between India and Japan for Economic Development:-At the beginning of the 21st century, the green signal for trade between "India & Japan cleared by the visit of P.M. of Japan, Mr. Yoshiro Mori, in 2000 in India. Mori with Indian P.M. Shri Atal Bihari Vajpayee marked to negotiate "India-Japan Global Partnership" in the 21st century"[10]. This partnership became the breakthrough for Economic relations between both countries. During 2000-2001, India & Japan bilateral trade was \$3.63 billion. India's export to Japan was \$1.79 billion, while Japan's export to India remained \$1.84 billion. Tremendous changes were brought into India-Japan trade through CEPA effects. It resulted in a rapidly growing trade between India and Japan by being CEPA into force. Before CEPA, during 2010-2011, trade was \$13.4 billion. It increased to \$18.3 billion in 2011-12.

Finally, trade has changed dramatically with the several economic dialogues and official visits of both countries P.M's. It reached to total trade of export and import between India and Japan is \$17.63 billion in 2018-19. India has received Japan's export of \$12.77 billion. India is also exporting less as compared to Japan's \$4.86 billion in 2018-19. Now we have to clarify relations in trade between Japan & India through the table shown below.

Year	India's export to Japan	India's import from Japan	Bilateral trade between India and Japan
2000-2001	1.79	1.84	3.63
2001-2002	1.51	2.14	3.65
2002-2003	1.86	1.83	3.69
2003-2004	1.70	2.66	4.36
2004-2005	2.12	3.23	5.35
2005-2006	2.48	4.06	6.54
2006-2007	2.86	4.59	7.45
2007-2008	3.85	6.32	10.17
2008-2009	3.02	7.88	10.90
2009-2010	3.62	6.73	10.35
2010-2011	5.09	8.63	13.72
2011-2012	6.32	11.99	18.31
2012-2013	6.10	12.41	18.51
2013-2014	6.81	9.48	16.29
2014-2015	5.38	10.13	15.51

2015-2016	4.66	9.85	14.51
2016-2017	3.85	9.75	13.60
2017-2018	4.73	10.97	15.71
2018-2019	4.86	12.77	17.63

Source-Ministry of Commerce, India, Value in U.S. Billion Dollars.

1.2-Foreign Direct Investment in India:-

Foreign Direct Investment is considered an essential source of capital financing development and infrastructure in countries, especially India. It emerges as a significant contributor to productivity benefits by providing new investment, satisfactory technology, managerial skills, and export markets. Japanese FDI inflows in India since 2000. FDI is only applicable to developing countries like India for making a stable economic environment in the Indo-Pacific Region. From 2000 till 2019, as per the "Department for Promotion of Industry and Internal Trade", "FDI equity inflows in India total \$456.79 billion from all countries from April 2000 to December 2019". Out of \$456.79 billion, Japan's FDI inflows in India total \$30.746 billion from 2000 to June 2019. Japan became the second-largest investor in India in two fields of FDI projects and jobs created from 2007 to 2012. Japan's investment in India is divided between two sectors, namely, services (40.6%) and manufacturers (45.2%). New Delhi and Mumbai were chosen by most of the Japanese investors as their service projects, while Bangalore and Chennai as spotted for their manufacturing projects. Most of the Japanese investors invested in India's Industrial & Automobile Sectors. In the next six years until 2012, 225 projects were opened in these sectors, which created 98,708 jobs in India [7]. Honda, Toyota Motors, and Sony are some of the company's longtime investments in India.

In October 2016, 1305 companies of Japan registered in India, an increase of 76 new companies (6 percent growth) contrasted with 1229 in October 2015. There are 4590 Japanese businesses in India, with 173 establishments (3 percent growth) up from 4,417 in October 2015. In 2017, 'Japan Bank for International Cooperation' conducted a survey of Japanese Manufacturing Companies in which it was found Japan in second place. Japan has increased in recent years FDI in India, but it lasts less as juxtaposed to Japan's FDI inflow to others. Japan's FDI grows from \$2.61 billion in 2015-16 to \$4.7 billion in 2016-17. It reached \$1.6 billion in 2017-18 and \$2.965 billion in 2018-19. Japan's FDI inflows primarily from India into the following sectors: Automotive Industry (19%), Drugs & Pharmaceuticals (15%), Services Sectors (14%), Metallurgical Industries (9%), and Telecommunications (7%). It made India-Japan relations prosperous in the India & Pacific Region for Economic Development. FDI is inflowing sectors-wise from Japan in India showing in the table as under-

S.No.	Sectors	FDI inflows from Japan in India
1	Automobile Industry	19%
2	Drugs & Pharmaceutical	15%
3	Service Sectors	14%
4	Metallurgical Industries	9%
5	telecommunications	7%
		Total = 64%

Data sources-(RBI FIPB/SIA route)

Japanese investment in terms of FDI inflows in India can be understood with Table as below-

Years (January-December)	FDI Equity inflows from Japan in India	FDI Equity inflows from world countries in India
2000	0.22	2.34
2001	0.22	3.52
2002	0.41	3.35
2003	0.09	2.07
2004	0.11	3.21
2005	0.16	4.35
2006	0.11	11.11
2007	0.67	15.92
2008	4.47	37.09
2009	1.25	27.04
2010	1.29	21.00
2011	3.05	34.62
2012	1.90	22.78
2013	1.42	22.03
2014	2.33	28.78
2015	1.73	38.13
2016	5.78	46.40
2017	1.74	43.57
2018	2.55	42.40
2019*	1.15	46.98
January 2000-June 2019	Total = 30.74	Total = US \$456.79 billion

*only June-2019 (source of data-RBI and FIPB/SIA route), value-in US \$ billion

2-A study of Sustainable Environment between India and Japan in the 21st century:-

Sustainable Environment is the main priority of India & Japan in the “Indo-Pacific Region”. India & Japan are the fastest growing economic countries in “Indo-Pacific Region”. It is the main concern of both countries to accept the provisions of the “Kyoto Protocol” in December 1997 to obligate to reduce the emission of Green House Gases (GHG) caused by Industrial Activities. An important contributing factor to climate change is CO₂. The “Kyoto Protocol” is an international agreement within the scope of the “United Nations Framework Convention on Climate Change”, which includes its responsibility to the Parties by setting legally irrevocable carbon emission mitigation targets. Kyoto Protocol put an

obligation on the developed nations under the principles of common but separate responsibilities. On 16th Feb 2005, the Kyoto Protocol became effective. It covers emissions of six “GHGs-Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide N₂O, Hydro-fluorocarbons (HFCs), Per-fluorocarbons PFCs), and Sulphur Hexafluoride (SF₆)”. Kyoto Protocol came into force to maintain environmental sustainability in the Indo-Pacific Region. Kyoto Protocol formed the first commitment period from 2008-2012, India did not ratify it. However, “India became the 80th country to ratify the second commitment period of the International Treaty”. “The cabinet chaired by P.M. Narendra Modi has accepted the ratification of the Kyoto Protocol's second commitment period. India adopted the ‘Doha Amendment’ to the Kyoto Protocol in Qatar in December 2012”. The amendment added “New Commitments” for the parties to the Kyoto Protocol, one of which acknowledged to pledge between Jan 2013 and Dec 2020 for the “Second Commitment” term, and updated the catalogue of greenhouse gases to be reported by the parties for the “Second Commitment Period”. A declaration declared by the Permanent Mission of India to the U.N. that India had submitted its tools of undertaking under the U.N. of the “Doha Amendment” to the “Kyoto Protocol Climate Change Convention”.

India & Japan took further steps to adopt ‘Sustainable Development Goals’ framed by the U.N. in 2000. There are 8 Sustainable Development Goals that are essential for maintaining a sustainable environment. “These goals are as authorization of all individuals, the action of excellent ‘Health and Longevity’, making ‘Growth Markets’, revival of Rural Areas, and Promoting Science Technology and Innovation, property, and Re-silent Land Use, Promoting Quality Infrastructure, Energy Conservation, Renewable Energy, temperature change Counter-Measures and Sound Material-Cycle Society, Conservation of atmosphere, together with diversity, Forests, and Oceans, Achieving Peaceful, Safe and Secure Societies, and Strengthening the means that and Frameworks for Implementation of the SDGs”. These goals have the target of completing in 2015[9]. In 2015 the UN changed its Sustainable Development Goals from 8 to 17 by 2030 at the Paris conference.

2.1-Japan:-Japan had made environmentalism and sustainability cornerstone of its Policy to shine Global Image and soft Power. It fought climate change through the ‘facilitation of the Kyoto Protocol’ at Tokyo and pledge for ensuing ‘Climate Summits and Agreements’ [1]. Japan has its particular concern for environmental sustainability reflects in its National Commitments. Environment Minister of Japan at ‘United Nations General Assembly’ in Sep, Mr. Shinjiro Koizumi indicated the commitments of following major cities of Japan, namely “Yokohama, Kyoto, and Tokyo”, to end carbon emission mitigation by 2050. In 2007, Japan initiated “Japan-ASEAN Dialogue on Environmental Cooperation” [1]. Japan has also integrated major issues such as urban growth management, the promotion of sustainable transport, the regulation of acid rainfall, and the protection of migratory water-bird “flyways in the Pacific and Indian Oceans”. In June, ASEAN's "Indo-Pacific Outlook" report highlighted the “UN. Sustainable Developments Goals as a Priority Area of Cooperation”, and it concentrated on “Southeast Asia assigns to its environment-related alignment with Japan” [1]. P.M. Mr. Shinzo Abe began battling climate change by launching a “Long-Term Plan” in June to fulfill Japan's contribution to the “Paris Climate Accord”. Abe finds out that environmentalism and economic growth would not result in conflicting objectives to be balanced. Japan's start to invest in sustainable technology will lead to new route for long-lasting growth. Japan's history and values contribute to current environmental attitudes, and Shinzo Abe wished that better leadership future generations would deliver by future generations [1].

In 2009, the “Japan International Cooperation Agency” (JICA) and the “Asian Development Bank” and the “World Bank” jointly conducted a collaborative Environmental Research study, which found that the estimation of the effect of increasing sea levels on cities of coastal areas in Asia is emerging as an aid to the Global Climate Change Strategy. Japan’s govts-affiliated institutions “Japan Bank of International Cooperation” (JBIC) & “Japan International Cooperation Agency” (JICA) are important for the long-standing, vital contribution to economic growth and the key executors of the

Global Image for “Sustainable Development” & “Capacity Building” of Tokyo. Since 2010, JBIC has invested 100s of billions of yen in “High-Technological Green Projects” to counter energy inability and “Greenhouse Gas Emissions”, while JICA needs funds and technological skills to promote management of environment, clean power, conservation of water, and disaster reduction. JICA launched its projects such as Japanese experience in developing climate-strong infrastructure to enhance disaster alertness at home and other areas such as Thailand and Sri Lanka, under the “Sendai System” for “Disaster Risk Reduction” adopted at the U.N. in 2015 [1].

‘Asian Development Bank’ is the central pillar of Japan “Primary Vehicle” for improving Sustainability. \$30 billion funds had collected by Tokyo with the help of the ADB in “Climate Change for Innovative Technologies Projects” helping “Green Growth from 2011 to 2018”. Japan has prepared its budget for “Climate Change independent” of the (ADB) [1]. “Japan announced \$15 billion at ‘Copenhagen Climate Summit’ in 2009 over three years to developing countries between 2013 and 2015”. Japan’s added \$16 billion to Actions for a “Cool Earth”. At the 2015 Paris Meeting, the Japan’s govts allocated \$13 trillion to the developing world and ordered a panel in 2016 to draft a “National Energy and Environment Innovation Plan” [1]. Japan has set its goals under the Paris Agreement regarding reducing its Greenhouse Gas Emission by 26% below 2013 by 2030, and 80% by 2050 [8]. New Japanese Environment Minister, Mr. Shinjiro Koizumi at COP-25 announced that “Greenhouse Gas Emission in Japan total about 1.24 billion ton in 2018, the Fifth year in a row that emissions have decreased [8]. Since 2005, total greenhouse gas emissions have fallen by about 10 %.” Mr. Shinjiro Koizumi stated that “in politics, there are so many issues, sometimes boring. On tackling such big-scale issues like Climate Change, it’s got to be fun, it’s got to be cool. It’s got to be sexy too”. Japan has set a target of achieving renewable energy from 22% to 24% by 2030.

2.2-India:-At the onset of the 21st century, the Indian economy was the thirteenth-largest in 2000 with \$460 billion and 1.6 percent GDP. Therefore, there was not so much concern about environmental sustainability. India tended to conclude the Civil Nuclear Deal with the USA in 2005 and finally came into being in 2008. Civil Nuclear Energy resulted in peaceful use for maintaining environmental sustainability. India took a step for environmental sustainability, formed the National Environment Policy in 2006 to acknowledge environmental degradation in India. Environment degradation caused by “Population Growth”, “Poor Resource Usage Choices and Poverty” [4]. “Environment policy clarified its provision that any polluter should bear the cost of Pollution. It also outlined plans to protect environmental zones, water conservation measures, wildlife protection, and wetland protection”[4]. In 2008, a report of “Global Footprint Network and Confederation of Indian Industries” suggested that “India had the third-largest Ecological Footprint in the World and its resource use was already twice its bio-capacity, and that bio-capacity had declined itself by half in last few decades”. The Eleventh Five Year Plan of India is dedicated for monitor targets of Environment Protection. Attain air quality standard in all major cities as per the WHO, increase energy efficiency by 20% and growing forest and areas of trees cover by 5%. The govts of India initiated the “National Action Plan on Climate Change (NAPCC)” in 2008 for mainstreaming “Climate Change for Developmental Process”. Under the ‘Copenhagen Accord’, “India aims to reduce the emission intensity of its GDP by 20 to 25% by 2020 in comparison to 2005”.

India ratified the “Second Commitment period” of the “Kyoto Protocol” from 2013-2020, Indian cabinet under P.M. Shri Narendra Modi approved the “Second Commitment Period” of the “Kyoto Protocol”. India adopted the “Doha Amendment” to the “Kyoto Protocol” in Qatar in Dec 2012. The Kyoto Protocol is used to decrease Greenhouse Gas Emissions by India. According to 2014 reports of World Bank, India bear the cost of “Environment Degradation as \$ 80 billion annually, or 5.7 percent of GDP World Bank” suggested India that to halt the “cycle of environmental loss and resource depletion”, to comprise clean technology and sustainable policies [4]. SDGs were set to carry “Development and Environment” together into one set of the target [5]. It was under the ‘Paris

Agreement' held at 'Paris in France in the 21st COPP under UNFCCC' and concluded on the embraced of the "Paris Agreement on Post-2020 Action on Climate Change". "Paris Agreement succeeded the Kyoto Protocol to give a framework for all countries to take action on Climate Change for making Sustainable Environment"[5]. It emphasized Climate Justice and Sustainable Lifestyles. It pledged to reduce the global mean temperature to below 2°C above the pre-industrial level and limit to 1.5°C. At Paris Agreement 2015, "India's 'Intended Nationally Determined Contribution' (INDC) had pledged to improve emissions intensity of its GDP by 33 to 35 percent by 2030 below 2005 levels". India increased its part of "non-fossil fuels" based electricity to 40% by 2030. "Forest cover also enhanced to absorb 2.5 to 3 billion tonnes of carbon dioxide by 2030". "The 'Clean Development Mechanism (CDM) Projects' was started by India on 4 January 2016, 1593 out of a total of 7685 registered under CDM"[5]. CDM Projects included "energy efficiency", "fuel-switching", "industrial process", "municipal solid waste", "renewable energy", and "forestry sectors". "State action plans on Climate Change initiated in India to create institutional capacities and implement sector activities to address climate change"[5].

In 2017, "India's Ministry of New and Renewable Energy" reported that India's working "Solar Power Capacity" of 12.2 GW, its enhanced energy capacity as 370 percent over three years [4]. 'National Solar Mission' contributed to solar energy, and India has the world's most extensive "Renewable Energy Expansion Programs" with the aims of achieving 175 GW by 2022, which would result in environmental sustainability in the country [4]. "It is a national prediction that 'Clean Energy Investment' in India will cover \$1 trillion by \$2030 250 billion invested for the next five years alone in clean energy" [4].

3-Prospects and Concern in the Indo-Pacific Region:-

India & Japan have become the dominant economic player in (IPRs-India & Pacific Region) to sustained Chinese influence in the region of economic development. India is after China the world's 2nd-largest populous country [15]. Japan became the 3rd-largest economic country in the world, while India is also the fastest-emerging economic country with the fifth rank in the world. There is a prospects and concern between India and Japan relation concerning Economic Development and Sustainable Development. These can be explained clearly for understanding what that prospect and concern between both of the countries in the India & Pacific Region.

3.1-Prospects:-

First, India and Japan's relations for Economic Development have to boost up from the point of India's significant changing market and its resource, likely human resources. At the same time, Japan is advance in technology and modern equipment in "Indo-Pacific Region".

Second, these countries are the prime economic countries in the "India and Pacific Region", in terms of ranking, Japan became the 3rd largest economic countries, while India is 5th in the world. Ranking of both countries will result in making strong ties of Economic Development in the (IPRs-India and Pacific Region), which will be fruitful for both countries in the 21st century.

Third, \$90 billion for Delhi-Mumbai Industrial Corridor, the first tranche of 5500 crore rupees for Mumbai-Ahmedabad High-Speed Rail (Bullet Train), about 80% of the cost of projects funded by the way of a soft loan from Japan's Government, Metro Projects like (DMRTS-CM- Delhi Mass Rapid Transit System and Chennai Metro). All these projects are functioned in India by Japan showed an Economic Positive attitude. It will result in other high technological and resourceful projects soon between India and Japan.

Fourth, India had ranked second in receiving Official Development Assistance from Japan, "Comprehensive Economic Partnership Agreement" in 2011 facilitate growth in the relation of bilateral trade and envisaged tariffs abolition over 94% of items traded between (both countries-India & Japan)

in 10 years \$30.746 billion FDI as one of the most significant Investment inflows into India from Japan between January 2000 to June 2019. It has tremendously changed the Indian economy (IPRs-India & Pacific Region). Japan has become a significant player in the Indian economy. Relations between India and Japan will govern in the name of trade relations and sharing cultural values.

Fifth, the Kyoto Protocol 1997 was held in Tokyo to facilitate for reduction of emissions of Greenhouse gas by responsible developed countries, while the Paris Agreement in 2015 made it possible for all countries to reduce greenhouse gas. Japan set a target of reducing 26% emission of Greenhouse Gas below 2013 by 2030 and 80% by 2050, while India will improve the intensity of emissions in its "GDP by 33% to 35% by 2030". Both of them have obligations to make the environment sustainable in the "Indo-Pacific Region".

Sixth, Sustainable Environment is the National commitments of both India and Japan in "Indo-Pacific Region" not disturb Climate Change through harmful Industrial activities. India has aims of Solar Energy 175 GW by 2022 to make Clean Energy, while Japan has already manufactured its national commitment for the set target of the share of renewable energy 22% to 24% by 2030.

3.2-Concerns

First, India and Japan relations are governed under the Chinese influence in "Indo-Pacific Region", because the China is the vastest populous & 2nd-largest economic country in this region. Both countries are trying to make economic relations to control the Chinese effect in the (IPR-Indo-Pacific Region).

Second, Japan determined its foreign policy's initiatives which resulted in often alluding to environmental sustainability. Japanese Official Documents were explaining Tokyo's vision of a "Free and Open Indo-Pacific". It stressed the value of "Global Public Goods" & "Economic Prosperity" and "Peace and Stability" security rules and norms [14].

Third, India and Japan had agreed to many rail projects like Mumbai-Ahmedabad High-Speed Rail (Bullet Train), (DMRTS-CM-Delhi Mass Rapid Transit System, and Chennai Metro Projects) resulted in clearing forest areas for these projects are harmful sustainability of Environment in India.

Forth, in 2011-12, there was bilateral trade of \$18.31 billion between India and Japan, while this bilateral had reduced to \$13.60 billion in 2016-17. It was the issue of concern between India and Japan's economic relations because of poor relations. It was slowing down reached to \$17.63 billion of bilateral trade.

Fifth, the Kyoto Protocol in December 1997 held in Tokyo, which made compulsion on only developed countries to reduce the greenhouse gas emissions, could not ratify by India till 2012, Second Commitments Period of the Kyoto Protocol from 2013 to 2020 ratify by India. Paris Agreement was held in 2015 to succeed in the Kyoto Protocol for allowing all countries to reduce emissions of greenhouse gas to maintain a sustainable environment.

Sixth, future relations between India and Japan for economic development will be worse if India will conduct the test of Nuclear Weapons, Japan suddenly will stop its relation with India. It is the principal wall between India and Japan relations.

Conclusion:-India & Japan are historically shared their Buddhist, cultural, religious, traditions, trade with each other in the "Indo-Pacific Region". Both countries are the largest and the oldest democracy in this region. Many distinguished sources resulted in strong ties among India & Japan to build a peaceful environment & stability in the area. In the early years of the 21st century, P.M. of Japan, Mr. Yoshiro Mori, visits India in Aug 2000 during P.M. Shri Atal Bihari Vajpayee, and both leaders agreed to establish a partnership at the Global level between India and Japan in the 21st Century. It was privileged to both countries to make good relations in the field of trade relations. In 2000, India and

Japan trade was narrow down with a value of \$3.63 billion, which has increased to \$17.63 billion in 2018-19. (CEPA-Comprehensive Economic Partnership Agreement) emerged in 2011 to foster trade relations between Japan and India. Before CEPA coming into existence, bilateral trade was \$13.4 billion in 2010-2011, after CEPA, it resulted in a tremendous change in the bilateral trade relationship between both countries to reach \$18.3 billion in 2011-2012. India had gained the largest beneficiary of the (ODA-Official Development Assistance) of Japan since 1958. Various projects of Japan are functioning in India like Mumbai-Ahmedabad High-Speed Rail (Bullet Train), Metro projects like (DMRTS-CM-Delhi Mass Rapid Transit System, and Chennai Metro,), etc. Japan's FDI investment in India reached \$30.746 billion from January 2000 to June 2019. We lead to Indian economic growth.

India and Japan have concerned about the sustainable environment with economic development in the 21st century. The Kyoto Protocol in December 1997 at Tokyo bounded obligations on developed countries to curb greenhouse gas emissions. India could not take a step to ratify its first commitments period from 2007 to 2012. However, the Indian Cabinet under the P.M. of Narendra Modi approved to ratify the "second commitment period of the Kyoto Protocol", starting from 2013 to 2020. Indian took a step to form a (NEP-National Environment Policy) in 2006 to maintain the sustainability of the environment. In 2008, the "National Action Plan on Climate" change was also set up by India to check environmental degradation and climate change. Paris Agreement-2015 succeeded in the Kyoto Protocol to allow all countries to reduce emissions of greenhouse gas. Japan set a target to achieve renewable energy from 22% to 24% by 2030 and reduce carbon emission 26% below 2013 levels by 2030, and 80% by 2050. India aims to achieve set a target of 175 GW by 2022 and to improve the emission intensity of its "GDP by 33% to 35% by 2030". India and Japan eagerly committed to maintaining a sustainable environment in the Indo-Pacific Region, Japan became the third-largest economy and India is the fifth one economic country in the world [11].

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