



*In collaboration with:*



# **Energy transition, international projection and opportunities for India's strategic relations with Italy and Europe**

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## Introduction

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### 1. Lights and shadows of a complex subcontinent

In the course of its 75 years of independence (declared on August 15, 1947), India has attained many achievements. It has built a modern economy, remained a beacon of democracy with the same Constitution since January 26, 1950, and established an original foreign policy that has made a mark on the country's position on the world stage.

India is defined the world's largest democracy with an estimated population of 1.38 billion (the second highest population in the world soon to become the first, making India in the next few years the most populous country in the world, overtaking China, and one of the youngest: 46% of Indians are under 25), with two major urban centers (New Delhi and Mumbai) over 20 million inhabitants each. It is the seventh largest country in the world, with a total area of 3.29 million of square kilometers. A diverse territory, ranging from the peaks of the Himalayas to the coast of the Indian Ocean, and a history dating back 5,000 years.

India is also the fifth largest economy in terms of nominal GDP and the third largest in terms of purchasing power parity (PPP), the third largest producer and consumer of electricity, the second largest pool of scientific and technical workers. India has the third largest army (1.5 million active armed forces, 1.1 million estimated reservists and 1.6 million active paramilitary, according to the International Institute for Strategic Studies' *The Military Balance 2021*), and it is the sixth member of the nuclear club, the sixth member in the space race and the tenth largest industrial power in the world.

India embraces 28 States and eight centrally administered Union Territories and comprises a mixture of ethnic, linguistic and socio-religious groups that together constitute a traditionally stratified national population. India includes more than 1,600 different languages and dialects, it has the largest Hindu population in the world (about 83% of the population), while the Muslim component (over 11%) makes India the country with the fourth largest Muslim population in the world, after Indonesia, Pakistan and Bangladesh.

In short, there is no doubt about the fact that many factors contribute to the country's aspirations of great power: expanding strategic horizons, a vast territory straddling vital sea and energy routes, a large and growing economy with a rising middle class, a nuclear power with dynamic scientific and technological sectors.

Of course, there are also shadows.

The serious Covid-19 pandemic – officially, more than 40 million people infected and almost half a million dead in the country by the end of 2021 - has exposed the structural limits of development models that are incapable of protecting the rights, health and dignity of people suffering from the intersection of stratifications and multiple discriminations that the pandemic has exacerbated.

Its welfare state is severely lacking: only 3.4% of public spending is devoted to health, which in times of COVID-19 pandemic proves disastrous - as shown when the new Delta variant hit the country, with a peak of over 400,000 new daily cases of infection confirmed in mid-May 2021 and hospitals completely overwhelmed.

The World Health Organisation (WHO) reveals that 4.2% of India's population falls into poverty every year due to high health costs, i.e. more than 50 million people a year. This happens mainly because they do not have adequate health coverage. The WHO calculates that Indians have to pay two thirds of their medical costs, four times the average for countries in Europe and Central Asia, for example.

Despite its economic ascent, India remains a lower-middle-income economy and is the poorest of the BRICS group (Brazil, Russia, India, China and South Africa), with a per capita income of just \$1,900, a 10.38% decline from 2019 (but with great forward movement: it was \$443 in 2000!), according to 2021 data estimates.

The rise in the unemployment rate is the first social consequence of the economic slowdown, which is also occurring at a time when demographic dynamism is still very strong. There is an increase of 16 million inhabitants per year, and half of them are entering the labor market, while India has created just over 5-6 million jobs per year in recent years.

India's unemployment rate in 2019 was the highest in 45 years according to the periodic *Labor force survey* by the National Sample Survey Office (NSSO), and it is particularly high among young people: 34% among 20-24 year olds. These figures are consistent with those of the Centre for Monitoring Indian Economy (CMIE), according to which the unemployment rate for 20-24 year olds is 37% (compared to 17% in 2017), and for 20-29 year olds it is around 28%. For the latter age group, this means that 30.7 million young people would be unemployed, compared to only 17.8 million in 2017. Urban youth are the most affected: the CMEI survey conducted in December 2019 reports an unemployment rate of 44 % among urban youth aged 20-24, and the situation is even worse among university graduates: 63.4% of them were then looking for a job.

There are an estimated 600 million internal migrants in the country, of whom about 200 million come from another district within the same state or from other states. The most vulnerable are those with weak positions in the labor market, exacerbated by the lockdown measures in 2020-21. Particularly the vulnerable groups in socio-economic and political terms and subject to discrimination during the pandemic are Dalits, Adivasi communities, women and Muslim workers.

An estimated 29% of the population in large cities consists of day laborers, mostly internal migrants. About 22 million workers are permanently employed in the informal sector, and they are over-exposed to the negative effects of the pandemic. Despite a rising participation rate, women make up only about 33 percent of the active labor force.

Lights and shadows of a process of great change underway, with segments of the population much more vulnerable and exposed to the repercussions of health, environment, climate crises or possible regional political crises.

## 2. Pandemic made an economy and society with unresolved problems worse

The COVID-19 pandemic exacerbated difficult situations by hitting the most vulnerable sections of the population hardest in health, social and economic terms<sup>1</sup>. The pandemic caused a mass forced migration of India's migrant workers from cities to villages<sup>2</sup>.

Even in the last few years before the pandemic, the economy was growing, but this does not mean that the income of the entire population has increased. The top 1% in India earned 21% of the country's total income in 2019; this was 11% in 1990. The top 10% earned 56% of the country's total income in 2019; the bottom 10% earned only 3.5%. The distribution of wealth confirms the inequality problem: the richest 10% of Indians owned 80.7% of the wealth in 2019. Also the Gini coefficient (inequality in income distribution: 100% indicates full inequality and 0% full equality) indicates growing inequality in India: the coefficient in 2014 was 34.4%.

The factors underlying the acceleration of India's economic growth over the last 25 years (following a policy shift anticipated in the 1980s but actually initiated in the early 1990s) and the country's particular structure provide us with useful information. Looking at the data, the service sector has been the engine of growth for the economy, with different sub-sectors taking over at different times, periods in which each responded to a policy shift, such as the nationalisation of banks in the 1970s, the construction boom in the 2000s, and so on. However, industrial reforms did not lead to high and sustained growth due to constraints in terms of infrastructure manpower and land. States have followed different trajectories, due to initial conditions in each field leading to different responses to common reforms imposed by the centre. To understand this, obviously with a forced comparison, the long-standing and unresolved Southern issue of Italy's Mezzogiorno presents similarities with the Northern issue of Uttar Pradesh (nearly 200 million inhabitants!).

It is no coincidence that several Indian analysts point to domestic factors, rather than uncertainties in the global economy, as the primary cause of the growth slowdown in the last decade<sup>3</sup>.

In terms of spill-over effects on social development, while there have been improvements in many areas, other areas have witnessed stagnation or deterioration in general conditions. This almost 30-year long period has been characterised by a complete change in the nature of the state. Neo-liberal agenda has widely dominated policies in India as in the case of both Modi's mantra of minimum government and maximum governance and his predecessor Manmohan Singh; the debate only concerns the intensity of these policies. Within this framework, some issues continue to pose a challenge to development.

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<sup>1</sup> R. Bhattacharyya, A. Ghosh Dastidar and S. Sikdar (eds.) (2021), *The Covid-19 Pandemic, India and The World. Economic and Social Policy Perspectives*, Routledge, London.

<sup>2</sup> A. Hans et al. (eds.) (2021), *Migration, Workers, and Fundamental Freedoms. Pandemic Vulnerabilities and States of Exception in India*, Routledge, London. In recent literature, it is argued that the vulnerabilities of the migrant labour force are deeply embedded in the long-term changes in the political economy of development in India. These changes, on the one hand, have resulted in the gradual weakening of state support to the working classes, and on the other, have resulted in the normalisation of 'cheap labour' as a legitimate objective of neoliberal capitalist development. See: D. K. Mishra (2021), "Migrant Labour during the Pandemic: A Political Economy Perspective", *The Indian Economic Journal*, Vol. 69(3).

<sup>3</sup> A. Goyal (ed.) (2019), *A Concise Handbook of the Indian Economy in the 21st Century*, Oxford University Press, New Delhi.

The ‘growth euphoria’<sup>4</sup> diverted attention away from discussing per capita income, unemployment rate, poverty incidence, health and education outcomes and other social indicators, especially the challenge of inequality. The pattern of economic development has posed and continues to pose a serious challenge to the working class and rural economy in India (i.e., hundreds of millions of people), and new strategies, including one for diversification out of agriculture into rural areas do not seem adequate<sup>5</sup>. The fact that in Hindi the term ‘Vikas’ is used for both growth and development as synonymous, is emblematic of the disregard for the social and territorial (agrarian, in particular<sup>6</sup>) unevenness of neoliberal growth strategy.

The most recent studies by economists in India<sup>7</sup> highlight a decalogue of challenges that have been known for a long time in Italy and Europe:

1. jobless growth in the face of millions of young people being added to the workforce in India every year<sup>8</sup>,
2. inadequate social protection becoming inequitable<sup>9</sup>,
3. growing economic inequality in the face of less absolute poverty<sup>10</sup>,
4. rising cost of health and education under conditions of growing inequality<sup>11</sup>,
5. limited access of large parts of the population to resources<sup>12</sup>,
6. increasing forms of non-formal or more precarious as well as flexible employment<sup>13</sup>,
7. declining share of wages in total value added<sup>14</sup>,
8. a worrying withdrawal of women from the workforce<sup>15</sup>,
9. increasing gender pay gaps in wages as well as the widening gap at the top levels<sup>16</sup>;
10. investment in human capital is now secondary, while expropriations and the phenomena of forced displacement and internal migration increase<sup>17</sup>.

<sup>4</sup> India has emerged as the fifth largest economy in the world, with one of the highest growth rates in the world, and the news that India’s GDP had surpassed that of developed countries such as the UK and France - based on October 2019 data from the IMF’s World Economic Outlook - was greeted with jubilation.

<sup>5</sup> N. K. Mishra (ed.) (2020), *Development Challenges of India After Twenty Five Years of Economic Reforms. Inequality, Labour, Employment and Migration*, Springer, Singapore.

<sup>6</sup> R. J. Das (2015), “Critical Observations on Neo-liberalism and India’s New Economic Policy”, *Journal of Contemporary Asia*, Vol. 45, No. 4.

<sup>7</sup> Here we just highlight a couple of them: K. L. Datta (2021), *Growth and Development Planning in India*, Oxford University Press, New Delhi; R. J. Das (2021), *The Political Economy of New India. Critical Essays*, Routledge, London.

<sup>8</sup> K. P. Kannan, G. Raveendran (2019), “From jobless to job-loss growth”, *Economic & Political Weekly*, Vol. 54 (44).

<sup>9</sup> D. Kapur, P. Nangia (2015), “Social Protection in India: A Welfare State Sans Public Goods?”, *India Review*, Vol. 14:1.

<sup>10</sup> H. Himanshu (2019), “Inequality in India: A review of levels and trends,” *WIDER Working Paper 42*.

<sup>11</sup> A. Gumber, N. Lalitha, B. Dhak (2017), “Rising Healthcare Costs and Universal Health Coverage in India: An Analysis of National Sample Surveys, 1986 -2014”, *Working Paper 246*, Gujarat Institute of Development Research.

<sup>12</sup> M. D. Kumar, R. M. Saleth (2018), “Inequality in the Indian Water Sector: Challenges and Policy Options”, *Indian Journal of Human Development*, Vol 12, Issue 2.

<sup>13</sup> R. Srivastava (2021), “Labour Migration, Vulnerability, and Development Policy: The Pandemic as Inflection Point?”, *The Indian Journal of Labour Economics*, Volume 63.

<sup>14</sup> D. Maiti (2019), “Trade, Labor Share, and Productivity in India’s Industries”, *Working Paper 926*, Asian Development Bank Institute, February.

<sup>15</sup> S. Sanghi, A. Srijia, S. S. Vijay (2015), “Decline in Rural Female Labour Force Participation in India: A Relook into the Causes”, *Vikalpa: The Journal for Decision Makers*, Vol 40, Issue 3.

<sup>16</sup> B. Varkkey, R. Korde, D. Parikh (2017), “Indian Labour Market and Position of Women: Gender Pay Gap in the Indian Formal Sector”, *ILO 5th Conference of the Regulating for Decent Work Network*, Geneva, 3-5 July, mimeo.

<sup>17</sup> A. Mehdi, D. Chaudhry (2015), “Human capital potential of India’s future workforce”, *Working Paper 308*, Indian Council for Research on International Economic Relations, September.

Briefly, the economic model that has produced high growth rates has also given new urgency and a new dimension to the challenges of new poverty and inequality, labor market segmentation and employment, the agrarian question and migration.

Moreover, the knock-on effect of this development model is that the slowdown in the growth of personal consumption (due to an increasing concentration of wealth within the country) and a contraction of tax revenues relative to the performance of the economy (as an effect of neo-liberal policies) makes the performance of the economy more dependent on foreign markets and creates an alibi, laying the blame for the economic slowdown in the last decade primarily on external shocks<sup>18</sup>.

There is no doubt that today, more than in past centuries, the process of global interdependence and the relevance of global public goods such as the environment and peace make international dimensions a key factor in the well-being of the population and in accompanying the processes of structural transformation of the economy and society.

### 3. Central themes of common interest between India and the EU: the challenges of ecological transition, security and foreign policy

There are two issues that are certainly priorities and emerging issues today, for India as well as for other countries including the EU, which are usually dealt with separately and which clearly relate the domestic sphere of a country to that of its international relations: ecological transformation and security. On closer inspection, however, the interconnections are manifold, leading to reciprocal relationships and deserving of at least a related treatment. This is most recently demonstrated by India's positions in relation to those of other global players at the COP 26 conference in Glasgow in early November 2021.

#### i. Deciphering environmental and climate policies

India, home to 15% of the world's population, is a case in point on climate change policies. Despite the government's commitment to achieving a net zero carbon emissions target by 2070<sup>19</sup>, without providing any details beyond the overall 'five elixirs' (*Panchamrit*)<sup>20</sup> strategy, in the final days of

<sup>18</sup> S. C. Aggarwal, D. K. Das and R. Banga (eds.) (2020), *Accelerators of India's Growth—Industry, Trade and Employment*, Springer, Singapore.

<sup>19</sup> The goal of net zero emissions implies the use of mechanisms that offset the amount of carbon emitted by a country into the atmosphere by absorbing an equivalent amount of greenhouse gases from the atmosphere.

<sup>20</sup> The five targets outlined by Indian Prime Minister Narendra Modi in Glasgow are: (1) Achieve a fossil-fuel-free energy capacity of 500 GW by 2030; (2) Meet 50% of energy needs through renewable energy by 2030; (3) Reduce CO2 emissions by 1 million tonnes by 2030; (4) Reduce carbon intensity below 45% by 2030; (5) Achieve a net-zero emissions target by the year 2070.

These objectives means that the government is focusing on the renewable energy sector: solar and wind energy - of which the country is one of the world's largest producers - and, more generally, the achievement of a renewable energy capacity of 175 GW by 2022 and 275 GW by 2027, mainly through the development of solar parks and



COP26 India opposed the provision referring to a phase-out of fossil fuel and coal subsidies in the final draft of what is now the Glasgow Climate Pact<sup>21</sup>. Supported by some other developing countries, including China, Iran and Cuba, India tabled an amendment to use the word “phase down” instead of “phase out” for coal. In extraordinary continuity with the words of the Indian delegation at the United Nations Conference on Environment and Development (UNCED, the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992, which was the first world conference of heads of state on the environment<sup>22</sup>), at the Glasgow summit the Indian government wanted to emphasise the importance of declining in an equitable manner what is now the principle of common but differentiated responsibilities. Each country must achieve the net zero emissions target according to its particular context, and developing countries are entitled to their fair share of the global carbon budget and the responsible use of fossil fuels within this. What is worrying is that India, like China<sup>23</sup>, still has a lot of new investments in coal and it is precisely India and China, together with the EU and the US, that account for more than half of global greenhouse gas emissions.

It should be clear to everyone that energy, the environment, climate change, economic policy and international integration are issues that should always be addressed simultaneously because they are interconnected through many channels. Following the path prevailing so far, greater integration in the world economy leads to greater economic development based on specialisation and innovation which, in turn, results in greater use of energy, especially energy based on fossil fuels, which leads to greater environmental degradation, amplified by the attitudes of consumer societies and population growth. As an example, the Government of India’s five-year foreign trade policy (2015-20) gives many incentives to promote the export of goods and services, increasing production without rigidly tying this to environmental sustainability.

In the same way as other countries and the EU, India must meet the requirement of the international regime of environmental sustainability transparency and control. According to several Indian authors<sup>24</sup>, more policy interventions are needed in this regard: measures such as upgrading standards, creating domestic funding sources and making green technologies available through trade and technology agreements, direct incentives for micro, small and medium-sized enterprises

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substantial investments to encourage scientific research and innovation. At present, out of an already active capacity of 159 GW, renewables contribute 10%.

<sup>21</sup> Considering the needs of people, industry, and other activities, a large proportion of energy requirements in India is fulfilled by fossil fuels in such forms as coal, petrol, kerosene, diesel, or naphtha. The contribution of renewable energy sources is still less than expectations or requirements. In comparison to EU countries, India consumed more fossil fuel to fulfill the energy requirements of the people, and India needs a massive effort to achieve sustainable growth in energy. See: M. Nazrul Islam, A. van Amstel (Editors) (2021), *India: Climate Change Impacts, Mitigation and Adaptation in Developing Countries*, Springer, Cham.

<sup>22</sup> Thirty years ago, the Rio Declaration (in addition to the United Nations Framework Convention on Climate Change – UNFCCC - and the Convention on Biological Diversity, among others) issued a twenty-seven-point statement of principles on the environment and development, in practice a code of environmental ethics for States. This was a non-binding document for the signatory countries, which was intended to set out principles that, in practice, should become general principles. The limitation of non-binding declarations has remained, over the last thirty years, one of the main obstacles to the full implementation of the promises made. The UNFCCC, which was opened for ratification on 9 May 1992 and entered into force on 21 March 1994, was not legally binding and did not set mandatory limits on greenhouse gas emissions for States, although it did allow signatory parties to adopt additional protocols.

<sup>23</sup> China, by comparison, has committed to peak CO<sub>2</sub> emissions by 2030 and to reduce emissions per unit of gross domestic product by 60-65% from 2005 levels.

<sup>24</sup> A. Gupta and N. N. Dalei, (2020), *Energy, Environment and Globalization: Recent Trends, Opportunities and Challenges in India*, Springer Singapore.



to switch to low-carbon technologies, making easy finance available to them, and other incentives such as subsidies.

It should be clear that structural transformations of this magnitude have immediate effects on the stratified structure of the population and on processes of possible marginalization. These social effects should be considered and directly addressed.

ii. The variable geometry approach of India to International relations and security policy

At the same time, the issue of security and international relations is the second issue that is becoming increasingly intertwined with the environmental and climate dimension.

Indeed, the environment was absent from the main International debates of the 1960s and 1970s and was only recognised as legitimate at the end of the 1980s, due to the looming ecological crisis<sup>25</sup>. The link between climate/environmental policies and international relations is immediate, simply because the environment is a classic case of a global public good, transcending national jurisdictions and requiring coordination between countries and parties. The conditions of international cooperation in managing global environmental change and the action of transnational networks of firms, as well as civil society organisations, provide one of the most compelling illustrations of its relevance.

Obviously, it is not the only item on the international relations agenda, and it is an issue on which the strategic positioning has changed over the years.

India's foreign policy in 2019 and 2020 was increasingly dominated by deteriorating relations with China and this accelerated growing ties between India and the USA as a result<sup>26</sup>. At the same time, India is a country with enormous economic potential and a strategic partner for Italy and, at supranational level, for the EU<sup>27</sup>. The relationship between India and the EU dates back to the early 1960s and has rapidly developed. The EU was India's largest trading partner in 2019, and India is the EU's 10th largest trading partner; the EU–India Strategic Partnership emphasized the will of both India and the EU to enhance their cooperation, even if Indian-European relations have not met expectations in key areas of economy and security policy.

What makes the matter even more complex is that, on one side, the present COVID-19 pandemic seems to spur competition and isolationist tendencies, with Chinese activism reactively inducing the Indian government to strengthen ties with the West. However, at the same time, on another side, as shown by the recent COP26 results, common interests between China and India are consolidating

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<sup>25</sup> R. B. Mitchell (2002), "International Environment", W. Carlsnaes, T. Risse-Kappen, and B. A. Simmons (eds.), *Handbook of International Relations.*, Sage Publ., London, pp. 500–516.

<sup>26</sup> G. Kochhar and S. Ajit Ulman (eds.) (2021), *India and China. Economics and Soft Power Diplomacy*, Routledge, London; P. S. Suryanarayana (2021), *The elusive tipping point: China-India ties for a new order*, World Scientific Publishing, Singapore.

<sup>27</sup> P. Gieg et al. (eds.) (2021), *EU-India Relations. The Strategic Partnership in the Light of the European Union Global Strategy*, Springer, Cham

in the international climate negotiations, in contrast to the position taken by the EU and - with the new Biden presidency - also by the United States.

Even in the field of climate policy, alliances can be temporary and serve some short-, medium- and long-term objectives. In recent years, India has become the world's third largest consumer of energy (after China and the United States), the second largest coal consumer and the third largest global emitter of carbon dioxide.

On the climate policy front, there are many opportunities and incentives for Indian-European bilateral cooperation, starting from what concerns the energy sector (considering the Indian increasing appetite for energy as economic success depends on it, and its influence on the country's foreign policy)<sup>28</sup>. In particular, energy efficiency and the promotion of renewable energy, which are essential to climate mitigation policy. Since the beginning of the EU-India strategic partnership in 2005, there have been climate relations between the two sides and they have been developed up to the more recent Agenda for Action 2020 and the Joint Communication: many interrelated fields include energy, trade, investment, foreign policy and security.

In this sense, climate diplomacy enters into a coherent or incoherent relationship with traditional areas of security politics, which have to do with the new geopolitical balances and consequent alliances in the Asian region, linked first and foremost to China's strategy, but also to points of regional fragility, such as Afghanistan.

More specifically, the current situation seems to create increasing opportunities for bilateral relations between Italy and India, as witnessed by the signing of the Italy-India Joint Declaration and Action Plan 2020-2024. Trade exceeded 9 billion euro in 2019, but the spaces for cooperation that are now opening up go beyond strengthening economic partnership. Investment, joint ventures, but also mutual support to shared priorities, such as those that the energy and climate transition is now presenting, and the need for strengthening the partnership in relation to the geopolitics of the Asian continent and to rethink welfare, in the midst of the dramatic effects of the COVID-19 pandemic.

It is a question of combining:

- the appeal to values essential to both India and the EU/Italy (democracy, multilateralism, openness of the main routes for maritime and international trade, and security),
- the need for preventing common problems (the threats to global public goods such as environment/climate and health),
- the challenge to face common scenarios (in the areas of energy and the new technological frontier as well as in the COVID-19 pandemic emergence).

All these dimensions are interrelated: for example, the erosion of democratic forms of decision-making is accelerated by the adoption of containment and control measures needed to fight the diffusion of the COVID-19 pandemic.

Major changes are needed for climate change mitigation and adaptation, for biodiversity conservation and environmental sustainability as well as for other structural and more traditional domains of cooperation, such as security. There are significant regional issues of terrorism and

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<sup>28</sup> R. Pradhan (2021), *Geopolitics of Energy in Central Asia. India's Position and Policy*, Routledge, New York.

security concerns in South Asia, especially after the U.S.-led coalition's exit from Afghanistan<sup>29</sup>. In the field of peace and security, the COVID-19 pandemic interacts with a geostrategic trend of fundamental reorganisation of the world order through regionalization and the fact that multilateralism delivers strategically poor results<sup>30</sup>.

How can a strategy of cooperation between the parties - EU/Italy and India - be brought back into a coherent system framework, starting from the priorities, needs and attitudes that are emerging today?

### iii. The structure of the report

The report contains four chapters discussing these issues, including energy transition, international projection and opportunities for India's strategic relations with Italy and Europe. Quite simply, we consider these important and, at the same time, highly topical issues that deserve in-depth study and discussion between Indian and Italian experts with different expertise.

Soman Abhinav authors the first chapter, starting from a factual basis: in India, energy use has doubled since 2000, with most of that demand met by coal, oil and biomass. This is set to grow about 35% until 2030, which is a very high increase, but less than was thought before the COVID-19 (an expected growth of 50%). In particular, coal contributed to 70% of power sector emissions in 2019 and India's CO<sub>2</sub> emissions are driven by industry and transport. The article focuses on the transport sector in India, which accounts for about 13% of India's greenhouse gas emissions and is the third largest emitting sector in the economy. The key message is that an increasingly critical imperative for India today is to ensure a just transition as it shapes its energy mix for a sustainable future. The paper focuses on hydrogen, compressed natural gas and biofuels as key alternatives in addition to electric vehicles and the opportunities and challenges they pose. An energy mix is also a way to escape from the risk of dependence on imported fuels, with a permanent exposure to price volatility. A shift away from fossil fuels to an energy mix dominated by low-carbon sources of energy (renewable technologies) is essential but, in practice, it is by no means an easy and obvious step. The author recalls the need to distinguish between short- and long-term strategies needed to decarbonise transport with alternative fuels, and that the assumption of both private and public investment needed to promote the various fuels over a 30-year period is not at all obvious. Key parameters to consider when comparing fuels are listed, but what the author emphasizes is that the choice of alternative fuels is rarely driven solely on the basis of the value per ton of carbon dioxide equivalent (tCO<sub>2</sub>e) and environmental performance. Other factors include energy security concerns, i.e. local production capacity and resilience to supply shocks, impact on employment, criteria pollutant emissions, infrastructure availability, technology maturity and consumer awareness, as discussed in the literature. A prioritisation of fuel choices to satisfy India's transport demand can only take into account all these multiple factors, without limiting itself to the mere calculation of GHG emissions.

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<sup>29</sup> M. R. Izarali and D. Ahlawat (Eds.) (2021), *Terrorism, Security and Development in South Asia. National, Regional and Global Implications*, Routledge, New York.

<sup>30</sup> U. Werther-Pietsch (2021), *Transforming Security. A New Balance-of-Power Doctrine*, Springer, Cham.

Dinoj Kumar Upadhyay is the author of the second chapter. He analyses climate change and human security and how they figure in Indian foreign relations during the COVID-19 pandemic. Both climate change and the COVID-19 pandemic have already had implications for human welfare and the development process. The impact of the changing climate would be witnessed in multiple forms; the same applies to the COVID-19 pandemic. Both of them threaten human security by undermining livelihoods, culture and identity, and increasing displacement and migration. With respect to both emergencies, India's foreign policy was guided by the principle of 'Vasudeva Kutumbakam', based on interconnectedness and interdependence, peaceful coexistence, mutual respect and equality, policy of non-interference and non-aggression. India continued its support to development partners bilaterally, but also contributed to regional fora (such as the SAARC COVID-19 Emergency Fund) and multilateral organisations (India-UN Fund for South-South Cooperation). On the climate policy front India, even amid contradictions that have elicited critiques, has made commitments and is achieving important results. The author points to as very promising, while also highlighting their strategic importance, two Indian-backed global initiatives for cooperative action on climate change. A final point outlined in the contribution is that India is also making efforts to contribute to peace and security by undertaking security cooperation activities in the Indian Ocean. However, holding back the ambition of India's international projections are several challenges that need to be addressed, starting with low human development, high levels of malnutrition, health problems, poverty, inequality, demographic pressure on the environment.

Yogesh Josh is the author of the third chapter, which deals more directly with a theme only evoked in the previous contribution, namely the security policy linked to international relations, having to deal with a hostile major power in its immediate vicinity: China. Beyond the border dispute and the ever-present potential for military conflict, this is a confrontation between two large countries with a substantially equivalent and dominant population in the world (the two countries together account for one third of the world's population) but highly unequal: the gap between India and China - both economically and militarily - has grown dramatically during the last decade. And now, for the first time in its post-colonial history, New Delhi is directly competing with a hostile major power for influence in its immediate vicinity, from Pakistan to Myanmar, Nepal and Sri Lanka. Second, India's rise in the global system occurred during a period of US unipolarity. The rise of China has not only defeated American hegemony; it has also challenged the liberal global order that underpins India's growth. The risk of an era of deglobalisation and protectionism may complicate Indian economic fortunes. Third, the current strategic trend is creating new fault lines and generating new alliances: emerging balances of power are fracturing old relationships and generating new alliances. In fact, there is the Eurasian bloc of authoritarian or illiberal regimes in Russia, China and Pakistan and maritime democracies such as the United States, Japan, Australia and India, which are also actively courting many European countries to join their balancing coalition. In practice, increasingly structural tensions with China have led to a growing Indian alignment with the US; this has at times won India new friends globally, but has also strained traditional relations with countries like Russia and Iran, Indian traditional partners in the past. For this reason, in the security field India has significantly intensified its interaction with key US partners in the Indo-Pacific, notably Japan and Australia. This framework also includes the Quadrilateral Security Initiative or Quad. India's newfound enthusiasm for greater economic cooperation with Western countries is based on this strategic assessment; and now India is actively negotiating new free trade

agreements with the United States, the United Kingdom and the European Union, and the latter can emerge as a key player in this respect.

The fourth and final chapter is written by Oliviero Frattolillo and is focused on Italy and India's partnership, taking into account the country's geopolitical position within Asia, since this region not only has the greatest concentration of economic and financial interdependence, but at the same time it is also the most militarized region on the planet. In particular, the author explores the background of confrontation between the great powers: USA, China, India and Japan. While the reasons for, and chronicles of, India's clash with China are evident, on the other hand there are common interests between the two sides, such as the desire to shorten the transition time of the international system towards multipolarity and to counterbalance Washington's policy. The tensions of the 21st century involving the Indian Ocean and the Pacific area have become even more evident in recent years, both from a geo-economic point of view and for security issues. In this scenario, India – even if characterized by fragmentation as a key fact, and this is true in the labour market as well as in the political sphere and in the social dimension – has come to acquire a central geopolitical significance.

It is precisely within this framework that the relationship between India and Italy and the geopolitical dimension in which it is projected cannot be separated, obviously, from the regional and global scenarios mentioned above. Particularly important was the signing of the 'India-Italy Joint Declaration and Action Plan 2020-2024'. India and Italy have found themselves united in countering China's hegemonic expansion, so joint action based on cooperation is more necessary than ever. At the same time, areas such as energy transition, connectivity, infrastructure and digitalization are quite promising for an enhanced cooperation. In it is in a context of enhanced cooperation between the EU and India that Italy can work to harmonize its initiatives and projects at the European level, in synergy with Brussels and the other member states. Solidarity, sustainability, security, innovation and cultural diplomacy remain the five pillars of strategic engagement and potential effective cooperation between Italy and India.

Of course, the contributions collected here offer different and complementary points of view from different disciplinary perspectives and areas of interest. All are intended to offer food for thought and to explore areas of strategic policy decision-making.

We extend deep appreciation to the contributing authors for their professionalism and effort in producing their respective chapter, their willingness to discuss and clarify some parts of their contributions. Sincere thanks to the friends of India-Italy Association for Cooperation and Partnership (AIICP) who have encouraged us to think together on topics of common interest, organising some useful seminars. We acknowledge with appreciation the kind assistance of colleagues in Italy and India from SNAM – one of the world's leading energy infrastructure companies and one of the largest Italian listed companies by capitalization – for funding research and organising informal seminars for joint reflection and discussion.

We hope people will find these chapters worth reading.

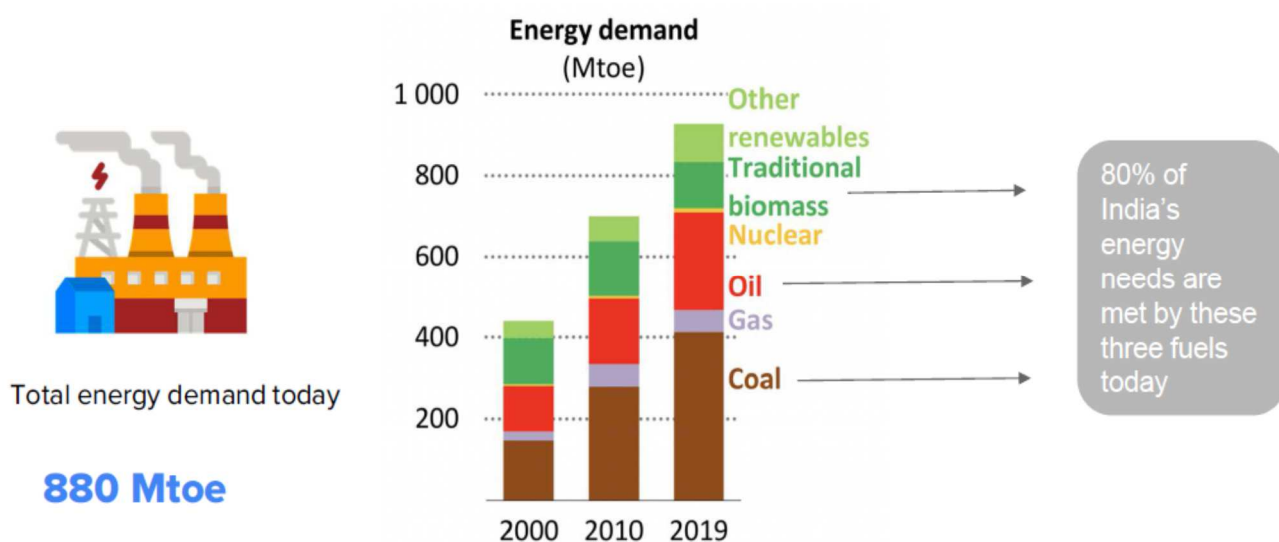
# Enabling sustainable energy transition in mobility in India: Optimising the fuel-mix

Soman Abhinav – Independent expert, New Delhi

## 1. Energy transition

India's energy consumption continues to grow by leaps and bounds. India's total energy demand in 2020 was 880 Mtoe which is more than two fold increase relative to 20 years ago<sup>31</sup>. The energy use in India has more than doubled since the year 2000 and continues to be catered to primarily by coal, oil, and biomass<sup>32</sup>.

Fig. 1 - Selected indicators for India, 2000, 2010 and 2019



Source: IEA, 2021

The major end-uses of these fuels include electricity generation and industry, transport sector, and cooking respectively. Coal contributed to 70 per cent of the emissions from the energy sector in 2019<sup>33</sup>. As per IEA's scenarios until 2040, India's CO<sub>2</sub> emissions will be driven by industry and transport and these sectors will also contribute to the major share of air pollution going forward.

However, unlike the current dominance of fossil fuels, in the decades ahead solar PV, wind, and natural gas are expected to play a leading role in India's evolving energy mix. Natural gas consumption is likely to be driven by industry, power sector and city gas distribution. India also has potential for biomethane and hydrogen<sup>34</sup>.

<sup>31</sup> IEA (2021), "India Energy Outlook 2021 – Analysis." <https://www.iea.org/reports/india-energy-outlook-2021>

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

## 2. Sustainable energy for mobility

Overall transport sector in India is responsible for about 13% of the GHG emissions and is the third largest emitting sector in the economy<sup>35</sup>. Energy demand from the transport sector is expected to more than double over the next two decades<sup>36</sup>. This will lead to proportionate increase in GHG emissions unless alternative fuels and energy efficiency are promoted through policy interventions. Roughly half the emissions in road transport is contributed by freight trucks. Indians travel an average annual distance of 5000 km today which is more than a three fold increase compared to 2000. Per capita transport energy consumption in 2019 was 79 kgoe. The transport sector consumed about 100 Mtoe in 2019 and accounted for nearly half of India's oil demand<sup>37</sup>.

Fig. 2 - Need for energy transition in the transport sector



Source: India Energy Outlook 2021, IEA; Decarbonising India's Transport System 2021, ITF.

<sup>35</sup> Nouni, M. R., Prakash Jha, Rudranath Sarkhel, Chandan Banerjee, Arun K. Tripathi, and Joydev Manna (2021), "Alternative Fuels for Decarbonisation of Road Transport Sector in India: Options, Present Status, Opportunities, and Challenges." Fuel 305 (December): 121583. <https://doi.org/10.1016/j.fuel.2021.121583>

<sup>36</sup> IEA (2021).

<sup>37</sup> Ibid.



### 3. The Basket of alternatives

A variety of alternative fuels and fuel technologies are available today globally and in India. The emergence of these technologies have been triggered by concerns around air pollution, energy security and climate change.

India's vehicle fleet comprises several vehicle segments including two-wheelers, three-wheelers, cars, light commercial vehicles and heavy commercial vehicles. There are technological, economic, infrastructure, and operational constraints to using any single low emission fuel for the entire vehicle fleet, across all segments. Invariably then, a low emission transport fleet for India will be powered by a fuel-mix consisting of varying proportions of alternative fuels. Potential contenders for fuels include – CNG, H-CNG, LNG, dimethyl ester (DME), biofuels (ethanol, methanol, biodiesel, algal biofuels, bio-CNG and bio-LNG), LPG, hydrogen, drop-in fuels, and electricity. However, based on a review of existing policies and studies exploring alternative fuels in road transport, four key technologies are promising - electric, CNG, biofuel, and hydrogen. An integrated roadmap for the use of these alternative fuels in transportation is missing today. Electric mobility has received strong policy support in India and is widely discussed in the context of transport sector decarbonisation.

In the section below, the author therefore focuses on hydrogen, CNG, and biofuels as key alternatives beyond EVs and the opportunities and challenges that they pose. The various considerations that need to be factored-in when choosing an ideal fuel mix are also gleaned from the discussion of these alternative fuels in literature.

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#### *a. Hydrogen*

The opportunities with hydrogen include using the excess solar and wind production to lower the costs of electricity in production<sup>38</sup>. Direct electrification is often more efficient than using hydrogen but in segments such as long distance trucking, aviation, and shipping, where electric alternatives are limited due to cost and battery size related constraints, hydrogen could play a role. Costs of hydrogen are expected to fall by 50 per cent by 2030<sup>39</sup>. Transporting hydrogen via pipelines in gaseous form is the most economical alternative for several applications but high initial capital cost can be a barrier<sup>40</sup>. Hydrogen also offers the advantage of being amenable to diversified production pathways using various feedstock which enhances resilience against supply shocks.

With hydrogen production, the key considerations include its input requirements of water, renewable electricity, and raw material availability. It is estimated that water requirement for electrolysis would consume 0.05% of India's water supply<sup>41</sup>. Similarly hydrogen will be competing for electricity with other sectors given the significant electricity demand for electrolysis. In terms of

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<sup>38</sup> PTI (2022), "New Policy to Cut Green Hydrogen Cost by 40-50 P: IOC," 2022.

[http://www.ptinews.com/news/13142341\\_New-policy-to-cut-green-hydrogen-cost-by-40-50-pc--IOC](http://www.ptinews.com/news/13142341_New-policy-to-cut-green-hydrogen-cost-by-40-50-pc--IOC)

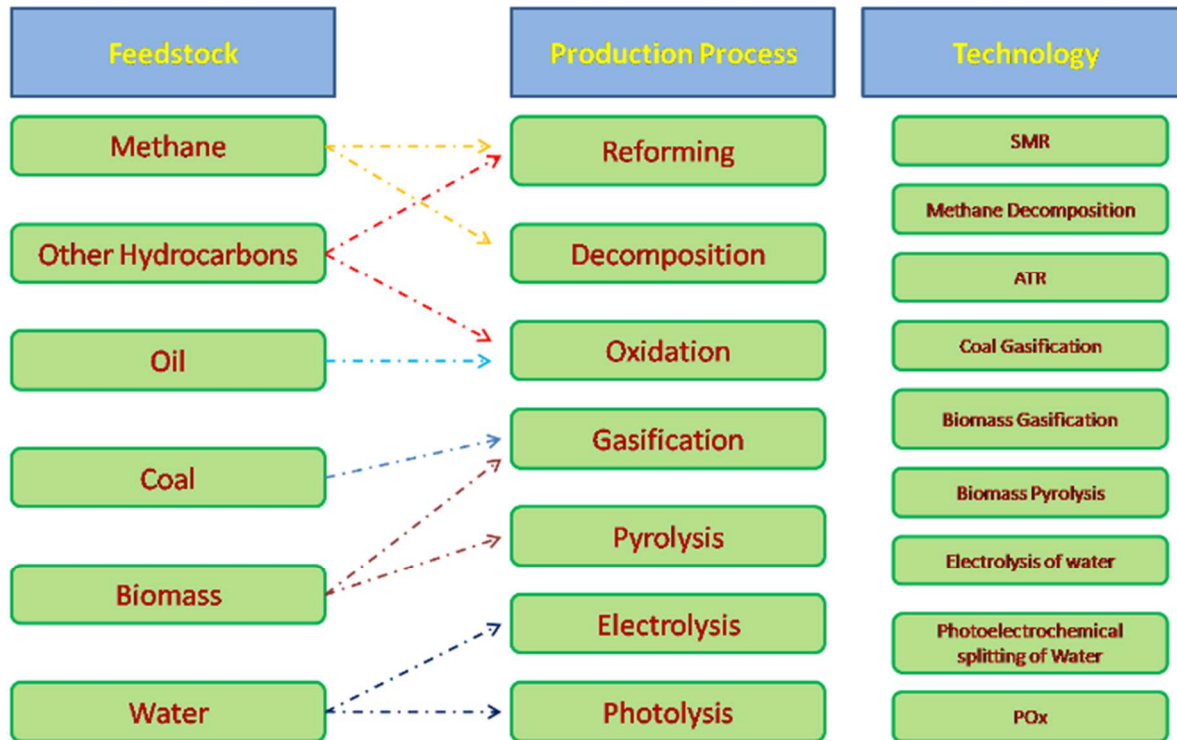
<sup>39</sup> Hall, Will, Thomas Spencer, G Renjith, and Shruti Dayal (2020), "The Potential Role of Hydrogen in India."

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

material demand, while steel and copper requirements could be catered to with domestic supply, this may not be the case with nickel which also finds application in EVs<sup>42</sup>.

Fig. 3 - Hydrogen production routes based on feedstock used



Source: DST, 2020

### b. Biofuels

Globally, ethanol and biodiesel are the predominant biofuels in use today<sup>43</sup>. Biofuels enhance energy security as it can be produced from locally available and grown feedstock. They also provide the added advantage of contributing to local employment generation, particularly in rural India.

Multiple policies stipulating ethanol and biodiesel blending have been introduced in the past starting 2003 with the Ethanol Blended Petrol Programme. However, these targets have not been met due to inadequate supply resulting from supply chain challenges and uncompetitive pricing<sup>44</sup>.

<sup>42</sup> Ibid.

<sup>43</sup> Nouni, M. R., Prakash Jha, Rudranath Sarkhel, Chandan Banerjee, Arun K. Tripathi, and Joydev Manna (2021).

<sup>44</sup> IEA (2021).

Vehicles made since 2008 are compatible with E10 blending of bio-ethanol. Biodiesel blending in 2017 stood at 0.001%<sup>45</sup>.

Transportation can be achieved via pipelines. Other modes of transport include liquid pipelines, rail, truck, barge, and marine transport. At present majority of the transport happens from road and rail and storage at OMC depots. Pipelines are safe, economical, reliable, and environment friendly mode of transporting liquid fuels<sup>46</sup>.

In a study that analysed over 38 barriers to biofuel adoption in India, it was found that limited support for supply-chain development, lack of biomass supply-chain standards, lack of entrepreneurship support, and limited incentives to foster competition in the sector were the top barriers<sup>47</sup>. The study further identified the need for investments into R&D to increase competitiveness in 2nd generation and higher biofuels.

Most recently the government announced the Roadmap for ethanol blending that advanced the 20% biofuel blending mandate to 2025 from 2030. As per the roadmap, the total ethanol demand is estimated to be 1016 crore litres. The total production capacity today stands at 684 crore litres from molasses and grain based distilleries with the report stating that the required annual feedstock can be domestically sourced<sup>48</sup>. Experts have however commented that these estimates are based on expectations of surplus grain production being maintained in the coming years which may not be realised<sup>49</sup>. The current roadmap is also a departure from the earlier policies in its focus on food-based feedstock. Further the government has proposed tax incentives for E10 and E20 fuel to compensate for the drop in fuel efficiency (upto 6%) from blending for the consumer<sup>50</sup>. Only 50 per cent of the petrol sold today is blended with E10 despite existing mandates due to limited availability of ethanol<sup>51</sup>.

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<sup>45</sup> SIAM (2019), "Alternative Fuels in India."

<https://www.siam.in/uploads/filemanager/159SIAMWhitePaperonAlternativeFuelsforvehicles.pdf>

<sup>46</sup> Ibid.

<sup>47</sup> Narwane, Vaibhav S., Vinay Surendra Yadav, Rakesh D. Raut, Balkrishna E. Narkhede, and Bhaskar B. Gardas (2021), "Sustainable Development Challenges of the Biofuel Industry in India Based on Integrated MCDM Approach." *Renewable Energy* 164 (C): 298–309.

<sup>48</sup> NITI Aayog, and MoPNG (2021), "Road Map for Ethanol Blending in India 2020-25: Report of the Expert Committee." New Delhi: NITI Aayog.

<sup>49</sup> O'Malley, Jane, and Stephanie Searie (2021), "India, Don't Fall for Ethanol: Roadmap Leads National Policy on Biofuels off Track." International Council on Clean Transportation (blog). August 26, 2021. <https://theicct.org/india-dont-fall-for-ethanol-roadmap-leads-national-policy-on-biofuels-off-track/>

<sup>50</sup> NITI Aayog, and MoPNG (2021).

<sup>51</sup> Ibid.

Tab. 1 - Emission reduction potential of ethanol-gasoline blends

Emissions	Gasoline	Two-wheelers		Four-wheelers	
		E10*	E20*	E10*	E20*
Carbon Monoxide	Baseline	20% lower	50% lower	20% lower	30% lower
Hydrocarbons	Baseline	20% lower	20% lower	20% lower	20% lower
Oxides of nitrogen	Baseline	No significant trend	10% higher	No significant trend	same

\* E10 project was carried out in 2009-10, E20 project in 2014-15. Hence, the test vehicles were not the same. However, the emission trend is similar.

Source: NITI Aayog and MoPNG 2021

In September 2021, the Transport Minister announced that India will soon mandate petrol cars to have flex fuel engines<sup>52</sup>. Flex fuel engine technology allows the vehicle to run on petrol or any blend of petrol and ethanol upto 83 per cent. The flex fuel 4Ws would cost about INR 17000-25000 higher whereas for 2Ws it would be INR 5000 to 12,000 higher. Current vehicles are compatible with E5 and can be tuned to be used with E10<sup>53</sup>.

### c. CNG

Unlike some other countries, the use of NG in transport in India was primarily driven by environmental and health considerations, particularly the toxicity of diesel pollution, as against cost advantages<sup>54</sup>. India today has over 3 million CNG fueled vehicles registered in the country<sup>55</sup>.

92% of the CNG vehicles are concentrated in four Indian states<sup>56</sup>. These vehicles are largely three-wheelers, buses and cars, most of which are used for shared mobility, for example as taxis, or for public transport. The natural gas consumption in transport activities in 2016 (including pipeline transport) was 2.97 BCM which represents 6,158 gallons of gasoline equivalent in energy terms<sup>57</sup>. While CNG demonstrates better performance than petrol and diesel, methane slips or leakages during well to wheel and combustion stage can result in additional emissions. In the HDV segments,

<sup>52</sup> ET Auto (2022), "After BSVI, Auto Industry Prepares for the Flex Fuel Technology Challenge - ET Auto." ETAuto.Com, 2022. <https://auto.economictimes.indiatimes.com/news/oil-and-lubes/after-bsvi-auto-industry-prepares-for-the-flex-fuel-technology-challenge/88898516>

<sup>53</sup> NITI Aayog, and MoPNG (2021).

<sup>54</sup> Roychowdhury, Anumita (2010), "CNG Programme in India: The Future Challenges," 37.

<sup>55</sup> IEA (2021).

<sup>56</sup> Le Fevre, Chris (2019), "A-Review-of-Prospects-for-Natural-Gas-as-a-Fuel-in-Road-Transport-Insight-50.Pdf." <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/04/A-review-of-prospects-for-natural-gas-as-a-fuel-in-road-transport-Insight-50.pdf>

<sup>57</sup> Ibid.

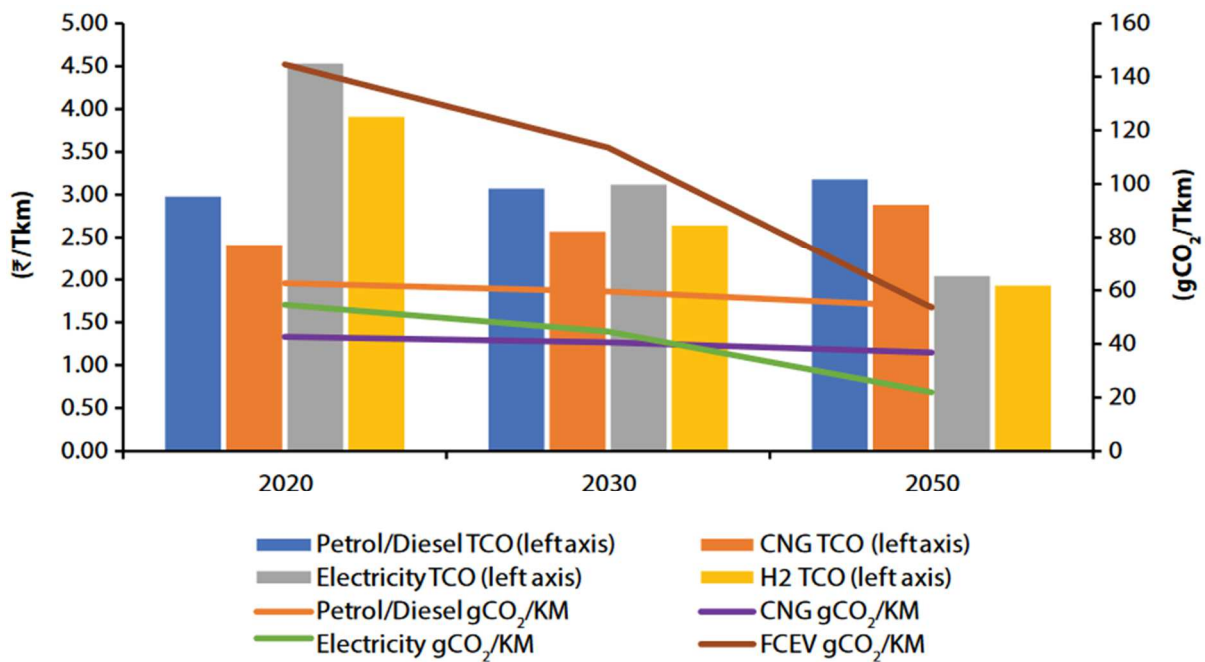
the main advantage of CNG over diesel is 80 per cent lower NOx emissions and 50% lower noise pollution. The choice between CNG and LNG for HDVs mainly comes down to range, with LNG vehicles offering upto 1600 km as against 500-1000 km with CNG<sup>58</sup>.

GAIL owns and operates 13, 200 km pipeline network which represents 70% of the gas pipeline network in India<sup>59</sup>. Unbundling of transportation and marketing of natural gas is yet to take place in India which can avoid cross subsidies between the two activities and creates a level playing field for all shippers. While the unbundling has been under discussion, it has also been opposed on the grounds that the gas market has not reached maturity and that it could impact pipeline network expansion<sup>60</sup>.

*d. TCO and GHG emissions*

An analysis of TCO and CO2 emissions trajectory for trucks and passenger vehicles in India between 2020 and 2050 illustrates and highlights the need to distinguish between short-term and long term strategies needed to decarbonise transport with alternative fuels<sup>61</sup>.

Fig. 4 - Modelled results for TCO/TKM and carbon intensity (gCO<sub>2</sub>/TKM)

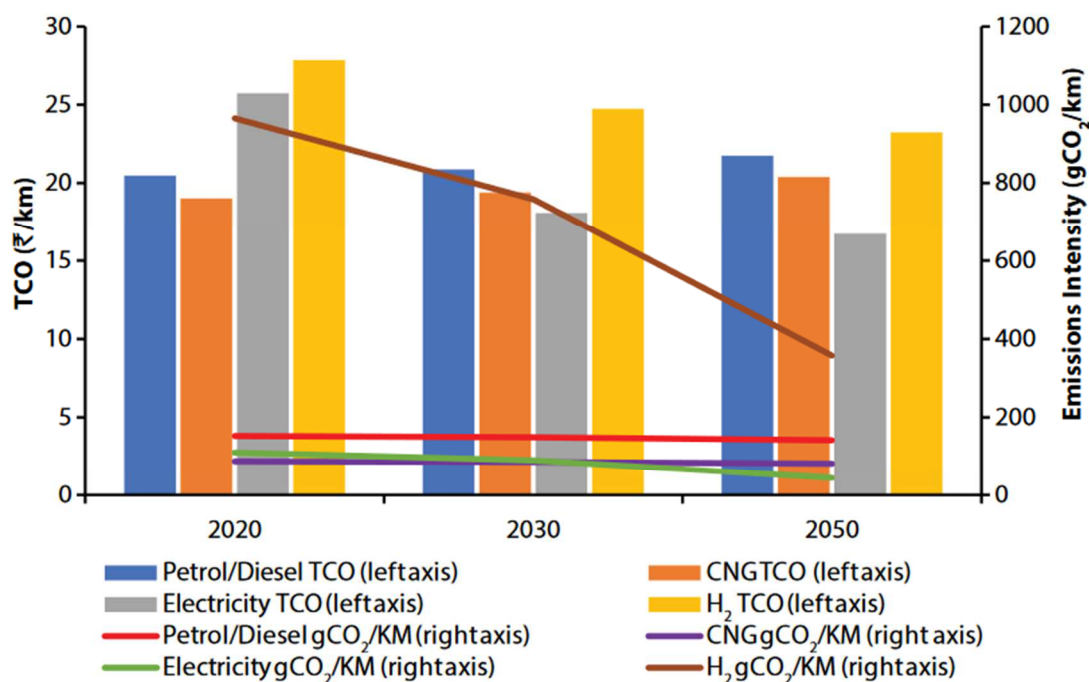


<sup>58</sup> Ibid.

<sup>59</sup> The Indian Express (2021), "Explained: Why GAIL Is Dropping Plans to Hive of Its Pipeline Business." The Indian Express, June 12, 2021. <https://indianexpress.com/article/explained/gail-pipeline-business-proposal-opposition-explained-7355702/>

<sup>60</sup> The Indian Express (2020), "GAIL Officials Opposing Unbundling of Marketing, Transmission Businesses Say No Response from Govt." The Indian Express, July 27, 2020. <https://indianexpress.com/article/business/gail-officials-opposing-unbundling-of-marketing-transmission-businesses-say-no-response-from-govt-6524995/>

<sup>61</sup> Hall, Will, Thomas Spencer, G Renjith, and Shruti Dayal (2020).



Source: (Hall et al. 2020)

In the short-term, CNG fares better both in terms of TCO and carbon emissions while in the long term, it is hydrogen that performs best in terms of TCO and electricity outperforms all other fuels in terms of emissions while resulting in a marginally higher TCO than hydrogen. By leveraging opportunities both in the short term and long term India can lower its emissions most effectively. However, this is easier said than done given the private and public investments needed to promote various fuels in a thirty year span, policy interventions needed, and life of vehicles in India (15-20 years). Infrastructure lock-in may be overcome with strategic planning for retrofitting NG pipeline for hydrogen transport. Retrofitting, however, would mean lining the steel pipe and other interventions to overcome embrittlement of steel by hydrogen<sup>62</sup>.

It is seldom the case that the choice for alternative fuels is driven purely on the basis of TCO and environmental performance. Other factors include energy security, capacity for local production and resilience to supply-shocks, impact on employment, criteria pollutant emissions, infrastructure readiness, and consumer awareness as discussed in literature<sup>63</sup>.

#### 4. Imperatives for India and way forward

<sup>62</sup> Ibid.

<sup>63</sup> Lanjewar, Pramod B., R. V. Rao, and A. V. Kale (2015), "Assessment of Alternative Fuels for Transportation Using a Hybrid Graph Theory and Analytic Hierarchy Process Method." *Fuel* 154 (August): 9–16.

<https://doi.org/10.1016/j.fuel.2015.03.062>. See also: Nouni, M. R., Prakash Jha, Rudranath Sarkhel, Chandan Banerjee, Arun K. Tripathi, and Joydev Manna (2021).

Continued reliance on imported fuels increases exposure to price volatility and supply disruptions with serious consequences to the economy<sup>64</sup>. Road transport sector is the third highest user of the total final energy in India, drawing the lion's share of petroleum consumption<sup>65</sup>. Diversified sources of alternative fuels is key as it ensures resilience against supply and price shocks in any one fuel type<sup>66</sup>.

A basket of alternative fuels are available as potential candidates to fuel India's transport demand. They each contribute to curbing GHG emissions to varying degrees and at different costs to the consumer. But a prioritisation of fuel choices, merely on the basis of GHG potential and economics doesn't effectively capture the implications on energy security, jobs, materials security, and the technology maturity and availability. These factors are critical when planning for a national strategy on auto fuels due to irreversibility of technology lock-ins and scale of private and public sector investments needed for an energy transition in mobility. At the same time, energy transition should not lead to over reliance on any one fuel type. Diversification of the fuel basket is critical to ensuring resilience from supply shocks and disruptions even in the case of indigenously produced fuels.

The Government of India (GoI) has at various points promoted the use of CNG, electric vehicles, methanol, biodiesel, and LPG as automotive fuels. These fuels have been promoted with the intent of either combating air pollution, reducing oil imports or reducing GHG emissions and at times a combination of all these goals have shaped decision making.

Promoting multiple alternatives in parallel would mean simultaneous and large investments for supply and storage facilities along with a distribution network for multiple fuels. Further, the transport sector comprises railways, shipping, and aviation which also require reliable and low or zero emission fuels. There is therefore a need to rank the various alternative fuels along multiple criteria representing the different goals from an energy transition in transport. These criteria have been collated in the image below.

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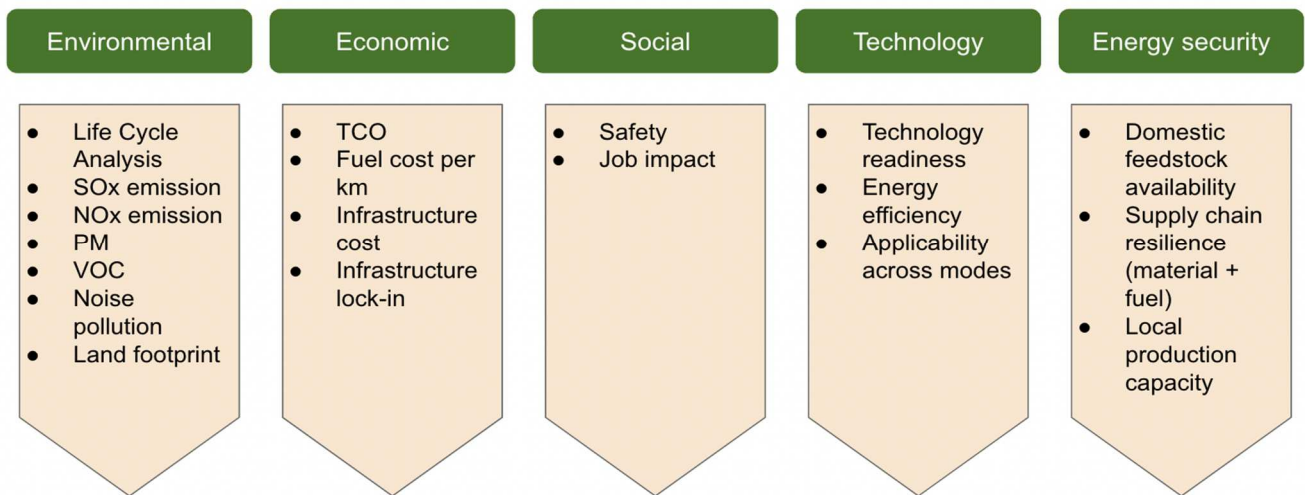
<sup>64</sup> IEA (2021).

<sup>65</sup> Nouni, M. R., Prakash Jha, Rudranath Sarkhel, Chandan Banerjee, Arun K. Tripathi, and Joydev Manna (2021).

<sup>66</sup> Roychowdhury, Anumita (2010).



Fig. 5 - Key criteria when optimising sustainable fuel mix for transportation



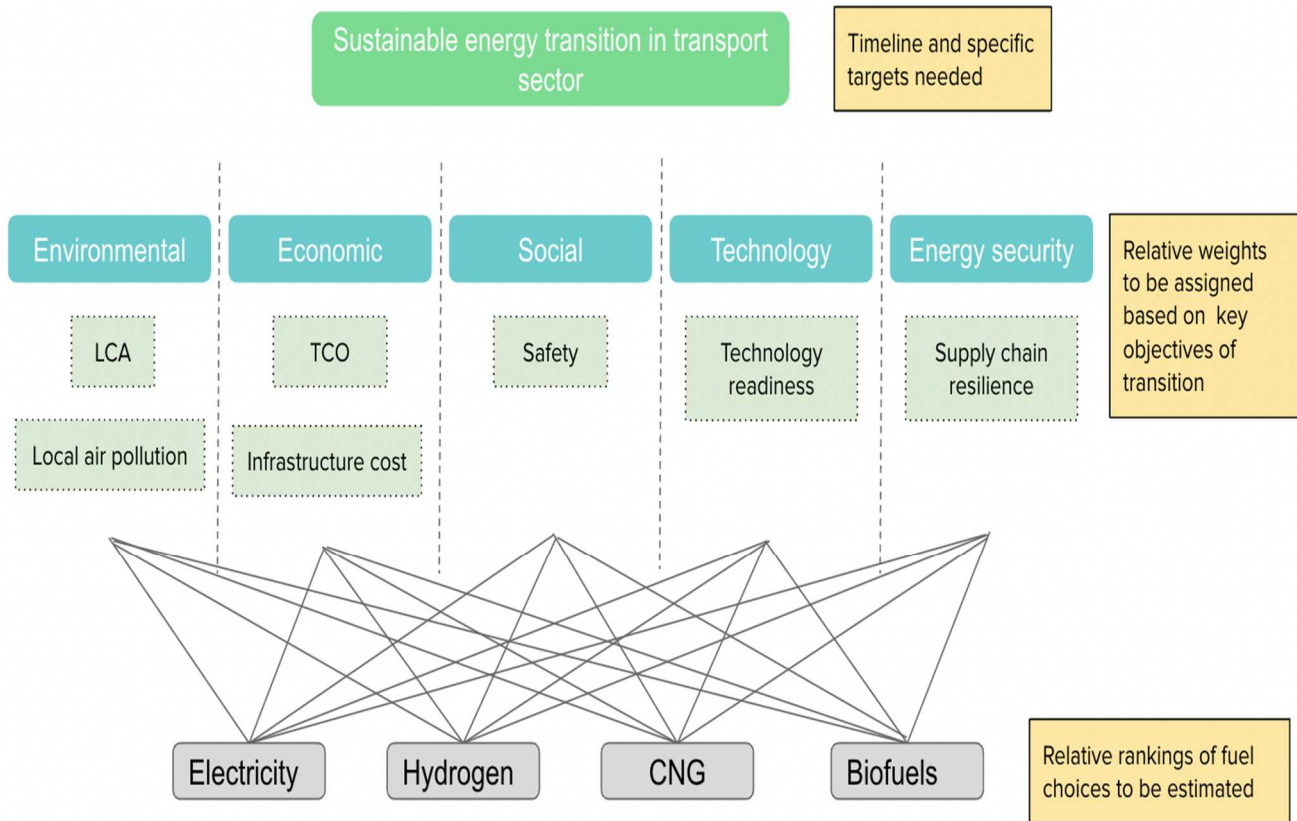
Source: Author’s compilation based on Lanjewar, Rao, and Kale 2015; Nouni et al. (2021).

For pragmatic decision making, the number of objectives under consideration must be limited. A shortlist can be created based on India’s short and long term vision, priorities, and targets. In order to compare and contrast the various alternatives on multiple parameters and arrive at a relative ranking of fuels to choose from, a Multi-criteria Decision Analysis (MCDA) approach is proposed. This approach has been utilised MCDA has been widely used in energy planning at the national level in the global north<sup>67</sup>.

The below figure is an example of how MCDA can be applied to optimising alternative fuels for transportation.

<sup>67</sup> Bhardwaj, Ankit, Madhura Joshi, Radhika Khosla, and Navroz K. Dubash (2019), “More Priorities, More Problems? Decision-Making with Multiple Energy, Development and Climate Objectives.” *Energy Research & Social Science* 49 (March): 143–57. <https://doi.org/10.1016/j.erss.2018.11.003>

Fig. 6 - An illustration of MCDA approach for ranking alternative fuels for transport against multiple criteria



Source: Author's analysis

## 5. Recommendations

Transport sector will increasingly dominate India's overall energy and GHG emissions in the coming decades. While there has been a serious effort to transition to certain sustainable fuels including electricity, CNG, and biofuels, a cohesive stocktaking of the various alternative fuels and their possible applications is missing today. To ensure the right mix of alternative fuels are promoted that meet India's energy transition objectives are met and infrastructure lock-in and redundancies are avoided - such a stocktaking of alternative fuels against multiple criteria is critical.

There are environmental, social, economic, technology, and energy security related considerations that shape the optimal mix of alternative fuels as gleaned from literature. Policymakers should clarify the goals and objectives from energy transition in the transport sector India. It is equally important to define the timeline and targets for this transition. The objectives, timelines, and targets in turn will help shortlist the key criteria for decision making on alternative fuels and the relative weights to be assigned to them under an MCDA approach.

# Climate Change and Human Security in India's International Relations During the COVID-19

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## 1. Introduction

The outbreak of COVID-19 pandemic has increased suffering to the people across the world. It caused high number of losses of human life and brought severe economic, social and psychological distress. People, who are working in informal economy, are more affected due to the majority lack social protection and access to quality health care and have lost access to productive assets.<sup>68</sup> Some of the low income and most fragile nations are more affected and the differential effects of the pandemic on the different sections of societies as well as among the countries have been noticed. The COVID-19 pandemic struck the world when there was the strained global trade, stagnating global growth, protracted conflict and climate-related crises, constrained fiscal space and existing challenges in the health and social structures in the several countries.<sup>69</sup> COVID-19 pandemic is yet to be over; reports coming on climate change are also cause of concern for the international community. Recent reports, particularly the latest IPCC report, have issued explicit warning of 'rapid', 'widespread' and 'intensifying' climate change.<sup>70</sup> It is the 'biggest threat' faced by humanity in modern times.<sup>71</sup> Therefore, climate change coupled with pandemic would have serious implications to human well-being and the process of socio-economic development. Weaker and marginalized sections of society would be the greater risks. In the broader concept of human security, an inclusive, sustainable and people-centric approach to security, the COVID pandemic and climate change would have long-term impact on the human development and human well-being and overall development process. As threats of human development are protracted and internationalized, there appears to be an academic debate over the revisiting the concept of human security itself. Termed as the 'human security 2.0', which includes recent challenges to human development including from pandemic and climate change, has also been advanced.<sup>72</sup>

Climate change and COVID-19 pandemic have also posed serious challenges to India. In the second wave of the pandemic, the country witnessed high number of infections and deaths and its health

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<sup>68</sup>World Health Organization (WHO), Impact of COVID-19 on people's livelihoods, their health and our food systems, Joint statement by ILO, FAO, IFAD and WHO, <https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people%27s-livelihoods-their-health-and-our-food-systems>

<sup>69</sup> Remarks by Angel Gurría, OECD Secretary-General, Official Development Assistance 2019 Data and Trends Release, <https://www.oecd.org/about/secretary-general/official-development-assistance-2019-data-and-trends-release-paris-april-2020.htm> (Accessed on 15 October 2021)

<sup>70</sup>IPCC, Climate change widespread, rapid, and intensifying – IPCC, <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>

<sup>71</sup> Climate Change 'Biggest Threat Modern Humans Have Ever Faced', World-Renowned Naturalist Tells Security Council, Calls for Greater Global Cooperation, <https://www.un.org/press/en/2021/sc14445.doc.htm> (Accessed on 10 October 2021)

<sup>72</sup> JICA Ogata Sadako Research Institute for Peace and Development, (JICA Ogata Research Institute), Deputy Director Makino Gives a Presentation on Human Security 2.0 at a Symposium Hosted by UNDP, [https://www.jica.go.jp/jica-ri/news/topics/20210608\\_01.html](https://www.jica.go.jp/jica-ri/news/topics/20210608_01.html) (Accessed on 10 October 2021)

facilities came under serious stress. Lockdown and travel limitation disrupted economy activities and subsequently curtailed employment opportunities and thrown scores out of jobs. However, India has shown remarkable resilience to recover from the shock of the pandemic. The country has just reported one billion vaccinations completed and its economy is predicted to register high growth in years to come. During the COVID-19 pandemic, New Delhi keeps engaged with world in search for solution and extending helping hands to the affected societies and countries. India also received support, especially when demand of oxygen was skyrocketing during the second wave.

Prime Minister Narendra Modi extensively engaged with world leaders and participated in regional and global forums. He offered New Delhi's development assistance in combating the pandemic and appealed for greater global cooperation in sharing medical and professional knowledge and technology. Despite the challenges at home, New Delhi shared its medicines and vaccines to the countries, irrespective of the income group to which they belong. India's approach to the global cooperation reflected in its engagement in the South Asian region, G20, and other global and regional forums for the collective response to the pandemic. In the broader context, the paper attempts to analyze the climate change and human security and how they figured in the Indian foreign relations during the COVID-19 pandemic. Apart from the discussing the COVID-19, climate change and human security issues, the paper would assess the New Delhi's development assistance during the pandemic.

## 2. The COVID-19 Pandemic, Climate Change and Human Security

Both climate change and the COVID-19 pandemic have already had implications for human well-being and development process. How climate change would threaten the human security has already been discussed in the academic various forms. It is argued that 'human insecurity almost never has single causes, but instead emerges from the interaction of multiple factors.'<sup>73</sup> Impact of the changing climate would be witnessed in multiple forms. It would threaten human security through undermining livelihoods; compromising culture and identity; increasing displacement and migration. It may also corrode ability of states for providing the conditions and services which are considered to be necessary for creating enabling environment for human development, which may contribute to enhance human security.<sup>74</sup> It is also observed that some migration flows are sensitive to changes in resource availability and ecosystem services. Major extreme weather events and natural disasters have led to significant population displacement in the past. If the frequency of extreme events increases due to climate change, it will lead to more such displacement. Physical aspects of climate change, such as sea level rise, extreme events, and hydrologic disruptions would also affect crucial infrastructure of transport, water, and energy.<sup>75</sup>

<sup>73</sup>Adger,W.N., J.M. Pulhin, J. Barnett, G.D. Dabelko, G.K. Hovelsrud, M. Levy, Ú. Oswald Spring, and C.H. Vogel, 2014: Human security. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 755-791.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid.

The outbreak of COVID-19 pandemic created unprecedented situation and its impact would not be limited to ‘the immediate and devastating loss of life.’<sup>76</sup> Subsequent lockdowns, social distancing and travel limitations, economic disruptions, etc have caused economic, security, social and psychological impacts. The pandemic has also exposed fundamental weaknesses in the delivery of social services, as well as systems of social protection and preparedness. And again the COVID-19 pandemic reminded that marginalized sections of society are more vulnerable to challenges posed the crises. The loss of livelihoods and decline economic growth decline, etc have already had implication on human well-being and sustainable and inclusive development. Some psychological and emotional impact of the COVID-19 pandemic and also natural disasters could not be measured in the quantitative terms.<sup>77</sup> Although there remains uncertainty over the end of COVID-19 pandemic and how situation will unfold in the post COVID world, a sense of fear also persists that situation may worsen due to dissatisfaction and scarcity among societies. Loss of livelihoods and restricted movement have suppressed the freedom of individuals as a trade-off for safety under measures to control the pandemic in many countries, creating human rights and dignity-related issues.<sup>78</sup>

### 3. Indian Diplomacy, Climate Change and Human Security during COVID-19 Pandemic

Being the third biggest emitter in the world, with coal accounting for 70% of its power generation, India has shown diplomatic proactiveness in engaging with the outside world, helping the Indian citizens stranded in different countries, providing the development assistance to people in different parts of the world. A bird eye view of Indian diplomacy in the past two years reflects that New Delhi’s policy towards climate change commitments, promoting sustainable development, extending development assistance to developing countries how it has dealt with climate change and COVID-19 pandemic have directly or indirectly contribute to the enhancing human security. Historically, India has repeatedly and publicly committed itself to the fight on climate change, actively participated in climate change negotiations, raising the voices of developing and low-income group countries, which are more vulnerable to the changing climate.

Since its inception, Indian development cooperation has also been focused on the enhancing the capacity building and promoting human development. India’s approach to development cooperation reflects its cultural ethos and social and political values. The principle of “*Vasudeva Kutumbakam*” envisages the true virtue of inter-connectedness and interdependence. The principles of peaceful co-existence, mutual respect and equality, policy of non-interference and non-aggression have guided India’s foreign policy. In similar vein, New Delhi’s development partnership is also based on mutual political understanding, socio-cultural empathy and local demand. Cooperation should be for development, social progress and empowerment. Capacity, particularly weaker and marginalized sections of society should be built to address the contemporary challenges

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<sup>76</sup> The Importance of Human Security in the Age of COVID-19, Human Security Newsletter, <https://www.un.org/humansecurity/wp-content/uploads/2020/09/United-Nations-Human-Security-Newsletter-Summer-2020-min.pdf> (Accessed on 10 October 2021)

<sup>77</sup> The impact of Covid-19 on Human Security, [https://www.un.org/humansecurity/wp-content/uploads/2021/06/Human\\_security\\_covid\\_CeSI\\_MAECI\\_May\\_2021\\_1.pdf](https://www.un.org/humansecurity/wp-content/uploads/2021/06/Human_security_covid_CeSI_MAECI_May_2021_1.pdf) (Accessed on 10 October 2021)

<sup>78</sup> JICA Ogata Sadako Research Institute for Peace and Development, (JICA Ogata Research Institute), Deputy Director Makino Gives a Presentation on Human Security 2.0 at a Symposium Hosted by UNDP, [https://www.jica.go.jp/jica-ri/news/topics/20210608\\_01.html](https://www.jica.go.jp/jica-ri/news/topics/20210608_01.html) (Accessed on 10 October 2021)

and bring them in the mainstream of inclusive and sustainable development, which is also an intrinsic element of “*sabkasaath, sabkavikas&sabkavishwas*”(“everyone together, everyone’s development, everyone’s trust”),.

India has also launched ‘*AatmaNirbhar Bharat*’ campaign during the pandemic. A confident and self-reliant India would be more proactive in playing greater role in development cooperation. It was aptly noted, “*A self-reliant India will automatically be a more internationalist India.*”<sup>79</sup> It is India’s compassion to share. The political values – non-violence, peace, social justice - nurtured during freedom struggle, and the ideals of Father of Nation, Gandhi Ji and philosophy of Rabindranath Tagore’s humanism and internationalism remain guiding principles against colonialism, oppression and marginalization, and support for human development and social progress as well as extending the development cooperation in the wake of ‘vaccine nationalism’ and other forms of protectionist measures such as vaccine passport, travel restrictions, etc.

During the pandemic, Prime Minister Narendra Modi participated in the G7 Summit; India-EU Leaders’ meeting; first Quad Summit; and Leaders’ Summit on Climate. These engagements have been accompanied by regular virtual and telephonic conversations with leaders of partner countries, including the US, Russia, the UK and Japan. India also continues its support for development partners bilaterally. It is also contributed to regional forums such as *SAARC Covid-19 Emergency Fund* and multilateral organizations – *India-UN Fund for South-South Cooperation* for effectively dealing with challenges of pandemic as well as supporting the nations in providing public health facilities. These Funds have been utilized in creating basic facilities for testing of COVID-19, preventive measures and other related facilities. Indian medical professionals reached out the countries and people in times of crises and urgency. New Delhi shared its medicines, medical kits and other equipment in every continent of the globe.

During the pandemic, it is seen that a new start-up culture has evolved in the country to address not only domestic needs of sanitizers, PPE kits, etc but also support and supply where people are in need. India has also launched a movement called the “*Vaccine Maitri*”, which has not just gathered high praise from distant and afar but also illustrated what beneficial prudence in impossible moments looks like. As on May 29, 2021 India sent 663.698 lakh<sup>80</sup> vaccine doses to abroad to contribute immunizations against coronavirus. India’s vaccine diplomacy helped in strengthening the spirit of cooperation in fighting the pandemic with a collective effort and disrupting vaccine nationalism and other protectionist measures. Vaccination is considered to be most effective in dealing the COVID pandemic, Therefore, sending vaccines to other countries should be considered to an important step in global cooperation.

In true virtue of social justice and dignity, India has always been concerned about the affordability and access to services of weaker and vulnerable sections of society, which underlines its approach towards inclusive development and empowerment. India's capacity building programmes, training, and scholarships for countries of Global South - African and Asian nations - have been vehicle for economic growth and social progress. India’s ITEC programme started more than five decades ago, provided students and officials of Global South to get access to quality education and training at the premier institutions. The ITEC programme focuses on shaping aspiration of young talents through

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<sup>79</sup> It is observation of Foreign Secretary of India, Shri Harsh Vardhan Shringla

<sup>80</sup> Ministry of External Affairs, Government of India, Vaccine Supply, <https://mea.gov.in/vaccine-supply.htm>



providing them access to premier educational institutions and financial support. The Global South has the demographic advantage, there needs to be comprehensive collaboration to harness this potential and educate and train them in order to contribute in deciding their development destiny and equitable, peaceful and just world order.

#### 4. Dealing with Climate Change

Climate change is already affecting people and development process now, and if continues its impact would be more severe for future generations. India is already facing severe water shortages, flooding and droughts, extreme natural calamities, and these effects are threatening the its development. India has been effectively taking steps to contribute in fight against climate change, even if Climate Action Tracker, an independent research group that tracks governments' climate actions, has rated India's efforts as "highly insufficient", indicating that India's climate policies and commitments are not consistent with the Paris Agreement's 1.5°C temperature limit. In this regard, more drastic measures would be needed to respond to the climate emergency. At the same time, it must be stressed that the government has announced action plans at the national and sub-national levels. In 2015, the government announced to implement the ambitious "Nationally Determined Contributions" (NDCs) as part of the United Nations Framework Convention on Climate Change (UNFCCC). These include promoting renewable energies as well as additional forest cover, enhancing adaptation measures and guiding producers and consumers for a sustainable lifestyle and not least mobilising finance and transferring technology. It has taken major initiatives in the areas of clean energy, energy efficiency, afforestation and bio-diversity. to support the global fight against climate change, New Delhi is taking initiative to cut down emissions, eliminate waste and to regenerate natural systems including the pursuit of cleaner sources of energy such as gas and renewables. In the global negotiations and multilateral forums, India stresses on sharing of advanced technology. New Delhi calls for sustainable technology and finance should be available to the developing world for facilitating sustainable development. Reportedly, India is likely to exceed its Paris commitment targets. According to Climate Action Tracker, India is the only G20 country with '2°C compatible' targets. The Climate Change Performance Index 2021, that tracks climate protection performance, ranks India as a high performing country. Promoting renewable energy is at the centre of India's ambition and agenda. The country has made huge investments for augmenting renewable power capacity. As reported, around 24 per cent of India's installed capacity comes from renewable sources such as the sun, wind, bio sources and small hydro projects. In absolute terms, India ranks within the top five globally when it comes to power generation from these renewable sources. India has set an ambitious renewable energy target of 450 Gigawatts by 2030.<sup>81</sup> India has already achieved target of 100 GW of renewables.

Here it is pertinent to highlight that the two major global initiatives supported by India. International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure are emerging as useful

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<sup>81</sup> Ministry of External Affairs, Government of India, Foreign Secretary's Remarks on "India's Foreign Policy in the Post-Covid World: New Vulnerabilities, New Opportunities", Public Affairs Forum of India, June 18, 2021, [https://mea.gov.in/Speeches-Statements.htm?dtl/33929/Foreign\\_Secretarys\\_Remarks\\_on\\_Indias\\_Foreign\\_Policy\\_in\\_the\\_PostCovid\\_World\\_New\\_Vulnerabilities\\_New\\_Opportunities\\_Public\\_Affairs\\_Forum\\_of\\_India](https://mea.gov.in/Speeches-Statements.htm?dtl/33929/Foreign_Secretarys_Remarks_on_Indias_Foreign_Policy_in_the_PostCovid_World_New_Vulnerabilities_New_Opportunities_Public_Affairs_Forum_of_India) (Accessed on 10 October 2021)



platforms for cooperative action in the area of climate change. Prime Minister Modi said, *"the Covid-19 pandemic has presented us an opportunity to reshape the world order, to reorient our thinking. We must create systems that addresses the problems of today and challenges of tomorrow. And we must think of the entire humanity and not merely of those who are on our side of the borders."*<sup>82</sup> It is also noted that the ISA has been a remarkable success and noted to be in among the fastest growing international organizations in the world. The ISA has generated several benefits including reducing the carbon footprint of member nations and increasing access to clean energy. India's example of low-cost solar auctions and build out of the transmission grids and massive solar parts programmes and other innovative policy tools can be replicated all over the world.<sup>83</sup> ISA is also developing a Solar Investment Action Agenda and Roadmap to help mobilize US\$ one trillion of investment for the deployment of solar energy by 2030. At the COP 26, Prime Minister Modi has launched the Green Grids Initiative -One Sun One World One Grid (GGI-OSOWOG), the first international network of global interconnected solar power grids, jointly with his UK counterpart Boris Johnson.<sup>84</sup>

India has been engaged with advanced countries of the world to facilitate the transition to the climate resilient economy, which will generate economic output and place the country on a sustainable growth path. A green economy makes for good economics and India is on the path to creating a green economy which is integrated with a global economy that is headed in the same direction. These priorities are apparent in what may be described as "next-generation" agreements that India has already entered into with Denmark, the UK and the European Union. India signed a Green Strategic Partnership with Denmark. India-EU have signed a comprehensive 'Connectivity Partnership' with EU which is focused on enhancing digital, energy, transport and people-to-people connectivity. A Global Innovation Partnership with the UK and a partnership that focuses on new and emerging technologies. New Delhi also emphasizes on research and innovation in sustainable technologies with the spirit of cooperation and collaboration between North and South.

Prime Minister announced that India would to reach net zero carbon emissions by 2070 during the COP26 Climate Summit in Glasgow. However, as far as revising goals are concerned, many environmental associations and partner countries in Europe believe India is in a good position to commit to a coal peak before 2030. India's role is quite important in effectively dealing with climate change and containing the global warming. In the climate change negotiations, India is also stresses on climate justice. At the COP 26 Prime Minister emphasized that rich developed countries ought to be providing at least US \$ one trillion in climate finance to assist developing countries and those most vulnerable. He informed that how the country is putting climate change at the centre of its policies and stressed the need to include climate adaptation policies in the school syllabus to make the next generation aware of the issues.<sup>85</sup> Earlier, Prime Minister Modi also noted that there has

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<sup>82</sup> Ibid

<sup>83</sup> India's 450 GW Renewable Energy Goal by 2030 Doable, Says John Kerry, The Economic Times, October 20, 2021.

<sup>84</sup> 'One Sun, One World One Grid': PM Modi calls for global solar grid at COP26, <https://www.hindustantimes.com/india-news/one-sun-one-world-one-grid-pm-modi-calls-for-global-solar-grid-at-cop26-101635877791812.html>

<sup>85</sup> India will always strengthen any effort for sustainable development: PM Modi, the Hindu, November 2, 2021, <https://www.thehindu.com/news/national/india-will-always-strengthen-any-effort-for-sustainable-development-pm-modi/article37298752.ece> (Accessed on 3 November 2021).

not been as much focus on climate adaptation as much as mitigation and that is an injustice against developing nations.<sup>86</sup>

## 5. Interlinking with Human Security

As explained above, the concept of human security takes a more inclusive and people centric approach in defining the security. Against the traditional notion of military security, it is broadly focussed on human wellbeing, freedom, development and creating enable environment for capacity building of people. Human security calls for a new kind of security diplomacy and a new set of measures and arrangements. Measures to human security considered to be preventive in nature and are based on cooperative mechanisms. They promote sharing of information and interoperability. They are more about policing and law-enforcement than about the military.<sup>87</sup>

Indian development efforts have already been explained and how it has reached out to people in time of need. India has its development footprint in Asia, Africa, South America and in the Pacific in building sustainable infrastructure, roads, hospitals, schools, dams and transmissions line etc. Apart from the development assistance and programmes, New Delhi has also contributing to enhance peace and improving security in its neighborhood and extended neighborhood. In the past, India has significantly contributed in UN General Assembly and Security Council and also in the peacekeeping missions. India has been one of the major troop contributors to UN peace Missions since the beginning. In tackling security issues like terrorism, disarmament, etc., New Delhi has always been at the forefront.

Maintaining peace and security are also considered to be important for growth and development. India has also made efforts for contributing to peace and security. India has taken a wide range of activities such as anti-piracy patrols; pollution control and maritime search and rescue operations; joint exercises; capacity building of partner countries etc. for improving security in the Indian Ocean. It also participates in a growing number of maritime dialogues and is active in ASEAN led-mechanisms; the Indian Ocean Rim Association (IORA) and the Indian Ocean Commission.<sup>88</sup>

Today technology plays an important for promoting human development. Here it is pertinent to highlight India has also offered to share its AADHAR technology and more importantly its CoWIN platform with other countries. India has now made CoWIN app open source, which could be used by other nations as well. Here it can also be mentioned that India and South Africa proposed a TRIPS Agreement waiver proposal which would temporarily waive intellectual property rights protections for technologies needed to prevent, contain, or treat COVID-19, including vaccines and vaccine-related technologies. The proposal was supported by more than 100 low-income countries. But

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<sup>86</sup> CoP26 summit | India will achieve net zero emissions by 2070, says PM Modi, the Hindu, 1 November 2021, <https://www.thehindu.com/sci-tech/energy-and-environment/prime-minister-narendra-modi-addresses-cop26-un-climate-summit-in-glasgow/article37292550.ece> (Accessed on 3 November 2021).

<sup>87</sup> Ministry of External Affairs, Government of India, Foreign Secretary's Vimarsh Talk on "Global Rebalancing and India's Foreign Policy", Vivekananda International Foundation (June 30, 2021), June 30, 2021, [https://www.mea.gov.in/Speeches-Statements.htm?dtl/33965/Foreign\\_Secretarys\\_Vimarsh\\_Talk\\_on\\_Global\\_Rebalancing\\_and\\_Indias\\_Foreign\\_Policy\\_Vivekananda\\_International\\_Foundation\\_June\\_30\\_2021](https://www.mea.gov.in/Speeches-Statements.htm?dtl/33965/Foreign_Secretarys_Vimarsh_Talk_on_Global_Rebalancing_and_Indias_Foreign_Policy_Vivekananda_International_Foundation_June_30_2021) (Accessed on 10 October 2021).

<sup>88</sup> Ibid.

many high-income countries, including some European Union member states, the UK, Japan, Canada, and Australia are against waiving of IPR. Although the US has extended its support for negotiating this waiver. However, the European nations remain adamant. Countries in Africa are lagging behind in vaccination. In Africa, vaccination rate is as low as only 3 per cent, where vaccination rate is above 50 per cent in Europe and 44 per cent in US. It is more than 32 per cent in Asia and South America.<sup>89</sup>

However, there are several challenges faced by India. It lags behind in human development. Levels of malnutrition, poverty, inequality, etc are high. It is currently placed at 131 in the Human Development Index. Gender inequality is reflected in India's low rank on UNDP's Gender Inequality Index. India ranked 127 out of 146 countries in 124. Recently released 2021 Global Hunger Index wherein India ranked 101<sup>st</sup> out of 116 countries, far below its neighbours like Pakistan, Nepal and Bangladesh. There are several factors including poverty, deepening inequality, rising unemployment, agrarian stress aggravated by climate change as well as glaring leakages and corruption in India's mammoth public distribution system. There are also newer challenges posed by the COVID-19 pandemic.<sup>90</sup> There is a hope in the country, COVID would be gradually disappeared; however, a sense of uncertainty also persists amid the reports of rising cases in Russia and China and emergence of new variant of virus.

## 6. Conclusion

The outbreak of the pandemic has certainly posed serious challenges to the international community. People particularly poor and marginalized sections of society are more vulnerable the pandemic and climate uncertainty. Although vaccination process has been substantially increased, however, many parts of the world are yet to be immunized against the corona virus. Developed world appears to be more protectionist and support and assistance required to deal with development challenges are completely fulfilled. There remains to be uncertainty over the pandemic. Global and regional economic scenario is not quite positive.

India has been taking some steps for dealing the challenges of climate change and also contributing promoting human wellbeing and inclusive development. It is part of several initiatives at the global and regional levels for promoting sustainable development, renewable energy and developing climate resilient infrastructure.

New Delhi has been at the forefront in sharing the vaccines and medical and professional know-how. It has also contributed the funds for the South-South cooperation and SAARC. It is imperative that COVID-19 diplomacy goes beyond geopolitics and truly serves the public good, in the spirit of

<sup>89</sup> Zainab Usman and Juliette Ovidia, Is There Any COVID-19 Vaccine Production in Africa?, Carnegie Endowment for International Peace, September 13, 2021, <https://carnegieendowment.org/2021/09/13/is-there-any-covid-19-vaccine-production-in-africa-pub-85320>

<sup>90</sup> Editorial: Free fall, The Telegraph Online, <https://www.telegraphindia.com/opinion/free-fall-india-slips-on-global-hunger-index/cid/1835017>

*Vasudeva Kutumbakam.* In the similar vein, India will have to keep fighting climate change challenges for its own people and for the world at large. It should have a proactive and dynamic global strategy for deepening cooperation with old partners and allies and at the same time forge new partnerships with rising powers.

A robust system of network-building between key stakeholders and creating effective links with national and international research institutions would also be useful further developing policy synergy.

# India's World and Security in the Era of Great Power Politics

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## 1. Introduction

In his address to the nation during the celebrations of India's 75<sup>th</sup> independence day on 15 August 2021, Prime Minister Narendra Modi told the Indian citizens that "the entire world is looking at every development in India – big or small – with deep interest, hope and expectation." Anxiety rather than hope however clouds how India looks at the world. Perhaps for the first time, India confronts the most difficult external environment in its history as an independent republic. Much of India's consternation engendered out of one singular development, both in its immediate neighbourhood and contemporary international politics: the rise of China as a great power.

China's rise has not only eroded the US unipolarity, but most political pundits agree that the world has already entered a bipolar world with the US and China as its declining and rising great powers respectively. The current shift in global politics is enormously consequential for India's position in the world. For the first time in its history, New Delhi confronts a hostile Great Power in its immediate neighbourhood: China. Even during the Cold War, India was not only geographically distant but also held no fundamental clash of interests with the Great Powers, whether the US or the USSR. China's rise has brought both a dangerous Great Power and the dangers of Great Power politics at India's doorstep. India's strategic eminence is increasingly getting compromised by the rise of China and its expanding influence in India's neighbourhood. From Pakistan to Myanmar to Nepal and Sri Lanka, for the first time in its post-colonial history, New Delhi is directly competing with a hostile Great Power for influence in its immediate neighbourhood. Second, India's growth in the global system occurred during a period of US unipolarity. The American policy of "benign altruism" not only streamlined India's integration in the global economic order, but it also assimilated her as a nuclear weapons power in the global nuclear order. The rise of China has not only vanquished American hegemony; it has also called into question the liberal global order supporting India's growth. New Delhi now confronts an era of deglobalisation and protectionism, which complicates its economic fortunes. Third, the current strategic flux is creating new fault lines and engendering new alliances. The emerging balances of power are fracturing old relationships and engendering new alignments of interests, ideologies, and policies most visible in the emerging Eurasian bloc of authoritarian and military-dominated regimes in Russia, China, and Pakistan and maritime democracies such as the US, Japan, Australia, and India, who are also actively courting many European countries to join their balancing coalition.

Navigating China's rise call into question many of the long-held assumptions in India's foreign policy thought and practice. Can it continue to follow the principles of non-alignment and remain wedded to its Gualliesque penchant for strategic autonomy? How can it reconcile the aspirations for global multipolarity with its cold-blooded need to avoid China's hegemony in Asia? Given India's relatively modest rise compared to China's great leap forward, both economically and militarily, how can India maintain its regional primacy in South Asia?

## 2. The China Challenge

In June 2020, at the height of the Covid crisis, Indian and Chinese soldiers engaged in one of the bloodiest clashes between Asia's two largest militaries. The skirmish not only highlighted the uneasy state of the border dispute between the two Himalayan neighbours but also alarmed the Indian decision-makers of how rapidly the military balance of power in the region is shifting in China's favour. India shares with China one of the oldest and longest border disputes in the world, with both sides claiming large swaths of territory under the administrative control of the other. Though the border dispute has always cast an ominous shadow over the bilateral relationship ever since the two countries fought a border war in 1962, New Delhi and Beijing, especially in the Post-Cold War period, developed a modus vivendi to accelerate their economic and diplomatic relations. This was made possible by both sides agreeing to negotiate a peaceful resolution of the border dispute while devising a series of confidence-building measures to avoid any major flareups on the frontier. New Delhi believed that a strong deterrent posture on the border coupled with deepening economic interdependence with China will help India's negotiating position in the long run. Beijing too signalled that it values its economic and diplomatic relationship with India and would not let the border dispute ruin their burgeoning relationship.

However, India's position vis-à-vis Beijing has transformed to its detriment in the last decade. First, the gap between India and China – both economically and militarily – has expanded dramatically. The Chinese economy is almost 7 times the Indian economy; at \$ 200 billion, its military budget is 3 times the amount India spends on its defence. The relative difference in their economic and military capability has significantly impacted India's capability to deter China but will continue to shift the military balance of power in the latter's favour. Second, if New Delhi believed that growing economic interdependence will act as insurance against China's hostile intentions in the future, Beijing's increasing bellicosity and its use of economic coercion as a tool in CCP's statecraft has punctured any hopes of reigning in the Chinese leadership. Indian decision-makers are now seriously threatened by its economic dependence on the Chinese economy.

Beyond the border dispute and the ever-present potential of military conflict, China's rise has not only challenged India's primacy in the South Asian region but also poses the biggest obstruction to its rise as a global power. India's size and geography have always lent her an overbearing influence in South Asia and the Indian Ocean region. The Himalayas and the Indian Ocean created a buffer against other major powers' influence and interference in South Asian affairs. China has surpassed India as South Asia's primary economic partner; today, the trade volume between China and South Asian countries is approximately five times the trade between India and its neighbours. The Belt and Road Initiative aims to integrate all South Asian countries with China, physically, digitally, and economically. The BRI has the potential to shift South Asia's center of gravity – both economic and political – from New Delhi to Beijing. Chinese economic investments are also increasing its political heft among South Asia's smaller countries. If India feels besieged on its northern borders, China's naval rise is squeezing it in the Indian Ocean. Not only has the Chinese Navy set its eyes on being a naval power in the Indian ocean, but it is also developing military and commercial basing facilities all across the region – Djibouti in the Horn of Africa, Gwadar in Pakistan, Hambantota in Sri Lanka, Kyaukpyu in Myanmar (Burma) and Sihanoukville in Cambodia. India is hemmed in by the Chinese Pearl of Strings strategy.

Even at the global level, the rise of China presents India with myriad problems. India's rise necessitates its accommodation in the global order which can only be done through India's membership in global organisations managing global governance. However, China has remained opposed to India's candidature for both the permanent membership of the United Nations Security Council and the Nuclear Suppliers Group, even when most of the other consequential powers such as the United States, Britain, Russia, and France have expressed their support. China's growing sway over international organisations has also complicated India's diplomatic efforts in getting terrorist organisations and individuals in Pakistan sanctioned by the UNSC. Pakistan has also avoided blacklisting by the Financial Action Task Force (FATF) largely due to China's support.

The rise of China is the single most important factor in shaping India's contemporary foreign and national security policy. It is also forcing the Indian decision-makers to reevaluate its traditional foreign policy posture of nonalignment, seek new strategic friends and partners, and embrace fully the logic of geopolitics and balance of power.

### 3. Growing Alignment with the US

For much of the Cold War, the world's strongest and the world's largest democracies remained at loggerheads. Such estrangement resulted out of America's excessive focus on containment of the Soviet Union which rendered a non-aligned New Delhi an uncertain partner. India too rode the high horse of idealism, anti-imperialism, and ideological opposition to great power politics. If American strategic calculations against its Cold War arch-rival brought it closer to Pakistan and China, India sought Moscow's assistance in preserving its national interests. US and India, therefore, found themselves on the opposite ends of Cold War politics, even when they shared the political foundations of democracy and the absence of any serious bilateral conflict.

The end of the Cold War rejigged Indian foreign policy. The implosion of the Soviet Union made the Indian decision-makers confront the reality of US unipolarity. India required a new strategic and economic anchor. The US was the preeminent power that could help India realise its political and economic ambitions. The US also looked at India as an important player in South Asia and the Indian Ocean. US hegemony was immensely helpful for India's rise. A closer relationship with the US helped India to obtain economic assistance from the Bretton Woods Institution, technological assistance for its economic and military needs but more importantly, it assisted India's accommodation in the global order. India's bandwagoning with US power paid handsome dividends, culminating with its inclusion in the global nuclear order with the signing of the Indo-US nuclear deal in 2008.

However, if the economic, technological, and political gain was the primary motivation behind India's cosy relationship with the US in the first two decades after the end of the Cold War, today, the Indo-US strategic partnership serves a more existential purpose for the Indian state: balancing China's rise in the region. Not without reason, therefore, military coordination with the US has emerged as the most important aspect of the bilateral relationship in the last decade. Washington is today India's foremost source of military hardware: between 2013-2017, India's arms imports from the US jumped by 557 percent compared to the period between 2008-2012. If the Indian Armed forces were excessively dependent on Moscow during the Cold War, the composition of arms in India's inventory is now turning disproportionately American. Among all its strategic partners, India



conducts the maximum number of military exercises with the United States. The shadow of China on the momentum of their defense relationship is evident from the fact that India has signed all the foundational defence agreements – ranging from logistical support to intelligence sharing to communications encryption – in the last five years. Except for America’s treaty partners, no other country enjoys such a close defense relationship with Washington DC.

The US role in India’s balancing strategy via-a-vis China, however, goes far beyond being a major arms supplier to the Indian military. New Delhi understands that to counter China’s growing regional and global influence, India needs to actively partner with the US. For a long time, India detested the interference of outside powers in the affairs of South Asia. Today, however, India actively encourages greater interaction between the US and its South Asian neighbours. From Sri Lanka to Burma to Nepal to Mauritius, India has welcomed American security ties with South Asian states. The US has also played an important role in pressurising Islamabad to abide by its obligations against harbouring terrorism. US support was critical in putting Pakistan in the FATF greylist. Increasingly, the US has sided with India on its actions against Pakistan's support of terrorism; in February 2019, when India conducted airstrikes against Pakistan in response to a terrorist strike in the Indian province of Jammu and Kashmir, the US supported India’s right to use force in self-defence. It also prevailed over Pakistan to return an Indian Fighter pilot who was captured during the ensuing engagement. The US has supported India's prominent role in South Asia and the Indo-Pacific, regularly hailing India as the net security provider in the region. India also looks at the US to assist its rise in the global order. US support has helped India gain membership of the Australia Group, the Zangger Committee, and the Missile Technology Control Regime. In the last decade, the US has also become one of the ardent supporters of India’s bid for the permanent seat of the UNSC.

India’s strategic partnership with the US is driven by its need to balance China’s rise. It has however had many unintended effects on India’s foreign policy. India’s external relations are increasingly aligning with US interests. This has sometimes won India new friends globally but has also strained traditional relationships with countries such as Russia and Iran.

#### 4. Policy of Multialignment

India's need to balance China's rise and its burgeoning relationship with the US has had a major influence on how India interacts with the rest of the world. Two major trends are visible here.

First pertains to the downslide in India’s bilateral relations with some of its traditional partners such as Iran and Russia. Whereas Iran had been a major source of India's energy needs, Russia has been a constant source of military hardware. Moscow has also been one of the most reliable supporters of India's diplomatic positions, whether on its nuclear weapons status, its UNSC candidature, or Kashmir, on the global stage. In the last decade, however, both these bilateral relationships have lost much of their vigour. New Delhi has not only sided with the Western nations in pressuring Iran from going down the nuclear route, but it has also retracted its energy imports from Tehran under the threat of US sanctions. The relationship with Moscow, however, is a major cause of concern and has engendered serious debate within the Indian foreign policy establishment. Replacing India’s reliance on Russian military equipment is far more difficult compared to the swiftness with which India has replaced its energy dependence on Iran by sourcing oil from other Middle Eastern

countries and the United States. Moreover, Moscow has the heft to complicate India's strategy vis-à-vis both China and Pakistan; if a Russia-China alignment can significantly alter the regional balance of power, Russian military and diplomatic support to Pakistan will increase the capability and influence of India's South Asian nemesis. However, the freefall in US-Russia relations in the aftermath of the Ukrainian crisis and Russia's alleged intervention in the 2016 US presidential elections has forced Moscow to embrace Beijing. New Delhi's growing closeness with the US has also forced her to recalibrate its relationship with Moscow. To counter the growing alignment between Indo-Pacific's maritime democracies such as India, Japan, Australia, and the US, Russia is actively canvassing for a Eurasian alliance by teaming up with China and Pakistan. The emerging great power politics in the region has engendered two distinct balancing coalitions, forcing the two erstwhile allies into opposite camps.

Second, to cut its losses, India has embarked on a strategy of multi alignment: building relationships with states that can assist New Delhi's ability to compete effectively with China, by bolstering its economic, energy, and military security. Even here the imprimatur of Indo-US alignment is starkly visible since most of these countries are traditional allies and partners of Washington DC.

In the security domain, India has significantly stepped up its interaction with key US partners in the Indo-Pacific, particularly Japan and Australia. During the Cold War, both these countries had frosty relations with New Delhi. However, as Indo-US relations blossomed, so have India's relationship with Japan and Australia. However, the rise of China has provided Indo-Pacific's middle powers such as India, Japan, and Australia an autonomous motivation to foster a closer strategic partnership. On one hand, they all have a common interest in deterring China's increasing military and economic assertiveness. They have been the biggest beneficiaries of US hegemony and American security presence in the region. On the other, they are also extremely concerned that facing a rising China, America may finally retrench into the safety provided by the Atlantic and Pacific Oceans. As Indo-Pacific's resident powers, they have the most to fear from an impending Chinese hegemony.

The need to balance China has therefore provided the strategic rationale for the increasing alignment between these countries, resulting in the Indo-Pacific's newest security institution called the Quadrilateral Security Initiative or the Quad. The idea of the Quad has been on the horizon for almost a decade; it was first proposed by Japanese Prime Minister Shinzo Abe in 2007. However, the idea remained stillborn because of the lukewarm response from India and Australia who feared that a concert of maritime democracies may unnecessarily provoke China and unleash a security dilemma in the region. China's rise and its assertiveness has forced India to reverse its earlier reservations. New Delhi has been a driving force behind the resuscitation of the Quad in recent years; the four countries have again started conducting joint naval exercises and in early 2021, Quad held its first summit-level meeting. New Delhi has also encouraged greater European involvement in the Indo-Pacific's security. In 2020, France was invited to participate in the Malabar series of naval exercises with the Quad countries. India has welcomed UK's decision to increase its military presence in the region.

However, New Delhi understands that military balancing will not succeed until and unless it reduces its economic dependence on Beijing. India's decision not to join the Regional Comprehensive Economic Partnership – a free trade agreement in the Asia-Pacific region spearheaded by China – was largely motivated by the same fear. New Delhi also believes that China's economic power provides her with a very powerful instrument to pressurise its opponents and expand its influence

in the region. Geopolitical resistance to China therefore must be supported by a geoeconomic strategy. India's newfound enthusiasm for greater economic cooperation with the developed world, as was evident in the recent G-7 summit in London, is predicated on this strategic assessment. India is actively negotiating new free trade agreements with the US, UK, and the European Union. From purely a military hedge against China's rise, India is also using the Quad to counter China's connectivity and infrastructure projects. India is increasingly cooperating with the Quad countries and the European Union to provide physical, digital, and financial infrastructure to smaller states in the Indo-Pacific.

Lastly, a quiet revolution is also visible in India's approach towards its energy security. First of all, the Indian government has given great emphasis on renewable sources of energy. The world's third-largest emitter of greenhouse gases has placed its bet on solar and wind energy to reduce its renewable energy footprint and to reduce its dependence on conventional energy resources. In 2015, India and France launched the International Solar Energy Alliance, and European Union has emerged as India's preferred partner in developing solar and wind energy resources. Even in the import of oil, India has shifted away from its traditional reliance on Iran to more reliable and less controversial sources such as Iraq and Saudi Arabia. However, the most significant shift has been the emergence of the US as a major source of oil and gas for the Indian economy. If the shale gas revolution in the US has made American sources more economical, sourcing American oil also helps India assuage Washington's anxieties regarding the Indo-US trade balance.

## 5. Conclusion

As India aims to halt the Chinese juggernaut from emerging as a hegemonic power in the Asian continent, major recalibration in its foreign and national security policy is already visible. The China challenge necessitates India's embrace of the balance of power politics. India's growing alignment with the US and its search for new strategic partners is primarily motivated by its security and economic compulsions. European Union is going to emerge as a key actor in this regard. If France and the UK could provide alternative sources of military equipment, greater economic cooperation with EU states can help India resuscitate its economy from the clutches of the Covid-19 pandemic. However, the India-EU partnership is vital for the sustenance of the liberal global order. As the existing structures of global governance come under increasing pressure from both the US and China, a strong India-EU push for multilateralism, freedom, and democracy can help navigate the tempestuous currents of contemporary global politics.

# India's geopolitical position between East and West: Challenges and opportunities with Italy

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## 1. Introduction

While Italy, the USA and other countries are entering a new and more promising phase of the COVID-19 emergency, it may be of some interest to think about the effects that this pandemic could have also on the future geopolitical order. This paper is focused on Italy and India taking into account its geopolitical position within Asia, since this region – just like Europe on the eve of the Great War - not only has the greatest concentration of economic and financial interdependence, but at the same time it is also the most militarized region on the planet. It is the place of confrontation between the great powers: the USA (the hyperpower), China (the great rising power), India (one of the greatest rising power with high demographic trends) and Japan (the third world economy, which was the economic driver in the 1980s, just like China is acting today).

## 2. The Indian geopolitical factors

According to some analysts, India already at the beginning of the 21st century represented “a far more solid power than its neighbor China”. This statement is largely linked to the particularity of the Indian development model if compared with other Asian countries, since it is based on consumption rather than on investments and on high-tech services rather than on industry. About fifteen years ago, a metaphor in use among analysts dealing with India humorously stated that the country knows the internet and the ox-cart, and that its computer engineers also know how to harvest wheat. It was a way to effectively symbolize the reality of a country characterized by an extreme sectorial, social and spatial diversity. Indeed, the essential geopolitical feature of India seems to be the fragmentation. A peculiarity that can be found in the most various sectors of the country: in the labor market with its caste system and its negative effects produced also on the economic level (excessive taxation, blocking the industrialization of crafts, especially in the cotton sector); in the political sphere with its tendency to fragment the country into small states and the rivalry between Hindus and Muslims; in the social dimension with the protection, for instance, of the *zamindar*, or tax collectors, inherited from the Mughal Empire. Undoubtedly, Indian development must be interpreted in the complex framework of the historical heritage and colonial policies that have long affected it. Just as we should consider the political and economic choices of the so-called “third path” made by Jawaharlal Nehru (who made India the largest parliamentary democracy) and then by Pamulaparthy V.N. Rao and Manmohan Singh with their liberal turn that made us remember very closely the Chinese openness and reform plan which was launched in 1978 by Deng Xiaoping.

### 3. India in the Asian context and in the game of world powers

After the implosion of the USSR and the terrorist attacks of 11 September, India's geostrategic landscape has begun to change profoundly, confirming that it is the superpower of South Asia, where multiple and deep-rooted rivalries are concentrated. Until a few years ago, according to the White House strategists, one of the worst scenarios would have involved a rapprochement of the country with China, and even more the creation of a Delhi-Beijing-Moscow axis (which the Chinese Prime Minister Wen Jiabao himself had evoked during his visit to New Delhi in 2005).

On the other hand, there are common interests between India and China that could have supported a similar hypothesis, such as the desire to shorten the transition times of the international system towards multipolarism and to counterbalance Washington's policy but also, ultimately, to look more to Europe. Today we can say not only that American fears were unfounded, but that the geopolitical games in the Asian continent and their projection abroad have developed in a very different direction.

Certainly, the confrontation between the United States and China is the great game of the new century. Beijing is aware of the enormous strength it gained also in terms of soft power, and aims to become the regional hegemon.

For its part, Washington - which for the next decades will continue to be the undisputed first military power but which (after the brief "unipolar moment") is now also aware of the impossibility of exercising hegemony on a world level – seeks to contain China with the aim of continuing to play the traditional role of offshore balancer.

In this scenario, India ended up acquiring central geopolitical significance. The geometries of geopolitical assets have evolved and the QUAD - *Quadrilateral Security Dialogue* (which involves the United States, India, Australia and Japan) is one of the most important outcome of this process.<sup>91</sup> The four countries work on a much broader agenda than in the past, including the fight against security threats, the economic growth and the health issues. In a meeting this year, the leaders of all four countries have shown that they are even more united than before by their concerns about China's increasingly assertive behavior in the region and are more willing to define a constructive cooperation agenda.<sup>92</sup>

All four Navies participated in their first joint exercise in November 2020, and in March 2021, the four leaders in a virtual meeting formed working groups on COVID-19 vaccines, climate issues and technological innovation. For Washington it is quite natural to actively cooperate with these countries, since Australia and Japan are traditional US allies and India is an important strategic partner. Yet during the Trump administration this entity had taken shape, but the Biden administration is going to further expanding the Quad's agenda.

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<sup>91</sup> A. Panda, "US, Japan, India, and Australia Hold Working-Level Quadrilateral Meeting on Regional Cooperation", *The Diplomat*, November 13, 2017: <https://thediplomat.com/2017/11/us-japan-india-and-australia-hold-working-level-quadrilateral-meeting-on-regional-cooperation/>

<sup>92</sup> A. Jash, "The Quad Factor in the Indo-Pacific and the Role of India", *The Journal of Indo-Pacific Affairs*, March 08, 2021: <https://www.airuniversity.af.edu/JIPA/Display/Article/2528182/the-quad-factor-in-the-indo-pacific-and-the-role-of-india/>

The Joint Leaders' Statement said: "Together, we will continue to work [...] through the Quad, which has never been stronger, to build the free, open, accessible, diverse, and thriving Indo-Pacific we all seek".<sup>93</sup>

Indeed, another essential geopolitical construct that must be taken into account is the Indo-Pacific idea that goes from India to Japan and which is based on the concept that the oceans, understood as a continental border and as an important geo-economic tool, drive the rise of Asia.<sup>94</sup> Thus, Asia's "maritime womb" (the Indo-Pacific) gets the role of a singular and integrated geopolitical construct, able to offer enormous geo-economic opportunities and security challenges, not only for Asia but also for the rest of the world.

An essential pillar of the Indo-Pacific idea is India's growing geopolitical relevance. As we know the "Indo" in "Indo-Pacific" refers to the Indian Ocean and not to India, however the expectations are that this country will be playing a strategic role, also in terms of ensuring a maritime environment adequate for economic growth and development. The previous and long-discussed "Asia-Pacific" construct was ambiguous on the inclusion of India in the region's affairs.

The economic interdependence and the consequent geopolitical effects that emerged at the beginning of the 21st century between the Indian Ocean and the Pacific area has become even more evident in recent years, both from a geo-economic point of view and for issues related to security (it would suffice to think, for example, to the crucial raw material dependence of East Asian countries on the West Asian region and Africa, for which the Indian Ocean serves as an essential bridge).

But it goes without saying that the main cause and objective of this new geopolitical dimension find their foundation in the need for the countries of the region to contain the concerning Chinese ambitions of commercial expansionism and not only, at the global level, also from the dangerous idea relating to the "String of Pearls" and to the OBOR (*One Belt, One Road*).

In this sense, India and Japan share common perceptions and goals and the vital importance of the Indian Ocean for Chinese transport lines can clearly be a decisive factor in the role that the Indian Navy can play. This is demonstrated, moreover, by the "Indian Maritime Security Strategy" inaugurated by Prime Minister Narendra Modi as early as 2015 and with which the country aims at expanding the "areas of maritime interest" to the entire Western and South-western area of the Pacific Ocean.<sup>95</sup>

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<sup>93</sup> The White House, *Quad Leaders' Joint Statement: "The Spirit of the Quad" – March 12, 2021*: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/12/quad-leaders-joint-statement-the-spirit-of-the-quad/>

<sup>94</sup> M.A. Kuo, "The Origin of 'Indo-Pacific' as Geopolitical Construct", *The Diplomat*, January 25, 2018: <https://thediplomat.com/2018/01/the-origin-of-indo-pacific-as-geopolitical-construct/>

<sup>95</sup> Indian Navy, *Indian Maritime Security Strategy – 2015*: <https://www.indiannavy.nic.in/content/indian-maritime-security-strategy-2015>



#### 4. India and Italy. Challenges and opportunities

The relations between India and Italy and the geopolitical dimension in which they are projected cannot ignore, of course, the regional and global scenarios mentioned above. And this is understandable for various reasons that are discussed below and that take into account not only the process of globalization (which allows only up to a certain point to think in terms of nation-state and bilateral relations), but also India's geographical location in the Asian region and the challenges related to the Chinese fast rising power that affect both players very closely (and in the Italian case of course also at the EU level). The scenarios are therefore complex and characterized by a high level of interconnection.

On 15 February 2018, seventy years of diplomatic relations between India and Italy were celebrated with a meeting at the Council of Ministers which was also attended by the Ambassador of India to Italy, Reenat Sandhu. The event followed the institutional visit to India by Prime Minister Paolo Gentiloni a few months earlier, at the invitation of President Modi, and which had given new impetus to relations between the two countries.

But if we have to think about the most recent and significant developments in India-Italy relations, the virtual summit held on 6 November 2020 between the Indian Prime Minister Modi and the Italian Prime Minister Giuseppe Conte must certainly be counted for its unprecedented importance, following which the "India-Italy Joint Statement and Plan of Action 2020-2024" was signed. This is a document that include with a wide ranging bilateral discussion on regional and global issues. Both countries recognized the importance of the developments recorded in particular in the two previous years and following Conte's visit to India in 2018.

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The Plan of Action is divided into four pillars and highlights a number of measures and opportunities for cooperation between the two parts:

- Political dialogue at bilateral level and coordination in multilateral fora (pillar I);
- Economic engagement (pillar II);
- Partnership in the field of Science and Technology (pillar III);
- Cultural cooperation and people-to-people exchanges (pillar IV).

What is of particular interest to us here are the strategic goals and mechanisms that the two countries have agreed to base on their dialogue and initiatives at political level (pillar I).

I believe that the opening statement of the Plan of Action on reaching "common understanding, convergence of interests and agreed operational decisions on all the bilateral relations" is particularly meaningful as the two parts agreed that "in an increasingly complex international scenario, India and Italy intend to strengthen the existing consultation mechanisms both at governmental and high-officials level". This clearly reveals the orientation of the two governments to promote initiatives both at the bilateral and multilateral levels where it is necessary to act synergistically to counter a possible unwanted action by a third actor.

As an historian, I cannot fail to recall the analogy traceable to the Shanghai Communiqué of 1972 which marked the thaw of US-PRC relations and that included an ambiguous anti-hegemonic clause committing both parts to act in synergy to counter the possible hegemonic ambitions in Asia by a

third part: the reference was obviously to the USSR of those years, in the same way in which Beijing's concerning rise in the world geopolitical chessboard is implied today.

Currently, the confrontation with China undoubtedly represents, in fact, the hottest political and economic front for both actors and deeply influences their geopolitical positions. As proof of what has just been stated, the resounding turnaround made by the Italian government towards Beijing should be considered.

If in 2019 Italy had signed a bilateral memorandum of understanding supporting China's OBOR under Prime Minister Conte (although warnings came on many fronts from European and American leaders for Italy in dealing with Beijing), current Prime Minister Mario Draghi has repositioned Italy's ties with China emphasizing the country's traditional contribution to the Western alliances.<sup>96</sup>

It is clear that the economic expectations that led Rome to sign the memorandum have been disregarded, but not only. From a geopolitical point of view, Italy as a member of the G7, a founding member of both the EU and NATO and the third largest economy in the eurozone, by fully supporting the Chinese hegemonic dream of the OBOR would have placed itself on the wrong side.

And this not only for an ideological discourse (last May the Italian parliament strongly condemned the human rights abuses in Xinjiang, in addition to Beijing's escalation crackdown in Hong Kong), but for reasons that political scientists would define as systemic: an imbalance in the heart of the West in favor of China would have had heavy repercussions on the EU internal equilibrium and on the international balance of power.

It is against the background of these circumstances that on 17 June India, Italy and Japan launched a Trilateral partnership to enhance stability in the Indo-Pacific region and to promise security and prosperity for all the countries involved.<sup>97</sup>

Once again India and Italy have found themselves united in countering Chinese hegemonic expansion, so joint action based on cooperation is more than ever necessary.<sup>98</sup> This is an area that offers enormous economic opportunities but which, at the same time, it is subject to great risks due to the growing Chinese interest in the area and it is therefore essential to guarantee the safety of this important maritime space in a world order that appears more and more complex.

There is an extreme need for cooperation in joint actions to address the challenges that arise in the global commons and to ensure respect for the existing international law and treaties concerning this area. India shares with Italy a common view on bringing a peaceful, open, rule-based and stable order in the Indo-Pacific, and Japan does the same.

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<sup>96</sup> ANI, South Asia's Leading Multimedia News Agency, *Italy Repositions Its Ties with China Amid Failed 2019 Belt and Road Initiative Deal*, June 25, 2021: <https://www.aninews.in/news/world/europe/italy-repositions-its-ties-with-china-amid-failed-2019-belt-and-road-initiative-deal20210625191817/>

<sup>97</sup> AffairsCloud, *India, Italy & Japan Launch Trilateral Partnership for Stability in Indo-Pacific Region*, June 23, 2021: <https://affairscloud.com/india-italy-japan-launch-trilateral-partnership-for-stability-in-indo-pacific-region/>

<sup>98</sup> K. Sharma, "India-Italy-Japan Come Together to Promise Security and Prosperity for the Indo-Pacific", *The Kootneeti*, July 1, 2021: <https://thekootneeti.in/2021/07/01/india-italy-japan-come-together-to-promise-security-and-prosperity-for-the-indo-pacific/>; Ministry of External Affairs, Government of India, *India-Japan-Italy Trilateral on Strengthening Indo-Pacific Region*, June 18, 2021: <https://indbiz.gov.in/india-japan-italy-trilateral-on-strengthening-indo-pacific-region/>

As an advanced democracy and the third world economy, Japan can only represents a high added value in this “ménage a trois” and, moreover, Tokyo’s political relations with Rome and New Delhi are excellent.

Due to its geocultural connotations (geographical insularism plus cultural particularism), Japan is scarcely “pro-active” but, on the other hand, it is very “reactive”: it is an exceptional “second” endowed with an extraordinary resilience able to to transform a threat into an opportunity, to make “revolutions” without bloodbaths and, above all, to overcome the model chosen from time to time (thanks to its pragmatic nationalism).

In short, while the United States and China are bound to lead, Japan is bound to follow, but it almost always crosses the line first. On the basis of these premises, the Rome-New Delhi-Tokyo trilateralism might only be highly successful.

Another very important aspect is the relationship that India has with the EU, which Italy obviously cannot ignore. Indeed, in the G7 Summit hosted by the UK in June 2021, the China issue occupied an important part of the discussions and - not surprisingly - India, Australia and South Africa were invited as guest countries to join the meeting.

The initiative proposed by the USA and agreed by the seven big ones to create an investment program of infrastructures in developing countries that could represent an alternative to the Chinese OBOR in order to invest and build in such countries was another important signal of the new geopolitical dimension that are taking shape at the global level.

In this regard, it should be noted the important role that Rome is playing in order for India to assume an ever more central relevance for Brussels. As reported by *The Hindu* newspaper, “Stating that the focus areas of the European strategy for the Indo-Pacific are strikingly similar to India’s own vision, a senior Ministry of External Affairs official [...] encouraged Italy to lend support to an India-centric European Union Strategy for cooperation in the region”.<sup>99</sup> In the same editorial we can read that, in the Italian Ambassador to India Vincenzo De Luca’s words, “Italy can play a leading role in the field of energy transition, connectivity, infrastructure and digitalization”.<sup>100</sup>

Italy’s support for an India-centric EU strategy is and will certainly continue to be a chance for new cooperation opportunities at the European regional level, while the Indo-European partnership will benefit, moreover, from the recently launched “India-EU Connectivity Partnership” which aims at enhancing sustainable connectivity in the Indo-Pacific region based on the following four highlights: Digital; Energy; Transport; Human Dimension.<sup>101</sup> An important document (the *Joint Statement on India-EU Leaders’ Meeting*) had been signed between the two parts following the meeting between the Indian and European leaders (held on May 08) that focused on a wide range of political and economic issues on which the involved actors may find space for an effective cooperation. In short, it could be said that due to the new geopolitical circumstances, Europe is changing its perception of India: the times, the political premises and the terms of the dialogue today seem more ripe than ever to launch concrete initiatives of exchange and cooperation.

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<sup>99</sup> “Indo-Pacific: ‘Italy Can Lend Support to India-Centric E.U. Strategy’”, *The Hindu*, June 17, 2021.

<sup>100</sup> *Ibidem*.

<sup>101</sup> European Commission, *EU-India Connectivity Partnership*, 08 May, 2021: [https://ec.europa.eu/commission/presscorner/detail/en/FS\\_21\\_2354](https://ec.europa.eu/commission/presscorner/detail/en/FS_21_2354)

What has been said so far would also explain what might be the effects of post-COVID-19 on this relation between the two parts. No one knows the future, however, we can try to imagine it, without doing predictive analysis.

As regards potential options for cooperation, although the role of the EU and Italy may overlap or merge with each other for obvious political and institutional reasons, it is possible to envisage, as far as possible, a dual scenario.

At the European level, in addition to the interesting developments for an idea of creating a FTA with India<sup>102</sup> and a “connectivity partnership”, Bruxelles needs to pivot away from China (the European Parliament strongly opposed China and imposed sanctions for its treatment of the Uighur Muslims minority in Xinjiang region) and to play a more incisive political role in the Indo-Pacific. To this end, central players such as France and Germany, in addition to Italy, should also be significantly encouraged. Furthermore, given the current situation, health cooperation assumed a new centrality and the two parts should commit themselves to do more on global health and on the need to focus on resilient medical supply chains. As the geopolitical scenario evolves rapidly in an era deeply marked by the pandemic and its aftermath, India and the EU certainly have more engagement opportunities available, which we could summarize as follows:

- The EU institutions and its members should improve their coordination both on technical and institutional levels in order to foster a more fruitful engagement with India on global issues. Predictably, in this case the greatest difficulty will be to overcome the possible internal competition between the member states of the Union, allowing complementary actions between the various actors, with a view to a dialogue based on strategic capabilities at the member state level.
- The EU should increase the number of initiatives and projects with India on urgent issues concerning the digital era. This means that Brussels should promote and coordinate projects targeting geopolitical aspects that are related to the development of technologies such as 5G and cybersecurity. And since these are issues included in the various agreements of intent between India and the individual European states, it would be strongly recommended that they are regulated at a central institutional level so as to foster a more constructive and effective dialogue with a single voice.
- India, for its part, should seriously consider the opportunity to develop an approach that is as coordinated as possible with the EU and in order to ensure that its objectives follow a path aligned with the European one, New Delhi government should probably adopt of a political-institutional agency that is specially designed for relations with the EU. Obviously, this aspect cannot be separated from a strengthening of parliamentary diplomacy between the two sides.

If, as mentioned above, in a scenario such as the one just described, Italy can only work to harmonize its initiatives and projects at the European level, therefore in synergy with Brussels and with the other member states, we should consider that the five pillars of potential effective cooperation with India are likely to be solidarity, sustainability, security, innovation and cultural

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<sup>102</sup> N. Bhardwaj, “Can We Expect an India-EU FTA Soon? What Has Changed in the Bilateral Relationship”, *India Briefing*, May 18, 2021: <https://www.india-briefing.com/news/can-we-expect-an-india-eu-fta-soon-what-has-changed-in-the-bilateral-relationship-22287.html/>

diplomacy. If we put aside, in fact, the crucial role that can be played by Rome on the geopolitical level by contrasting the Chinese hegemonic aims for the reasons and in the ways discussed above, Italy and India might have five concrete areas of engagement.

- Solidarity can certainly be declined in many different ways, but perhaps in this specific case the immediate reference should be made in relation to the current health emergency for which Italy seems to have managed the most critical phase, while India is still experiencing a very hard moment. An effective exchange of policies for the management of the health emergency at the institutional level could also be useful for consolidating relations and dialogue procedures between the two parts. Also in this case, it could be said that avoid leaving a void that could be promptly filled out by China would have a significant strategic importance.
- Sustainability is an area of great opportunity in order to enhance the dialogue between the two countries and can have important positive repercussions also on a geopolitical level. Environmental protection and measures to reduce the climate impact on the life of the entire planet and on the more and less advanced economies would probably be a very important opportunity to strengthen dialogue and cooperation between the two countries and to promote renewable energy. The climate change issue is known to be one of the issues able to influence geopolitical balances - and it would be enough to recall the infamous policy of Donald Trump and its disastrous effects also on the relations with Europe and China, as well as the new Chinese ambitions towards the Arctic. In this regard, Italy and India could set up a permanent interparliamentary commission that appropriately deals with dossiers for joint actions and that are directly linked to national institutions and agencies responsible for managing and monitoring their implementation.
- With regard to the crucial area of security, the two governments could prepare an effective cooperation plan both on anti-terrorist measures (a field in which both seem to have a remarkable experience) and on strategic naval operations. The latter aspect, in particular, could lead to joint operations between the two Navies in the Indian Ocean and the Pacific, with important geostrategic and geopolitical developments in areas of crucial importance such as the Strait of Malacca and the South China Sea. Effective coordination, facilitated by the creation of an ad hoc operational committee between the respective heads of state and defense ministers, could lead to joint operations to be carried out with a certain periodicity, in agreement also with the Japanese and Australian governments. A synergy of this kind, which would involve Italy with four key players in the Indo-Pacific, would undoubtedly represent a warning and a deterrent for the Chinese military agenda and a remarkable example of a geostrategic counterbalance that would see the US excluded by.
- The innovation sector could be another area with great opportunities for cooperation in strengthening the dialogue on research (Science and Technology). An ever-increasing number of mobility and collaborative networks between the two countries could further develop the so-called "Digital Innovation Forum" recently organized between the two parts and which has already brought academic institutions from both countries together. Extending this project also at an institutional level (in the most appropriate ways) could lead to interesting results in terms of digitization also for cooperation purposes in the field of security.

- Encouraging cultural diplomacy initiatives and projects could be highly desirable both to allow greater and deeper knowledge between the two cultures and to favor the development of a greater soft power by and for both parts. Again, the geopolitical fallout could be relevant since China has made soft power one of its main tools of political consensus at the global level. To this end, among the many initiatives that could easily be imagined, the creation of ad hoc Italian and Indian institutes in both countries could perform a function similar to that of the Confucius institutes that Beijing has disseminated throughout the world and which heavily contribute to the well known “Beijing consensus”.

## 5. Concluding remarks

In general terms, it can be said that the pandemic, rather than creating ruptures or new aggregations, is a powerful accelerator of the radical transformations and trends underway – and this is particularly evident in the case of India-Italy relations. In conclusion - and according to Stephen Walt <sup>-103</sup> the COVID-19 emergency is a very hard blow to globalization to the advantage of sovereign movements, in the sense that states (especially in Europe) have a further reason for the defense of their sovereignty.

If the economy, ecology and health emergency are global, on the contrary, politics is still national, based on nation-states; and the latter at the beginning of the new millennium appears too big for small problems and too small for big ones. Taking into account the hard constraints of the globalization on the one hand, and the inefficiency of the political system on a global level (also due to the growing divide between the two major powers) on the other, what should we do? Should we de-globalize the economy or globalize politics?

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<sup>103</sup> Stephen Walt, “A World Less Open, Prosperous, and Free”, *Foreign Policy*, 20 March 2020: <https://foreignpolicy.com/2020/03/20/world-order-after-coronavirus-pandemic/>.



