

# The Journal of Governance

Volume 26

January 2023

*INDIA @ 75*



**IC Centre for Governance**  
**NEW DELHI**

The Journal of Governance  
IC Centre for Governance  
3, Palam Marg, 3rd Floor, Vasant Vihar, New Delhi-110057

**Editorial Board**

V K Agnihotri

Mahesh Kapoor

R A Mashelkar

Anil Tyagi

Prabhat Kumar – Editor

The IC Centre for Governance has been set up with the objective of collective thinking and acting on important issues of governance. It believes that public governance is too serious a matter to be left entirely to the state and that the involvement of civil society is not only desirable but also essential. The Centre seeks to strengthen the capacity of civil society and government for ensuring good governance.

---

# THE JOURNAL OF governance

Vol. 26

January 2023

*INDIA @ 75*



IC Centre for Governance  
New Delhi

Opinions expressed by our contributors are exclusively their's and not of any other individual or institution, including the IC Centre for Governance.

The Journal of Governance is printed and published by Mahesh Kapoor on behalf of the IC Centre for Governance, New Delhi-100057

Printed at Rakmo Press Pvt. Ltd. C-59, Okhla Industrial Area, Phase I, New Delhi-110020

Please address all correspondence to IC Centre for Governance at 3, Palam Marg, 3rd Floor, Vasant Vihar, New Delhi - 110057  
e-mail:iccfgyahoo.co.in

## CONTENTS

---

Editorial PRABHAT KUMAR	1
Educational Reform for a developed India K. KASTURIRANGAN AND SRIDHARA MURTHY	4
Science, Technology and Innovation: India@75 to India@100 R A MASHELKAR	25
Reflections on the Judiciary Justice Delivery over 75 years MADAN B. LOKUR	42
Women Representation- A core gender issue <i>Where do we stand today</i> REENA RAMACHANDRAN	55
Why India must engage Global Governance Indices Pro-Actively SANJEEV SANYAL	75
Logistics of Transport Increasing role of Railways R DAYAL	83
Evolution of Indian Foreign Policy: India at 75 SURESH GOEL	106
Democracy Past and Present: Need for Electoral Reforms in India T.S. KRISHNAMURTHY	117
Panchayati Raj At 75 VINAY SHANKAR & KK SETHI	123
Administrative Reforms – Lessons and Experiences V. SRINIVAS	143

## OUR CONTRIBUTORS

---

OUR CONTRIBUTORS	158
------------------	-----



## EDITORIAL

*“Within any important issue, there are always aspects no one wishes to discuss.”*

— George Orwell

As India enters the Amrit Kal of its destiny, a new narrative is being pressed by a set of intellectuals and institutions that everything is not well with India’s democracy. The Economist Intelligence Unit considers India a “flawed democracy”; and Sweden’s Varieties of Democracy Institute calls India an “electoral autocracy”. The Washington think tank Freedom House rates India as only “partially free”. Yale University professor Jason Stanley says that “India demonstrates just how global ethno-nationalism, and its more violent sibling, fascism, have become”. In his two recent papers, Ashutosh Varshney argues that since 1947 India has done better as an electoral democracy, and less well as a liberal democracy.

On the contrary, Salvatore Babones, Professor at University of Sydney, says that these international evaluations of Indian democracy are “suffused with wanton speculation, misleading statistics, and uncritical reproductions of activist accusations” against Prime Minister Modi’s strident nationalism.

Yual Noah Harari, one of the foremost thinkers of today, also argues otherwise. According to him, nationalism can be a positive force. The crisis of many democracies is not an upsurge of nationalism but a weakening of national ties. Many countries are seeing civil wars and growing social rifts. Some leaders intentionally poke these wounds instead of healing them. Nationalism says my country is unique and I have special obligations towards it. It is about loving our compatriots. You can fiercely root for your national team, but play by common rules.

Although India does face challenges, the stridently negative appraisals by rating organizations seem wildly disproportionate to

the actual evidence marshaled to support them. In several instances, they smack of intentional deception. It is well-established that most intellectuals hold left liberal political affiliations, and that this bias is strongest among intellectuals who crowd the expert pool for rating organizations.

Whatever the liberalist intellectuals may think of Modi and his government, all of the objective indicators shows Indian democracy to be in good health. In fact, India's democracy is in much better health than that of peer countries with similar levels of education and income.

There is no doubt that our democratic journey has not been without hiccups, because of unfortunate events like Emergency and Sikh riots. But the continued strength, and resultant respect in international arena, of our country is largely owing to our cultural harmony and rich heritage amidst diversity. Amidst the post pandemic global turbulence and disruption, India's rise as a determined economy holds great promise.

Instead of looking at the contesting narratives of Indian democracy, it would be more prudent to consider country's performance on most economic and social indicators, which appears to be quite remarkable. In fact, the recent discourse has shifted to India becoming a developed country. The thinking during the last decade has shifted from backward to aspirational to inspirational, according to Ajay Piramal, the chairman of Piramal group.

In the last seven-and-a-half decades, India achieved remarkable development in agriculture, heavy industry, irrigation, energy production, nuclear power capability, space technology, biotechnology, telecommunication, oceanography and science education and research. Today India is an IT superpower, has the largest scientific manpower and largest railway network in the world. The new look India is all poised for a giant leap forward in science and technology.

Taking 15<sup>th</sup> August 1947 as our frame of reference, we find that there are several fields like Science and Technology, economy, and human development where India has shown remarkable progress. However, several fields like health, education, employment and



income inequality are still to be taken care of. The dimensions of our problems are daunting. There are challenges to resolve, but there is much to be optimistic about. In the midst of a slowing world, India remains a bright spot.

India has made mistakes during the last seventy-five years. It missed the tell tale signs of growth patterns around the world. It seems that now we have corrected the strategy to enable the common masses to catch up on the ease of living index. 99% of the households have access to banking thanks to the Jan Dhan yojana. The survey by the think tank Peoples Research shows that between 2011 and 2021, the increase in the ownership of mobile phones has risen by 40%. The survey which covered 3 lakh households shows that now two thirds of the households had access to tap water. Over half of the household now own two wheelers compared to 20% in 2011. Now, more than three fourths of households have television sets while 14% possess four wheelers.

As one looks at the state of the world, it could well be a logical conclusion that among all the major economies, India is one of the best countries to live in. The narrative of India shining is slammed by Indian origin intellectuals settled in the west. But as the world totters towards uncertainty and recession, India appears to be a good place to be in.

According to Ruchir Sharma India at 75 is, at last, on the upswing.

**Prabhat Kumar**

## **Educational Reform for a developed India**

### **1. The educational strategy of independent India**

India had the long tradition of an integral approach to education, recognising it as an instrument to transform human lives towards fulfilment. The holistic perspective of education in ancient India was rooted in the quest for reality and self-enlightenment. Integral to such a vision of education was the human development with the harmony of inner and outer worlds.

Though India acquired independence from colonial rule in 1947, it was then heavily under the influence of a long history of upheavals in this field. In the post independent era, the progress, under that burden forced preoccupation largely with issues of access and equity, and the baton was unfortunately dropped with regard to quality of education. The implementation of the two previous education policies had been incomplete. The unfinished agenda of the National Policy on Education 1986, modified in 1992 (NPE 1986/92) had been appropriately dealt with in the National Educational Policy 2020. A major development since the formulation of the NPE 1986/92 has been the establishment of Constitutional and legal underpinnings for achieving universal elementary education. The Constitution (Eighty-sixth Amendment) Act, 2002 that inserted Article 21-A in the Constitution of India envisages free and compulsory education for all children in the age group of six to fourteen years as a Fundamental Right. The Right of Children to Free and Compulsory Education Act, 2009 (RTE Act) which came into force in April 2010, entitles every child of the age of six to fourteen years to the right to free and compulsory education in a neighbourhood school till the completion of elementary education. However, despite progress in some aspects,

a mind-numbing uniformity prevails in the education system today, one in which students are not nurtured for their individual potential, in complete antithesis to our ancient traditions.

There have been many important developments since the formulation of the NPE 1986/92 that have made it imperative to bring about a new Policy at this time. The NPE 1986/92 was formulated just before the Internet revolution and, while recognising the potential of technology, could not foresee the radical changes of the past few decades. Since then we have been almost fatally slow in the adoption of technology to improve the quality of education, as well as in using it to improve governance and planning and management of education. Young learners today belong to a generation that is born and raised in technology-rich environments. They will use technologies that haven't been invented so far and enter jobs that don't exist at present. Globalisation and the demands of a knowledge economy and a knowledge society call for emphasis on the need for acquisition of new skills by learners on a regular basis, for them to 'learn how to learn' and become lifelong learners. The narrow time lag between the generation of new knowledge and its application, especially in the fields of science and technology, necessitate the periodic renewal of school and higher education curricula to maintain their relevance to the changing societal and personal needs of learners, and the emerging national development goals. The demographic dividend that India is fortunate to have is expected to last for a few decades. Therefore, it is essential that children and youth in the country are equipped with the knowledge, skills, attitudes and values as well as employable competencies that would enable them to contribute to India's social, economic, and political transformation.

## **2. Transformational journey of India and global developments**

India aspires to take its place beside the United States and China as the third largest economy by 2030-2032, the same period during which NEP 2020 aims to bring about the biggest transformation. India is the fifth largest economy now and when we will be the third

largest economy in the decade of 2030's, our ten trillion economy will not be driven by natural resources, but by knowledge resources. We have not looked ahead into the implications of being the world's third largest economy. It will be a totally different environment. Ecosystems force us to think differently and achieving this milestone will have ramifications all across the country. Are we ready to take our place besides the USA and China as the top three largest economies of the world and be confident of sustaining it in the following years? To do this, we will need a knowledge society based on a robust education system, with all the requisite attributes and characteristics in the context of changes in knowledge demands, technologies, and the way in which society lives and works. In this context, the Prime Minister's call to leverage the Fourth Industrial Revolution to take India to new heights is particularly apt. It is pertinent to recognise that investment at present is an imperative for achieving and sustaining a ten trillion dollar economy that we aspire as a next step. We cannot wait until we get to the ten trillion mark to prepare the human resources that we will need. Quality education will be a key part of the transition to the knowledge economy that is currently underway in parts of India but needs to encompass the entire country. We must, therefore, find the funding that education needs and find it quickly. The stability of transformational socio-economic progress woven under the fabric of democratic polity in Indian society has to be founded in the widest access to empowering education and based on the strength of pluralistic heritages.

Global consciousness on sustainable progress had seen greater commitment in recent decades as exemplified by embracement of Sustainable Development Goals across the globe. The education of the future needs to be reconfigured to meet the targets of the sustainable development goals, set for 2030. Specifically, Goal 4 relating to 'Quality education' seeks "to ensure inclusion and equitable quality education and promote lifelong learning opportunities for all", and Goal 8 relating to 'Decent Work and Economic Growth' seeks to "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all".

### **3. The imperative of quality education**

Over the last three decades since the previous Education Policy, the socio-cultural, economic, scientific, and technological landscape has changed dramatically in India and indeed globally. In the present landscape, it is impossible to escape the conclusion that we, as a nation, are in the midst of a “learning crisis”. By openly acknowledging this painful yet undeniable fact in its opening paragraphs, NEP 2020 lays the stage for the bold and necessary changes that must be enacted. Education touches every individual, but so many of our fellow citizens lack access to quality education. Extensive consultations with a vast number of stakeholders were undertaken to ensure that all voices were heard, and that issues of equity were explicitly addressed in the Policy. Thanks to advances in Science, we have a much clearer understanding today of how the brain learns, and how critical the early years are. Many of the policies related to early childhood education are grounded firmly in these new scientific advances. The policy also recognizes the need to wisely leverage the use of Technology in education, not as a silver bullet, but as an approach that must be evaluated carefully if we are to reap its potential benefits: improved access to affordable and high-quality education. Last but not the least, NEP 2020 calls for a more imaginative and broad-based multidisciplinary liberal education, as a foundation for holistic development of all students.

A key question in that context is the following. How can we create an educational system that better prepares students to tackle such multi-faceted challenges? After all, the problems we face at the national and international levels are increasingly of this nature, and we clearly cannot leave this preparation entirely to chance.

As stated in the Policy, the purpose and importance of a liberal arts education, especially today, is to “enable students to explore the numerous remarkable intertwined relationships that exist among the sciences and the humanities, mathematics and art, medicine and physics, etc. – and more generally, to explore the surprising unity of all fields of human endeavour”.

It is increasingly clear that the 21st century will demand greater flexibility in ways of thinking, and this can only come through

greater exposure to diverse ways of thinking. Disciplinary and even multidisciplinary approaches alone cannot satisfy our thirst for knowledge in the 21st century, which would often demand inter or trans disciplinary approaches even. This is increasingly necessary in cutting-edge research, leading to the solution of complex problems or emergence of new sub-disciplines (or even whole new disciplines). A liberal education has thus the potential to provide graduates with a combination of transferable and uniquely human skills, to help them adapt and continuously learn to work in this challenging environment. Steve Jobs famously remarked that the Macintosh would never have happened without the calligraphy class he took in college. Obviously, Jobs was not referring to the specifics of that one calligraphy class, but to how it sensitized him more broadly to aesthetics, and still more broadly to the power of multiple perspectives. To design his computers, he therefore built teams that not only consisted of top-notch engineers, but included computer scientists who were also musicians and poets and artists and zoologists and historians.

In an uncertain world buffeted by pandemics, climate change, and technological advances such as AI, graduates need this wider range of skills. Thus, the formal education system must provide graduates with a combination of transferable and uniquely human skills, to help them adapt and continuously learn to work in this challenging environment. A liberal education seeks precisely these outcomes – strong written and oral communication skills, teamwork skills, ethical decision making, critical thinking, and the ability to apply knowledge in real world settings.

#### **4. Global views on education and vocational learning**

The idea that education must result in the ‘full development of the human personality’ continued to be reflected in influential reports such as that entitled ‘Learning: The Treasure Within’, which the International Commission on Education for the Twenty-first Century chaired by Jacques Delors, submitted to UNESCO in 1996. The Report argued that education throughout life was based on four pillars: i) Learning to know - acquiring a body of knowledge and learning how to learn, so as to benefit from the opportunities

education provides throughout life; ii) Learning to do - acquiring not only an occupational skill but also the competence to deal with many situations and work in teams, and a package of skills that enables one to deal with the various challenges of working life; iii) Learning to live together - developing an understanding of other people and an appreciation of interdependence in a spirit of respect for the values of pluralism, mutual understanding and peace; and iv) Learning to be - developing one's personality and being able to act with autonomy, judgement and personal responsibility, while ensuring that education does not disregard any aspect of the potential of a person: memory, reasoning, aesthetic sense, physical capacities and communication skills.

Such an articulation of a broad view of education encompassing the holistic development of students with special emphasis on the development of the creative potential of each individual, in all its richness and complexity, has grown increasingly popular in recent years, and many recent reports from UNESCO, the OECD, the World Bank, the World Economic Forum, and the Brookings Institution have highlighted the broad consensus that has developed. Students must develop not only cognitive skills - both 'foundational skills' of literacy and numeracy and 'higher-order' cognitive skills such as critical thinking and problem solving - but also social and emotional skills, also referred to as 'soft skills', including cultural awareness and empathy, perseverance and grit, teamwork and leadership, among others. The process by which children and adults acquire these competencies is also referred to as Social and Emotional Learning (SEL).

Based on the developments that have taken place in the world of cognitive science, there is now deep engagement with the idea that these social and emotional competencies must be acquired by all learners and that all learners should become more academically, socially and emotionally competent. The Policy recognises that it is important to conceive education in a more encompassing fashion, and this principle should inform and guide reforms in relation to the reorientation of the contents and processes of education.

A recent report of the UNESCO too on the state of vocational

education in India makes some pertinent observations and recommendations. These relate to placing the learners and their aspirations at the centre of all vocational education and training programmes. Developing an appropriate ecosystem for teachers, trainers and assessors is considered to be the need of the hour, as also emphasised under NEP 2020. The UNESCO report also points to the importance of inclusive access to women and persons with disabilities to the technical and vocational education and training. Another recommendation of the report is that of supporting local communities in generating livelihoods by capitalising on India's cultural heritage so as to increase the job potential. The UNESCO report also suggests expanding massively the digitalisation of vocational education and training. Digitalisation, as distinct from digitisation refers to the use of digital technologies to re-imagine and transform the way vocational education is delivered to students as digital skills are driving competitiveness in the current economy. Digitally supported education and training can make learning more flexible and help strengthen individual skills and competencies and enhance the quality and attractiveness of technical and vocational education and training.

## **5. NEP 2020 – the essential tenets.**

NEP 2020 provides an integrated yet flexible approach to education. Further, it has kept the interconnectedness of the various phases of education in mind, and how the same will enable continuity, coherence and processes to ultimately realize an end-to-end educational road-map for the country. An articulation of a broad view of education encompassing the holistic development with special emphasis on kindling of the creative potential of each individual in all its richness and complexity has grown increasingly popular in recent years. The policy, thus, aims at the development of 21st Century skills for the students, while giving enough flexibility in making choices.

### **5.1 Early education**

The policy has recommended transformative changes in the way the school education needs to be configured. In the contemporary times,



advances in developmental, cognitive and educational psychology have considerably influenced our thinking about how we need to address the teaching-learning processes of the youngsters in their early childhood. Thus, the change from the “10+2” design to an expanded “5+3+3+4” structure is based on our better understanding of the scientific basis which provides insights of the child’s learning trajectory from birth to secondary school. It is noteworthy that the policy takes specific measures even for children below the age of 3.

Between the ages of 3 to 14, children gradually transition from perceptual learning, to conceptual learning, and then on to prescriptive learning and abstraction. From the age of 3 to the age of 14, recognizing the developmental trajectory of the child, school education is structured as foundational, primary and middle, in conformity with the above mentioned characteristics of the evolution of a child’s learning ability. To develop values, skills, capacities and knowledge, that are relevant not just for today but for the rapidly changing world of tomorrow, we must demolish the hierarchy and hard separation between subjects. We must see knowledge as the integrated whole, it actually is, and understand its relationship and use, to the world around us. A curriculum tuned to above principles will then seamlessly enable the transition of our students to higher education – where the policy is of transforming all undergraduate education with similar principles of holistic, multi-disciplinary liberal education.

The final Secondary level from ages 15 to 18, is when students can explore their interests and strengths. Critically, the policy calls for exposure to vocational education at this stage so that students are fully prepared to decide at the end of 15 years whether they will pursue vocational profession or higher education. The policy recommends mastery of at least one vocational subject during this period. A schooling system that respects these natural development phases of a child will prepare our students far better for higher education or professional and vocational careers.

It is also important that in order to realise an effective roll-out from “the early childhood care” stage, each state does need to develop its own micro-implementation plan, responding to each geography.

This would require close collaboration between the departments of education, woman and child development, and health.

## **5.2 Higher Education**

Turning to the higher education system, the key paradigm will be to make the graduates well rounded and capable of manifesting their potentials. NEP encourages all Higher Education Institutions (HEIs) to consider offering a 4-year liberal education program, even while continuing to keep the option of the 3-year program open. Integration of vocational education into main stream education at schools as well as higher education levels is also recommended, since only about 3% of India's labour force has formal vocational training which hurts not just the economy but also the workforce itself. The policy also envisages evolution of all HEIs into degree granting institutions, moving away from affiliation system and integrating research capacities.

To enable these sweeping changes in higher education, the policy has made some novel provisions for the governance of universities and autonomous institutions. The onus will be on the leadership of these institutions to create Institutional Development Plans, which will be public documents that incorporate these goals in line with their own vision and mission. Every HEI is expected to have a Board of Governors (BoG) and the Board is made responsible for the educational outcomes at the HEIs and maintaining transparency.

## **5.3 Institutional structures for higher education**

One of the main thrusts of the policy is the restructuring of higher education to end the extreme fragmentation, by transforming higher education institutions into large multidisciplinary universities, autonomous colleges or HEI clusters, each with at least 3000 or more students. This would help build vibrant communities of scholars and peers, break down harmful silos, enable students to become well-rounded across disciplines including artistic, creative, and analytic subjects as well as sports; develop active research communities across disciplines including cross-disciplinary research, and increase resource efficiency both material and human, across higher education. The

definition of a university will thus allow a spectrum of institutions that include (i) research-intensive universities that place emphasis on research in comparison to teaching, (ii) teaching-intensive universities that place greater emphasis on teaching but still conduct significant research, and, autonomous degree-granting colleges that are primarily focussed on undergraduate teaching though not limited to just that. The characterisation of HEIs based on these distinctions are not hard boundaries and HEIs will have the opportunity to move up into higher levels based on their performance.

Another important anomaly that NEP corrects is the separation between undergraduate and postgraduate education that has set in through the affiliation system and has prevented the development of a culture of undergraduate research. The NEP encourages all universities to start undergraduate education on their campuses and all Higher Educational Institutions (HEIs) to take up both teaching and research.

#### **5.4 Faculty development:**

Teachers are the central pillars on which all these ambitious plans rest. The NEP 2020 has given considerable attention to teachers, to their initial preparation, conditions of work, and their continuous professional development, while charging them with the critical responsibility of translating the vision of NEP 2020 into desirable outcomes for students, for society, and for the country. The initial preparation of school teachers will move into Departments of Education within Universities. One can see that this could be very well facilitated through the large number of qualified faculty in different disciplines at the universities. PhD programmes too must be strengthened with adequate training to the scholars for teaching careers. State universities are urged consider the possibility of launching professional learning communities in different subjects in order to create environment of peer support.

#### **5.5 Promoting Research and Innovation:**

The Policy recommends the creation of a National Research Foundation (NRF) in order to increase the quantum and scope of

quality research across all disciplines, and to create a much larger workforce of trained researchers within the country, particularly within the university system. The primary role of NRF will be to nurture a vibrant research ecosystem through adequate funding, mentoring, and support of multidisciplinary research in the Arts and Humanities, Social Sciences, Natural Sciences and Mathematics, Engineering and Technology, including Educational Technology.

The NRF will contribute towards enabling India to become a more competitive knowledge economy and help fulfil the goal set by the Hon'ble Prime Minister for an Atmanirbhar Bharat. India's present strength of 252 researchers per million population and R&D investment of 0.65% of GDP as per Economic Survey 2020-21 compares very unfavourably with the other top ten economies in the world. It is therefore imperative to grow research as well as the number of trained researchers by increasing research spending at the earliest.

NRF will also ensure focus on outcomes through selection of research proposals purely based on merit by following a rigorous peer-review process. The benefit of research funding will be available to both private and public funded institutions. NRF will build research capacity across all institutions and all levels, from undergraduate to PhD, and to even entertain requests for research funding from schools. Many PhD and Post-doctoral fellowships will be made available through the NRF so that the low levels of PhD enrolment (just 0.5% as of 2020) is improved upon. Aim is to enhance our ability to solve problems in multi-disciplinary domains of value to society such as clean air, water, healthcare systems, and climate change, challenges that demand the highest level of intellectual engagement.

## **5.6 Integrating Vocational and Professional Education:**

NEP also heralds the potentially explosive growth of vocational education and skill development in the country since it requires, as mentioned earlier all educational institutions to integrate vocational education into their offerings. The potential strengths of over 40,000 colleges and more than 1000 universities should be channelized

through innovative models to provide more hands-on experience to students, with a goal to make India the skill capital of the world, at least in some areas.

Taking the strategy further towards integrating professional education with general education, the policy aims to take a holistic approach to the preparation of professionals. The goal of professional education should be to develop individuals with the capacity to combine theoretical knowledge and specific competencies with an ability to connect theory to practice. In addition to generic competencies such as decision making, critical thinking, problem solving and communication, they should possess an ethical compass and disposition to be constructive, contributing citizens. Achieving such a goal necessitates that professional education must also be of holistic character. Providing strategic thrust on new and emerging disciplines in professional education, the policy also encourages a stronger interaction between academic institutions and industry in this regard.

### **5.7 Promotion of Arts and Lifelong Learning**

While aiming at one coherent ecosystem of higher education, the policy has also paid special attention to the promotion of Indian languages, arts, and culture recognising that India is a treasure trove of culture developed over thousands of years and manifested in the form of arts and crafts, works of literature, customs, traditions, linguistic expressions, heritage sites and so on. Another major dimension which is critical to the higher education is providing flexibility and support for lifelong learning. The policy has brought in the provision for an Academic Bank of Credits (ABC). ABC would be a digital/ virtual/ online entity to be established and managed by the government. A National Higher Education Qualification Framework defines an integrated concept of credit system for all higher education qualifications including the credits defined through the National Skills Qualification Framework (NSQF). This will allow the ABC to also integrate vocational education and skills training seamlessly enabling students to remain relevant to the needs of their work life.

### **5.8 Access and empowerment through technology:**

The NEP 2020 recognises the strengths and usefulness of Open and Distance Learning (ODL) systems and encourages and supports it. ODL has a critical role to play in improving access and ensuring equity, through making good quality, affordable, academic programmes available to students of all ages and from diverse categories and geographies. NEP 2020 envisages that ODL programmes should aim to be on par with the highest quality in-class programmes available. Norms, standards, and guidelines for systemic development, regulation, and accreditation of ODL will be prepared, and a quality framework will also be recommended. A Professional Standard Setting Body (PSSB) for ODL is recommended to be set up under the aegis of the General Education Council under the Higher Education Commission of India (HECI).

Educational Technology applications and research must play a crucial role not only in achieving a higher Gross Enrolment Ratio (GER) by enhancing access to quality higher education, but also in improving the resilience of the entire educational system from disruptions. In this regard the National Educational Technology Forum (NETF), a new autonomous entity is recommended in the policy, to provide a platform for crucial dialogue between educators and education technology entrepreneurs for capacity enhancing efforts with a strategic thrust.

### **5.9 Autonomy and regulation**

Given the emphasis of the policy on achieving quality education through providing autonomy to academia and academics to innovate, the process of accreditation acquires new meaning particularly since it is being made mandatory. As regards to the school level, the policy aims to make governance more local, effective and efficient through grouping of public funded small schools in a neighbourhood into school complexes, for ensuring better resource availability. Their governance ensures support for integrating different facets like early childhood care and education, vocational and adult education as well as special education. Regulation will be based on separation of functions to eliminate conflicts of interest. Paradigms of community

support and supervision, reformed accreditation, flexibility in schools for the choice of curriculum and empowerment by the states for effective implementation including RTE are the other key features.

The regulatory framework of higher education will also be overhauled with all the four key functions such as regulation, accreditation, funding, and academic standard setting being conducted by independent bodies under the umbrella of a new Higher Education Commission of India (HECI), which will be empowered through an act of parliament. Among its constituent bodies, the National Higher Education Regulatory Council (NHERC) will be responsible for regulation, which will be 'light but tight'. The new National Accreditation Council (NAC) will set up a network of accrediting institutions to cope with the workload of accrediting every institution at least once in every five years. The General Education Council (GEC) will collaborate with all the professional councils to set academic standards that HEIs can aspire towards.

## **6. Steps for implementation: Challenges and opportunities**

The first critical and challenging step in the implementation of the NEP 2020 for school education is the development of the National Curricular Frameworks (NCFs) for school education, teacher education and adult education. Focus on the goals of NEP and stakeholder participation at national and state levels will be the key drivers of implementation. The process of development of the National Curricular Frameworks, ensuring the integrative and holistic nature of curriculum as envisaged by NEP, is being guided by a National Steering Committee constituted by the Ministry of Education, and this will also be seamlessly working with the Ministry and the National Council of Education Research and Technology (NCERT).

There will be four curricular frameworks: for Early Childhood Care and Education (ECCE), for school education, for teacher education, and for adult education. The ECCE and School Education frameworks will be seamless and integrated, as they must be to bring to life the vision of the NEP for the Foundational Stage. The teacher education framework will be deeply informed by the ECCE

and School Education Frameworks. A Mandate Document guides the process of the development, anchors the whole effort clearly in the NEP, and lays out the vision for the NCF.

States have a critical role in the development of the National Curricular Frameworks. The NCF will draw heavily from all the twenty five Position Papers developed by each State, the District level consultations and mobile app surveys undertaken across the country. District level consultations and the survey have included teachers, parents, teacher educators, community members, experts, students (school and higher education), anganwadi workers, school principals, non-literates, neo literates and others. Twenty five National level Focus Groups are also providing inputs into the NCF development process. Both the State and National Focus Groups have conducted widespread consultations - these consultations will continue as the NCF development process moves ahead. The NCFs will reflect the key transformations in the NEP 2020 and become the basis for curricula, teaching and learning in the schools. Once the draft NCF is developed, it will go back to the States for review. The NCF will be finalised after feedback is received from all States with provision for one year operational evaluation.

Based on the NCF, each State will develop its own State Curricular Framework (SCF). The SCF will be the basis for the syllabus, textbooks and learning material in schools along with the approach to in-service teacher education in the State. All this will together drive improvement in classroom teaching and student learning outcomes.

Preparing for the world of work is also an integral part of education and this means not just skilling for a particular vocation but also developing competencies that will help young people in the world (e.g. working with their hands, task completion, taking responsibility, good communication skills, working in teams, critical and analytical thinking). States will be ensuring, in line with the vision and guidelines of NEP that their State Curricular Frameworks, their syllabi, textbooks and learning material reflect these skills and capabilities. Schools and teachers will need to support to gear up for this change. State Councils of Educational Research and Training



(SCERT) and the District Institutes of Education and Training (DIETs) must be especially capacitated for this.

The Implementation Plan for higher education which is being detailed will require multiple initiatives and actions, to be undertaken by several bodies in a synchronized and systematic manner, including Ministry of Education, the proposed Central Advisory Board of Education (CABE) with empowerment, the Union and State Governments, other education-related Ministries such as the Ministry of Skill Development and Entrepreneurship (MSDE), the regulatory bodies in higher education and the HEIs. Some important initiatives have already been launched by the UGC such as the operationalisation of Academic Bank of Credits (ABC), and notifications on the Open and Distance Learning (ODL) and the Online Programmes Regulations, 2020 which eases the eligibility criteria for HEIs to be able to offer programmes in online and ODL modes.

As a key step towards its realization, the policy recommends strengthening and empowering the Central Advisory Board of Education (CABE), which had been referred above to have a wider mandate, being a forum for widespread consultation and examination of issues relating to educational and cultural development. The remodelled and rejuvenated CABE, shall also be responsible for developing, articulating, evaluating, and revisiting the vision of education in the country on a continuous basis in close collaboration with the Ministry of Education as well as the related apex bodies of States. It shall also create and continuously review the institutional frameworks that shall help realize this vision.

Other central aspects relevant to implementation of NEP will be the legislative and regulatory empowerments and the resource mobilisation. The initiatives announced already by the union government include i) putting in place the legislative framework for setting up the Higher Education Commission of India (HECI); ii) allocation of Rs. 50,000 crore, over five years, for the establishment of the National Research Foundation (NRF) to strengthen the overall research ecosystem of the country with focus on identified national priority thrust areas; iii) putting in place a regulatory mechanism to permit dual degrees, joint degrees, twinning arrangements to

promote enhanced academic collaboration with foreign higher education institutions and iv) setting up a National Digital Education Architecture, including a Digital University, to support teaching and learning activities as well as educational planning, governance, and administrative activities of the Centre and the states/UTs.

## **7. Overarching needs to drive political consensus**

As emphasised in the preceding sections, two critical areas of focus in the NEP 2020 are the high quality early childhood care and education for all children and the achievement of foundational literacy and numeracy by all children by Grade three. While different departments may handle different parts of the Foundational Stage, States must ensure that both the Department of Women and Child Welfare and the Department of Education work closely together to ensure the synergy required for this. Further the programs like NIPUN Bharat, which is now a flagship program of the Ministry of Education, Government of India, should be taken advantage of by the States, who can implement it with full rigour to achieve the objective of all children having attained foundational literacy and numeracy by Grade three by 2025.

Since the NEP 2020 sees teachers as central to good education, the National Curricular Framework for Teacher Education (NCFTE) will have to be in place once the NCF for School Education is complete. It will be the basis on which both pre-service and in-service teacher education should be designed in the country. Going forward, the four-year Integrated Teacher Education Program (ITEP) will be the standard qualification to become a teacher. States must encourage the best Universities and colleges to offer the ITEP so that high quality teachers can enter the system very soon.

If good in-service teacher education has to be ensured, academic support institutions like State Councils for Educational Research and Training (SCERT), District Institutes of Education and Training (DIETs), Block Resource Centres (BRCs) and Cluster Resource Centres (CRCs) must be significantly strengthened. Currently, most of them struggle with inadequate infrastructure, learning resources and faculty. States must focus on building these into high quality

institutions so that teachers and schools are well supported to make the kind of transitions that the NEP 2020 is aiming at.

The NEP 2020 sees equity and inclusion as a cornerstone of our education system. Accordingly it also envisages Gross Enrolment Ratio (GER) of 100 across all the school years - from early childhood education to secondary education - by 2030. The focus must now be on full inclusion. Inclusion means physical, curricular and pedagogical access for all children with full support available for each child. States must develop curriculum, textbooks and learning material representative of all, classroom pedagogy must account for all children's needs with sensitivity and care. Children with disability must be particularly addressed in this regard. States must ensure that every Block Resource Centre has Inclusive Education specialists, in-service teacher education must include modules on understanding this area and learning to respond to it.

Early years' education is best done in the local language. States must ensure that there is adequate emphasis on learning language well in school with good teachers and good material available to children. Many States have worked towards developing an excellent technical vocabulary in different Indian languages. It is important to continue that work and integrate it with textbooks and material developed for children in schools. The success of the Policy will lie in the successful implementation of the NCFs that truly reflect the spirit and specifics of the NEP 2020. The transformation of school education is contingent on this aspect. In turn, implementation of the NCFs largely depends on all. It is the vision and leadership that will drive the changes necessary to enable this.

A strong, vibrant public education system is the foundation of democracy. Our public education system must be of the highest quality and complete equity. Implementing the NEP 2020 is an opportunity to make this transformation happen. States and the Centre must work closely together towards this - this is the synergy that will make this transformation a reality.

The NEP's aim at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution and ready for the 21st

century is an overarching national cause that should unite diverse stakeholders across the political spectrum. There is imminent need to rise above the partisan divides to forge political consensus for a national interest that the education policy represents.

## **8. Integration with the Vision of Developed India**

The National Education Policy reflects the collective consciousness of contemporary India for an aspirational future. By virtue of the widest possible consultations held in an inclusive manner prior to its formulation, the policy reflects the common aspiration of the nation. On the one hand, it draws upon the strength of universal values for human development realised through ages in this part of the globe and on the other, it reckons with the possibilities and the context of the twenty first century India - progressing as a self-reliant nation and yet with a distinct role in the community of global nations.

If India has to remain self-reliant in an interconnected world, it has to rely on the excellence and values of individual citizens combined with a well-orchestrated team work driven by innovative strategies and institutions. Developing human capacity and values for these is the quintessential function of education. New Education policy reflects these goals by setting the purpose of the education system to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values and a rootedness in India. In this process it endeavours to draw the strength of the universally relevant laws of human development and their capacity for the solutions to the problems of man and society.

The value of a Digital Public Good can also be leveraged to enhance the goals of equity and inclusivity and to accelerate the pace of transforming learning environments. We have already tasted success with such model where a wide spectrum of population has access to a range of innovative services built on top of Aadhaar, DigiLocker, UPI, and the entire India Stack. In the context of education, we similarly have the National Digital Education Architecture (NDEAR) and Digital Infrastructure for School Education (DIKSHA). Among

other things, this infrastructure provides Artificial Intelligence (AI) building blocks which the Central and State Government agencies as well as India's thriving Educational Technology ecosystem can utilise to enhance and augment the capabilities of all key stakeholders: learners, their parents, teachers, and education administrators.

The vision outlined for India by Honourable Prime Minister Modi, as the nation completes the first hundred years of independence in 2047 focuses on a developed India characterised by the five cardinal attributes of cooperative federalism, celebration of India's diversity, unity among citizens, gender equality and a research and innovation driven society. The Prime Minister also reminded that in the next 25 years, which constitutes an Amrut kaal, the need for dedication and for fulfilling the aspiration of each Indian for rapid progress should assume priority. He underscored the importance of gender equality in achieving unity and ensuring the role of women in all sectors including science and people's representation. Central to all this transformation is the role of education that needs to be manifested in all its diverse aspects such as access, inclusivity and quality. Educational reforms as envisioned through the National Education Policy is no more a choice but it is an indispensable instrument for the march of India towards developed nation status, effectively dealing with the challenges of the 21st century environment.

## **9. Epilogue**

The journey of evolving and drafting the National Education Policy was exciting and at the same time humbling as it drew the inputs of a vast range of stakeholders and experts who liberally shared their perspectives and experiences. They represented diverse walks of life across the geography of India and their names are too numerous to mention here but they all deserve rich tributes and acknowledgements for the collective wisdom reflected in the policy.

The process which began in 2015 under the able guidance of Ms Smriti Irani, resulting in the first version of draft policy prepared under chairmanship of late Dr TSR Subramanian, was subsequently shaped successively under the overall Ministerial stewardships of Sri Prakash Javadekar, Shri Ramesh Pokhriyal and

Shri Dharmendra Pradhan in an outstanding manner. The recent and crucial mentorship, guidance and oversight by Shri Dharmendra Pradhan, needs special mention from my side, for his extraordinary leadership. Needless to emphasise here that a policy of this magnitude and transformational character could not have been brought into reality without the inspirational vision and extraordinary support of Honourable Prime Minister Shri Narendra Modi. I am deeply beholden to all the above and to the exceptional dedication and eminent support of the members of the committee which I had the privilege to chair in this national endeavour. I owe a deep sense of gratitude to countless personalities who contributed to shape it with a sense of urgency and all the seriousness it deserved.

\*\*\*\*\*

## Science, Technology and Innovation: India@75 to India@100

### Looking back

India's journey in science, technology and innovation has been remarkable in post-Independent India. While looking back proudly on the journey that took us to India@75, we have to look forward to the path ahead. Indian science, technology and innovation must help build India@100 of our dreams. It also means not forgetting Bharat@75 of today, 70% of which lives in villages and 17% lives in slums<sup>1</sup>.

Although there have been numerous achievements of Indian science and technology in the post-independent India, we will highlight ten of them here, which have been game changers.

### India@75 - Top Ten STI Achievements

1. Green Revolution- from 'ship to mouth' to 'food exporting' nation
2. White Revolution—becoming the world's largest milk producer
3. Drugs and therapeutics - becoming a 'pharmacy of the world'
4. Vaccines -'becoming' vaccine capital of the world, from discovery to manufacture
5. Space – from satellite transport by bullock cart to global leader in satellite launch

---

<sup>1</sup> <https://timesofindia.indiatimes.com/india/17-of-urban-india-lives-in-slums-census/articleshow/19118219.cms>

6. Defence – from technology denial to techno nationalism
7. Atomic Energy – from peaceful nuclear tests to sanctions to self-reliance
8. Connectivity revolution—connecting a billion
9. Digital Revolution -building digital India to becoming global digital front runners
10. Inclusive Innovation -creating the magic of access equality despite income inequality

We will briefly explain each of these milestones and how they changed India forever.

1. *Green revolution: From ‘ship to mouth’ to ‘food exporting’ nation*

In the 1960s India was living a ‘ship-to-mouth existence’. It was dependent on the import of food grains from the USA under humiliating PL480 conditions<sup>2</sup>. The green revolution led to a dramatic increase in agricultural production with enhanced crop yields when Indian farmers began adopting new technologies such as high-yielding varieties of cereals, extensive large-scale usage of fertilisers, pesticides, irrigation and mechanization. It made India not only food self-reliant but also an exporter of food grains.

2. *White revolution: becoming the world’s largest milk producer*

Varghese Kurien’s visionary leadership was responsible for ushering in the white revolution making India the world’s largest milk producer. 70 million farmers today earn income from dairy activities, making it the single largest contributor to agriculture.<sup>3</sup>

Due to the short supply of cow milk in India, research was undertaken at Central Food Technological Research Institute (CFTRI) to develop a process for the production of infant food from buffalo milk, which led to Amul taking up its production and selling it under the brand ‘Amul Spray’.

---

2 <https://www.indiatoday.in/magazine/international/story/19800515-shaking-off-dependence-806682-2014-01-30>

3 <https://www.investindia.gov.in/team-india-blogs/indian-dairy-landscape>



Amul converted abundantly available buffalo milk into skim milk, doubling up the per capita availability of milk. But it also innovated the creation of a three-tiered structure: first, dairy cooperative societies at the village level; second, milk union at the district level and third, a federation of member unions at the state level.

### 3. *Drugs and therapeutics - becoming a 'pharmacy of the world'*

India has now earned the reputation as the 'pharmacy of the world'. It is ranked third in pharmaceutical production, exporting pharmaceuticals to more than 200 countries & territories. It fulfils 50% of the global demand for vaccines, 40% of generic demand in the US, and 25% of all medicines in the UK.<sup>4</sup>

India's rise to this preeminent position in therapeutics was initially fuelled by the prowess of process chemistry and engineering of CSIR's chemical group of laboratories such as NCL, IICT, CDRI, etc. in the early 1970s. Our favourable patent laws allowed only process patents in this sector. That meant copying new molecules was legally allowed. That made a huge difference in building the generic drug industry with high-quality drugs being made available at the most affordable prices.

The price of antiretroviral treatment in 2000 for HIV – AIDS drugs was annually USD 10,000 per person, which was brought down to USD 120 today.<sup>5</sup> The trigger was the process chemistry innovation done at IICT, and commercialized by CIPLA. This not only saved millions of lives but also led to the landmark 2011 Doha declaration on TRIPS and public health, which gave WTO Members the right to protect public health and, in particular, to promote access to medicines for all by circumventing patent rights.

### 4. *Vaccines –becoming a Vaccine Capital of the World*

India had already established its reputation as a leader in research, innovation, manufacture and deployment of vaccines, be it polio, Hepatitis B, rotavirus, etc. But this Indian capacity was stress tested

---

4 <https://www.ibef.org/industry/pharmaceutical-india>

5 <https://qz.com/india/1666032/how-indian-pharma-giant-cipla-made-aids-drugs-affordable>

during the COVID pandemic. Serum Institute came out with Covid vaccine based on licensed technology. National Institute of Virology (NIV) and Bharat Biotech jointly developed indigenous Covaxin. These indigenous vaccines saved millions of lives. The effective management of vaccination of over 2 billion doses within the record time of 18 months<sup>6</sup> was made possible by the CoWIN platform, built by the National Informatics Centre. CoWIN has been in demand in over 50 countries now.

5. *Space - from satellite transport by bullock cart to global leader in satellite launch*

In 1981, ISRO carried its Apple Satellite in bullock cart. From there, India has achieved global leadership with ISRO launching ~129 satellites of Indian origin and ~342 foreign satellites from 36 countries. This satellite-enabled data and services acted as building blocks of India's IT and telecommunication revolution, offering a platform for game-changing solutions from weather forecasting to television broadcasting to mobile communications.

Its launch vehicles journey - from SLV to ASLV to PSLV to GSLV has been impressive so has it been its record of being the first nation to succeed in Mars Orbiter Mission. India is now ranked among the leading nations in the world in space technology.

6. *Defense - From technology denial to techno nationalism*

Access of strategic technologies was denied to DRDO. Despite this, it achieved many milestones in rocket and missile technology. These included Agni and Prithvi missiles, Akash surface to air missile, Submarine launched ballistic K-15 missile system, Light Combat Aircraft (LCA) Tejas. The supersonic cruise missile BrahMos that was developed in partnership with Russia was the fastest supersonic cruise missile when it was introduced. Laser-based High Energy Directed Energy Weapon (DEW) systems was another great achievement.

7. *Nuclear Energy - Peaceful nuclear tests to sanctions to self-reliance*

By doing the successful nuclear tests of Pokhran-1 in May 1974

---

6 <https://www.hindustantimes.com/india-news/india-covid-vaccination-drive-crosses-milestone-of-2-billion-doses-101658039620042.html>

and Pokhran-2 in May 1998, India boldly showcased its self-reliance in nuclear weapons development.

The Indian tests changed the nature of the international non-proliferation game as well as the structure of international security. Nuclear Suppliers Group severely affected India's nuclear program. The world's major nuclear powers imposed a technological embargo. But this denial helped develop the self-reliant capability in atomic energy in power & non-power applications, nuclear submarine, and both fission and fusion/thermonuclear-based weapons.

Indeed the entire range of technologies, from the prospecting of raw materials to the design and construction of nuclear reactors, such as nuclear fast breeder reactor, was developed on a self-reliant basis.

#### *8. Indian connectivity revolutions*

Connectivity Revolution 1.0 happened in the mid-80s in physical telephony. C-DOT (Centre for Development of Telematics) triggered the telecommunication and IT revolution in India by launching an indigenous digital rural electronic 128 line electronic exchange, which could work without A/C, in dusty conditions, and despite erratic electric supply. This connected Indian cities and rural areas for the first time.

Connectivity Revolution 2.0 happened in mobile telephone and internet connection. India had ranked 155th in mobile data consumption in 2017 amongst 230 nations. Reliance's Jio helped it catapult to number one position in the world. India has held that position ever since. Jio paved the way to accelerating digital India and bridging the digital divide meaningfully by connecting over 450 million Indians to the internet in less than 5 years, thus fundamentally changing their lives. The affordable excellence of the internet across the nation paved way for India's advanced digital transformation.

#### *9. Digital Revolution- Building digital India to becoming global digital frontrunners*

The bedrock for India's digital transformation began with the Aadhar card which provided identity to 1.3 billion Indians by enabling quick identification of the user digitally, anywhere, anytime. This was

the first arm of India stack. In 2016, the second arm of India Stack was born with the advent of the Unified Payments Interface (UPI) which catapulted the entire nation into the era of digital payments just by scanning the QR code and making transactions digitally through the bank. Within just 6 years, India has become the world's 5th largest payment network by volume, surpassing over 20 billion online transactions during Q2 of 2022.<sup>7</sup> It is fair to say that India Stack positioned Indians as the trailblazers of the Internet age by promoting financial and social inclusion across India.

*10. Inclusive innovation – creating the magic of access equality despite income inequality*

As mentioned at the beginning, we have to look at Bharat@75, which comprises resource-poor people from villages and slums. They must be included in development and growth through inclusive innovation, something in which India is ranked as a world leader.

The Indian way of doing innovation has led to the introduction of new nomenclatures in the 'dictionary of innovation' with phrases that did not exist just few years ago!

These include phrases like frugal innovation, Gandhian innovation, MLM (more from less for more), reverse innovation, nanovation, and even Indovation!

Some of the Indian innovations were driven by the power of the combination of scarcity and aspiration.

Some of these have been truly game-changing and are taught as case studies in world's leading business schools. Aravind Eye Care doing high-quality cataract eye surgery at one-hundredth of the cost in USA or the fact that Narayan Hrudalaya can do a high-quality heart surgery at one by twentieth of the cost prevailing in USA due to the 'work flow innovation'. Well known as the Jaipur foot is an example of a high performing \$28 foot, which became a Time magazine cover story. But some of the recent examples are even more stunning. These state to challenges like.

---

<sup>7</sup> [https://www.business-standard.com/article/current-affairs/india-saw-20-5-billion-online-transactions-worth-rs-36-trillion-in-q2fy22-122100400459\\_1.html](https://www.business-standard.com/article/current-affairs/india-saw-20-5-billion-online-transactions-worth-rs-36-trillion-in-q2fy22-122100400459_1.html)

- Can we make high-quality but simple breast cancer screening available to every woman, at an extremely affordable cost of \$1 per scan?
- Can we make a portable, high-tech ECG machine that can provide reports immediately and at a cost of Rs 5 a test?
- Can we make a robust test for mosquito-borne dengue, which can detect the disease in 15 minutes at a cost of \$2 per test?

Looks impossible. But all of these have been made possible by Anjani Mashelkar Inclusive Innovation Awardees, all of them being young start-ups and all of them are growing in the market today some even conquering global markets.

Anjani Mashelkar Inclusive Innovation Award<sup>8</sup> was set up in 2011 by me to precisely achieve this. All its 14 winners so far have created products that represent true inclusion.<sup>9</sup>

These awardees were mandated to fulfil three conditions. First, not following ‘best practice’ but creating ‘next practice’. Second, achieving affordable excellence by making high technology work for the poor at affordable cost. Third, potentially disruptive and game changing innovations.

Take ECG. Rahul Rastogi created Sanket<sup>10</sup>, a pocket-size portable and affordable ECG machine, which has a very simple process that can be used even by a villager, and which enables transmission of the ECG to the best expert in a city by WhatsApp or email. The cost per ECG is just Rs 5. Around 2 lakh devices have been sold in 8 countries.

Take breast cancer. Mihir Shah created iBreast<sup>11</sup>, an ultra-portable & affordable non-invasive but high-tech scanner, which gives instant accurate results. Minimal training is required. The cost per scan is just one US dollar. Several million scans have been done and the objective is to reach 25 countries.

---

8 <http://mashelkarfoundation.org/amiia-awards/criteria-process/>

9 <https://www.civilsocietyonline.com/cover-story/reinventing-healthcare/>

10 <http://mashelkarfoundation.org/amiia-awards/sanket-winner-details-2015/>

11 <http://mashelkarfoundation.org/amiia-awards/ibreastexam-winner-details-2016/>

Take oral cancer. Dr Subhash Narayanan created Oral Scan<sup>12</sup>, a breakthrough high-tech device that provides an early, accurate and inexpensive detection of pre-cancerous lesions. No biopsy is required. The device has 97% sensitivity and 92% specificity. Its use nationwide is increasing.

Take pregnancy-related complications. Senthil Murugasen created Save Mom<sup>13</sup>, an IoT-based maternal healthcare wearable solution. 1,000 days care to mother and child for Rs. 1,000 that covers 15 antenatal check-ups of the mother and post-natal care of the baby. It has reached hundreds of villages.

Take Dengue test. Dr. Navin Khanna created Dengue Day 1 Test<sup>14</sup>, which can detect dengue fever within minutes on day one of the fever, affordably, in resource-poor settings. The test kit is now a market leader in India, having captured more than 75% market share – till date, around 10 million dengue tests have been sold. Its costs is 3 to 4 times less than a conventional test.

All these are illustrative examples of inclusive innovation. All of them can benefit Bharat@75 and help build inclusive India@100.

## Looking Ahead

Based on the strengths that have led us to India@75, how can we build competitive Science, Technology and Innovation Landscape for India@100

Here is a five-fold strategy.

1. Clever Balancing of Five Technology Options
2. Achieving assured success in Indian innovation through the ASSURED Framework<sup>15</sup>.
3. Building an inspiring ecosystem for Science, Technology and Innovation
4. Building Science and Technology led Entrepreneurship

---

12 <http://mashelkarfoundation.org/amiia-awards/oralscan-winner-details-2021/>

13 <http://mashelkarfoundation.org/amiia-awards/savemom-winner-details-2020/>

14 <http://mashelkarfoundation.org/amiia-awards/dengue-day-1-test-winner-details-2017/>

15 <https://www.mycii.in/KmResourceApplication/77719>. CIISTRIDE Journal on Technology Leadership Inaugural edition.pdf

## 5. Building Robust Scientific Temper

Here is the discussion of each of them.

The limited view of developing indigenous in-house technology in the laboratories from a scratch is limited to only one option. That is not the case.

### **Clever Balancing of Five Technology Options**

There are five technology options that I had identified in my C D Deshmukh memorial lecture titled Economics of Knowledge.<sup>16</sup>

These are:

1. Make
2. Buy
3. Buy to Make
4. Make to Buy
5. Make it Together

### **The ‘Make’ option**

Prime Minister Narendra Modi has given a clarion call for Atmanirbhar Bharat following his earlier call on ‘Make in India’. However, ‘make in India’ can’t be just ‘assembled’ in India, it has to be ‘invent and make’ in India. That means not just producing products but even producing underlying technologies that are made in India. Then only can we create Atmanirbhar Bharat with Atmavishwas.

### **The ‘Buy’ option**

‘Buying’ technology through foreign technology licensing is the second option. However, some technologies are not available for love or for money. And they are not just in strategic sectors, they are also in civilian sector too. My own experience varies from witnessing denial of access to technology for acrylic acid (used in baby diapers) to alpha olefin sulfonates (used in clothes washing) to butyl rubber (used in tyre inner tubes). Further, even when licensing is done, ‘buying’ the

---

16 Mashelkar, R.A., Current Science, 77(2), July 1999, 223 – 229

core knowledge embedded in a technology or a machinery is possible, only when the owner is willing to part with it.

India is not necessarily being looked at as a bottomless pit of demand by the firms in the developed world. Technology buyers from India are being seen as potential competitors in the world market. Therefore, technology sales are invariably conditioned with marketing territory restrictions. The age of straightforward technology licensing agreements is giving way to technology-cum-market, technology-cum-stakeholding, technology-cum-product swap, etc. Technology is available to a buyer only if it fits in with the supplier's global scheme.

#### The 'Buying to make better' option

Smart countries like Japan opted for the third option of 'buying to make better' route. They acquired knowledge through technology licensing (e.g. Sony buying the transistor patents from US), absorbed it and developed superior products, which competed with the best in the world. In recent years, China has taken to this option. Technology absorption strategy was interwoven (explicitly not just implicitly) by China, into its policy right at the time the foreign investor came in. So China would say, 'we only import once'. India did not do that so well through a strong policy framework. We kept on buying and buying. This needs to change.

#### The 'Making to buy better' option

The fourth option of 'making to buy better' means moving up the curve on technology development and positioning oneself at high enough Technology Readiness Level (TRL) , if not at commercial level. That positioning itself can create a doubt in the minds of the technology licensor. Cray denied high performance supercomputer technology to India but as soon as higher levels of Param series of supercomputers were unveiled, they offered the technology. After all, strength respects strength. Here is the interesting story.

After C-DAC successfully demonstrated the PARAM-8000 in 1990, the Los Alamos (Worlton) report concluded that supercomputers were not necessary to design nuclear weapons.



In 1991–1992, C-DAC exported its PARAM supercomputers to Canada, Germany, and Russia, while others, such as NAL's FLOSOLVER Mk III, and DRDOs' PACE, matched the capabilities of US-made, mid-range workstations.

In December 1992, the US Office of Naval Research sent an official to Bangalore to assess Indian capabilities in supercomputing. In 1993, the US authorized the licensed conditional export of high-performance computers to several Indian institutions.

In April 1995, India placed parallel processing supercomputing on its list of items requiring an Indian export license. In July 1995, the US began to review its supercomputers export controls and in October 1995, further relaxed the export of computers to India.

In 1998, C-DAC launched PARAM 10,000, which demonstrated India's capacity to build 100-gigaflop machines. In response, the US further relaxed its export controls.

During the same year, CRAY established a subsidiary in India; the same company had denied CRAY supercomputers in 1980s! 'Making to buy better' requires smart strategic planning.

### The 'Making it together' option

The fifth option is 'making it together', when different actors and stake holders across the nation come together to build a new technology. Let's take an example of New Millennium Indian Technology Leadership Initiative (NMITLI) launched by CSIR in the year 2000<sup>17</sup>. The successful launch of India's first indigenous hydrogen fuel bus that gives \$400 per KW as against the imported ones that give \$1000-1200 per KW by KPIT Technologies along with CSIR laboratories is a brilliant example of 'making it together'.<sup>18</sup>

CSIR's successful post-COVID 19 effort would not have been possible without this 'making it together' approach.

India must have a short, medium and long-term plan on what is the dynamic mix that it will create of the five options, namely

---

17 <https://www.csir.res.in/collaborations/nmitli>

18 <https://m.economictimes.com/industry/renewables/indias-first-indigenously-built-hydrogen-fuel-cell-bus-by-csir-kpit-launched-in-pune/articleshow/93694170.cms>

make, buy, buy to make better, make to buy better, and making it together.

### **Achieving assured success in Indian innovation: The ASSURED Framework**

Consider the success rate of any idea getting converted into business. An interesting analysis done by Stephen and Burley<sup>19</sup> for Industrial Research Institute gives the answer.

They show that there is a universal curve, which illustrates the number of substantial new product ideas surviving between each stage of the new product development process. It shows that out of 3000 raw ideas (handwritten), 300 are submitted, which lead to around 125 small projects, further leading to 9 significant developments, 4 major developments, 1.7 launches and 1 success.

How do we ensure maximisation of assured success? Mashelkar and Pandit<sup>20</sup> have done an analysis and we propose an ASSURED framework, where each of the letters in ASSURED stands for an attribute.

A (Affordability) is required to create access for everyone across the economic pyramid, especially the bottom.

S (Scalability) is required to make a real impact by reaching out to every individual in society, not just a privileged few. Depending on the product, the target population may vary. Obviously affordability and scalability go together

S (Sustainability) is required in many contexts; environmental, economic and societal.

U (Universal) implies user friendliness, so that the innovation can be used irrespective of the skill levels of an individual citizen across the economic pyramid.

R (Rapid) means speedy movement from mind to market place. Acceleration in inclusive growth cannot be achieved without speed of action matching the speed of innovative thoughts.

---

19 <https://www.tandfonline.com/doi/abs/10.1080/08956308.1997.11671126>

20 <https://penguin.co.in/book/leapfrogging-to-pole-vaulting/>

E (Excellence) by using cutting-edge tools is as important as excellence in non-technological innovation (business model, system delivery, workflow innovation), product quality, and service quality is required, for everyone in the society since the rising aspirations of resource-poor people for high quality have to be fulfilled.

D (Distinctive) is required, since one does not want to promote copycat, 'me too' products and services. In fact, we should raise our ambitions and make D as in 'disruptive', which will be truly game-changing.

The ASSURED framework is already being used<sup>21</sup> for technology selection, investment decisions, project selection and monitoring in national labs, as criteria for awards selection in different fields, etc. ASSURED as a dynamic character. Firms that were ASSURED a decade ago or so are existing no more because some elements or the other of ASSURED failed out in their journey.

### **Building an inspiring ecosystem for Science, Technology and Innovation (STI)**

The reality of India's STI is that it is shackled by bureaucracy. There has been a promise to correct this in the speeches at the Indian Science Congress by successive Prime Ministers in the year 2000, 2011 and 2015, to which this author has been a personal witness. But despite these honest and good intentions by the top leadership, bureaucracy has stayed its course over the years.

The fundamental principle of bureaucracy is more about appearing to be right, process being more important than the performance, and also mistrust rather than trust. This creates overemphasis on and overburdening processes assuming that it will necessarily lead to desired outcomes. Overemphasis on procedures comes at a cost of speed. Science, which is an exploration at times, cannot be audited with the current systems that are used for infrastructure projects. We need a new audit system.

India's investment in R & D as a percentage of GDP has remained at around 0.7% during the past three decades. Our investment has

---

<sup>21</sup>[https://www.mycii.in/KmResourceApplication/77719.CIISTRIDE\\_Journal\\_on\\_Technology\\_leadership\\_Inaugural\\_edition.pdf](https://www.mycii.in/KmResourceApplication/77719.CIISTRIDE_Journal_on_Technology_leadership_Inaugural_edition.pdf)

to rise to often promised 2% of GDP. The industry's share in this investment is around 30%, which must be increased to round 70% as in other advanced nations, including China.

Private sector's R&D investments need to be incentivised. To the contrary, R and D weighted tax reduction has been reducing over the years. This must be reversed. Not only the innovative target and performance-based incentives introduced but those, which have been stopped, must be revived.

We must embrace risk for Derisking our Future. In science-led innovation, when a new idea is born, which leads to the design and development of a new product, that the present market has not seen before, the ready provision of early-stage financing is crucial.

DBT through its BIRAC program, has been a huge propellant for Biotech industry. The 'New Millennium Indian Technology Leadership Initiative' launched by CSIR, in the year 2000, is another example. Other departments and ministries need to introduce systems that will support really high-risk cutting-edge science-based innovation.

### **Building Science and Technology led Entrepreneurship**

Science and technology-led entrepreneurship is not only critical for creating, shaping and sustaining the future industrial sectors of the nation but also crucial for delivering the benefits of scientific research and development to the society at large.

Every effort must be made to create a nurturing and supportive environment for entrepreneurs and entrepreneurial ideas to flourish and thrive. Towards this end, it should be the endeavor to encourage entrepreneurs by reducing systemic risks, uncertainties and barriers for new businesses, incentivize private investment in new ventures, and provide funding support for early stage innovation.

As regards talent and technology, young start-ups are turning out to be a valuable resource for talent and technology, whenever they are backed up with trust. The government has created laudable initiatives to support the start-up ecosystem within the country. One of the key drivers and motivators should be creating bold public procurement

systems for startups in government purchases. “The Swiss Challenge” approach to such procurement is one such enabler.

India is rapidly moving from a ‘starting up’ nation to a leading ‘startup’ nation. Till 2016, there used to be one unicorn (a billion dollar market cap) per year. The year 2021 saw 42 unicorns<sup>22</sup>, almost one per week! What is encouraging is that almost half of these unicorns are by founders, who have not studied in Ivy League institutions, but they come from institutions from tire II or tire III cities, and even dropouts. This implies democratisation of opportunity.

However, there is a word of caution. Most of the start-ups appear to be on consumer tech and not deep tech. A recent study<sup>23</sup> highlighted that only 4% of the investments have been in deep tech start-ups. This needs to change. The challenges faced by start-ups exploring high science or technology led innovation are described by Mashelkar<sup>24,25</sup>.

They need to be addressed.

Amitabh Kant has edited a book<sup>26</sup> on transformative ideas that can change India. In that book, I have provided a framework for such a bold and visionary public procurement policy. Its consideration needs urgency.

## **Building Robust Scientific Temper**

Progress in STI will mean nothing if India continues to be plagued by superstition and dogmas. India must make scientific temper as a way of life, in terms of both thinking and acting. It must encompass individual, societal and political level. It must consistently use the principles embodied in scientific method, involving the application of

---

22 <https://inc42.com/features/indian-startups-that-entered-the-unicorn-club-in-2021-in-india/>

23 <https://timesofindia.indiatimes.com/business/india-business/deep-tech-startups-attract-more-than-double-investment-in-2021/articleshow/88461856.cms>

24 <http://www.mashelkar.com/index.php/work/articles/item/377-science-led-innovation>

25 <http://www.mashelkar.com/index.php/convocation-addresses/165-talent-technology-trust-cornerstones-of-start-up-india>

26 Amitabh Kant (2018), *The Path Ahead: Transformative Ideas for India*, Rupa Publications, New Delhi.

logic. Discussion, argument and analysis have to become vital parts of scientific temper. Elements of fairness, equality and democracy have to be integrally built into it.

The assertions about scientific temper continue to find a place in every science, technology and innovation policy. Most recently, there was a reassertion of this in the Scientific Social Responsibility Policy brought out by the present government in September 2019. It made a specific statement on scientific temperament in para 3.6 committing to “an approach to human and social existence that rejects dogma or assertion that contradicts empirical evidence or lacks a scientific basis, that habit surely questions everything, that privileges logic and rationality and is consistently self-critical.”

The question is what actions will make this possible. For India@100 to become a fully scientifically tempered nation, we propose five transformational tenets that can be act ionised in the decade of 2020s.

First, for students, from treating science as a subject to science as a way of life, and also not just remaining students of science but becoming ambassadors of science in the society.

Second, for citizens, not just remaining consumers but promoting and practising citizen science

Third, for civil society, changing the role from delivering services to spreading scientific temper

Fourth, for media, changing from sensationalism to sensible science journalism

Fifth, for cultural transformation, changing from obedience to openness and also from censorship to freedom of expression.

### **Dreaming India@100**

If the five pathways elaborated above are followed, we are confident that we will build Indian India@100 that would have the following five features.

First, India will create science, that will solve, technology that will transform and innovation that will impact.

Second, India will not be just land of ideas, but land of opportunities, and therefore, it would move from the current state of brain drain to brain gain to brain circulation.

Third, India will create ‘next practice’ in STI, which others will follow, and it will not just opt for ‘best practice’, following others. Indian STI will be risk-taking and not just risk-averse. India will create products with unprecedented cost/performance features and not just marginal cost or future improvements

Fourth, ‘Make’ in India will not just mean ‘assembled’ in India, but invented and made in India, and not just for India, but for the world.

Fifth, Indian STI will dedicate itself to make sure that no one is left behind. It will become a global leader in disruptive inclusive innovation, which can bring in rapid and radical yet sustainable transformation in India.

In short, in India’s Science, Technology and Innovation journey so far, it has moved from a follower to a fast follower. It’s journey towards leadership has just begun. From there, it should accelerate to rapidly become a proud leader by not just leapfrogging but pole vaulting to a new future.

\*\*\*\*\*

**Madan B. Lokur**

---

## **Reflections on the Judiciary** *Justice Delivery over 75 years*

**T**he first sitting of the Supreme Court of India was on 28<sup>th</sup> January 1948 in the Chamber of Princes in what is today known as Parliament House. The Supreme Court shifted to its present home much later in 1958.

### **The initial years**

In the system of checks and balances that we follow, the Supreme Court has the obligation to ensure that the legislature (both Parliament and State Legislatures) stay within the bounds of the Constitution and the executive stays within the bounds of the law enacted by the legislature, and of course the Constitution. It is for this reason that the Supreme Court (and indeed the High Courts) are called the guardians of the Constitution.

But who is to check the Supreme Court? The Constituent Assembly made a provision for amendment of the Constitution. Therefore, if the Supreme Court interpreted the Constitution in a manner not in consonance with the intention of Parliament, the Constitution could be amended to reflect the mandate of Parliament. This became clear in the initial years of our republic when the Constitution (First Amendment) Bill was introduced by the Provisional Parliament in 1951. The Statement of Objects and Reasons of the Bill states, *inter alia*,

During the last fifteen months of the working of the Constitution, certain difficulties have been brought to light by judicial decisions and pronouncement specially in regard to the chapter on fundamental rights. The citizen's right to freedom of speech and



expression guaranteed by article 19(1)(a) has been held by some courts to be so comprehensive as not to render a person culpable even if he advocates murder and other crimes of violence. . . . . Another article in regard to which unanticipated difficulties have arisen is article 31. The validity of agrarian reform measures passed by the State Legislatures in the last three years has, in spite of the provision of clause (4) and (6) of article 31, formed the subject-matter of dilatory litigation, as a result of which the implementation of these important measures, affecting large numbers of people, has been held up.

The main objects of this Bill are, accordingly to amend article 19 . . . . . and to insert provisions fully securing the constitutional validity of zamindari abolition laws in general and certain specified State Acts in particular . . . . .”

There was thus a healthy and respectful appreciation and understanding of the responsibility that the judiciary and the legislatures had to shoulder. That is not to say that transgressions were unknown. One example is in the case of a Special Reference in which the President sought the Advisory Opinion of the Supreme Court under article 143 of the Constitution (1964). Very briefly, the Legislative Assembly of Uttar Pradesh sentenced and imprisoned Keshav Singh for contempt of the House and breach of privilege. On a petition filed on his behalf, a Bench of two judges of the Allahabad High Court granted bail to Keshav Singh. The Legislative Assembly then passed a resolution to the effect that the judges had committed contempt of the House and they should be brought in custody before the House. The judges learnt of this development and petitioned the High Court for appropriate relief. The full complement of judges (28 of them) of the High Court held a special sitting and after hearing the case of the judges, restrained the Speaker from issuing the necessary production warrant against the judges and, if already issued, restraining the Government of U.P. and the Marshal of the House from executing the warrant. At this stage, the President sought the opinion of the Supreme Court which advised that the judges did not commit contempt of the Legislative Assembly by granting bail to Keshav Singh. It was also advised that the Legislative

Assembly was not competent to direct the production of the judges before it in custody or to call for their explanation for its contempt. The matter ended there.

### **The turbulent years**

Turbulence between Parliament and the Supreme Court seems to have commenced in the late 1960s when two contentious policy decisions were taken by the government. The first related to the nationalization of banks and the second pertained to the abolition of privy purses for the rulers who had merged their former Indian states with the Indian Union. The decision to nationalize banks led to a legislation being enacted and subsequently challenged in the Supreme Court. The bank nationalization case was decided against the government and led to the Constitution (25<sup>th</sup> Amendment) Act of 1971 to overcome the judgment of the Supreme Court.

Similarly, privy purses to the ex-rulers were abolished through a presidential order in respect of each ruler of the former Indian States. This resulted in the ruler ceasing to be recognized as such. Writ petitions were filed in the Supreme Court by some of the ex-rulers as test cases questioning the presidential orders. After hearing the parties, the Supreme Court struck down the presidential orders as illegal and inoperative. The ex-rulers were held entitled to all their pre-existing rights and privileges including the right to privy purses. This led to the Constitution (26<sup>th</sup> Amendment) Act of 1971. The Statement of Objects and Reasons for the amendment Bill reads:

The concept of rulership, with privy purses and special privileges unrelated to any current functions and social purposes, is incompatible with an egalitarian social order. Government have, therefore, decided to terminate the privy purses and privileges of the Rulers of former Indian States. It is necessary for this purpose, apart from amending the relevant provisions of the Constitution, to insert a new article therein so as to terminate expressly the recognition already granted to such Rulers and to abolish privy purses and extinguish all rights, liabilities and obligations in respect of privy purses. Hence this Bill.

As is evident, all issues of disagreement were dealt with constitutionally and gracefully, with no rancour. However, the 1970s witnessed stormy years particularly after the Kesavananda Bharati case was decided by the Supreme Court in 1973. This was also the high point of the Supreme Court in terms of jurisprudence. Without going into the details of the case, it need only be said that the Supreme Court, by a 7:6 majority, accepted that power to amend the Constitution, though wide, is not untrammelled and the basic structure of the Constitution cannot be amended. Essentially, this doctrine formulates the principle that our Constitution has the basic structure of a republican democracy and any legislation that adversely impacts the basic structure would be unconstitutional, even if it is an amendment to the Constitution. This decision has had far-reaching implications for our democracy.

Subsequent decisions of the Supreme Court laid down that free and fair elections are a basic feature of our Constitution. Similarly, independence of the judiciary as also judicial review are basic features of our Constitution. Therefore, if the Constitution is amended and free and fair elections are abolished or if the judiciary ceases to be independent or cannot question the decisions of the government, then we will cease to be a republican democracy.

The first and immediate fall-out of the decision in Kesavananda Bharati was that for the first time in the history of independent India three senior judges were superseded and overlooked for appointment as the Chief Justice of India. One of the judges in the minority opinion superseded his three colleagues who resigned in protest. The grace and dignity earlier shown in the relationship between the judiciary on the one side and the executive on the other became a thing of the past.

Two years later, the Allahabad High Court set aside the election of Mrs. Indira Gandhi on the ground of some corrupt practices. This led to a declaration of an internal emergency in 1975 and suspension of all our fundamental rights. The subsequent year witnessed a low depth to which our Supreme Court had sunk under the weight and pressure of the executive. The decision of the Supreme Court in

the ADM Jabalpur case (also known as the *habeas corpus case*) decided by a 4:1 majority resulted in the acknowledgement that even the fundamental right to life and liberty of every person in the country was suspended. So, a person could be arrested and sent to prison without any just cause and he or she had no recourse to the courts and justice. Judgments to the contrary by several High Courts across the country were set aside by the Supreme Court. The illegal and unlawful confinement of thousands for persons during the emergency was thereby validated.

This judgment too had an immediate fall-out. The sole dissenting judge in the ADM Jabalpur case was superseded and overlooked for appointment as the Chief Justice of India. He too resigned in protest. This period was perhaps the worst as far as relations between the executive and the judiciary were concerned. Relations did not normalize for quite a while. There was talk of the government being desirous of having a ‘committed’ judiciary – a bit like the referee or the umpire in a match being compromised. The Law Minister took pot-shots at the Supreme Court in 1987 expressing the following view:

“Madhadhipatis like Keshavananda and Zamindars like Golaknath evoked a sympathetic chord nowhere in the whole country except the Supreme Court of India. And the bank magnates, the representatives of the elitist culture of this country, ably supported by industrialists, the beneficiaries of independence, got higher compensation by the intervention of the Supreme Court in Cooper’s case. Antisocial elements i.e. FERA violators, bride burners and a whole horde of reactionaries have found their heaven in the Supreme Court.”

The Supreme Court was invited to take action against the Minister for contempt of court, but it declined to do so. The shoulders of the Supreme Court were broad enough to take even trenchant criticism in its stride.

## **A resurgent Supreme Court**

Fortunately, after the emergency was over, it took only a few years

for the Supreme Court to rise from the ashes like a phoenix (so to speak), despite many distractions. Several important and significant developments took place over the next 20 years.

### **(i) Public interest litigation**

Among the first innovations was the advent of public interest litigation or PIL. It provided access to justice to marginalized and disadvantaged sections of society. This was achieved by relaxing the rule of locus standi, that is the right to be heard or to appear in court. This enabled social activists and well-wishers of the marginalized and disadvantaged to litigate for and on their behalf in public interest. For example, there was no way that bonded labourers could approach the Supreme Court to assert their rights. PIL enabled Swami Agnivesh, a social activist to litigate on their behalf in the Bandhua Mukti Morcha case and thereby give them freedom from generations of bonded labour (1984). Similarly, an NGO called Rural Litigation and Entitlement Kendra (RLEK) could litigate in the Supreme Court for and behalf of the multitude of residents of Dehra Doon adversely impacted by air pollution through limestone quarrying in the Mussoorie Hills (1985). Suspected criminals who were blinded with acid being poured in their eyes by the police in Bhagalpur, were heard by the Supreme Court through a PIL and provided medical treatment and punishment meted out to the errant policemen (1980).

The RLEK case ushered in environmental activism through which many problems were resolved with the intervention of the Supreme Court in matters concerning air and water pollution, protection of forests and so on. It is the intervention of the Supreme Court in environmental pollution that led to the introduction of unleaded fuel for vehicles and subsequent refinements. From environmental jurisprudence, the Supreme Court moved on to issues of corruption and governance particularly with monitoring the so-called Jain Hawala case and later the allotment of 2G spectrum, the allotment of coal blocks and mining issues. The Supreme Court also introduced a much-needed clean-up exercise and transparency in election processes such as requiring candidates for elections to declare their assets and if they have any criminal cases pending against them.

### **(ii) Lok Adalats**

Another significant development of the 1980s was the arrival of Lok Adalats as an alternate mode of dispute resolution in our justice delivery system. Lok Adalats are a semi-formal method to resolve cases that are not particularly complicated. This mechanism was really a boon for the common man or woman who was unfortunately embroiled in long years of litigation over petty matters. Over the years, millions of small and some not so small cases have been resolved through Lok Adalats. Such has been the impact of Lok Adalats that they have been institutionalized and a few permanent Lok Adalats exist in different parts of the country that resolve disputes between citizens and public utility services. The common citizen finally had real access to justice through Lok Adalats.

### **(iii) Free legal aid and services**

Legal aid was an innovation that entitled the poor, women, children and scheduled castes and scheduled tribes among others, free legal assistance and advice. Although access to justice through Lok Adalats was a reality, access to courts was still a problem for many due to their precarious financial conditions. Now, through the legal aid mechanism, various categories of persons could access the courts without incurring any expenditure in terms of court fees and even lawyers' fees. This endeavour resulted in an amendment to the Constitution and the introduction of article 39A in the Directive Principles of State Policy. Parliament also enacted the Legal Services Authorities Act, 1987 to establish legal services authorities at the national, state, district and taluka level. As at present advised, free legal aid and advice has been provided to millions of beneficiaries across the country.

All these innovative ideas and their effective implementation for the benefit of the average Indian brought the Supreme Court closer to the people and people's issues. The Supreme Court gained the respect of the people of the country, respect that it had lost during the emergency era of 1975-1977 when it virtually capitulated to the whims of the government. A resurgent judiciary also brushed aside post-emergency criticism and its connect with the people gave the Supreme Court the epithet of a 'people's court'.

## **Appointment of judges**

One of the burning issues of the post emergency period related to the appointment of judges to the High Courts and the Supreme Court. The question was: who has primacy in the matter of appointments? With the ‘committed judiciary’ philosophy not having died, the government continued to believe that it had the final say in the matter of appointment of judges. The Supreme Court took the view that the Constitution gave primacy to the Chief Justice of India. But, to prevent the Chief Justice being the sole authority or acting unilaterally, the Supreme Court through a decision rendered by 9 judges felt it appropriate to establish a collegium consisting of three judges (for appointments to the High Courts) and 5 judges (for appointments to the Supreme Court). Therefore, while final recommendations for appointment were henceforth to be made by the collegium of judges of the Supreme Court, inputs from the concerned State Government and the Central Government formed the basis of the recommendations. In other words, the collegium would normally not recommend a person for appointment if the State Government or the Central Government provided valid reasons against the recommendation. The latest salvo launched by the Central Government towards the fag end of 2022 in the matter of appointment of judges, suggests that it is turning the procedure upside down and reaffirming the ‘committed judiciary’ philosophy of the 1970s. Moreover, the Central Government seems to now suggest that the reasons given for not accepting a recommendation of the collegium are sacrosanct and the Supreme Court ought not to disagree with them.

The ‘hostility’ of the Central Government to the process of appointing judges and the collegium system apparently stems from the declaration by the Supreme Court (4:1 majority) that the Constitution (Ninety-Ninth Amendment) Act, 2014 is unconstitutional and violates the basic structure of the Constitution in as much as, if implemented, it would destroy the independence of the judiciary. The Amendment Act sought to introduce a National Judicial Appointments Commission for the appointment of judges to the High Courts and the Supreme Court. Had the constitutional

validity of the Amendment Act been accepted by the Supreme Court, the Central Government would have had (or wrested) complete control over the appointment of judges to the High Courts and the Supreme Court thereby irreparably damaging one of the pillars of our democracy.

To overcome the judgement of the Supreme Court, the Central Government has, in the recent past, adopted an unfortunate stance in that it processes the recommendations of the Supreme Court collegium as and when it finds it convenient to do so and sometimes does not even process the recommendations. Should this machination continue for long, it is quite possible that Central Government will get its way in the appointment of judges and eventually control the judiciary. Since the Central Government and the State Governments are the biggest litigants in the courts, it is like a team in a football match choosing the referee or a team in a cricket match choosing the umpire. What justice can a common man or woman expect in such a situation?

### **Court administration and management**

Be that as it may, the present century has seen a shift in focus from justice to the administration and management of justice. This is not to say that significant decisions have not been rendered by the Supreme Court. Decisions were rendered that cleaned up electoral politics to an extent, including implementation of the anti-defection law. Other decisions of great import such as decriminalizing gay relationships, entry of women in Sabarimala, decision on the Ram Janambhoomi Babri Masjid controversy, redefining adultery and so on were rendered by the Supreme Court. During the covid 19 pandemic, the Delhi High Court and then the Supreme Court and other High Courts virtually compelled the Central Government to wake up and devise a vaccination policy, provide beds and oxygen in hospitals while tackling the hardships of migrant labour. But, at the same time, the Supreme Court realized that the large number of pending cases and delays in their disposal was not conducive to justice delivery or the rule of law. Delays adversely impacted litigants in the manner of justice delayed being justice denied.



**(i) Statutory changes**

Parliament made several amendments to the Code of Civil Procedure to expedite disposal of cases. For example, mediation, conciliation and judicial settlement were introduced as alternate dispute resolution mechanisms with effect from 01.07.2022. Similarly, a cap was placed on the number of adjournments that could be granted in a case. The Supreme court saw the value of these and other procedural amendments and appointed a committee headed by a former judge of the Supreme Court and Law Commission of India to submit reports on alternate dispute resolution mechanism and case-flow management. The committee submitted outstanding reports (with draft rules) on both subjects. The Supreme Court accepted the reports in 2005 but they have unfortunately not been implemented.

Parliament also amended the Criminal Procedure Code in 2006 and inserted Chapter XXIA introducing thereby introduced plea bargaining as an alternate method of resolving petty criminal cases. Through this process, not only is the accused heard in the matter but also the victim of alleged crime. Both parties can, with the assistance of the prosecutor and the defence lawyer, arrive at a mutually satisfactory disposition.

A serious attempt was made to introduce plea bargaining in the District Courts in Delhi and it was moderately successful but for one reason or another, the attempt to institutionalise the process of plea bargaining did not quite succeed. No further attempts seem to have been made elsewhere to introduce plea bargaining as an alternate dispute resolution mechanism. It is worth mentioning here that almost 95% of criminal cases in the United States are resolved through plea bargaining. The potential of this process, in India, is enormous but has not been taken advantage of.

**(ii) Pending cases and vacancies**

The first issue of Court News (a quarterly publication) published in April 2006, points out that the number of pending cases in the High Courts across the country was 35,21,283 as on 31<sup>st</sup> December, 2005. Similarly, the number of pending cases in District Courts across

the country was 2,56,54,251. Today, the National Judicial Data Grid of the eCourts website (inaugurated in 2017) shows the pendency figures for the High Courts as 59,67,884 and for the District Courts the pendency figure is 4,31,50,000. Quite clearly, the growth in the number of pending cases has been exponential. This is a matter of grave concern.

The situation of vacant posts of judges at the High Court level and at the District Court level is also not particularly encouraging. The website of the Department of Justice of the Government of India shows that in the High Courts, the overall vacancy position is about 30%. The vacancy position in the District Courts is not immediately available, but is in the region of about 20%.

The massive pendency of cases across the country and the huge vacancy position points to a failing justice delivery system. It is of no use informing a litigant that he or she will get justice one day. The question that will be asked is, when. Once again, going back to the National Judicial Data Grid, it will be seen that almost 34,00,000 cases (about 8%) are pending in the District Courts for over 10 years and the figure for High Courts is about 13,00,000 cases (about 20%). Such enormous delays will test anybody's patience and particularly that of a person seeking justice.

Justice delivery is not confined to the Courts. We have several Tribunals and Commissions such as Administrative Tribunals, National Green Tribunal, Consumer Commissions, Information Commissioners, Juvenile Justice Boards and so on. Before these statutory authorities also, the number of pending cases is enormous, often running in tens of thousands. Cases before these authorities are, by and large, of an uncomplicated nature, but the litigant has to wait for a hearing for several months, if not years.

### **Where do we go from here?**

The challenges facing the justice delivery system are enormous. A few reforms are needed in our justice delivery system to make it more meaningful and to serve our purpose.

### **(i) Court and Case Management**

It is absolutely important for the judiciary to introduce managerial practices to streamline the processes and expedite delivery of justice. The 13<sup>th</sup> Finance Commission had suggested and recommended the appointment of Court Managers. Some High Courts did take the initiative but in the absence of proper oversight and training, the Court Managers served hardly any purpose. A rethink is necessary. Try and imagine a hospital running without a trained administrator; there will be total chaos in such a situation. The courts across the country are actually functioning without a trained administrator. Judicial officers functioning as Registrars are not an adequate substitute.

### **(ii) Judicial Education**

Even judges need to be educated from time to time on nuances in the law and to introduce best practices in matters related to judicial functions such as judgement writing. A few countries across the world, such as all of the United States, Canada, the Caribbean countries have taken judicial education to the next level. It is necessary to strengthen our judicial academies so that our judges at all levels not only become good judges but great judges.

### **(iii) Alternate Dispute Resolution**

It is time that our judiciary takes serious note of various alternate dispute resolution mechanisms. Mediation has got a toehold in our justice delivery system but much more needs to be done so that it becomes institutionalised. Similarly, for criminal cases it is necessary to seriously consider introducing plea bargaining to resolve non-compoundable disputes. These processes and systems can take away a huge chunk of litigation away from the courts. They can function in tandem with Lok Adalats. The executive and the judiciary need to seriously look at implementing the Gram Nyayalayas Act, 2008 so that justice is delivered at the village level thereby making access to justice a reality for the common man and woman.

### **(iv) Use of Technology**

The eCourts Project had achieved a lot to the introduction of the

National Judicial Data Grid and providing computers and training to all judges across the country and the court staff. It is the success of the Project that enabled the courts to function (to some extent) during the Covid 19 pandemic. Virtual courts were established and cases could be heard through video-conference. There is a need to take advantage of the available resource, including online courts that were established in 2017 for traffic challans. A holistic view of the use of technology in justice delivery is necessary and there is no doubt that it can bring about a sea change in the matter of expediting justice.

#### **(v) Other issues and solutions**

These are some reform measures that may address a few issues troubling the judiciary. There are other issues such as an absence of adequate **infrastructure** and a conducive atmosphere in the courts. Along with Swachh Bharat, there is a need to have a **Swachh Nyayalaya** project.

The judiciary also needs to heavily invest in **research** and try to ascertain why is there a frightening backlog of cases and why is there an unhappy vacancy position. Is the collegium system failing as is being advocated by the Law Minister? While I do not think so, there is undoubtedly a need to introspect by the judges. Knee jerk reactions or ad hoc solutions have not worked and cannot work. The system of fast-track courts and special courts has given way to special fast track courts and fast track special courts. This is nothing but a play of words and the pendency position continues to worsen.

Perhaps the most important reform is to make the courts and justice delivery, citizen centric. If the focus gets diverted, the dream of the Constituent Assembly will remain a dream. Today, there is a need for the judiciary to once again rise to the occasion, introspect and move forward to give justice to all as postulated in the preamble to the Constitution, that is, justice – social, economic and political.

\*\*\*\*\*

## **Women Representation-A core gender issue** *Where do we stand today*

Talent is gender neutral. Yet, gender has been a favoured subject for discussion in various conferences and seminars over the past few decades, to identify the various ways to enhance the representation of women in.

It is well recognised that the gainful engagement of human capital has a direct correlation with the GDP of a Nation. It is therefore imperative that everyone responsible for governing find ways to develop and manage this valuable resource. Several initiatives have been taken by both Central and State Governments, across the public and private sectors in that direction. A former president of World Bank summed it best: “Gender equality is Smart Economics.

A specific reference to the fact that 4 out of 5 members of the team that worked on the economic survey from the Finance Ministry were women while presenting Indian Budget in 2013-2014 reflects the growing realisation of their talent potential.

### **Where do we stand today?**

Census data shows that the gap in Male-Female Literacy ratio has widened from 12.30 per cent in 1951 to 16.8 per cent in 2011 (See Figure 1)

However, enrolment in higher education for girls has increased from 10 per cent in 1950-1951 to 48.6 per cent in 2018-2019 (See Table 1).

And, a recent Nasscom study reveals that women comprise 14 per cent of the total entrepreneurs in India, which works out to 8 million individuals.

According to the periodic Labour Force Survey 2018-2019, the female labour force participation rates among Women aged above 15 years are as low as 26.4 per cent in rural areas and 20.4 per cent in urban areas in India. A 2018 report of the NITI Ayog, which reviewed the performance of states on sustainable Development Goals, showed all states performed poorly on gender equality.

Governance is an exercise of political, economic and administrative authority in the management of a country's affairs at all levels. Good governance thus implies that the state, the Civil Society, and the private sector will ensure the participation of all sections of society, particularly women, in the decision-making process at all levels, while also building their capacities and capabilities.

The equal participation of Woman in every aspect of Governance is crucial for the growth of the country's economy as well because an economic system cannot realize its full potential if half of its human resources are out of reckoning.

India's scorecard on governance from the angle of women's participation is a mixed one. While the presence of Women can be seen in practically all fields, this presence is both qualitatively and quantitatively rather insignificant.

In every sphere of Governance, women have been consistently marginalised and discriminated against. They remain in a position of inequality compared with men partly because their situation, needs and concerns are typically not considered when making policy decisions, and even when these are taken into consideration, they remain peripheral and incidental to the mainstream agenda.

Women's advancement demands that they participate actively in setting the agenda and determining the issues on which decisions are to be made and that they put their own stamp on these decisions. The scope of Women's participation is circumscribed by the customs and value framework of a male -dominated structure. There surely are exceptions with women executives distinguishing themselves in the higher echelons of business hierarchies. But these instances are far removed from the vast numbers of competent and qualified women who are available for diverse assignments.

In a democratic system, the Legislature is the fountainhead of all power. Globally, the experience has been that the presence of a critical mass of women at the policy making level, can bring about significant changes in society. There is also an expectation that the greater presence of women in these bodies can have a transformative effect on the nature of polity itself making it more humane and sensitive.

However, women are grossly under-represented across both the federal and state legislatures in India, leading to a great “democratic deficit“. This leads to inadequate female influence on legislative and policy decisions.

It is this lack of adequate space for women in the totality that of politics that has given rise to the demand for affirmative action by way of reservation of seats in legislative bodies. While, the 73rd and 74th constitutional amendments in 1993 provided for 33 per cent reservation of seats for women at the panchayat level, the issue of similar reservation for women in the Parliament and state legislatures has been raging for the past three.

### **Constitutional Entitlements for Women:**

Dr. Bhimrao Ambedkar’s vision of gender inclusion in the Constitution across its various Articles was vast and perhaps after a deep dive into the implications on the socio-cultural diversity and religious beliefs in India (see Box 1)

An analysis of the affirmative action taken by various governments and their agencies (see Box 2) has indeed contributed to some extent in creating awareness both amongst women and society at large about various possibilities that exist for advancement of women. Consequently, there are more girls enrolled in school, and an increasing number of women in higher education and professional disciplines like engineering and medicine, in the Defence forces, and in Local Self-Government, apart from the corporate sector.

### **Untapped potential**

Research points out that if India were to focus on harnessing female economic participation, 264 million (26.4 crore) more workers

could be mobilised and the country's GDP could grow by 27 per cent. Removing discriminatory provisions and providing equal opportunity to Indian Women, can add an estimated \$700 billion (Rs 70,000 crore) to the country's economy.

However, the lack of a systems approach for the achievement of intended objectives in various initiatives, the outcome leaves much to be desired.

The critical factors hampering the advancement of Women and needing attention are :

### **Poor Compliance of Law**

For instance, while many women in formal employment can take advantage of the Prevention of Sexual Harassment Act, the majority of India's women, who work in the informal sector, have no such access. Poor data collection, inadequate monitoring and patchy implementation further hamper compliance to the law.

Almost 24 years after India got its first guidelines to prevent sexual harassment at the work place and nine years after the government enacted a Law for it, there are few publicly available data on how efficient these mechanisms are. In fact the government maintains no centralised data relating to cases of harassment of women at work places, the Parliament was told in July 2019. Also, 95 per cent of India's women workers are employed in the informal sector and find it difficult to access legal mechanisms to report sexual harassment at work place.

On February 17, 2021 a Delhi Court Acquitted journalist Priya Ramani in a Defamation lawsuit filed by a sitting MP for accusing him of sexual harassment in 1993. The judge mentioned in his judgement "the woman has a right to put her grievance at any platform of her choice and even after decades.". He also noted that in 1993, she had no other avenues to seek redressal for her alleged harassment, as India only formulated "The Sexual Harassment Of Women At Workplace Act (POSH) in 2013. However, nine years since its enactment, Government has not published any information on how effectively this law and its committees function. However there is no Government body as yet that tracks the law's implementation.



According to a report published on February 21, 2021 overall Compliance with the law is low. The majority (56 per cent) of India's 655 districts did not respond to requests to provide data on the functioning of local committees to look into workplace sexual harassment and 31 per cent of companies surveyed in 2015 were still not compliant with the law.

Like the POSH Act, there are an astounding 200 laws related to employment across the country that actively discriminate against female job seekers, according to the recent 'State of Discrimination Report' by Trayas, an Independent regulatory research and policy Advisory Organisation. These discriminatory laws allows the state to act as a Paternalistic agent and put a premium on the employment of Women, impacting female labour participation.

The laws referred here, a few of which group women with Children, criminals and people with disabilities, either completely prohibit the employment of women in certain occupations or impose time restrictions on their work. They also insist on whole lot of permissions and conditions that make it hard for employers to hire female employees.

A study published in March 2022 assessed 23 Indian states on the basis of four restrictions placed on female jobseekers:

- 1) Working at Night
- 2) Working in jobs deemed hazardous
- 3) Working in jobs deemed arduous, and,
- 4) Working in jobs deemed morally inappropriate

Of this employment of Women at Night is the most legislated. Five of the six laws analysed in this study are: Factories Act and Rules, Interstate Shops and Establishment Act, Contract Labour Act and Rules, Interstate Migrant Workmen Act and Rules, and Plantation Labour Act. All of these laws place restrictions on Women working at night.

The study ranked Odisha, Meghalaya, Chhattisgarh, and West Bengal as the worst performers in terms of the numbers and egregiousness of their restrictions on female employment. Kerala,

Tamil Nadu and Goa are ranked the best. As for the laws, the Factories Act, 1948 has the maximum types of restrictions on female employment. It prohibits women from working at night, in hazardous processes and in jobs deemed arduous.

The study's conclusions may help explain why Indian Women remain severely underrepresented in the formal economy — only 18.6 per cent of all Women, and only 24.5 per cent of those in the working age group, are a part of the workforce in India.

States with relatively fewer legal restrictions had greater than average female labour force participation. In these states, the number of women in managerial participation, and the ratio of women's salaries to men's salaries was also higher. Further, these states had an average female unemployment rate of 10.39 per cent compared to the 12.36 per cent in states rated below the median. In addition, woman's salaries in states with ratings above the median, was 77.4 per cent, of men's salaries, to states with below median ratings-where it was 67.7 per cent of men's salaries.

Studies have shown that several factors influence a woman's decision to not join the workforce. For instance, income and employment of family; marital status, childcare arrangements and safety; continuing education over joining the labour force early; and domestic responsibilities. The effect of restrictive laws on women's employment needs further exploration, though they clearly limit the demand for women workers and impacts their right to choose work.

There is also need for competitive federalism, for states to correct discriminatory provisions.

### **Limiting Women**

When laws deem women as a "special" category with no agency, it signals to employers that women are incapable of some jobs. The language of these provisions also reinforces traditional norms — that en masse women are a "vulnerable" group and need sanctuary and protection. These laws end up becoming the tools that restrict their entry into and mobility in the labour market. While drafting or justifying these legal provisions, states have kept in mind women's

constraints but rarely their aspirations.

Some of the laws studied for the report highlights how the “categorisation” are limiting women, putting them on par with children and giving the state a role of a benevolent intervenor and curtailing the autonomy of female workers. These restrictions have been justified as necessary for preserving “women’s safety, moral integrity and health, and for family welfare”.

For Instance, Section 87 of the Factories Act ,1948 which prohibits the employment of Women, adolescents, and children in operations that are classified as “dangerous”. It empowers state governments to specify any number of processes as “dangerous” or exposing employees to serious bodily injury, poisoning, or disease.

For instance, Bihar prohibits the employment of Women in pottery units; West Bengal prevents them from working on jute hemp and fibre softening machines; Madhya Pradesh does not allow women to work on machines used for cutting stones or making grooves on stones in the manufacture of slate pencils. Even in occupations that are women centric, laws place restrictions on female employment. For instance, women constitute more than 50 per cent of the work force in plantations research has shown, but the plantation labour rules of Tamil Nadu and Tripura prohibit the employment of women in the sector because it is deemed to be “Hazardous”. Rule 69 A of the Tripura Plantation Labour Rules ,2017 prescribes the “eligibility for employment in spraying works “ that prohibits both children and Women from engaging in the process.

Bihar and Jharkhand each have deemed 49 processes as “too hazardous” for adult Women and children to work in. On similar grounds, more than 650 provisions in Factories Rules across Indian states restricts women’s entry into the labour market.

### **Criminal, Diseased or Women**

There are laws that undermine the capabilities of women by grouping them with people with disabilities, people afflicted with disease and criminals. The Chhattisgarh Excise Act ,1915, for example, requires a person applying for a liquor licence to submit an affidavit swearing that he would not employ a salesperson or

representative who has i) “Criminal Background”, ii) “Suffers from any infectious disease or is below 21 years age or iii) is a “Woman”.

Laws also diminish the agency of Women by anchoring their employment to familial relationships. The Shops and Establishment Acts of Madhya Pradesh and Sikkim, for instance allow women to work in shops and establishments at night only if they are the owner’s family members.

### **Contesting Restrictive Laws**

It is not that laws that limit a women’s participation in the job market have gone unchallenged (for example, *Leela vs State of Kerala*).

In *Hotel Association of India and others vs Union of India and others*, 2006, where the petitioners challenged the prohibition on women serving Liquor under section 30 of the Panjab Excise Act, 1941, the Delhi High Court allowed the petition and declared section 30 as violative of the Articles of the Constitution.

Such discriminatory legal provisions are justified by arguing that the constitution allows positive discrimination in favour of women: Article 15(3) permits the state to make special provisions for women and children. Acknowledging that Indian women have been socially and economically disadvantaged for centuries, this article was added to the constitution.

But to reduce Women’s employment prospects by quoting Article 15(3) would be “to cut at the very root of the underlying inspiration behind this Article” (*Vasantha R. vs Union of India and others*, 2000). The Petitioners in the case pleaded against Section 66(1)(b) of the Factories Act which creates a classification solely on the basis of sex. The Madras High Court declared the section unconstitutional.

### **Job creation and Labour Participation.**

The total labour participation rate has dropped from 46 per cent to 40 per cent in 5 years. Only 9 per cent of Indian women are employed or looking for jobs. This decline in female labour participation predates the Pandemic. Explanations for the drop in

workforce participation vary. Unemployed Indians are often described as students or home makers. In a world of rapid technological change, many are simply falling behind in having marketable skillsets. For women the reason sometimes relates to safety or time-consuming responsibilities at home.

**Though they contribute around 49 per cent of India's population, Women contribute only 18 per cent of the economic output, about half the global average.**

Four out of five women are not working in India. Only Yemen, Iraq, Jordan, Syria, Algeria, Iran, and the West Bank and Gaza Strip have a lower female labour force participation (FLFP) rate than India. In 1990, India's FLFP was 30.3 percent. By 2019, it had declined to 20.5 percent, according to the World Bank. While the men's labour force participation rate slightly decreased over time, it was four times that of women at 76.08 percent in 2019. Despite a rising GDP and increasing gender parity in terms of falling fertility rates and higher educational attainment among Indian women, India's FLFP continues to fall. India's job stagnation and increasing unemployment in the past few years a problem that is aggravated by the COVID-19 pandemic — could further worsen this situation.

More women entering the workforce is beneficial for both men and women. Research shows that median real wages for both men and women rise by 5 to 13 percent with a 10 percent increase in FLFP rate in a metropolitan area.

Individually, studies have linked women's paid work to increased autonomy and decision-making power in the household, delays in the age of marriage and first childbirth, and an increase in education for children in the house.

While labour force participation is declining globally on average, women's participation has increased in high-income countries that have instituted gender-focused policies like parental leave, subsidized childcare, and increased job flexibility.

On the Global Gender Gap Index by the World Economic Forum (WEF), India has fallen four places from 2018, now ranking 112 of 153 countries, largely due to its economic gender gap. In less

than 15 years, India has fallen 39 places on the WEF's economic gender gap, from 110th in 2006 to 149th in 2020. Among its South Asian neighbours, India now has the lowest female labour force participation, falling behind Pakistan and Afghanistan, which had half of India's FLFP in 1990.

### **Possible Explanations for India's Declining FLFP**

While greater education leads to greater economic participation for men, it is not the same for women. Researchers have observed a U-shaped relationship between education and labour force participation in India. Women with no education and women with tertiary education display the highest rates of labour force participation among Indian women. The lack of demand for moderately educated women and occupational segregation could explain the Indian paradox of increasing female education and decreasing women's employment despite India's economic growth.

Indian women are often required to prioritize domestic work, particularly if they are married due to the cultural and societal expectations of women as caregivers. In the Indian National Sample Survey (NSS) for 2011-2012, over 90 percent of women who did not work were primarily engaged in domestic duties. Around 92 percent of these women stated that their principal activity was domestic work in the previous year because they were "required (needed) to do so," with 60 percent of women in rural areas and 64 percent in urban areas adding that their primary reason to spend most of their time on domestic duties was that there was "no other member to carry out the domestic duties."

Women continue to do a majority of housework in India. On average, Indian women perform nearly six hours of unpaid work each day, while men spend a paltry 52 minutes, according to the Organization of Economic Cooperation and Development (OECD). Feminist economists have long debated what constitutes "work" and the invisibility of women's household labour. In a working paper for the Centre for Sustainable Employment, researchers Bidisha Mondal, Jayati Ghosh, Shiney Chakraborty, and Sona Mitra question the classification of work and argue that domestic duties and women's

other paid but unrecognized work (ex. begging or prostitution) should be counted as they “involve the production of goods and services that are potentially marketable and are thus economic in nature.” When these are counted alongside market work, the drop in female labour participation is no longer so evident.

Rather, the researchers noticed a shift from paid to unpaid work from 1993-94 to 2011-12. They find that the total female work participation was greater than that of men in India at 86.2 percent compared to 79.8 percent for men if women’s domestic work and other paid but unrecognized work was counted. There is still some decline in female labour participation, 6.1 percent in the rural areas and 3.8 percent in the urban region, that the researchers attribute to women’s increased involvement in education.

Social stigma against women working outside the house, especially for the those who can afford not to work, continues to influence women’s presence in the labour market. A 2016 survey in the *Economic and Political Weekly* finds that around 40- 60 percent of women and men in rural and urban parts of India believe that married women whose husbands earn a good living should not work outside the home.

Women from poorer households have a higher economic activity rate, suggesting that poor women cannot afford to abide by the social expectation of female seclusion. However, researchers note that as household income per capita increases, women start to leave the workforce. Since family status is linked to women staying inside the home, domestic work becomes more attractive as the family income increases.

Indian women also struggle with well-meaning but discriminatory government policies like the amended India’s Maternity Benefit Act 2017, which increased women’s paid maternity leave from 12 weeks to 26 weeks. This act reinforces women’s role as primary caregivers and increases employer bias, especially in the absence of similar benefits for fathers. Women in India are also not allowed to work in any factory overnight, with Section 66(1)(b) of the Factories Act 1948 specifically stating that women can only work in a factory between the hours of 6 a.m. and 7 p.m. There are no such restrictions on

men. Ashmita Gupta finds that this policy had an adverse effect on women's participation by constraining women's work hours.

To combat the economic downturn brought on by COVID-19, some states have proposed changes in labour laws. This could disproportionately harm women. Uttar Pradesh, the largest and the most populous Indian state, has suspended 35 of its 38 labour laws for three years, including laws like the Minimum Wages Act, Maternity Benefit Act, Equal Remuneration Act (ERA), and more. Suspension of many of these labour laws could push even more women out of the workforce as employers extend work hours, widen the gender pay gap without the safety of the ERA, and reduce women's mobility by taking away health and safety mechanisms.

Recent studies have shown that violence against women in public places, particularly the risk of sexual assault and unsafe work environment, discourages Indian women from entering the labour market. In a country ravaged by high rates of violence against women, these states will no longer hold companies accountable for providing safety like transport for night shifts, nurseries, or adequate lighting.

Another big impediment to women's labour force participation is the gender wage gap. A survey by Avtar Group, a diversity and inclusion consulting firm, finds that women are paid 34 percent less than men for the same job with the same qualifications, despite India's Equal Remuneration Act of 1976 that mandates equal pay for same work and prohibits hiring discrimination. Indian women perform a double shift at work and home just to earn less than their male counterparts at work, all the while facing down normative, cultural, and legal challenges — pushing many to leave the workforce.

The Government of India has tried to address the problem, including announcing plans to raise the minimum marriage age for women to 21 years. That could improve workforce participation by freeing women to pursue higher education and a career, according to a recent report from the State Bank of India.

### **Corporate Sector**

Ever since the Companies Act, 2013, made it mandatory to have



at least one woman on Company Boards there has been several studies and periodical review by various interested groups to know the progress made by Indian Companies in this regard. However, this increase in gender representation must translate into practices and culture.

According to a report by Forbes in 2020, as well as the Egon Zehnder Global Diversity Report 2020, Women hold 17 per cent of Board Positions in Corporate India, an increase of 8.6 percent since 2012. At the same time, Women lag behind when it comes to leadership posts on Company Boards. The report indicates that only 11 per cent committee chairs are held by Women, while the number stands at 27.3 per cent globally.

When it comes to boardrooms of Indian corporate sector, there are only a few women at the top – a study carried out by IIM Ahmedabad (IIM-A) faculty in February 2022 indicated that only 5 per cent women have made it to the top management, whereas another 7 per cent have made it as senior executives.

Gender disparity plagues pay packages – the study indicated that the women are paid 17 per cent less than their male counterparts for the same roles.

The study indicated that out of total, 40 senior women executives were in finance roles, 28 in HR, 25 in IT, 24 in operations and 20 in marketing.

The researchers said that a mix of factors was responsible for the phenomenon including family, organization, self and attitude. They said that the women's role is seen as more 'family-oriented' which often hampered their ascent to the top. Other issues included gendered leadership, negative attitude towards women managers, lack of better negotiation and not actively seeking power and status.

A critical mass of women in organizations is required at first. Till organizations start seeing only talent or merit, the scenario is unlikely to change.

“Counting the number of women on Boards is just the first step. We need to make their presence count in a way that companies are able to reap the benefits of diversity,” says the Global Diversity Report-2020.

Around 96 per cent of the companies surveyed in India have at least one Woman on Board, in line with the requirement of Companies Act. But the report observes that bridging the gap between paper and the practice requires a boardroom to have at least three under-represented voices. As per the survey, 18 out of 44 countries (up from 13 previously) have an average of three or more women on the boards of their largest companies.

Out of the 18 Countries, eight are governed by regulations for the minimum number of women on a corporate board. In India, 23 percent of large companies have at least three women, up by 10 percent since 2018. The report also mentions that about 20 per cent female directors in India hold more than one board seat, compared to 8 per cent in the case of men.

Companies need to have a ready pipeline of board candidates who can take charge Companies have to be committed to replacing an outgoing male board member with a female. Women accounted for 16.3 per cent of the new board appointments in India in 2020. Globally, around 30 per cent new Board appointees were Women, up from 27 per cent in 2018. To promote diversity and inclusion, expanding the size of the board could be considered. In India average board size is 11 members, and the average number of women per board stands at 1.9. We can also add new roles as in committee vice chair Positions for women.

## **Public Sector**

The public sector represents a single largest organised sector in the country, touching and influencing the lives and development of the entire population. Women constituted 5.68 per cent of the total PSE workforce as on March 31, 2001 as compared to 4 per cent as on March 31, 1991. The most encouraging development has been an increase in women managers and supervisors in PSEs across the decade from 1991 to 2001.with 87.35 per cent increase.

## **Forum of Women in Public Sector**

The Cabinet Secretariat in association with the Department of Public Enterprises and Standing conference of Public Enterprises

(SCOPE) organised a National Convention on Women in PSUs in October 1989 in New Delhi which was attended by over 500 Delegates representing diverse PSUs from across country.

Instead of this convention going down in the history as just another discussion and being forgotten, the wise women at the convention collectively suggested creating a permanent platform for setting an agenda for continuous exchange of ideas, experience sharing and confidence building. This they hoped would expose women to new developments and help them contribute more effectively to their enterprises.

At the initiative of the then Chairman of SCOPE, a meeting was organised in New Delhi on February 12, 1990 and interested Women from the public sector were invited to join. Thus the Forum of Women in Public Sector (WIPS) was created under the aegis of SCOPE.

### **The Forum derives its strength from its basic Aims and Objectives:**

- A) To promote the growth and development of Women in Public Sector.
- B) To assist the Public Undertakings in optimising the full potential in Women employees.
- C) To play a catalytic role in improving the status of Women in and around Public Undertaking

From a business perspective, the issue of diversity is of fundamental performance. Diversity of thought, experience & perspective is needed to respond to challenges. Unfortunately, women's access to the boardroom remains limited. **Organisations can succeed and grow only if the best talent is not only employed but also supported and developed.**

Department of Public Enterprises issued necessary directions on this to all concerned on 19 August 2015 to set up WIPS cell in all PSU's. This is yet another milestone achieved by Women in PSUs collectively.

## **Accelerating Gender Diversity**

**Nothing is sustainable unless women themselves become the driving force.** This requires having ambition and clear goals, a continuous learning approach, putting in the best in every assignment, benchmarking performance, an entrepreneurial spirit, saying no to soft options, improving visibility, networking effectively, managing Information, and having a caring attitude. There is of course no substitute for hard work. (See Box 3 for agenda items for improving gender diversity).

## **Education & training**

There has been deliberate strategy to enhance the Gross Enrolment ratio more particularly for women by improving Educational Infrastructure: there has been a 93 percent increase in the number of women's colleges in XI plan from the end of X plan. As of March 31, 2012 there are 4,266 colleges exclusively for Women. There has been a phenomenal growth in the number of women students enrolled in higher education since Independence. Women's enrolment which was less than 10 percent of total enrolment in 1950-1951 had risen to 42.66 percent in 2011-2012 according to the UGC Annual Report. The pace of growth has been very impressive in the last two decades. Setting All Women Universities have contributed to improving the Gross enrolment ratio.

While 60 per cent of the country's university lecturers are women, the proportion falls to 40 per cent at the level of associate professor and slumps to 20 per cent at the professor level. Only 3 per cent of Vice chancellors are Women.

Gender inequality reinforced by social attitudes, has largely contributed to occupational segregation in India. In what is horizontal segregation, men and women are streamed into vastly different trades, profession and jobs. Significant changes in women's occupational profiles have however taken place in the last two decades. Not only do men and women end up in different jobs, there are differences to the extent to which they are represented in the hierarchy of positions. Even in occupations dominated by women, men normally occupy the more skilled, responsible and better paid positions.

## **Sports-A unique initiative**

The spectacular Achievement of Women in Indian sport against considerable odds are now firmly established. Despite the rise of women sports persons, it is still a Male-dominated field. The majority of families still don't consider sports or physical education as a career for girls, but things are changing, thanks due to many role models in India and the active involvement of progressive non-Governmental organisations. Sphoorthi, a project of the Karnataka Health Promotion Trust (KHPT), a life-skills based empowerment programme in six districts, has identified an interesting way of breaking gender stereotypes. It used sports to bring girls together, build their grit, and challenge gender norms.

Studies show that girls who participate in sports are more likely to experience academic success and have more faith in their own competencies and abilities.

## **Entrepreneurship**

Today India has 13.5 million to 15.7 million women-owned enterprises, representing 20 per cent of all enterprises. While large in absolute numbers, these are overwhelmingly comprised of single-person enterprises, which provide direct employment for an estimated 22 to 27 million people. Further, in the coming decade, India will have the largest working-age population in the world with over 1 billion people. This demographic dividend, when combined with an increasingly educated population, has the potential to transform India's economic and social development. Entrepreneurship among women is a vital component of the overall solution. There are four opportunity areas to unlock the potential of women and entrepreneurship in India:

1. Level the playing field for the high-impact, employment-creating entrepreneurs
2. Enable the willing middle—the ambitious solopreneurs and small business owners—to scale up
3. Expand the funnel to get more women to start enterprises
4. Build, strengthen and scale productive rural agripreneurs

## **Crimes against Women**

In the recent years there has been increasing number of cases of crime against women and the girl child. The analysis of these cases reflects that animosity, anger, difference of opinion, failed relationship, to settle scores between two families, property dispute; in any situation the target is almost always women irrespective of her age. This is a disturbing trend and reflects socio-cultural discord and breaking communities, an essential ingredient for peace and harmony.

## **Data Management**

One of the weakest links in the governance system is availability of data both real time and otherwise. Central or state Governments do not publicly compile and release data on companies, the labour force and gender discrepancies therein. Data exists in disparate and scattered siloes. Better quality data would help analyse trends and inform standard operating procedures for such cases, which would help better implementation of laws. We hope the recently initiated Data Centre under implementation in Bangalore would fill the gap for better governance.

## **Conclusion**

Women's representation in the nation's economic activity is the core gender issue. Over the years, legal reforms, gender-responsive social protection and public service delivery systems, quotas for women's representation and support for women's movements have made a difference. It is now more important than ever before to scale up these gender positive recovery policies and practices and provide enabling conditions for women to be employed, provision of hostels and day care facilities, social security and better data management. Women's participation in the economy must improve substantially, since, the country's development potential will remain unmet if close to half its citizens are excluded.

In this regard, a few action items are clearly necessary to improve gender diversity and improving the critical mass of women at all levels in India.

- Women hold 17 per cent of Board positions in Corporate India, by Divya J Shekhar, Forbes India; December 2020
- Constitutional Rights and Welfare of Women by Tanya Shrotriya, Legal Service India.
- How Indian Laws Patronise Working Women and Limit Job Opportunities by Prisha Saxena and Sirjan Kaur, Behan Box; April 2022.
- Powering the Economy with HER-Woman Entrepreneurship in India by Bain and Company; 2019.
- Public sector and Gender Diversity by Dr.Reena Ramachandran Kaleidoscope (Monthly Journal of Standing Conference of Public Enterprises); 2003.
- Woman in Public sector Undertakings by Dr. Reena Ramachandran- National Consultation on Woman in Governance for National Commission for Women; March, 2003.

Most critical is administering a periodic gender and social audit that is able to build real time data, both qualitative and quantitative, on where women really stand. This audit can then determine future direction to increase the participation of women in nation-building.

However, based on the experience of the past 75 years, some measures that have shown efficacy in certain sectors need to be made more mainstream.

For instance, ensuring the presence of at least one woman in every selection panel and increasing the transparency in job recruitments has already had a positive impact in PSEs. It is time to extend this across the spectrum.

Also, organisations, both big and tiny, need to be recognised nationally for improving gender diversity. This can be done by instituting awards and by publicising their innovative approaches to skill development and on-the-job training.

Creating adequate infrastructure and at least a basic support system such as creches, day care and women's hostels is also a key measure that needs to be encouraged and developed.

Finally, a campaign is required on a war footing that engages Indian society at large and influences families to support the efforts of girls in getting an education and of women in securing meaningful work.

**References :**

- 8 years on and Poor Compliance with Sexual Harassment Law by Anoo Bhuyan & Shreya Khaitan, IndiaSpend; February 2021.

\*\*\*\*\*



Sanjeev Sanyal

---

## Why India must engage Global Governance Indices Pro-Actively

Despite widespread acknowledgement that India's economy has emerged stronger from the shock of the Covid-19 pandemic and that it is clearly outperforming the rest of the world, the country continues to do poorly on various global indices. This is especially true of opinion-based perception indices on subjective topics like democracy, freedom and happiness. While many of them are obviously biased and laughably distorted, India should not ignore them and simply brush them off as irrelevant. Directly or indirectly, many of these indices have concrete impact on our economy and global standing. This paper illustrates the issue through a handful of global indices and suggests definite steps that may be considered by the government.

### Introduction

There is now widespread acknowledgement that the Indian economy was handled deftly during the Covid-19 pandemic and has emerged as the world's fastest growing major economy. India's GDP is now the fifth largest in the world in US dollar terms and the third largest in purchasing power parity terms. Moreover, almost all credible economic analysts including the IMF, World Bank and international banks, estimate that the economy's growth rate was the world's highest in 2022 (bar oil-fuelled Saudi Arabia) at around 7%<sup>1</sup>, and that it will retain the top spot in 2023. Even the usually

---

The author would like to thank Aakanksha Arora and Bibek Debroy for their inputs. All opinions expressed in this paper are personal and do not necessarily reflect those of EAC-PM

<sup>1</sup> World Bank upgraded its 2022-23 forecast from 6.5% to 6.9% in its December 2022 update.

sceptical Western media is now, almost reluctantly, admitting that India is doing well.

Despite this obvious outperformance, there has been a curious trend in recent years where India's scores and rankings on a number of global indices have sharply dropped. India's scores struggle even in the case of indices like the Human Development Index that are supposedly based on hard data. However, the largest declines have been in opinion-based indices that deal with subjective issues such as democracy, freedom, happiness and so on. Do they pass the smell test?

Some of the perception indices from well-known think tanks are laughable. Swedish think-tank Varieties of Democracy (V-Dem) recently published its Index of Academic Freedom 2022 <sup>2</sup>. India placed in the bottom 20-10% decile along with Cuba and Yemen. Apparently, India's academic freedom is worse than that of Pakistan and Taliban-ruled Afghanistan (both placed in the bottom 30-40% decile). The 2022 edition of World Happiness Index similarly puts India in the bottom ten – placed below war-torn Yemen, but mercifully above Afghanistan. <sup>3</sup> There is obviously some systematic bias in all these indices.

The response of the Indian government and intellectual establishment so far has been to ignore these perception indices, but the problem is that they have concrete implications. For instance, these indices are inputs into the World Bank's World Governance Indicators (WGI) that, in turn, have approximately 18-20% weightage in sovereign ratings. Moreover, the growing demand to hardwire Environment Social Governance (ESG) indicators in economic decision-making means that this issue will only become more important. As well-known analyst Gautam Chikermane puts it: "But what is not acceptable is the legitimacy given by multilateral institutions such as the World Bank to such ideologues. Already reeling under the onslaught of willful manipulation by its executives at the behest of China in its now discarded Doing Business rankings

<sup>2</sup> <https://www.pol.phil.fau.eu/files/2022/03/afi-update-2022.pdf>

<sup>3</sup> <https://worldhappiness.report/ed/2022/happiness-benevolence-and-trust-during-covid-19-and-beyond/#ranking-of-happiness-2019-2021>

and reports, if this continues, it is only a matter of time that the World Bank itself loses its credibility.”<sup>4</sup>

### **The Problem with Opinion Indices**

There are now a plethora of opinion-based indices produced mainly by Western think-tanks. For the purposes of the current discussion, this paper will investigate three indicators that feed into World Bank’s WGI as it directly impacts sovereign ratings. Readers interested in a more detailed report are directed to a working paper co-authored with Aakanksha Arora (Why India does poorly on Global Perception Indices, EAC-PM Working Paper, November 2022).<sup>5</sup>

The Freedom in the World Index (FWI) has been published since 1973 by Freedom House, a New York-based think-tank.<sup>6</sup> India’s score on Civil Liberties was flat at 42 till 2018 but dropped sharply to 33 by 2022; that for Political Rights dropped from 35 to 33. Thus, India’s total score dropped to 66 which places it in the “partially free” category – the same status it had during the Emergency!

Note that the FWI score for Northern Cyprus is 77 which makes it a free democracy. This is a territory that is not even recognized by the United Nations and is only recognized by Turkey. The ethnic cleansing of its Greek population apparently does not bother Freedom House. Meanwhile, the think-tank continues to treat Jammu and Kashmir as a separate territory that is “not free”.

Similarly, London-based Economist Intelligence Unit publishes a Democracy Index (EIU-DI). Since 2014, India’s score for Political Culture declined from 6.25 to 5.0, and that for Civil Liberties from 9.41 to 6.18. As a result, India’s overall rank dropped from 27 in 2014 to 53 in 2020. It then recovered marginally to 46 in 2021 on grounds that the government rolled back farm-sector reforms!

---

4 <https://www.orfonline.org/expert-speak/g20-needs-to-push-rankings-reforms-at-the-world-bank/>

5 [https://eacpm.gov.in/wp-content/uploads/2022/11/Global-perception-indices\\_Final\\_22\\_Nov.pdf](https://eacpm.gov.in/wp-content/uploads/2022/11/Global-perception-indices_Final_22_Nov.pdf)

6 <https://freedomhouse.org/reports/freedom-world/freedom-world-research-methodology>

Even a cursory analysis of country rankings shows that the EIU-DI scores are suspect. India's latest score for Civil Liberties lags that of Hong Kong (8.53)! Similarly, India's score for Political Culture is much lower than that of Hong Kong (7.5) and Sri Lanka (6.25). It is no defense to say that Sri Lanka's political turmoil happened after publication because the analysis is expected to have predictive power. Why else would it feed into sovereign ratings?

The Varieties of Democracy (V-Dem) report is published by a Swedish think-tank. It scores countries on six indices – Liberal Democracy, Electoral Democracy, Liberal Component, Egalitarian Component, Participatory Component, and Deliberative Component<sup>7</sup>. In turn, these are built on objective and subjective sub-indices. India does well on objective parameters such as share of population with suffrage, but the subjective sub-indices have all declined sharply since 2014.

The V-Dem Clean Elections sub-index has dropped from 0.785 in 2013 to 0.552 in 2021, the Freedom of Expression sub-index from 0.882 to 0.598, and the Deliberative Component (i.e. public discourse) from 0.885 to 0.605. The Liberal Democracy Index has declined from a middling 0.567 to a lowly 0.357. This puts India's current rank on Liberal Democracy Index at 93 and V-Dem had to coin an oxymoron “electoral autocracy” to describe the country. Contrast this with the rank of 60 given to the Kingdom of Lesotho that only started to experiment with democracy in the mid-nineties, suffered a military coup in 2014, and repeatedly has been under a state of Emergency.

So, how do these think-tanks arrive at these scores? We found that in all cases it is derived from the opinions of four to six anonymous “experts”. There is no transparency on how the experts were chosen, how they arrived at their conclusions, and how cross-country comparisons are made. EIU-DI claims that it uses additional inputs from the World Values Survey but we discovered that no such survey has been done for India since 2012!

---

<sup>7</sup> [https://v-dem.net/documents/19/dr\\_2022\\_ipyOpLP.pdf](https://v-dem.net/documents/19/dr_2022_ipyOpLP.pdf)

To the extent that the think-tanks justify their rankings, they are based on a superficial and often skewed use of media reports. For instance, Freedom House declares that “informal community councils issue edicts concerning social customs that discriminate against women and minority groups”. However, it does not explain how this has worsened over time. It then states that the five journalists killed in India in 2021 is “the highest figure for any country”. Surely, it should also mention that India accounts for 11% of world total compared to its 21% share of world population (excluding China as their journalist death data is not included).<sup>8</sup>

There are also serious issues with the questions that are asked by these think-tanks – both the ones they ask and the ones that they leave out. For instance, there is a sub-index called Direct Popular Vote (in V-DEM) based on the following question: “To what extent is the direct popular vote utilized?” This is an indicator in which India scores zero! This is because it relates to use of direct referendums, and plebiscites which is obviously not possible for a large country like India; even US scores zero on this. Obviously, this sub-index is suitable only for a small country like Switzerland where direct referendums are feasible. Ironically, countries such as Afghanistan, Belarus, Cuba have score high than zero in this sub-index (In short, they are deemed more democratic on this parameter than India or the US).

In contrast, the researchers leave out reasonable questions like “Is the head of state democratically elected?” This is surely something that should be asked for a democracy index but if it were added in the list of questions, it would immediately negatively affect countries such as Sweden, Norway, United Kingdom, Denmark, Belgium, Netherlands, Canada, New Zealand and Australia that are constitutional monarchies. Most readers will agree that asking such a question is not unreasonable in an index trying to assess the democratic situation in a country.

---

<sup>8</sup> <https://quadrant.org.au/magazine/2022/09/indian-democracy-at-75-who-are-the-barbarians-at-the-gate/>

## Issues with Data Based Indices<sup>9</sup>

Although India generally tends to do much better on objective indices, it has faced several problems even in this space. As an illustration, let us consider the Human Development Index (HDI) which is the second most widely used indicator for measuring economic progress after national income statistics (i.e. GDP). The latest HDI reading released in September 2022 by United Nations Development Programme ranked India at 132 out of 188 countries.<sup>10</sup> Indeed, India's rank has not improved over the last two decades and declined by one place in 2022. At least the index score was rising, but this also fell in the last two years from 0.645 in 2019 to 0.633 in 2021. Is this a fair assessment of India performance?

HDI has three components - health as measured by life expectancy at birth; education as measured by a combination of mean years of schooling, and expected years of schooling; and income as measured by Gross National Income per capita (at purchasing power parity). The final score is calculated as a geometric mean of the three categories. The per capita income data is taken from a standard World Bank database but our investigation suggests serious problems with the data used for other categories, particularly for life expectancy.

Life expectancy at birth is defined as the average number of years that a newborn can expect to live. The estimate used for India was cut by 3.67 years (70.9 years to 67.2 years) from 2019 to 2021. The UN agency claims that this cut reflects Covid-19 related mortality but we discovered three serious flaws in their estimate.

First, it is a conceptual mistake to lower life expectancy at birth because of a virus that, according to the overwhelming evidence, only kills adults. In effect, the UN is saying that Covid-19 will be around in twenty years to impact today's new-borns with the same virulence as at its peak in 2020-21. UNDP needs to explain why they expect this.

---

<sup>9</sup> An earlier version of this section appeared in Times of India on 18th October 2022: <https://timesofindia.indiatimes.com/blogs/toi-edit-page/fact-checking-the-hdi-tally-undp-needs-to-compute-indian-data-more-accurately-india-needs-to-provide-more-timely-data/>

<sup>10</sup> <https://hdr.undp.org/content/human-development-report-2021-22>

Second, the UN agency has adjusted India's mortality rates for "excess deaths" from Covid-19 as estimated by World Health Organization (WHO). This is in addition to the adjustment routinely done on grounds that India's data is underreported. According to WHO, India had around 4.7 million unreported excess deaths from Covid-19, almost one-third of the world total. The Indian government had objected to the WHO estimates in May 2022 by pointing out various flaws in their methodology. Some of the key issues were related to use of media reports, use of parameters like test positivity rate which varied widely across the country, and so on. Nevertheless, UNDP still used the WHO excess death numbers in their HDI calculation.

Third, and most damagingly, the UN's reduction of 3.67 years in India's life expectancy is not justified even after including WHO's flawed numbers. When the excess deaths of 4.7 million is added to the registered numbers, deaths per lakh population in India stood at 375.6. This is still lower than that for the US (589), UK (505), Italy (570), Brazil (640), and so on. Yet, the cut in life expectancy for the US is 1.94 years, UK is 0.98 years, Italy is 0.70 years, Brazil is 2.7 years – all substantially lower than that for India.

As one can see, a series of "adjustments" ended up skewing the Indian data. This is not limited to life expectancy or HDI estimates. We have found that layers of one-sided adjustments and circular references are routinely done to India-related data by international agencies and think-tanks. It is not dissimilar to the financial layering done to launder money. The poor quality of Indian data is no justification since there are serious lacuna of data for most of the countries ranked above India where similar adjustments are not made. If anything, with digitization and a unique identity number, Indian data is now very good in many areas.

Nonetheless, it should be admitted that the fault is not always on the part of external agencies. Government departments often do not update numbers in time for international surveys. In the case of HDI, it was found that the data for expected years of schooling was not published till after the deadline. As a result, the previous year's data was used by UNDP.

### **Conclusion: What should India do?**

As discussed above, there are a range of serious issues with how global think-tanks and agencies score and rank India. These should not be ignored as they directly and indirectly impact sovereign ratings and ESG indicators.

As a first step, the Indian government should request the World Bank to demand transparency and accountability from think-tanks that provide inputs for the WGI. The same should be done wherever these perception-based indices impact concrete decision-making. However, longer term, independent think-tanks in India should be encouraged to turn their gaze on the rest of the world and publish such indices. That is the only way India (and the Global South more generally) can balance the tyranny of Western certification.

Next, Indian government departments need to publish data in time for important indices. This may be a problem as India's financial year runs three months behind the calendar year, but an advance estimate can be published and revised later (same as for GDP). Moreover, Indian agencies should not just provide raw data to external agencies but take the extra step of calculating the relevant indicator. This is not difficult as standard methodologies are available. For instance, the Registrar General of India should publish an official estimate for life expectancy every year. This will reduce the scope for manipulation by external agencies and put the burden of proof on them. Indeed, we found that the UNDP commonly uses official estimates for most countries, included developing countries.

In short, Indian government departments need to pro-actively engage with international indices and surveys – both to provide timely data but also challenge inaccurate estimates where appropriate. Similarly, multilateral agencies that provide legitimacy to various opinion-based indices should be asked to demand greater transparency and accountability. Unless this is done pro-actively, India and the Global South risk a new kind of colonial domination. Perhaps this is an issue that G20 should take up during India's Presidency in 2023.

\*\*\*\*\*



R Dayal

---

## Logistics of Transport Increasing role of Railways

*“You will not find it difficult to prove that battles, campaigns,  
and even wars have been won or lost primarily because of logistics”.*

- Gen. Dwight D. Eisenhower

**T**urned 75 on August 15, India standing on the cusp of history signifies a moment of quiet reflection and resolve. As the country draws up the contours of Vision India@2047, consistent with what “We, the people” set about defining our goal and aspirations 75 years ago, we now determine what needs be done to accomplish by the 2047 centennial.

With the avowed aim of creating a ‘New India’, complying with countrymen’s hopes and aspirations, we covet a “heaven of freedom” into which India may awake, free from poverty, want, and deprivation. It is acknowledged that sustained economic growth is indeed the need, paramount and urgent, for India to help all its people realise their expectations, firstly to find a new deal for the millions with basic necessities – *roti, kapda and makaan*, also *sadak, paani and bijli*. Ingredients of essential social welfare and equity - healthcare and schooling too in today’s worldview is an inescapable responsibility of the state.

The looming spectre of geo-strategic volatility and close aggressive neighbourhood compels the country to grasp the imperative of adequate safeguard it must assiduously build for its frontiers to remain secure and tranquil. World is alive to the dictum, power flows from the barrel of the gun. The deterrence in terms of

force, velocity and sophistication of the gun would demand trillions of rupees to be featured in national budget.

### **Transport – pump-primer of economic growth**

Logistics or transportation, it has been said, is in many ways the “heartbeat of civilization.” As population increases, people’s needs and demands increase, opportunity for industry increases, wages and disposable income increase, thereby a cycle of growth ensues. None of this is possible if there aren’t good roads and railways to help people move from home to work and to deliver products from manufacturers to consumers. Millions of people have been lifted out of poverty in last few decades; a growing middle class has emerged. More growth demands more infrastructure to sustain it. And building infrastructure is indeed an expensive proposition.

Positive linkages between transport provision and economic development are established in the direct transport input and indirect, including multiplier, effects. A causal linkage between low-cost transport and economic growth is exemplified in the success of the Industrial Revolution coming prior to revolution in transport technology. The indirect effects stem from the employment created in the construction of transport infrastructure and hardware manufacture, besides the jobs associated with operating the transport services.

### **Unprecedented thrust to infrastructure**

Indian geography represents a multipurpose transport network; highways, railways, airways, and waterways feature as its predominant transportation networks to ferry goods and people in, around, and across the country. As the country targets rapid economic growth, Government is seized of the need to ramp up the transport infrastructure. The Economic Survey 2017-18 estimated investments of the order of \$4.5 trillion by 2040 for the development of infrastructure. And as the agenda of action admits of the primacy of national wealth to grow, essential is it to speedily build the requisite infrastructure - surface and aerial arteries, across rail and road networks, as well as marine and air modes.

## **Private Sector Investment**

While launching the national logistics policy, Prime Minister Modi elaborated how, during last eight years, India has brought about systematic infrastructure development by way of schemes like dedicated rail freight corridors, *Sagarmala and Bharatmala*.

Recognising the critical role of the sector in the country's future, Government is pursuing a range of actions to improve its logistics infrastructure and performance. The national infrastructure pipeline includes over 7,400 projects, with a price tag of Rs 30 trillion for roads, Rs 14 trillion for railways, Rs 1.4 trillion for airports, and Rs 1 trillion for gateway ports and inland waterways. The Union Budget induct FY '22 allocation of Rs 2.3 trillion for transport infrastructure is an indication.

A unified tax system, GST has smoothened the wrinkles in logistics sector. Initiatives like e-way bills, FASTag, paperless EXIM trade process through e-sanchit, faceless assessment by customs, etc. are of immense importance. Under the Integration of Digital System (IDS), thirty different systems of seven departments are integrated. The Unified Logistics Interface Platform (ULIP) is designed to bring all digital services related to the transportation sector into a single portal, freeing the exporters from a host of long and cumbersome processes. Through the Ease of Logistics Services (e-Logs), a digital dashboard for registering, coordinating and monitoring time-definite resolution of problems as they arise, industry associations can directly take up any matters which hinder their operations and performance.

## **The half-full Glass needs to touch the brim**

The way we move around has changed a lot over time. Different modes of transportation have arisen and improved over the years. One doesn't know whether the old slow, simple, sedate modes, in tune with similar pace of life, were better than the high velocity modern day glitter and rat race. Given the name of 'progress', possession of an automobile, travel on a Volvo bus or a Vande Bharat, better still, flying on a white bird in the sky is a common refrain, considered natural aspiration.

The pre-independence India's transport bulwark remained slow, rickety means such as bullock carts, camels and donkeys in rural India, palanquins or *palkeis*, *tanga* and *buggies*, bicycles and cycle rickshaws, not to forget, the human-pulled rickshaw in towns and cities, while tramways and buses made an appearance in some cities. The British rule introduced railways, and steamships on rivers. As late as 2000, around 40% of villages in India lacked access to all-weather roads and remained isolated during the monsoon season. To improve rural connectivity, *Pradhan Mantri Gram Sadak Yojana* (Prime Minister's Rural Road Programme), was launched in 2000, to build all-weather roads to connect all habitations with a population of 500 or above (250 or above for hilly areas).

Not only buses, three-wheeled auto-rickshaws and *kaali peeli* taxis, myriad other modes of transportation crowd the roads. Buses are an important means of public transport. Most state governments operate bus services through state road transport corporations. Alongside the public companies there are many private bus fleets. Since India's first rapid transit, the Kolkata Metro started operations in 1984, several cities have developed the Metros. The Delhi Metro, currently celebrating 20 years of its existence as a rapidly growing system, serves as the backbone of national capital's public transport infrastructure. It provides a template for efficient rapid transport systems to be developed for urban agglomerations in India and abroad.

**Roads dominate:** As a country with a low coast to landmass ratio, bulk of India's freight is ferried through the roads, which also holds good for passenger traffic as well. Roads in India were given much lower priority than railways during the British rule. Public expenditure on roads and road transport in the first two five-year plan periods was less than 40% of that devoted to the railways. The First Five-Year Plan (1951-56) classified roads into National Highways, State Highways, District Roads, and Village Roads. India now has world's second largest road network, with a total length of about 6.2 million km. The total length of National Highways in 1947 was 21,378 km. In the last few years, the pace of NH construction increased more than thrice, from 12 km/day in 2014-15 to 37 km/

day in 2020-21; their total length went up from about 91,000 km during these years.

**Railways losing steam:** The mainstay of India's transport framework, accounting for lion's share of freight and passenger traffic prior to the advent of the Plan era, railways carried as much as 89% of country's total freight and 74% of passenger traffic. Bruised by World War and dismembered by the 1947 partition, IR had herculean task on hand, to rehabilitate and resuscitate the system. Rising to the occasion, it delivered the goods, served as sinews of strength, bulwark of support for agriculture and industry to grow, new 'temples' of the economy to sprout, men and materials moved with alacrity for defence of the country to be ensured. IR won plaudits for building indigenous capacity to manufacture a vast range of equipment as well as laying new rail lines, including strategic and challenging links such as the Assam Rail Link, DBK (Dandakaranya, Bolangir, Kiriburu) line, the Konkan Railway, and lately the Kashmir Rail Line, amongst many others.

**Waterways:** India has a coastline spanning 7,517 km, forming one of the world's biggest peninsulas. Ministry of Ports, Shipping and Waterways has administrative control of 13 'major' ports – 12 government-owned and one private - (Chennai, Cochin, Deendayal (earlier Kandla), Haldia, Jawaharlal Nehru (Nhava Sheva), Kamarajar (earlier Ennore), Kolkata, Mormugao, Mumbai, New Mangalore, Paradip, Visakhapatnam, and V. O. Chidambarnar (earlier Tuticorin)). A total of 187 notified 'non major' ports (of which only 78 are functional) are under the authority of respective state governments through their maritime boards. The goal under Vision 2047 is to increase the port handling capacity four-fold, to 10,000 million tonne per annum, from the existing 1,598 m.t. capacity of 'major' ports and 1,007 m.t. of 'non major' ports.

Set up in October, 1986, the Inland Waterways Authority of India is responsible for development and regulation of inland waterways for shipping and navigation. The total navigable length is 14,500 km, of which about 5,200 km of the river and 4,000 km of canals can be used by mechanized crafts. Freight transportation by waterways has remained peripheral; facilities remain highly under-utilized.

Of the 111 National Waterways declared under the National Waterways Act, 2016, four of them attract special attention: NW-1: 620km: Haldia- Allahabad: Ganga-Bhagirathi-Hooghly river system (Haldia - Allahabad), NW-2 891km: Dhubri - Sadiya: on Brahmaputra river, NW-3: 205km: Kottapuram – Kollam, Champakara and Udyogmandal canals, NW-4: 82km: on Muktiyala to Vijyawada on Krishna river.

Initiatives for cross-border networks: West Bengal, Meghalaya, Mizoram, Assam and Tripura share the 4,096-km border with Bangladesh. Tripura and other northeastern states are surrounded by Bangladesh, Myanmar, Bhutan and China on three sides and the only land route access to these states from within India is through Assam and West Bengal by Siliguri or the Chicken's Neck corridor. The distance between Kolkata and Agartala increased to 1,650 km after the partition in 1947, which falls to just 515 km, if transportation is through Bangladesh. "Prior to partition in 1947, Tripura was seamlessly connected to India through Bangladesh by road, rail and waterways.

Sharing 54 common rivers, including the Brahmaputra, India and Bangladesh have a 2,979 km land border and 1,116 km of riverine boundary. Both countries have, of late, moved ahead restoring the waterways connectivity.

Four inland water routes, currently operational include: Kolkata-Pandu (in southern Assam) Kolkata-Karimganj (in southern Assam) Rajshahi (in Bangladesh)-Dhulian (in southern Assam) and Karimganj-Pandu-Karimganj.

There are also four ports of call in each country through which bilateral trade through inland waterways can take place: Narayanganj, Khulna, Mongla and Sirajganj in Bangladesh and Kolkata, Haldia, Karimganj and Pandu in India.

Food Corporation of India ferried over 35,000 tonnes of rice from different parts of India to Tripura via Bangladeshi waterways and surface roads.

Earlier in 2012, Bangladesh had allowed Oil and Natural Gas Corporation to ferry heavy machinery, turbines and over-dimensional

cargoes through Ashuganj port for the 726-MW Palatana power project in southern Tripura.

**Pipelines:** With an aggregate length of 20,000 km pipelines for crude oil, and another 15,000 km length for petroleum products, there are three significant networks: (i) from oil fields in upper Assam to Kanpur via Guwahati, (ii) between Barauni and Allahabad, and (iii) from Salaya in Gujarat to Jalandhar in Punjab via Viramgam, Mathura, Delhi, and Sonipat. A gas pipeline from Hazira in Gujarat connects Jagdishpur in Uttar Pradesh, via Vijaipur in Madhya Pradesh.

**Flying high:** With humble beginnings, the Indian aviation industry, currently world's 10<sup>th</sup> largest civil aviation market, is well poised to be world's third largest aviation market by 2030, according to the International Air Transport Association (IATA). There has been substantial spurt in air traffic. Between FY 15 and 20, air traffic logged a 12% CAGR. While there are 346 civilian airfields in India, including 253 with paved runways, only 132 were classified as "airports" as of November 2014. Operations of major airports have been privatised, and this has resulted in better equipped and cleaner airports. Currently, with over 145 operational airports, aviation infrastructure is strained. The Delhi and Mumbai airports account for more than 40% of nation's air traffic. India's largest and the busiest, with an annual handling capacity of 70 million passengers, the Indira Gandhi International Airport in Delhi handled about 200,000 daily travellers during December '22, underscoring the need to augment capacity, and streamline processes and procedures. The terminal is expected to have 100 million passenger passing through it, when the ongoing expansion work is completed by end-2023. The new Jewar airport coming up in NCR, some 80 km apart from IGI airport, is expected to add annual capacity of 12 million passengers on completion of phase I of the project.

Similarly, the Mumbai terminal, with a daily average capacity of around 140,000 passengers, handled passenger movement of 150,000 on some days in December'22. There is urgency felt for completing the Navi Mumbai terminal which is expected to add annual capacity of 10 million passengers in the first phase. Further, while the new Bengaluru terminal is set to raise annual capacity

from existing 25-35 million to 50-60 million, the Hyderabad airport is expanding to increase its capacity from 21 million per year to 34 million passengers.

### **Infirmities and inefficiencies**

Logistics has been the economy's Achilles' heel. Characterised by high costs and low service, India's logistics infrastructure has been "insufficient, ill-equipped and ill-designed" to support the expected economic growth rates of 7-8%, putting its growth at risk\*.

Logistics flows in India are highly concentrated: carrying more than 95% of country's total freight. Railways and roads dominate India's transport landscape. Within these two modes, less than 3% of road length (National Highways and expressways) carries over 40% of all road traffic, and 1/6th of the rail network carries over 2/3rd of all rail traffic.

The Eleventh Five Year Plan identified various deficits in transport sector which include inadequate roads/highways, old technology, saturated routes and slow speed on railways, inadequate berths and rail/road connectivity at ports, and inadequate runways, aircraft handling capacity, parking space and terminal building at airports. Urban centres are severely congested. In Mumbai, Delhi and other metropolitan centres, roads are often severely congested during the rush hours. Only about 20 cities out of 87, with population in excess of 500,000, and the state capitals have any kind of organized transport. The share of public transport in cities with population sizes over 4 million declined from 69% to 38% between 1994 to 2007. Accident and fatality rates are some of the highest in the world.

Country's transport landscape is dominated by road transport, with 71% share in overall freight movement. Rail remains the second most important mode of transport, but having just 17-18% modal share. Railways faces severe capacity constraint. All high-density rail corridors face severe capacity crunch. Major railway routes, key corridors of freight are running with capacity utilisation between 110% and 150%. Also, freight tariffs have been kept high to subsidize passenger traffic. Share of coastal movement is 9% in terms of tonne-km, and of IWT and aviation estimated to be 0.1% and 0.2% respectively.



\*(McKinsey: *Building India: Transforming the nation's logistics infrastructure*).

Coastal shipping has been beset with regulation like cabotage rules, besides the low capacity vessels that render it cost-intensive in comparison with railways. Total number of coastal shipping fleet in 2020 was 998, of which more than 450 were operating for more than 20 years, implying that around 45% of the total coastal fleet are over-aged. The National Waterways Act came into force in April, 2016. The number of national waterways increased from 5 to 111, covering total length of 20,375 km. Major constraint of IWT remains low available depth.

The table below provides a peep into country's freight modal share over last few years:

Year	Road	Rail	Coastal Movement		Coastal Movement		IWT		Aviation		Total
	BTKM*	Share	BTKM	Share	BTKM	Share	BTKM	Share	BTKM	Share	BTKM
2003-04	595.0	52.5	384.1	33.9	152.5	13.5	1.6	0.1	0.19	0.017	1133.4
2004-05	643.0	53.0	411.3	33.9	156.1	12.9	2.5	0.2	0.23	0.019	1213.1
2005-06	728.3	54.7	441.8	33.2	159.0	11.9	2.8	0.2	0.24	0.018	1332.1
2006-07	825.9	55.3	483.4	32.3	181.7	12.2	3.4	0.2	0.25	0.017	1494.7
2007-08	933.7	57.3	523.2	32.1	168.3	10.3	3.4	0.2	0.27	0.017	1628.9
2008-09	1,021.6	58.4	552.0	31.5	172.9	9.9	2.9	0.2	0.24	0.014	1749.7
2009-10	1,144.5	58.8	601.3	30.9	198.3	10.2	3.7	0.2	0.29	0.015	1948.0
2010-11	1,287.30	60.8	626.5	29.6	199.1	9.4	4.0	0.2	0.37	0.018	2117.3
2011-12	1,407.80	61.5	668.6	29.2	206.8	9.0	3.8	0.2	0.38	0.016	2287.4
2012-13	1,516.20	63.7	650.6	27.3	210.6	8.8	3.1	0.1	0.40	0.017	2380.9
2013-14	1,652.10	65.3	666.7	26.3	209.8	8.3	2.4	0.1	0.44	0.017	2531.4
2014-15	1,823.20	66.7	682.6	25.0	224.5	8.2	2.8	0.1	0.52	0.019	2733.6
2015-16	2,027.40	69.5	654.5	22.4	233.0	8.0	3.5	0.1	0.66	0.023	2919.0
2016-17	2,260.20	71.8	620.2	19.7	261.5	8.3	3.8	0.1	0.68	0.021	3146.4
2017-18	2,484.80	71.3	692.9	19.9	302.9	8.7	4.1	0.1	0.75	0.022	3485.5
2018-19	2,697.00	71.3	738.5	19.5	341.5	9.0	4.7	0.1	0.83	0.022	3782.6

\* Billion Tone KMS

## Freight transport: critical to the growing economy

The logistics sector represents 5% of India's GDP, and employs 2.2 crore people. Broadly, India's transport networks move goods, of which 22% are agricultural, 39% mining products, and another 39% manufacturing-related commodities. Between 2015 and 2020, India's GDP grew by 32%, to Rs 217 trillion. Its population increased by 5%; freight demand by 28%.

According to a study by Niti Aayog and RMI-India, commercial activities generate about 4.6 billion tonne of freight annually, generating over three trillion tonne-km of transportation demand, entailing expense of Rs 9.5 trillion. With a projected annual GDP growth of 7-8% in the next few years, rising income levels, higher exports, a rapidly growing e-commerce sector, a growing retail sales market, the demand for goods movement is expected to increase at about 7% CAGR, freight movement increasing to 15.6 trillion tonne-km in 2050.

### **Demand in years to come**

Demand for transport is a derived demand. A US\$ 2.7 trillion economy, it strives to become a US\$ 5 trillion economy by 2025 (envisaged prior to the Covid-19 pandemic). Higher economic progress would mean higher demand for transport. Movement of goods being a quintessential economic activity will fuel this growth. The Council on Energy, Environment and Water (CEEW) projects the demand for total freight to increase by 58% by 2030. It is estimated that country's total freight demand would reach 4,534 billion tonne-km, of which 3,462 billion tonne-km would come from roads, while railways and coastal domestic shipping would contribute 855 and 209 billion tkm respectively. The share of inland waterways and aviation will continue to be negligible.

### **Saving energy**

Addressing the skewed modal-mix will be the cornerstone of any serious effort to reduce costs and time for freight transport. For a sustainable modal mix, all the modes of transport need to get their optimal share. Globally, shipping and rail have the lowest energy intensity per freight tonne transported. Expert studies have focussed on modal shift, in particular shift of traffic from road to rail, also to IWT and coastal shipping. To achieve an optimal modal mix, it is advocated that share of liquid bulk cargo transported via pipeline be raised from 55% to 80%, mode-share of coastal shipping and inland waterway transport from 8% to 15%, and, importantly, rail's mode-share of freight transport be increased to 50%.

A Niti Aayog report maintains that India's cumulative energy consumption of 5.8 billion tonne of oil equivalent (TOE) from freight transport between 2020 and 2050 can be reduced by 50% through three opportunity areas, namely, (i) increasing the share of rail transport; (ii) optimising truck use; and (iii) promoting use of fuel-efficient vehicles and alternative fuels. In fact, such a freight paradigm will also lead to higher economic growth, better public health, and enhanced logistics productivity. It will help reduce logistics costs, as desired, from a 14% share of GDP currently to about 8%, which, in turn, would amount to a saving of up to Rs 10 trillion. In addition, it will reduce carbon emissions and improve air quality.

A path towards net-zero will inevitably require an overhaul of the mode-share distribution in freight for which decade long efforts will be required. It will mean dramatic reduction in freight tonne-kilometres in the share of road freight to be only in the range of 37% to 30%; freight TKM by rail will need to increase by a whopping 96% to 116%. Inland waterways, whose current freight TKM share is negligible, will need to grow by 37% and coastal shipping to grow by 116% relative to current levels.

It is pertinent that we remain alive to the evolving paradigm of logistics worldwide. A large, diverse and complex industry, logistics has increasingly shifted from a purely cost-centre to centre creating value. Some mega trends that shape the 21st century directly impact transport. Changes in transport technology and information systems combined with the increased importance of high value, low weight manufactures has brought forth new distribution systems. The traditional model assumed a trade-off between warehousing and transport with the costs of operating warehouses rising with their number but transport costs falling assuming a constant throughput of goods, the optimal warehousing levels being determined by minimising the combined cost of warehousing and transport.

Now a high-technology industry, transport has ceased to be a wholly independent function; it is now an integral part of the production and distribution process.

- Worldwide, transport growth has been consistently higher than the economic growth, primarily due to specialization,

sourcing of material on a wider scale, just-in-time strategies, increase and dispersal of retail and wholesale activities.

- The value of trade grows much faster than its weight: The nature of freight being transported is changing fast from heavy bulk to lighter high value goods to move in smaller consignment volumes.
- Customers demand an intelligent logistics execution, managing multi-modal, multi-leg and multi-carrier integration. Preference is on one-stop, single window, with one contract, one consolidated price.
- Time – the cutting edge: Increasingly, shippers see goods in transit as NPAs. Faster transport can speed the changes in the geography of trade. Today, instead of cheaper and better, the new emphasis is on quicker. Goods with the highest time sensitivity have seen the fastest increase in trade, e.g., perishable agricultural goods, fashion articles, and electronics.
- Falling freight costs, driven by investments in transport infrastructure, better capacity use, and technological developments. In 1956, the loading of loose cargo cost \$5.83 a ton. When containers were introduced in that year, the loading cost reduced incredibly, to less than \$0.16 a ton. Falling communication costs have resulted in greater fragmentation of services into “components,” supplied from different locations across the world for assembly. Manufacturing is increasingly globalised, with “world factories” relying on complex global supply chains as their assembly line.
- As transport costs fall, physical geography matters less; but, with economies of scale in production, economic geography matters more.
- ICT transforming logistics world: Technology can affect the range of capability and quality of service. Cost of any mode of transport can thus alter its prospective role in the nation’s transport system. IT is the glue that holds value chains and supply chains together. Today, an integrated

logistics service involves convergence of traditional transport infrastructure with the world of information technology. Tworecurringthemesreverberateacrossthelogisticsdomain – digitalisation and multimodality.

### **Railways hold the key**

The sub-optimal rail-road mix in freight movement is a major concern. Contrary to the avowed aim of policymakers to substantially enhance railways' share in nation's transport market, it has, instead, steadily been declining: railways' share (by tonne-km) fell from 86% in 1950-51 to 62% in 1980-81, 39% in 2000-2001, to estimated 17-18% currently. It has been particularly losing most of the low density high value cargo. Railways has also had a steeper fall in passenger business: from over 74% share (in terms of passenger-km) in 1950-51 to 18% in 2000-2001, which by now is shrunk to less than 7-8%.

### **India's freight market... the pie gets larger, but rail slice is thinner**

A quick glance at decadal growth of India's GDP over last fifty years in juxtaposition with growth levels in railways' net freight output (net tonne km) indicates a disconcerting trend of rail mode delivery trailing behind the economic growth, instead of, if anything, remaining ahead of it. Railways' slide is clearly discernible in recent years.

**Dwindling rail share in major commodity segments:** While determining the projected future transport demand for various major commodity groups, the National Rail Plan (NRP) analysed the aggregate commodity volumes in the national freight ecosystem in 2017-18 and 2018-19 of country's total freight movement of 4,464 million tonne in 2017-18, IR carried 1,163 m.t., a market share of just 26%.

A total of 860 m.t. of coal was transported, of which 560 m.t. (65%) by rail and 298.5 m.t. (35%) by road. In case of cement, 37% transported by rail, remaining 63% by road; food grains: 16% transported by rail, 84% by road; POL: 18% by rail, 82% by road.

Balance other goods (BOG) comprise of various commodities carried in containers or in bulk. A total of 1,767 m.t. of BOG transported, of which 1,690 m.t. (96%) by road, only 77 m.t. (4%) by rail.

Of all the nine major bulk commodities, maximum share for rail movement was of fertilisers (87%), followed by pig iron (68%), coal (65%), iron ore (65%) and raw materials for steel-making (56%). In case of road, maximum share was of balance other goods (BOG) (96%), followed by food grains (84%), POL (82%), containers (76%) and cement (63%).

An analysis of freight transport in 2018-19 revealed that total freight movement having leads up to 300 km increased from 840 m.t. in 2007-08 to 1,829.16 m.t.; total freight movement with leads beyond 300 km increased from 1,486 m.t. in 2007-08 to 2,245 m.t. Although railways' share in the quantum of freight movement remained at a similar level, its share in freight movement having leads beyond 300 km fell from 51.5% (765 m.t.) in 2007-08 to 32.4% (727 m.t.) in 2018-19.

**Shift to Rail:** Railways' strengths are energy efficiency as well as space efficiency. Rail's green credentials are key to its competitiveness. Steel on steel will always feature lower friction than rubber on asphalt. Congestion and space consumption remains a key advantage for rail, despite road vehicles becoming electric and/or autonomous.

In view of the overarching global concerns at climate change, India communicated its Intended Nationally Determined Contribution (INDC) for the period 2021-2030, including reduction in emissions intensity of its GDP by 33-35% by 2030, from the 2005 level. India identified "reduction of emissions from transportation sector" as one of the priority areas. CO<sub>2</sub> emissions from freight transport are projected to increase by 451%, from 220 m.t. in 2020 to 1,214 m.t. in 2050. Shifting from road to rail can be the most effective lever to decarbonise the freight transport sector. In a way, India is committed to increasing the modal share of railways in country's total land transportation, to 45%.

### **IR shows little urge to change and adapt**

In its 2014 report, the National Transport Development Policy

Committee advocated for IR a market share of 50% by end-15th Five-year Plan period (2031-32), which would oblige it to have its freight output to grow at a CAGR of 12% over the next 20 years. NTDPCC estimated that, even to retain its then share of 30-35%, IR would have to grow its annual freight volumes at more than 10%. The stark reality is that IR has been steadily losing its share in national freight market.

Alongside its steadily diminishing role in nation's transport domain, its arteries are constricted, its finances dreary, its costs jumping ever high. While its passenger business inflicts an annual loss now of Rs 60,000 crore (as Minister of Railways informed Parliament), the burden is tossed over to freight segment, making it unduly costly, and uncompetitive. IR's high freight tariffs besides its endemic capacity constraints on tracks and terminals, as also generally bureaucratic service regime conspire to let the system wallow in only an incremental growth trajectory, far below its own potential, and levels required by the economy.

### **Looming challenges**

IR confronts still more formidable challenges in days to come. For example, the National Highways length, which already transports over 40% of all road-borne traffic, is being rapidly doubled, to 200,000 km, with capacity to carry 80% of the freight. The maximum load carrying capacity of heavy vehicles has been allowed to increase 20-25%, raising the axle load weight of trucks by 12-14%. The road sector will be enabled to further improve competitiveness and efficiency, as much has already happened, consequent upon the introduction of GST.

**Changing commodity basket:** By the year 2051, the rail-borne commodity mix is projected to undergo a drastic change: share of coal is estimated to plummet from present 49% to 23%, whereas that of Buld Other Goods (BOG) will jump three-fold, from present 7% to 21%. Commodities which presently represent about 80% of IR's freight volumes will only account for just one-third of the total freight transport demand. Conventional high-value as much as non-conventional commodities will become important for IR to focus on.

The NRP determined the projected future demand of major commodities over different time-frames, viz., 2019-2021, 2021-2026, 2026-2031, 2031-2041 and 2041-2051. Total freight demand forecast (million tonne) major commodity-wise is listed below:

### **Some imperatives**

Railways must essentially be run as a business. Caught in a blizzard of change, railways needs to adapt to market demands. Customer sincerely demand a experience that is personalised, comfortable and easy to shop for. IR can ill afford to remain stuck in bureaucratic quagmire. It needs to shake off its perceived role of a departmental undertaking with public service obligation, and, instead, have an unambiguous commitment to being essentially a corporate entity, with inalienable responsibility to carry nation's freight and passengers adequately, efficiently and economically.

It must address the high cost factor sincerely, keeping a hawk's eye on productivity, and maintenance regime for optimal utilisation of assets through better maintenance and asset management. The measures that can support the effort would include improvement of existing network infrastructure by increasing axleloads, increasing train length, and enabling trains to move faster; adding new network capacity by developing specialised heavy-haul corridors and dedicated freight corridors; Identifying and upgrading corridors with high potential for inter modal transport; ensuring better modal integration across rail, road, and water.

NRP, while recommending the projected railways' modal share probability for the years 2021, 2026, 2031, 2041 and 2051, visualized two salient pre-requisites: (i) gradual enhancement of average freight train speed (Year 2021: 25 km/h, 2026: 30 km/h, 2031: 35 km/h, 2041: 40 km/h, and 2051: 50 km/h); and (ii) 30% reduction in tariffs in respect of selected commodities, e.g., BOG, cement, containers, food grains, iron ore and raw material for steel.

Clearly, it needs to escape from the straight-jacket, transcending much beyond its traditional, blinkered vision of a monopoly of an old era. It must aspire to be an intermodal operator in contemporary milieu of integrated logistics. For long it has remained



overwhelmingly patronized by captive customers, for whom railways is the only option. The huge potential of containerisation of domestic cargo offers opportunities for an exponential growth in the sector simultaneously with a challenge for it to put in place the requisite line haul capacity, terminal facilities, appropriate tariff structure, and facilitating environment for integrated intermodal development.

Railways is a preferred mode, provided there be a minimum critical mass. It needs to create this critical mass in partnership with other players, looking for a role of a wholesale carrier of bulk commodities in block trains and liner trains composed of sundry block loads of piecemeal wagons and containers on flat cars, for block-load operation end-to-end, with pre-fixed departure schedules, guaranteed transit. IR can partner with third party logistics service providers (LSPs) to leverage their superior market access and create end-to-end logistics.

**Domestic intermodal – a critical factor:** An estimated 1,500 million tonne of originating freight in India is break-bulk, most of which is transported by road, often over sub-continental distances. Currently, IR moves less than 12 m.t. of cargo in domestic containers. A recent study carried out by NCAER suggests that as much as 66% of all road traffic can be moved in containerised closed body trucks. A large part of the potential customer network that needs less than train load solutions is largely unaddressed. LTL cargo journeying over 700 km and more is estimated to constitute approximately 1,000 million tonne. Considered preferable for containerized transport, FMCG (estimated annual market of value of Rs 450,000 crore) will be the most important commodity group, which runs an annual logistics bill of Rs 35,000 crore. Automobile is another major candidate, involving movement from production clusters to distribution nodes; the 4-wheeler segment entails average transportation of about 1,300 km between the clusters, and 2-wheelers average haul of 650 km. Among several other products, chemicals and apparel would be prominent targets.

The domestic intermodal as the pivotal development in US rail renaissance holds a good lesson. US railroads are moving away from being merely bulk carriers of raw or semi-finished materials; they are now

regenerating markets for finished and value-added goods, working with their bi-modal partners –shipping lines, truck load carriers, and inter modal marketing companies. The two world's largest integrators are partnering railroads: UPS has emerged as the largest rail intermodal operator. Fedex Freight too opted in 2011 to work with railways, after years of not following arch rival UPS.

The cost-economics of domestic container movement, largely dependent on existing ISO type container designs, does not usually provide incentive for domestic cargo owners to containerise their cargo and move it on rail. A clear need is promotion of new container designs with improved use of the loading envelope. The low height of the indigenously developed 'Dwarf' container, for example, would enable double stack movement on conventional electrified rail routes, thereby making for increased volume in comparison with 20 foot ISO containers, yielding almost 70% additional loadability, especially of low density commodities.

**Crux of the matter – Cost-effectiveness:** The total logistics cost of intermodal transport tends to exceed that of trucking due to high transit time and lack of reliability, both these factors resulting in higher-than-necessary inventory-in-transit and safety stock costs. Improving transit times and improving reliability would enhance efficiency of intermodal transport, making its total logistics cost-effective. Customer requirements for shorter transit times stem from a need to reduce inventory levels in the supply chain by getting efficient, on-demand dispatches and deliveries.

**E-commerce - the new kid on the block:** Shopping habits are changing, and consumers' expectations with them. Logistics is increasingly becoming a decisive factor for the success of e-commerce companies. One promising avenue for IR to explore is the rapidly expanding e-commerce market, for which strategic collaboration with large players would open a window of opportunity.

**Generic parcels traffic:** A major sector with immense potential for IR to focus on is the generic parcels traffic, which encompasses the express market. India's Rs 15,000 crore express market includes the air express alone having an approximate share of 30%, road express another 45%, and the rest 25% accounted for by e-retail.

Several variants in the rail service packages may be unfolded: IR may operate dedicated train formations entirely designed and developed by the private entrepreneur/integrator. There is likely to be popular demand for individual vans to be operated for inter-city transport of freight/parcels/courier packages by higher speed passenger trains. Some others may opt for dedicated space to be leased on long term contract in VPs on such trains. Evidently a way forward will be for IR to offer a FAK rate, assuring time-definite money-back guaranteed supply of hardware as well as transit time. It will require selected nodes/yards/terminals/sidings for aggregation/consolidation; also industry clusters.

### **High speed freight transit**

There is a growing realization that railways has significant revenue potential, if it can offer a time-competitive service. IR may plan for overnight inter-city journey of freight and documents, post-DFCs, like, for example, some railways in Europe and China improvise high speed EMUs to operate scheduled freight services similar to air freight carriers.

### **Develop and utilise a standardised pallet:**

There appears a concomitant need to design and develop ancillary hardware for unitization of small volume cargo, for example, standardized pallets like airline ULDs, also the use of road-railers/trailers, product-specific customised vehicles for value-added specialised logistics, able to extend integrated transport service, in addition to improved wagon designs and incentivising private players for induction of rolling stock suitable for bulk movement of commodities such as cement, grains, steel, automobiles. For these special wagons to be used, IR needs to provide a supportive regulatory framework for the introduction of domestic containers/swap bodies, specifying the standard dimensions.

A standardised pallet will help handle piecemeal general cargo by road or rail, by passenger or freight trains. Unitization of the LTL cargo can well facilitate economic haulage by train for longer journeys. While LCL consignments can be aggregated for transport

end-to-end in an ISO container, piecemeal goods and parcels forming less than a full container load may well be carried from origin to destination in standardized pallets or ‘cubes’ (each of 4.5 cubic m volume, 3 tonne gross weight) designed for the ‘Dwarf’ container, or even in general purpose wagon (accommodating up to 18 ‘cubes’), yielding estimated 45-50% saving in haulage.

Legacy and lessons: Let IR recall that concepts such as multimodal and time-definite transit of goods are not alien to it. For years decades ago, its suite of services included “quick transit” of LWL consignments, even involving repacking/transshipment, as also “door-to-door” service with their road collection and delivery, remote locations served through out-agencies. IR pioneered in the mid-1960s its own-designed and manufactured 5 tonne freight container. It proved an instant hit with leading FMCG firms like Hindustan Lever, Tata, Godrej.

Undoubtedly the “QTS” and “shunting and van goods” operation in effect turned out to be highly cost-intensive and inefficient, in absence of the concomitant support by way of management information and monitoring mechanism as available now. Again, the rapidly growing traffic throughput volumes on the network then in the throes of remodellings and additions to infrastructure left little room for LTL operations. But there was no justification for IR to overwhelm itself with huge, unbearable costs and inefficiencies. Instead of involving partners on contract for first/last mile road transport of empty/loaded containers to/from consignees/consignors, arranging crane as well as routine cleaning/petty repairs, etc., costs of sub-optimally utilized departmental staff would inevitably make the railway product unbearably cost-intensive.

### **Logistics Policy**

Improved rail mode share, increased logistics efficiency and clean vehicles are the building blocks for a transformative freight paradigm, that will be cost-effective, conducive to reduced transport costs, and optimised mode share. As the freight activity is projected to rise five-fold by 2050, India’s freight transport ecosystem will be called

upon to play a critical role in supporting the concomitant priorities such as efficient delivery, international competitiveness, clean air and environment.

Addressing cardinal issues of high cost and inefficiency, the National Logistics Policy lays down an overarching inter-disciplinary and multi-jurisdictional framework for the development of the logistics ecosystem. It primarily targets (i) reduction in cost of logistics from about 13-14% to 8% of GDP over the next five years; (ii) improvement in country's ranking in Logistics Performance Index to 25th over these five years (India ranked 44th in 2018), and (iii) creation of an indigenous data-driven system for monitoring components of the logistics sector to enable higher logistics efficiency.

Terming the policy a “solution for many problems”, Prime Minister Modi called for a concerted effort to address the high logistics costs, “a pain point for the industry for a long time”. The cost of logistics for a retail chain, as a percentage of the cost of goods sold (COGS), is about 4-5% according to global estimates. In India, logistics costs as a share of COGS are estimated to be at least three times higher.

Prime Minister himself pointed to a “new direction” to infrastructure development, ensuring multimodal coordination, different modes complementing each other. Reduction in transportation costs is planned through migration towards “the right modal split”. besides improvement in efficiency of transport systems. Reduction in warehousing costs would accrue from right location of warehouses by developing a national grid of logistics parks and terminals, and improving quality of services, also reduction in inventory costs; unified documentation would help reduce administrative and order processing costs.

A policy is as good as its implementation, India's new logistics policy unveiled with much fanfare awaits its agni pariksha. Evidently,

the success and real impact of the NLP is predicated on the government effectively developing and coordinating the programmes and plans germane to the policy with concerned Central government departments and agencies as much as counterparts in the states. The states' is indeed a crucial role in NLP's successful performance.

Essential is it to grasp the importance of coordination and cohesion in India's \$ 200 billion logistics industry, the sector involving more than 20 primary government agencies, 40 secondary government agencies, 37 export promotion councils, and 500 certifications.

Requirements for enhanced coordination include the positive factors of management initiative and technological development.

Integration employing different modes of transportation may be related to the structure of a national system which employs each mode according to its economic fitness or to the establishment of a transportation enterprise employing two or more modes under a unified corporate control. As a result of independent development and separate promotion and regulation, the dominant relationship among the modes has been competitive, not coordinative.

The current projections and targets for the transition to multi-modal freight in India may appear overly optimistic. The policies in place including Dedicated Freight Corridors, Sagarmala, and Maritime Vision India 2030 are nevertheless much needed, for a sustained move forward towards India's net-zero future. It is also observed that, if the Sagarmala programme and Dedicated Freight Corridors were to generate their targeted mode-shifts, it would result in a 58% reduction in emissions in 2030.

The development in new India requires a paradigm shift in the thought process, methods, and tools of the policymakers. The most important challenge for New India will be to establish Sustainable Development for a Sustainable Future. The current transportation sector will also witness an overhaul in its pursuit of cleaner energy and greener low carbon energy fuel with electric-mobility, biofuel driven, and hydrogen-powered vehicles taking a lead. This would enable India to fulfil its commitment of cutting GHG emissions intensity by 33% to 35% below the 2005 levels, by 2030.

There needs to be a general agreement about the overall economic objective of a national transportation policy, that is, an optimal share of the nation's economic resources to be devoted to the sector, and an optimal distribution of transportation resources among the modes, including integrated multimodal services. Only by strict adherence to both these requirements can the national product be optimized. Of course, the influence of politics cannot be ignored altogether. It should be recognized that some essential service may not be self-liquidating; metropolitan commuter and urban transportation, for example, for which public aid is required. There could thus be occasions for deviation from strict economic efficiency in recognition of other social considerations but these deviations must not be allowed to get out of hand and promote wasteful investment and inefficient operations.

For an institutional framework to evolve conducive to an optimal growth of transport sector, some of the recommendations made by the National Transport Policy Development Committee are indeed relevant, such as (a) A unitary Transport Ministry for a coordinated development of rail, road, shipping and aviation sectors; (b) effective regulatory mechanism to safeguard stakeholders' interests – including of investors, operators, and consumers. This new order of things will, in turn, require well qualified personnel across the spectrum. Skill gap is a big challenge. Country needs to put in place an abiding ecosystem to build skills and re-skill the vast workforce in this critical domain. Amidst India's largely unsophisticated logistics sector, it is not wholly devoid of some pockets of excellence, e.g., the automobile industry, for which LSPs have developed transportation, inventory management and warehousing systems to rival those of the international gold standards.

*“Leaders win through logistics. Vision, sure. Strategy, yes.  
But when you go to war, you need to have both toilet paper and  
bullets at the right place at the right time.  
In other words, you must win through superior logistics”.*

- Tom Peters

\*\*\*\*\*

## Evolution of Indian Foreign Policy: India at 75

Foreign policy of a country, particularly a dynamic civilization rooted in traditional and ancient value systems like India, is anchored in three pillars, or sets of principals. These are –

1. National Objectives,
2. Social system/systems, and
3. Civilizational Values

National objectives are clearly durable and the most important pillar of the policy framework. They are the foundations of secure and progressive national policies. For most of the countries, but more so in the case of India, its geographical location, history, cultural systems, political and economic trajectory, global ambitions, require the overall framework for the national objectives to be secure geographical borders; economic security encompassing food security, energy security, and now environmental security, and an environment of freedom and security for its citizens everywhere to pursue their interests in accordance with the law. Chanakya in his Arthashastra has stated that the king shall be responsible to his subjects and citizens, and that also describes the relationship between the state and citizens in modern times as a guide for foreign policy. All consular policies and legal responsibilities towards Indian nationals and citizens living abroad emanate from this element.

The largely religion, caste, income based social layering bears a direct relation to social stability and internal peace. These are sensitive areas for the overall security of the country, and thus can be adversely exploited by adversarial powers. And that requires higher and constant attention of the concerned authorities.



Our civilizational values emanating from Vedic times imbue the country with a sense of continuity and historical centrality to the world. Indian society has been truly acclaimed as knowledge centric and inclusive of diverse opinions. The foreign policy of the country can not be therefore divorced from our traditional liberal system, and at the same time needs to work towards securing a central place for India in global power structures.

Foreign policy is then evidently an instrument for conduct of relations between sovereign states who will act to secure their own national states which may at times, and often usually compete with each other. The competition turns into contest and conflict on occasions as evident from the history. This has almost always led to involvement of top leaders of the country in the formulation and implementation of the foreign policy. The foreign policy very often therefore becomes the preserve of the heads of government who leave their own stamp and influence on the policy. Every leader in the case of India has left his or her own imprint in the evolution of foreign policy, and thus taken decisions unique to their times.

Jawaharlal Nehru was the first Prime Minister of India from 1947 to 1964. That period saw contest to our Northern boundaries from across China. India had just become independent in 1947, was short of resources for its economic growth, which was an aspirational goal and was in keeping with pledge made by the the people of India before independence. The Cold War had become the centerpiece of International politics after the end of World War II, dividing the world in two distinct camps challenging and colliding with each other, emergence of nuclear weapons as the ultimate weapon of mass destruction, and military conflicts in Korea and Indochina very close to our doorstep. Our requirement at this time was peace enabling us to carry out our economic policies of growth, obtain resources including technology, raw material and financial resources from foreign countries often opposed to each other, to come to par with the industrialized world of Europe and the USA, avoid becoming part of Cold War frictions and to ensure both peace and stability for India. We needed to be at peace with both the camps and required peace between them. Nehru was the architect of non-aligned movement

against this history. India emerged as peacemaker of choice in the Korean peninsula and Indochina because of its known positions on Cold War rivalry and distancing from the two distinct camps.

At the same time, the values of liberalism, independent thought, non-violence and inclusiveness made India lead the movement of decolonization in Asia, Africa and Latin America, as well as Caribbean region. The championing of India to decolonize the countries governed by alien powers started a movement which led to complete decolonization by the 1980s.

Nehru's focus on industrialization of India and skill acquisition for a modern India also led to establishment of institutions such as IITs, IIMs and AIIMS.

The outcome of all this was that India was punching way above its weight in international affairs despite our weak economy and tensions with China on our Northern borders, and with the new country of Pakistan on our Western borders pulling us into a conflict frequently. India was seen universally as a country championing partnerships and sharing of knowledge and resources for global good. Truly an epitome of Vasudev Kutumbakam.

Nehru also started the lofty idea of sharing India's capacity and knowledge with the poorer countries in Africa, Latin America and Caribbean through its policies of ITEC and Colombo Plan as well as under the umbrella of Commonwealth.

Lal Bahadur Shastri became the Prime Minister in 1964 and passed away after a short period of about one and half years, in 1966. Shastri had inherited a food deficit country from Nehru. Emphasis on industrial development and lack of agricultural technologies, fertilizers and pesticides, and good seeds, combined with growing subdivision of land in the agricultural areas had made India hugely dependent on the USA, Russia, Australia and other European countries for the basic food items like grain. During the same period, India faced incursions from Pakistan across our Western borders, from Pakistan who had the single most ambition of occupying Jammu and Kashmir state as part of Pakistan. The twin challenges introduced the slogan of Jai Jawan, Jai Kisan and there was a perceptible shift in Indian

national policies, and foreign policy accordingly, for the priority to be attached to defence development and agricultural development through induction of modern technology, local development through indigenous productions, as well as technological research and development. India saw during this time development of institutions like DRDO and IARI as a mark of this shift.

After Shastri's death in January 1966, Mrs. Indira Gandhi became the Prime Minister and served for eleven years till 1977, and again for four years from 1980 till 1984 when she was assassinated by her own bodyguards. With the exception of a period of approximately four years, when Morarji Desai and Charan Singh were the Prime Ministers, the foreign policy of Mrs. Gandhi was impacted by the forces of instability in India caused by extremist movements, forces of separatism in Punjab, militancy gathering strength in Jammu and Kashmir and challenge to her leadership from the political strife within and from the various political parties. Pakistan perennially inimical to India, discovered cross border encouragement to extremism and separatism in India as the more effective and less expensive means of waging war with India. The so-called West led by the USA looked the other way because of its dependence on Pakistan for its objectives in Afghanistan, Iran and the Gulf. Mrs Gandhi developed a strong antipathy towards the USA as a result, and yet our dependence on the USA was great because of the technology and financial inflows we needed. Her tilt to the Soviet Union was also caused by her efforts to rapidly take India ahead in advanced technologies like space through state intervention. Aryabhata, the first Indian satellite was launched in 1975 with the help and support of the USSR. Aryabhata was the first step towards the highly ambitious space programme in later areas, which has put India in the top ranks, both in civilian and military areas.

India also faced the largest migration of refugees from across its borders with East Pakistan across West Bengal and Assam. This period saw a response from the Prime Minister as of greater control over the national institutions like security and finance. But from the foreign policy point of view, the growing weaknesses on the national front led to a more confrontational and stronger assertiveness to the

recognized world powers. Mrs. Gandhi also took strong action in the East leading to creation of a new country, Bangladesh, getting closer to the Soviet Union to address the growing distance between the West and India as well as an emerging stronger socialist system in the country. China was mostly keeping at bay during this period because of its own domestic issues. It continued to be a threat and a challenge however, as it appeared during the 1971 war and then later in the form of several incursions in the north sector of our borders and LAC across China. The period saw India becoming more socialist internationally and greater recourse to govt control in economy and financial sectors. There emerged more distancing between the West and India during this period. India was even more visibly labeled Pro USSR. Even in NAM, India was seen by others as tilting towards the left. The foreign policy of India was seen as a challenge to the West, more inward looking with emphasis on indigenisation, import substitution, public sector as opposed to private sector etc.

Rajiv Gandhi was the reluctant Prime Minister of India from 1984-89 after the assassination of Mrs Gandhi. He was a pilot professionally who had seen all the glamor of the consumerist western world with easy availability of consumer goods, high living standards, and private industry playing a strong role in the national and international economy. He had also been deeply affected by his mother's assassination because of the forces of separatism, extremism, fundamentalism and terrorism, and was keen to get the nation out of the clutches of these forces. He was also convinced of the centrality of India in South Asia, and therefore wanted India to play a greater role in building up a platform where they could all come together with India as the hub. This led to formation of SAARC which has continued to flounder because of Pakistan opposed to India always, and seeing itself playing the role of another alternative hub.

Rajiv Gandhi had a great vision of India as a powerful nation in South Asia, playing global role in international affairs, and therefore took several initiatives in resolving problems with our neighbors including China. After a hiatus of two decades, he undertook the first top level visit to China where his 10 minute long handshake with Deng Xiaoping became the proverbial talk of the town. That

was a breakthrough moment in a new chapter of India-China relationship. SAARC was modeled after ASEAN to promote economic cooperation in the whole of South Asia. He believed that India bore a special responsibility to maintain peace in the region, and particularly Sri Lanka because of the Tamil linkages.

This visionary approach required matching policy initiatives. For various reasons there seemed to be a deficit of faith and confidence in this respect.

His vision of an Indian society led by forces of private capital and western consumerism led to huge imports of consumer goods into India but with limited market access because of high levels of duties. This was both a drain on limited Indian resources and a stifling of the Indian economy because of a shift towards import of western consumer goods. Rajiv Gandhi era continues to be questioned for the dubious performance of his foreign policy and economic performance.

The years from 1989-91 saw quick change of Prime ministers in India with terms of one year or even less. This was barely enough for anyone of them to leave significant mark on India's foreign policy and yet, the world was going through a rapid transformation, metamorphosing the world order that we had been hitherto familiar with, even to extent of having a level of comfort with it. There was a churn in the familiar Cold War order. The Soviet Union had disintegrated by the middle of 1991 creating the largest Russian Federation and several independent countries in Central Asia, Eastern Europe, Central Europe and baltics. China had already launched its post Mao Deng era of economic reforms and a new aspirational china. The USA had launched its war of the Century in Iraq, clearly demonstrating its strategic superiority and the world shifting to a unipolar axis from the historical bipolar order.

The Indian economy had descended into economic depth with earlier episodic mismanagement leaving us with foreign currency barely enough to meet 19 days imports and the threat looming large for India to have to pawn its Gold reserves to raise money for survival. That was the watershed year when P V Narsimha Rao became the Prime Minister in 1991.

Narasimha Rao had inherited a bankrupt India which found itself at the same time bereft of any support structures. Dependence on the Soviet Union had been great for both the Rupee Rouble trade, technology and strategic support in the international arena. Would the inheritor state of the Russian Federation which itself was grappling with economic and financial issues be able to live up to its commitments? India's economy urgently required the much needed financial resources including investment into a system which was socialist in nature and appeared to be more aligned to the left? Would the Government of India be able to convince the west, traditional source of private capital, of the opportunities in India and the need to invest in India.

The foreign policy then had the following major challenges:

- 1) Develop partnerships to support and promote economic reforms. This involved major and emerging economies including the USA and the West,
- 2) Keep the relationship with the Russian Federation intact till such time as we were certain of the ground we were treading,
- 3) Discover and develop other partnerships if the west seems hesitant.

And then we evolved our policy of Look East. Our Look East Policy involved several elements:

- 1) Historicity of the relations,
- 2) Synergy of cultural values,
- 3) Mutuality of interest, and
- 4) Commonality of strategy.

These all came together in the case of ASEAN, which has been one of our biggest success stories despite the tardiness of our own responses on occasions.

ASEAN particularly wanted the order to be balanced. They had begun to be overwhelmed by Chinese dominance in the region and India was the only other power in the region which could provide the right response to China. Famously, Lee Guang Yao had described in

2002, India as the other wing of the aircraft to support the flight of ASEAN into the horizon. The other wing was China. That was the level of confidence ASEAN had on relations with India to carry the nation into the changed world order.

India became a dialogue partner of ASEAN in 1992, a summit partner in 2002, a member of East Asia Summit the same year. East Asia summit(EAS) has a limited membership of ASEAN members and major ASEAN partners only important for the security of the region. The regional trade began to grow exponentially with the level reaching 100 billion dollar in 2010. Most importantly, the rapid growth in economy and strengthening of relations with ASEAN, led to a rearrangement of international dynamics. India was seen as a rising power and an alternative to China. China began to look at India as a serious competition in the world, both economically and strategically, and the Indian market became an attractive opportunity for investors from the USA and the West.

This growth in the Indian economy and her political stature continued under the 1998-2004 term of Sh Atal Behari Vajpayee as the Prime Minister. The improved economy gave confidence to the govt to exercise a more muscular foreign and security policy. India took a step towards developing nuclear weapons by conducting tests in 1998. After furor in the West led by the USA for about an year and almost simultaneous nuclear tests by Pakistan in return, the international opinion began to veer towards India again. This, besides the merit of the Indian reasoning and deftness of our diplomacy, was a recognition of India's growing economy which began to create an image of competition with China. Pakistan had begun to slip down the ladder as a result of its falling economy and its support to terrorist network. Osama Bin laden had carried out the 9/11 attacks against targets in the USA and Pakistan support to such a group had made it almost a pariah in the eyes of the world with the exception of a few countries.

USA recognition of India as a nuclear power strengthened our leverages in negotiations with the USA on 123 agreements. Relations with the USA also began to grow in several other areas and soon India became a strategic partner of the USA with agreements in place

for transfer of technology, logistics, mutual support in development and deployment of defense technologies etc.

India's response to Pakistan in the Kargil war in 1999 had also demonstrated the willingness and ability of the Indian government to take a muscular and tough approach when needed, and the USA support to India in the face of a threat of nuclear war assured us of the strength of our relations with the USA.

It was also during this period that the world began to talk about hyphenating India and China on the world stage by coining the word Chindia. India was firmly established on the global stage as the emerging power with the capacity to balance China globally and in Asia.

Relations with China also were on a growth path and there also appeared a hope that the border problem would be resolved or will stop casting a shadow on the relations. Treaty of peace and amity with China was signed during this period.

These upward trends continued during the Manmohan Singh era. USA became a firm partner in India's growth with bipartisan support from the congress. 123 agreement with the USA was eventually signed in 2008. The trade began to grow rapidly and several major US companies had begun to seriously consider India for establishing manufacturing bases. India became a summit partner of ASEAN. We managed to dehyphenate ourselves from Pakistan and began to look seriously at China as the competition. There were expectations of Indian economy soon becoming the 10th largest economy (it happened in 2014), and soon reaching the 5th largest (it finally happened under the watch of PM Modi in 2022)

However, China had joined the WTO in 2001 and that started another chapter in China's economic growth. China began to rise rapidly as the world's market and factory, this led to the Chinese economy galloping much faster than assumed earlier. The already existing power asymmetry between India and China had begun to grow even wider by 2010.

This was the matrix of leverages and disadvantages which Sh. Modi inherited as Prime Minister in 2014. Everyone looked



expectantly at the Indian trajectory with the new Prime Minister at the helm. Full cooperation of the US Government to the new PM also became evident when President Obama removed the visa restriction imposed on the then Chief Minister Modi in the wake of Godhra incidents.

Prime Minister Modi soon made it clear that his foreign and strategic policies are going to be far more muscular and assertive than in previous governments. This became obvious in his responses to Pakistan's terror strikes in Uri and Pathankot by undertaking surgical strikes in Balakot. His shrewd tactics on relations with France, the USA, the UK, Germany, Africa, transforming the look east policy into Act East policy- all demonstrated both ease as well as nimble footedness in foreign affairs.

Some of the success stories of PM Modi have been:

1. Demonstrating to Pakistan that he will not hesitate in taking strong and often unconventional action to deal with the threat. Surgical strikes in Balakot, taking greater control of security in Jammu and Kashmir, abolishing the Art 370 in the state and crossing the LOC to deal with the terrorist structures in POK are examples.
2. Assessment of the neighborhood dynamics and devise innovative responses. SAARC had been at the centre of our neighborhood policy besides bilateral relations. However, SAARC processes were being consistently stymied by Pakistan. PM Modi began to give primacy to BIMSTEC (Bay of Bengal Multisectoral Economic and Technical cooperation) which is a similar regional cooperation organization but excludes Pakistan,
3. His Africa diplomacy by visiting African nations twice so far and developing cooperation projects in agriculture, food processing, human resource development,
4. His policy of separating Israel and Palestine in foreign policy dealing,
5. His policy of using assistance and disaster relief in developing bilateral relations. This was seen in our dealings with Sri Lanka when we extended financial assistance and supplies of POL at a

critical time. His vaccine supplies to many developing countries during the recent Covid epidemic was another example.

6. Most of all, his unique way of using summit meetings in an almost event management manner to create a high visibility in public and thus a deep impression of a successful visit both in the mind of the visitor and the public.

The forthcoming SCO presidentship and the ongoing G-20 presidentship will also provide an opportunity for him to project India and populate minds of visiting decision makers with enormous opportunities India has to offer. His skills in creating specific themes convey both the possibilities and interest in working together. For example, the theme of “one world, one family, one future” tells the importance of G-20 sharply and concisely.

In this 75th year of India’s independence, our foreign policy is a story of wise formulations and shrewd implementation with flexibility and astuteness to adjust to the changing reality of the world.

It will be interesting to see how PM Modi deals with the challenge of China which has emerged as a growing threat to both our aspirations to be global power, economic and strategic ambitions and to our security. Incursions into Indian territory over the last three years suggest total lack of sensitivity on Chinese side to our security but even more importantly a suggestion and a challenge that they can ignore India when they want, challenge India when they want and do what they want with India at a place and time of their choice. This is also a brutal recognition of the growing asymmetry between India and China. This will need to be resolved if India has to maintain her place in the global order.

\*\*\*\*\*

T.S. Krishnamurthy

---

## DEMOCRACY PAST AND PRESENT: NEED FOR ELECTORAL REFORMS IN INDIA

Democracy, all over the world, is going through an awesome and confusing churning process. It is indeed facing a number of complex critical and crucial challenges almost threatening its very fragile existence. Although democracy was designed to make governance closer to benefit the people, it has unfortunately in recent years moved rapidly far away from the people, thanks to what is now known as Representative Democracy.

Western concepts of liberty, equality, rule of law, independence of judiciary, representative democracy based on universal franchise, periodical elections etc., considered essential for a quality democracy seem to be eluding the countries that have emerged after the colonial rule possibly because these countries coming out of the shackles of imperialism and colonialism in the 20<sup>th</sup> century were suffering from abject poverty, poor literacy, gender injustice, malnutrition inadequate leadership and feudal socioeconomic conflicts. Consequent to their independence from colonial rule, the aspirations and ambitions of these people increased manifold dramatically contributing further to the already prevalent ineffective and chaotic governance. The evolution of democracy has been picturesquely explained in the following words of Bernard Levin, (Chief columnist, The Times London)<sup>1</sup>:

*“I come back to the very strangeness of democracy. We, who are happy to live under its rainbow, tend to forget what a very remarkable thing we have. We do not know what Pericles thought his invention would do for the world; Did he have an inkling of what was to follow – that is, the extraordinary gap of about two and half thousand years between Periclean Athens and the next democracy*

*to flourish in the world? Yet it seems that even though the stream had to run beneath the earth for all that time, the idea that Pericles had started had never entirely died out; I know of no comparable example. Indeed, it will be very difficult even to imagine something like this. And that is not the only mystery in this long story; why, for instance did democracy take root first in Western Europe and America, and why did most of the rest of the world take so long to catch up – to say nothing about the tragic fate of those democracies which have ceased to be so?”*

Distortions in the functioning of these established and emerging democracies got accentuated further due to the proliferation of undemocratic political parties led by selfish political leaders surviving on corrupt political nexus with mafias, unethical corporates, biased media, incompetent and corrupt civil servants and criminals. National leaders of unimpeachable integrity who were aplenty during the freedom struggle became very rare in many countries amidst this anarchic and corrupt political scenario.

Yet, democracy no doubt enjoys an unprecedented popularity as of now. An international survey showed that of the world's 192 countries, 121 (63%) were electoral democracies as against 66 democracies out of 167 countries in 1987 (40%). The survey goes on to point out that human liberty has steadily expanded throughout the 20<sup>th</sup> century although this is highly questionable according to some critics. The United Nations studies show that since 1980, 81 countries have taken significant steps in democratization with 53 military regimes replaced by civilian governments. Globalization has also played an important role in accelerating democracy's numerical growth partly because some countries found it convenient to claim themselves to be democracies because of availability of massive international aid for such countries. This being so, many of these democracies are only in form than in substance thereby not living up to the democratic ideals propounded by Abraham Lincoln viz., “*a government of the people, by the people and for the people*”. In spite of democracy's best credentials as a medium to protect and preserve the freedom of the people with a view to promoting economic growth and social justice, such protection has not been possible to achieve by merely having democratic institutions unless they are backed by

public spirited and honest leaders with constitutional checks and balances in letter and spirit.

Be that as it may, the confusing scenario of global democratic journey co-existing with violence, hatred and corruption leads us to wonder whether anything can be done to productively and simultaneously harness the gains of democracy and development without the slings and arrows that flow from developmental process within a democratic framework. The present disenchantment of the people with political parties, political leaders, and legislature and to some extent bureaucracy and even judiciary in some of these countries arise mainly because of failures in public governance and deficiencies in the regulations of the marketplace. It would therefore imply that democracy as a political system can possibly survive only if the people's aspirations can be achieved smoothly by people aggressively asserting themselves through consensus. The appalling poverty and social inequality in many emerging democracies is a standing testimony to the incompetence or inadequacy of governments and regulatory institutions. If that be so, governance holds the key to make democracy and development real, meaningful and successful to the people at large. Good governance is therefore quite critical in the emerging democracies if people's faith in democracy is to be restored. This would therefore imply that high quality development-oriented democracy is certainly not an oxymoron.

India having a unique written Constitution can be said to have all the ingredients of a democracy such as Rule of Law, elected representative Parliament, independent judiciary and freedom of expression. And yet there are many criticisms of different shades regarding the functioning of democracy in India. Almost every day we read some protest or the other in various corners of the country displaying discontent among some sections of the people against functioning of our democracy. It is a healthy sign, no doubt to have dissenting voices in our democracy. The question however arises often whether our democracy will survive in the midst of bitter hatred, violence and conflicts among different sections..

Electoral reform as a tool to improve the quality of democracy is a frequently discussed subject in all democracies. In the US, there

is an ongoing public debate about having an electoral college for the presidential elections, distinct from the Congress or state legislatures. Similarly, in the Commonwealth countries there is debate on how to encourage a healthy political party system, and the need to curb money and muscle power. The first-past-the-post system has also come under scrutiny. Demands to make democracy more transparent have arisen in Nepal, Indonesia, Pakistan, Myanmar and the newly formed East European states. Bangladesh has a caretaker government during the elections to provide a level playing field for all political parties. In African countries like Zimbabwe, Congo, Nigeria and Uganda, there are demands to improve the credibility of the election management bodies. The demands for improvement are not confined to the electoral process – they extend to post-electoral management too. Electoral reforms are thus an important topic within the larger discussion on how to improve the quality of democracy.

There have been growing concerns over the years in India about several features of our electoral system. The conduct of elections has also thrown up many challenges calling for reforms. While political parties have been making various suggestions they are all very often politically motivated based on their ideologies..

However from time to time, many suggestions have been made to improve the electoral democracy in India by Law Commission, Election Commission of India, Non Governmental Organisations and media. These suggestions have a long term objectives and are generally apolitical. No doubt there is a strong case to bring in certain urgent reforms on the basis of our experience and exposure during the last 75 years since independence.

Our experience during the last 7 decades clearly indicates that we seem to have a distorted democracy. It is not the fault of the Constitution. It is indeed the fault of various stakeholders operating the constitutional mandate. It is also relevant to mention that our media and public vigilance also require to be revamped periodically. A disturbing trend is the increasing political and ideological intolerance among political parties and their followers. Another disturbing feature is the enormous use of money (sometimes black money) in elections and more so in bye elections,. Having these aspects in mind, the

following reforms require urgent consideration:

- (i) A comprehensive law on political parties covering its formation, functions, financial management, electoral manifestoes, rotation of parties' functionaries, resolution of disputes within the political parties etc. This was even recommended long ago by Justice Venkatchaliah Committee on Review of the Constitution. Many countries have such a law but India is still lacking.
- (ii) The present electoral funding of political parties needs to be completely overhauled. In particular the electoral bearer bond system needs to be done away with as it does not provide total transparency in the funding of political parties.

It is suggested that a National Election Fund be constituted under the supervision of the Election Commission of India to which the corporates and individuals be encouraged to contribute with 100% tax exemption for such donations. The fund should in consultation with all recognized political parties be utilized to conduct elections. No party will be allowed to spend its own funds during the elections.

- (iii) Those with criminal antecedents of serious nature should not be allowed to contest elections if the Court has framed a charge sheet against such persons for having committed heinous crimes.
- (iv) The First-Past-System has outlived its utility because many candidates are able to get elected with only 20 or only 25% of the votes polled. The ideal system is to insist on minimum 50% plus one vote of the votes polled as requirement for winning. However, as a transition measure we can specify that minimum 33.13% of votes polled is required for winning. Such a stipulation will gradually eliminate proliferation of small political parties formed on the basis of religion, and linguistic considerations all over the country.
- (v) The bye-elections have also to be regulated. The system of persons contesting in more than one constituency should be barred.

In case a bye-election is necessitated with more than two and half years of tenure left, the bye elections can be held as at present. If the period left is only less than two years, one of the two alternatives be considered i.e either a nominee of the party could replace the earlier candidate or the candidate who had come as second in the earlier election can be allowed to be Member of the Legislature.

- (vi) The procedure for the appointment and removal of Election Commissioners and Chief Election Commissioner need to be examined to improve the credibility of the election management body.

## **CONCLUSION:**

The reforms suggested above can certainly improve the quality of Indian democracy but it has also to be accompanied by judicial reforms such as Fast Track courts in respect of cases in which various politicians are involved as also mandatory disposal of elections petitions by the judiciary within six months of the filing of the petitions.

To conclude, electoral reforms detailed above are good to make our democracy credible with changes periodically to meet the demands of time but that does not mean that we have to amend the Constitution often.

It would perhaps be appropriate to quote here the former British Prime Minister John Major's caution on the institution of parliamentary democracy in UK:

*“The British constitution is Vibrant and Robust; but it is not indestructible. People must realise that our Constitution is not a piece of architecture that one can re-engineer by knocking down a wall here and adding an extension there. It is a living breathing constitution. Its roots are ancient but it has evolved. It embodies a set of values, a legacy of understanding that have developed year by year over the Centuries. No one should lightly contemplate tampering with a constitution that is so ancient and so alive”.*



## **PANCHAYATI RAJ AT 75**

### **Evolution of Panchayats in independent India**

The concept of Panchayats as institutions of self-government has been in vogue since the Vedic times. The constitution of India incorporated it as a directive principle and finally in 1993 it was inserted in the Constitution as Part IX creating a system of democratic self-governance of enormous size giving every rural resident voter in the country a say in the governance at the village, block and district level. The Panchayati Raj (PRI) System consists of the Gram Sabha, three tiers of Panchayats covering every village in the country and District Planning Committee, collectively known as “Panchayati Raj Institutions” (PRI). They cover all rural voters, whose number is estimated to be 640 million.

PRIs are unique in the sense, where every rural voter has a right to express his/her needs and propose what should be done to meet the needs.

While every rural voter is a member of the Gram Sabha, the governing bodies of the three tiers are elected. A considerable proportion of seats in the Governing bodies, known as Panchayats are reserved for women, Scheduled castes and Scheduled Tribes and Other Backward Castes.

There are constitutional provisions that make it the mandatory duty of the State Governments to enact laws that ensure free and fair elections, make funds available to the three tiers of PRI, reservation of seats for women, scheduled castes and scheduled tribes. The law and the practice of Governments should also provide for proper devolution of powers for proper functioning of the elected bodies.

The State Finance Commissions ensure availability of funds to the PRIs by making recommendations on distribution of funds between the state governments and the institutions of urban and rural institutions. They have to be set up every five years.

To promote bottom up planning and to ensure proper coordination between urban and rural areas, District Planning Committee is set up for every district. The plans made by them are expected to be included in the state five years plans. The list of powers which can be and should be, devolved on the Panchayats are listed in schedule XI of the constitution and covers 29 subjects.

### **Funds, Functions and Functionaries – Devolution Index:**

Since there has been a wide variation in devolution to PRIs among states and in view of the importance of devolution for the success of decentralisation through the Panchayati Raj System, it was considered necessary to measure devolution and for that purpose develop an index that would help in measuring and monitoring ‘devolution’.

A number of studies were sponsored by the Ministry of Panchayati Raj to develop such index and the latest was done by the Indian Institute of Public Administration (IIPA) in the year 2013-14 and by the Tata Institute of Social Sciences in the year 2014-15, which produced a report in 2016. Although these reports are based on data pertaining to the year 2013 - 16, that data is still useful for comparing the situation now. Another similar study by TISS is ongoing and its report may be available soon. These reports are available on the web.

The ranks are based on the progress made on Core Issues in Decentralisation i.e., the work done in 3 Fs (functions, funds and functionaries including institutions) and the support system for the PRIs.)

Taking into consideration the above factors, the Aggregate Devolution Index of each State has been worked out and rank of each State has been assigned in the TISS Report of 2016.

In brief the findings of this study on ranking of States on devolution are:

a) Overall rank of the States and in 2015-16 is given in the table below: (The table does not contain information about all States)

b)

Name of State/UT	Gram Panchayat Rank	Block Panchayat Rank	Distt Panchayat Rank	Overall Rank	DP – GP (difference in rank)
Kerala	1	1	1	1	0
Maharashtra	3	3	3	2	0
Gujarat	4	4	2	3	-2
Sikkim	2	NA	7	4	5
West Bengal	6	5	5	5	-1
Telangana	6	7	6	6	0
---	---	---	---	---	---
---	---	---	---	---	---
Goa	21	NA	21	21	-2
Arunachal Pradesh	22	21	20	20	-2
Manipur	21	NA	17	19	-4
Punjab	18	20	18	18	0
Assam	20	19	16	17	-4
Odisha	15	17	19	15	4

The question arises as to the reasons why some states have done better in the Devolution Index while some others have lagged behind. That there would be differences in the degree of devolution is natural as the devolution is done by the States and the social, political, administrative environment differs from state to state.

The awareness and aspirational levels about the individual rights to self-govern vary among states. In some states there has been a tradition of voluntary organisations taking up social and community works, while in others this tradition has been rather weak. Moreover, the equation of political influence between the state level politician and the politician working at the levels of village, block and district would undergo drastic change as in one situation the state level politician would enjoy all the power while in the other considerable power would get transferred to the lower level politicians. The dependence of one on the other will get somewhat reversed.

Bureaucracy will also feel the pinch as it is placed under the control of the PRIs and there would be resistance to the change.

However slowly, there is change towards greater devolution and therefore to decentralisation of governance.

### **Objectives of Panchayati Raj**

Panchayati Raj System has the objective to result in successful democratic decentralisation. For its success there are two components as have been identified by Tata Institute of Social Sciences in their Report and they are a) Operational Core consisting of transfer of 3 Fs i.e., functions, funds and functionaries including local institutions, autonomy of PRIs and b) Support System consisting of the following elements

- Capacity building of the employees and the members of the Panchayat and the members of the Gram Sabha,
- periodically setting up the State Finance Commission and accepting its recommendation on allocation of share to the Panchayats out of the State revenues and raising of resource mobilisation
- District Planning Committees (DPC) are set up and are functioning, DPCs prepare the integrated Plan of the district
- Services to be offered by the Panchayats
- Transparency and governance features – 12 indicators are available.
- Intermediate and Gram Panchayat the index is worked out.

The role that the Panchayats are to perform requires staff in all the tiers. Gram Sabha is an additional tier which also throws up considerable work. It has been seen that the gram sabha (GS) is to discuss plans about the village they live in. The needs of the functionaries required in each tier need to be examined and necessary manpower resources have to be made available. For each State the exercise should be done and a programme to make the staff available be prepared and implemented.

### **Initiatives taken by the Ministry of PR.**

- a) Panchayati Raj (PR) System has been closely associated with the programme of achieving Sustainable Development Goals (SDGs). These goals were woven in to the activities of the Panchayati Raj Institutions (PRIs) through the Mission Antyodaya.
- b) Separate funds were provided.
- c) The funding by the State Governments for PRIs has been consistently rising
- d) Steps have been taken to ensure that the SFC recommendations are considered and accepted by the State Governments.
- e) Now that Optical fibre is available in a large proportion of GPs, E-governance and E- Panchayats are being encouraged with more and more Common Service Centres (CSCs) coming up.
- f) A new scheme, “Swamitva” for issuing of title papers in respect of property is being implemented using drones to correctly delineate the owner’s property in as little time as possible.
- g) The PRIs are being supported to improve their infrastructure.
- h) Training Programmes for Elected Representatives (ER), members of the Gram Sabha, officials and other stake holders are being held.
- i) The programme “ICT enablement of all Panchayats” was taken up in Mission Mode.
- j) Programmes for improving delivery of services, awareness generation about the role of every villager and his role in identifying the problems and proposing schemes how to deal with them including the preparation of Gram Panchayat Development Plan (GPDP) and approving such schemes, raising financial resources , building capacity of non-officials, officials and programmes have been of movement towards e-governance are conducted for which central funds are also provided.

- k) Incentivisation of Panchayats (National Panchayat Awards) is an important programme for involving the rural population in achieving the Sustainable Development Goals (SDG) and making awareness generation.

### **Awards for good performance**

It was thought necessary to promote competition among the States/UTs in the performance of the Panchayati Raj System. Therefore, awards were introduced for the best performing States in each of the three tiers. These awards are:

**Deen Dayal Upadhyay Panchayat Satat Vikas Puraskar (DDUPSP)** - for individual theme-wise performance, there are nine themes)

**Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar** (for aggregate performance under all the nine themes)

### **Special category Awards**

Introduced in the year 2011, DDUPSP is given to best performing Panchayats at all the three levels/tiers (District/Intermediate/Gram) for overall good governance in General category and following nine thematic categories:

- i. Poverty free and enhanced livelihoods Panchayat
- ii. Healthy Panchayat
- iii. Child Friendly Panchayat
- iv. Water Sufficient Panchayat
- v. Clean and Green Panchayat
- vi. Self-sufficient infrastructure in Panchayat
- vii. Socially Secured Panchayat
- viii. Panchayat with Good Governance
- ix. Women-Friendly Panchayat

These themes have localised the SDGs in to Goals that India will pursue and achieve with Panchayats playing a prominent role with resources available to the PRIs.

In the year 2022, the number of Panchayats including all the three tiers that received the National Awards was 322.

### **Capacity Building - ‘Transformation of Aspirational Districts’ program**

Rashtriya Gram Swaraj Abhiyan (RGSA), the ‘Transformation of Aspirational Districts’ program was launched to quickly and effectively transform selected districts. These districts were selected on parameters like poverty, public health, nutrition, education, gender, sanitation, drinking water, livelihood generation which are in sync with SDGs and fall within the realm of Panchayats.

RGSA was proposed to be implemented as a core Centrally Sponsored Scheme (CSS) for four years viz., from 2018-19 to 2021-22 with State and Central shares.

The sharing ratio for the GoI and State components is 60:40 except NE and Hilly States, where the Central and State Ratio will be 90:10. For all UTs, the Central share will be 100%. RGSA enables Panchayats to function effectively to achieve SDGs and other development objectives that require significant Capacity building efforts.

### **Infrastructure and amenities in Panchayats<sup>3</sup>**

Efforts have been made consistently to improve the infrastructure of Panchayats. It has been continuously improving as may be seen in the following table:

Year	Number of GPs	GPs with Panchayat Bhawans	GPs with Computer	GPs with Internet Connectivity*	Common Service Centres (CSCs)
2010	238054	164483 (69.09%)	53568 (22.50%)	97392 (40.91%)	85000 (35.70%)
2015	248154	196822 (79.31%)	166827 (67.23%)	132539 (53.41%)	147798 (59.56%)
2020	255487	198637** (77.75%)	201741 (78.96%)	136693 (53.50%)	240592 (94.17%)

Source: Yojana, November 2021; \* Service ready/broad band connectivity; \*\* More than 25000 Bhawans are under construction

Technical inputs have also been provided through Creation of Dash Board as a Platform for PRIs. The e-Panchayat is one of the Mission Mode Projects (MMP) under the National e-Governance Plan (NeGP), to completely transform the functioning of Panchayati Raj Institutions (PRIs)- making them more transparent, accountable, and effective as organs of decentralised self- governing institutions. The project aims to automate internal workflow processes of more than 2.5 lakh panchayats across the country, benefitting all stakeholders.

A large number of very useful programmes have been developed and are being increasingly used.

### **Challenges:**

India is a confident and proud nation and its focus, among others is on welfare, development, especially of the poor, on social justice and democracy. The people are conscious of their rights and jealously guard them. In short the citizens want to have self-government and a say in the day-day matters that arise frequently. This is sought to be achieved for rural areas through Part IX of the Constitution incorporated in the year 1993 introducing Panchayati Raj, a system for self-governance. Three decades have passed and although considerable work has been done in achieving the objectives of the system, a lot remains to be done. There are difficulties in implementing it because change is always slow as impediments arise at every step. Some challenges are :-

For the PRIs to discharge the role envisioned for them, they need effective devolution of Functions, Funds and Functionaries and autonomy - financial, administrative. Above all, the PRIs need to be accountable to the people they serve.

There are difficulties in introducing change in the roles, functions and powers of the elected representatives working at the level of the State (M.L.As) and those at the village, Block and District levels. Similar change affects bureaucracy and institutions. Redefining them needs consensus and it takes time to achieve it.

Although for the GPs some staff positions have been created in some States, it does not seem to be based on studies that may



indicate requirement corresponding to the work that has to be done by each tier. In many States, the works approved and implemented by Panchayats utilising their funds are executed by staff under the control of the State Governments.

The work in the new situation requires new skills in areas such as account keeping, communication, maintaining records, preparing plans of development and social justice at the village level.

Gram Panchayat Development Plan (GPDP) is prepared by the GP and it gets incorporated in the District Plan. The GP is competent to sanction works only up to a limited amount. Though the SFC may recommend substantial funds to the Panchayats, the expenses in the Gram Panchayats may still continue to be executed by the machinery of the State Government – the PRIs will definitely be involved but they may not wield control. In many States how much money will be given to a GP is also not known beforehand.

Emphasis is being laid on using ICT to an optimal extent. New computer programmes are being developed in languages used in States. Capacity building is a very serious issue. The GoI has introduced a new programme RGSA for strengthening capacity of the Panchayats to do their work using computers and programmes that have been developed. *Computer skills have to be acquired by staff working with the Panchayats, elected members and at least a few members of the Gram Sabha so that they are in a position to understand the programmes and how the allotted funds are being used.*

Awareness generation is key to the people participating in the meetings of the Gram Sabha and keeping in touch with the members of the GP and also in ensuring that their views about the GPDP and other issues are considered. Effective communication to the members of the Gram Sabha and receiving their views are important.

In view of the pressing demand for funds for so many programmes, the State Government is always under financial pressure. Therefore, even the recommendations of State Finance Commission tend to receive less importance.

Panchayats are used to implement Central and State Funded programmes. The funds they receive are tied, the quantum of

untied funds with the PRIs are always meagre. They are forced not to implement/postpone any measures although they may consider them to be important.

Because of shortage of technical support with the Panchayats, the works are given to officers under the supervision and control of the State Government affecting their supervision and control.

### **Measures to meet the challenges**

It is primarily the States which need to take measures to increase devolution and increase the capacity of Panchayats. The will of the States for greater devolution depends on political orientation of the parties.

The role of the GoI can only be advisory and providing incentives to States and assistance for improving their capacity through their Centrally sponsored schemes, through the Central Finance Commission and getting Central Institution for work in areas that improve the capacity of PRIs . Some of the measures taken are :

### **SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas)**

### **e-Gram Swaraj e-Financial Management System**

### **Training & Capacity Building**

### **People's Plan Campaign (PPC)- Sabki Yojana Sabka Vikas**

Inspired by the visible and quite satisfactory performance of the Gram Panchayats, Gram Sabhas and other stakeholders involved in the PPC during 2018-19 and 2019-20 and to provide sustainability to the Gram Panchayat Development Plan (GPDP) formulation process into a participative and transparent exercise, the process of GPDP preparation for the financial year 2021-22 again has started in Campaign mode.

## **Online Audit of Panchayat accounts**

### **Initiative for the Gram Panchayat Spatial Development Planning**

#### **Role of Panchayats in combating COVID-19 Pandemic**

With active assistance of the Ministry of Panchayati Raj, the Panchayats in the country have taken very significant role in various mitigation / preventive measures against the COVID-19 Pandemic. Right from times of early onset of the COVID-19 pandemic in the country, the Panchayats have been on the forefront taking various preventive and protective measures.

The various initiatives employed by the Panchayats in setting up isolation centres in rural areas include development of IEC materials towards awareness creation, intensive sanitization/ disinfection measures, deployment of village volunteers for COVID-19 management, enforcement of social distancing, organization of medical camps, tracking and isolating new entrants to the villages, door to door campaigns for awareness generation, hand washing campaigns, mass production of masks through SHG involvement, provision of gainful employment to returning migrant workers through involving them in Finance Commission, MGNREGS works etc.

#### **Garib Kalyan Rozgar Abhiyan (GKRA)**

Government of India had launched GKRA in six States to provide gainful employment to the migrant labourers who had returned to their native villages due to the outbreak of COVID-19 pandemic. As a part of the Abhiyan, MoPR undertook facilitation of two activities namely, (i) 'Construction of Gram Panchayat Bhawans' and (ii) 'Works under Central Finance Commission Grants.

The Panchayats in the 116 GKRA Districts were provisioned with the funds to the tune of **Rs.9554.97 crore** (unspent balance of XIV FC Grants and XV FC Untied and Tied Grants) for undertaking 'Works under Finance Commission Grants' in the rural areas, out of which an expenditure to the tune of **Rs.5810.95 crore** (60.82%)

was made and 2,82,45,660 person days generated during the Abhiyan period which ended on 22.10.2020. The Panchayats accomplished the works successfully.

### **Dissemination of vital information of other Ministries/ Departments to the last mile recipients at Gram Panchayats and role of the Ministry of Panchayati Raj**

Ministry of Panchayati Raj has been supporting, encouraging and catering to the information-needs of the Panchayati Raj Institutions, especially Gram Panchayats, to play an important role on issues of national importance. A sizeable number of Gram Panchayats are covered under digital umbrella and the availability of digital infrastructure / digital backbone as well as robust and advanced IT & e-Governance infrastructure available with Gram Panchayats facilitated an outreach till the last mile and proved boon to ensure dissemination of information.

### **Finance Commission Grants to Rural Local Bodies**

The grants of the Central Finance Commission have been drastically increasing. The Grants are provided in two parts, namely, (i) a Basic (Untied) Grant (50%) and (ii) a Tied Grant (50 %). While the basic grants are untied and can be used by RLBs for location-specific felt needs, except for salary or other establishment expenditure, the Tied Grants are earmarked for the national priority focus areas of Drinking Water Supply and Sanitation.

### **Excellence in Works:**

For having the confidence whether the country can achieve the desired result through the PRI System, it will be to helpful to see if there are examples of Panchayats achieving excellence in work despite the challenges faced by the Panchayats. We have to study why and how many Panchayats achieved outstanding performance even though they faced the same difficulties and challenges as so many other Panchayats who did not perform well. It will also be useful to examine what the factors were that facilitated the achievers to do what they did.

In this context, it will be interesting to learn how Bearhatty Panchayat in Nilgiris district involved the residents by holding gram Sabha meeting by changing location from one hamlet to another on a regular basis. It enabled all residents to participate. It is noteworthy to know that the panchayat had its own tea plantation which enabled it to have 26.47 percent of revenue from its own sources. It also raises revenue from nine acres of forest land besides house tax, library tax etc.

Another example of increasing its own revenue in Kerala state comes from Budhannoor GP. Door to door collection of levied taxes and organizing collection camps enabled it to have increased income. It collected as much as Rs. 33,43,925 in year 2016-17 from 6,564 households.

In <sup>iii</sup>GerethangLabing panchayat in Sikkim, the system ensured participation of the villagers in gram Sabha meetings by making the attendance compulsory. Absentee members had to give reason for their absence. The success of the gram panchayat is laid in the on window service provided to the residents.

In <sup>iv</sup>Akaliankalan village, district Bhatinda in the state of Punjab the Panchayat served the villagers by providing RO water and by laying down a 3750 feet long sewer line. It brought down the incidence of water borne diseases.

<sup>v</sup>Keinou GP in Manipur has also used RO water to generate interest in the work of GP. Twenty litres of RO water is provided daily to a household on payment of only rupees ten. The high fluoride content of earlier pond supplied water was replaced resulting in better health and therefore, better participation in the panchayat work.

The Gram Panchayat <sup>vi</sup>Borasinghi in district Ganjam in Oddisa cooperation was ensured by concentrating on the welfare of the children, and by providing free sanitary pads to adolescent girls. Neat toilets and regular care for the children in the aanganwadi made it possible.

The health concerns also were evident in gram panchayats <sup>vii</sup>Kasipudu of district Guntur in Andhra Pradesh and Vinjanampudu in Prakasham district. They worked on reducing anaemia and

malnutrition by close monitoring of anganwadis and regular medical checking helped.

<sup>viii</sup>GP Tandejais, district Chhotaudepur in Gujarat has concentrated on reducing the number of dropouts from education. this was achieved by getting regular check-up of Medicahe village to be free from open defecation, door to door collection of garbage and regular medical check-ups. It has also the distinction of having jandhan account for every household.

Self-help groups were the main weapon of two panchayats in Jammu and Kashmir viz. <sup>ix</sup>Flora Nagbani, district Jammu and gram panchayat Dhamal in district Kathua. The state programme of "ummeed" was utilised to make the local groups part of network of 60,000 SHG in the state.

Gram Panchayat <sup>x</sup>Bankhedhi in district Hoshangabad in Madhya Pradesh had a big problem of electricity connections as the dues piled up. The gram panchayat could persuade the villagers to pay up the dues and as much as 90 percent of dues to the electricity department were cleared.

It is remarkable that all these achievements have been made despite having a shortage of functionaries. The handicap is most felt in collection of taxes from its own sources.

<sup>xi</sup>Kumarakom Gram Panchayat in Kerala is an excellent model of an empowered Gram Panchayat. It is overseeing the work of the primary schools, krishi bhavan, the ayurveda dispensary to ensure prompt service to the residents. Neighbourhood groups help in providing supporting structure.

Another example of sustained development through proper implementation of central government schemes comes from <sup>xii</sup>Burugupudi Gram Panchayat of Andhra Pradesh by ensuring collection of waste and turning it into vermi compost. It also three kilowatts of solar energy.

Similar is the achievement of <sup>xiii</sup>Dadera GP in district Ayodhya in Uttar Pradesh using the Jal Shakti Abhiyan. Pond created provides not only water but also enabled fish and duck farming, adding to the income of the residents.

<sup>xiv</sup>Chand Samand village in Haryana has similar story about treating grey water and utilising the treated water for irrigation and rearing fish.

An excellent report of preparing annual development programmes comes from <sup>xv</sup>GP Ilambazar of district Birbhum. It has different sub committees to look after various aspects of village life, organizing Yoga camps, have football matches. It endeavoured to upgrade anganwadis though lack of funds was a hindrance but it did not prevent from achieving hundred percent immunization of the children.

*In this connection it will be relevant to draw attention to Advancing the Rights of Women and Girls, Panchayats leading the Way “A Compendium of Success Stories”, a case study of 21 cases where women have led to successfully find solutions to problems specific to women and girls . This is a study sponsored by UNFPO and is available on the website.*

### **Lessons Drawn From Examples of GPs doing outstanding Work:**

It may be seen from the above examples that in all the States from J&K in the North to Kerala in the South and from Manipur in the North East to Gujarat in the West, there are examples of excellent work done by the Panchayats. This is despite the fact that there are impediments as have been mentioned above. These and numerous success stories have some lessons which can be learnt by all the GPs and GSs.

### **Common Lessons**

In many Panchayats women Chair Persons have been as effective and, sometimes more, than the male Chairpersons and the performance of women members of the GP has been equally good.

Determined leadership provided by the Chair-person of the GP can result in achieving difficult tasks, even in reviving defunct institutions. The Chair-person should be a team leader and able to carry with him the members of the Gram Sabha. He/she should be able to mobilise behind him/her all sections of society including M.P.s, M.L.A.s, ministers, business community and other stakeholders.

The main problem(s) that need to be solved should be of concern to a vast majority of the members of the Gram Sabha. This can be achieved through regular meetings of the Gram Sabha in which the attendance should be as high as possible, if the information about the meeting is given in advance and the agenda is also publicised.

There should be deep involvement of the members of the Gram Panchayat. The first initiatives should be so chosen that the GP should achieve early success and solves a major problem of the villagers.

Women members of the Gram Sabha must be encouraged to attend the Gram Sabha meetings because it is the women who suffer most from deficiencies. Women members of the GP should be involved in contacting the women folk.

Panchayat must be able to raise its own resources (funds). Usually the funds available are committed to works and are not available for taking up the works which will address the pressing problems of the villagers. A good leader should be able to identify the funds which can converge with the works that the GP wants to undertake.

The available avenues such as imposing taxes, license fee on resources that are owned by the Panchayat, convergence of schemes, Local Areas Development Funds available to the M.P.s, M.L.A.s etc, getting Corporates interested in problems of the rural areas around them and in making donations are avenues that need to be explored.

Acquiring information about schemes that are being introduced by the State-governments and Union Governments should and applying for being parts of the schemes can also be useful.

Women's Self Help Groups (SHGs) have been known to be very successful in taking up enterprises for which grants/subsidies, loans are available. The women members of the Panchayat should encouraged to take lead in organising such SHGs.

An important lesson of Sanitation campaign is that the replicability of what is successful in one place may not be achievable in another place or State because of the difference in circumstances and value systems. In any case the Swachhata Mission has brought in a new dimension to the idea.



There are numerous examples of PRIs doing excellent work in every state. These examples illustrate that the PRIs are capable of providing effective and efficient self-government in the rural areas. It is noteworthy that the existing schemes of central and the state governments are successfully used to bring prosperity to the residents. However, a lot remains to be done before the PRIs reach the level of performance they have the unrealised potential to achieve.

### **Where Do Go From Here**

The Panchayats have an integral role to play in the country achieving the localised Sustainable Development Goals (SDGs) in every part of the country by the year 2030. These goals affect every person in the country including the rural population. A necessary condition is that rural people should be involved in the efforts to achieve these goals. There cannot be any other institution than the PRIs to involve every villager in the programme to achieve these goals. The Government of India in the Ministry of Panchayati Raj has taken many important initiatives for PRIs to acquire the capacity to play the role that is envisioned for them. They have been briefly mentioned in this paper. With technology that is becoming as accessible to rural dwellers as to urban dwellers – fibre optics is spreading fast in rural areas and communication network providing increasingly better connectivity internet connectivity, electricity is becoming reliable and rapidly improving road connectivity, the gap in growth potential between the urban and the rural areas is becoming narrower every day.

The degree of self-government that the PRIs can deliver in the areas covered by Panchayats is determined by each State. However, within the scope of Self-governance that is feasible in a State in the given circumstances, if attention is given to rationalise and clearly define the functions, funds and functionaries that can be available to the PRIs, attention is given to capacity building, ICT is introduced wisely in a planned manner building capacity in tandem, recent advances in technology are properly used in the functioning of PRIs, awareness generation is properly done, the Ministry of Panchayati Raj actively promotes and encourages the State Governments and PRIs to adopt and practice measures which improve effectiveness and efficiency of the resources available to the PRIs, the PRIs are likely to achieve

very good results in whatever they are expected and required to do. The increasing adoption by PRIs of platforms such as eGramSwaraj, e-GSPI, Audit Online, etc., is a testament to the immense potential and demand for technological interventions in the functioning of Panchayati Raj Institutions. Considering the emergence of frontier technologies such as artificial intelligence and machine learning, the Ministry is in the process of bringing several improvements in the e-GramSwaraj portal as well as better utilisation of existing platforms such as Gram Manchitra. Many programmes are being used and many more are being developed that will be of use to the PRIs.

The performance of the PRIs has been improving as is shown by the fact that almost every Panchayat participates in the competition organised by the MoPR every year for the National Panchayat Awards. The States and the PRIs have readily accepted the Localisation of Sustainable Development Goals and are actively engaged in working to achieve the goals. If the same pace of change can be maintained as we have seen during the last decade, the rural landscape is likely to change for a much better developed one. However, success would lie in keeping enthusiasm and commitment of all stakeholders to rural development at a high level and in working towards our goal of democratic decentralisation for development.

No doubt, there are challenges in achieving effective democratic decentralisation, the foremost of which include political will of the State politicians and the bureaucracy which may have lack of enthusiasm to so many functions and responsibilities being transferred to the PRIs from the State Governments. If the experiment succeeds, there will be a shift towards transfer of increasing number of subjects to the PRIs and local leaders gaining more importance in day-to-day matters affecting the rural population. Likewise, more and more of officials who presently are under the control of the State Governments will be working under the PRIs.

However, a political consensus needs to be evolved as to the degree to which function, funds, functionaries including local institutions can be devolved on the PRIs and responsibility can be entrusted to them in the matters that arise from day-to-day in the life of a rural person. Accountability must go hand in hand with the greater devolution.

With the country becoming comfortable with digital technology – mobile phones having acquired universal use in India- and the GoI promoting technology in every activity, our performance standards are likely to improve. We need to use fully the potential of the instrument of PRIs as the means of decentralised self-governance that will deliver rapid development - social, economic and political.

Since power-sharing between the state government and PRIs is solely at the disposal of the political leadership at the state level, the degree of self-government that the rural population can enjoy and the role the PRIs can play depend on the political will of the state. Naturally, it will differ from State to State.

Within these limitations, the MoPRand Central Institutions like the Finance Commission trytheir best to facilitate the PRIs to improve their infrastructure and capacity through development of technologies and training and education and resources.

To function effectively as institutions of self-government, the PRIs need to have the power to recruit and control staff required for managing its functions. In most states the key functionaries, namely, the secretaries and executive officers at all the three levels of panchayats are state government employees who are appointed,transferred, and controlled by the state government. Being under the direct control of the state administrative hierarchy, they are often reluctant to work under the administrative control of the elected panchayats. Rural local bodies do not have any staff even for maintenance which is their basic domain. However, they are constrained by lack of funds. Holding elective offices, they find it extremely difficult to raise funds.

Fortunately, we are in a phase where the PRIs are being strengthened to become effective and efficient tools for the development of the rural areas. Many schemes that are central to development are Centrally Sponsored and in these schemes the Panchayats have to play a significant role.

*There are signs that the PRIs are increasingly becoming agents of change and development.*

*An encouraging development is taking place in that persons having pursued higher education are getting elected to the all tiers of PRIs and so the transition to digital working environment may take place sooner than envisaged now.*

*Similar is the change observed in composition of PRIs where women, persons belonging to SCs and STs and other disadvantaged sections are getting elected. Thus the empowerment of these sections of rural population seems to be gaining momentum.*

## **REFERENCES:**

- Ministry of Panchayati Raj (MoPR) publication, “Best Practices in Panchayats on Management and Service Delivery”
- Yojana, November, 2021
- Published in MoP publication- “Best Practices in Panchayats on Management and Service Delivery”
- Ministry of Panchayati Raj (MoPR) publication, “Best Practices in Panchayats on Management and Service Delivery”
- viii Website of Ministry of Panchayati Raj – list of Panchayats with Best Practices.
- MoPR Annual Report 2021-22, also, news item published on <https://newsroomodisha.com/emulate-borasingi-panchayat-as-a-case-study-for-child-friendliness-panchayati-raj-ministry/>
- Kasipudu
- Website of J&K Rural Livelihood Mission –
- Website of Kerala Tourism giving thre history of Panchayat since 1956 and powers and functions
- Panchayat with Best Practices in the website of Ministry of PR describing the achievements of the GP
- Work done under Jal Shakti Abhiyan to use water for fisheries and irrigation, web site of Uttar Pradesh
- Ministry of PR publication “Best Practices in Panchayats on Management and Service Delivery”
- Panchayats with Best Practices published on the website of the Ministry of PR.

\*\*\*\*\*

## **Administrative Reforms – Lessons and Experiences**

### **Introduction**

*“Technology has immense potential to bring government and citizens closer. Today technology has become a powerful tool to empower citizens as well as a medium to optimize transparency and accountability in day to day functioning. Through various policy interventions, we are strongly moving ahead toward digital empowerment of citizens and digital transformation of institutions.”*

The Governance landscape of India has radically changed in scale, scope and learning paradigms. India has succeeded in transforming technologically obsolete institutions into modern day digital institutions which benefit millions of Indians. Today India’s rural country side has changed - banking Correspondents, e-Mitras and common service centers have bridged the gap between internet poor and internet rich. As India celebrates its 75<sup>th</sup> year of Independence as Azadi ka Amrut Mahotsav, the Prime Minister has given a clarion call for adoption of Next Generation Reforms by bridging the gap between government and citizens. This vision of Next Generation administrative reforms of the Prime Minister has been diligently translated into reality by Department of Administrative Reforms and Public Grievances (DARPG). Secretariat Reforms, Swachhta Campaigns, Benchmarking of Governance and Services, Redressal of Public Grievances & Improving Service Delivery, recognizing meritocracy and replication of good governance practices form the core of India’s good governance model.

### **Maximum Governance – Minimum Government**

India’s governance model in the years 2014-2022, has undergone

radical reforms. e-Governance has simplified a citizen's interface with Government, brought government and citizens closer and enabled benchmarking of service quality. I have witnessed central government's e-governance models like e-Gram Swaraj & Audit online, PM Street Vendors AtmaNirbhar Nidhi, Judgment and Orders Search Portal, Bharat Skills, Ayushman Bharat PM's Jan Arogya Yojana, Rail Madad, PM's Jan Dhan Yojana, Umang, ERONET (electoral registration officers network), One-Nation One-Ration Card, Passport Sewa Kendras; the State Government e-governance models like Mine Mitra, Kutumba – An Entitlement Management System, e-Registration (Self Help Portal) for document registration, Digital land in UP, khandijonline in Chattisgarh, AntyodayaSaral in Haryana, Go SWIFT in Odisha, iSTART in Rajasthan, Maha RERA in Maharashtra have benefitted in bringing transparency and openness to government processes. The widespread adoption of e-Office created paperless offices in the Central Secretariat and enabled smooth governance functioning in the pandemic. In 2022, CPGRAMS helped redress 18 lac Public Grievances.

The organizational reforms coupled with significant reforms in Personnel Administration like Mission Karmayogi, lateral recruitment, accelerated promotion policies, regional conferences for replication of good governance practices, recognizing excellence in public administration by scaling up the scheme for Awards for Excellence in Public Administration represent a paradigm shift in India's governance models. New India's strong institutions are best symbolized by adoption of e-governance practices. The best manifestation of "Maximum Governance – Minimum Government" policy is a "Digitally Empowered Citizen".

In 2022, India's roadmap for Next Generation Administrative Reforms witnessed three major initiatives undertaken by the Department of Administrative Reforms and Public Grievances – (a) the successful implementation of the Special Campaign 2.0 from October 2-31, 2022, (b) the Initiative for Increasing Efficiency in Decision Making in Central Secretariat (c) Governance Week from December 20-25, 2022 – Prashasan Gaon ki Aur campaign, each of which was implemented on digital platforms across thousands of government institutions.

### **Special Campaign for Disposal of Pending Matters:**

The Special Campaign 2.0 was implemented in Central Government from October 2-October 31, 2022 with the objective of institutionalizing swachhata and minimizing pendency in government. As part of the Campaign, 5.6 lac public grievances were redressed, cleanliness campaign was carried out in 1.01 lac office spaces, 37.50 lac files were weeded out, 89.5 lakh square feet of space was freed, and scrap disposal earned Rs. 370 crores. The special campaign 2.0 also brought in a number of success stories in digitization, efficient management of office spaces, enhancement of office premises, environment friendly practices, inclusivity, protocols and mechanisms being put in place and waste disposal.

Departments/ Ministries gave special attention to attached/ subordinate/ filed offices including in the remotest parts of India in month long campaign period from October 2-31, 2022. Special Campaign 2.0 was 15 times larger than Special Campaign of 2021 in terms of cleanliness campaign sites. The Special Campaign 2.0, was holistic in size and scale, witnessed widespread participation from thousands of officials and citizens who came together create a movement for Swachhata in Government Offices. Minister also participated in the Special Campaign providing leadership and guidance in implementation.

The Department of Posts has conducted the cleanliness campaign in 24000 Post Offices, the Ministry of Railways has conducted in 9374 Railway units, Department of Defence in 5922 campaign sites and Ministry of Home Affairs in 11559 campaign sites. Other Ministries/ Departments have conducted the Special Campaign in over 1000 campaign sites, and the progress was monitored on a dedicated portal on a daily basis. 215 Nodal Officers/ Sub-Nodal Officers were appointed in all Ministries/ Departments. The Special Campaign 2.0 was reviewed on a weekly basis by Secretaries to Government of India. The progress was widely reported in social media with over 67,000 social media tweets and 127 PIB Statements issued by Ministries/ Departments. Over 300 best practices in conducting the Special Campaign as a citizen centric movement, to bring citizens and government closer and create an aesthetically pleasant work

environment were reported.

Amongst the best practices that emerged in Special Campaign 2.0 the following are mentioned:

1. Two initiatives of Ministry of Railways in Bengaluru Railway Station to create a Plastic Rakshasa sculpture from discarded plastic bottles. A new rail coach restaurant has been started at Guntur Railway Station
2. The initiative of Department of Posts in opening a Parcel cafe Kolkata GPO by refurbishing old furniture for enhancing customer experience
3. The initiative of Ministry of Tribal Affairs in creating a Jarwa tribe hut in Port Blair which shows their way of eco-friendly cultural values towards cleanliness.
4. The initiative of Department of Agriculture Research and Education in creating a complete parthenium free and plastic free farms by KVK CRIDA, Telangana.
5. The initiative of Ministry of Women & Child Development to develop “One Stop Centers”, and imparting training for making usable products from waste material.
6. The initiative of Central Board of Indirect Taxes for innovative use of office corridor enhancement using the theme of “Aranya” in their office corridor.
7. The initiative of Ministry of Coal under the “Garbage to Garden” initiative in Central Coal Fields limited in Bokaro and Kargali fields. As part of this campaign Gardens have been developed in Coal Fields which were earlier junkyards.
8. The initiative of Central Board of Direct Taxes in creating Vertical Gardens made by use of waste plastic bottles help in recycling plastic waste and beautifying office spaces. 430 Aaykar Seva Kendras (ASK Centres) were operational in multiple locations across for redressal of public grievances.
9. The initiative of Ministry of Health and Family Welfare under the “Garbage to Green Project” by growing Ayush Herbal Plants at AIIMS Bibinagar.



10. The initiative of Ministry of Home Affairs, under the ‘Straight to security Initiative’ by CISF at Hyderabad Airport resulting in faster check-in,
11. The initiative of Department of Pensions and Pensioners Welfare in promoting the use of face authentication app for pensioners over the age of 80.
12. The initiative of Ministry of Ports, Shipping and Waterways in the Syama Prasad Mukherjee Port Authority, Kolkata (SMPA) has turned the paddle steamer into a unique showcase for cruise tourism, with an under-deck museum, floating restaurant/ conference and has been made operational through self-propulsion
13. The initiative of Department of Atomic Energy in using robots for cleaning sewers and drains in BARC Mumbai.
14. The initiative of Department of Scientific and Industrial Research in Geo-Tagging of Files.
15. The initiative of Border Roads Organization in building roads using plastic waste.

The Special Campaign 2.0 showed that Government Departments can innovate on a subject like cleanliness.

### **Initiative for Increasing Efficiency in Central Secretariat**

In 2022, the Central Secretariat continued to implement the Initiative for Increasing Efficiency in Decision Making in Government. Under this initiative, a four-pronged approach was adopted by the Central Government with DARPG as the nodal department.

- Review of Channels of Submission for creating flatter organizations – the channel of submission was reduced to not more than 4 levels from 7-8 levels
- Delegation of Financial/ Administrative powers to lower functionaries
- Adoption of Desk Officer System to ensure single points of file disposal

- Adoption of e-Office version 7.0
- Digitalization of all receipts in the Central Registration Units.

**Some of the key highlights are the following:**

- Channel of Submission and Levels of Disposal were reviewed in 63 Ministries/ Departments. In these Ministries, the channel of submission was reduced to 4,3 and 2 levels as per new delegation. Financial delegation for miscellaneous and contingent expenditure was made to DS/ Director level officers.
- Officers were divided into separate categories. Delayering entailed reducing number of levels, and level jumping was adopted amongst officers and staff with the guidelines that no officer falling in a particular category will put up files to another officer in the same category, which means they work in parallel, horizontal organizational structures.
- Additional Secretaries/ Joint Secretaries were placed in category II and Deputy Secretary/ Under Secretary were placed in category III across Ministries/ Departments.
- The review of the channel of submission resulted in identification of surplus manpower who could be redeployed to other Ministries. Several areas of financial delegation which were not revisited for several years were reviewed.
- New digital platforms for computerized working in administrative areas were introduced. In 2022, 31.65 lac e-files are operational in the Central Secretariat and the number of physical files came down to 7.41 lac. The share of e-Files in Central Secretariat is 81.03 percent. Departments of Social Justice and Empowerment, Scientific and Industrial Research, Biotechnology, Drinking Water and Sanitation, Ministry of North Eastern Region, Parliamentary Affairs, Earth Sciences, Panchayati Raj are 100 percent digitized Ministries. E-Receipts have touched 73.2 lac in 2022 as compared to 33.24 lac in 2021. All Ministries except 11 have upgraded to e-Office

version 7.0 and inter-ministerial e-file movement has been implemented.

- Use of heavy-duty scanners in central registration units was adopted, and fresh receipts were replied to in digital form. The digitalization of Central Registration Units along with e-Office has resulted in significant reduction in paper consumption in several Ministries/ Departments. Flatter organizations have enabled faster decision making.
- To enable a work from home environment in the pandemic, the Central Secretariat Manual of Office Procedure 2022 provided Virtual Private Network Facility upto Deputy Secretary level and laptops were provided upto Under Secretary level.
- Desk officer system was operationalized in 28 Ministries/ Departments where it was feasible. The Ministry of External Affairs has operationalized 264 desk officers along with Department of Telecom and Department of Posts with specific assignment of responsibilities.

The Government's initiative for "Increasing Efficiency in Decision Making" represented one of the most complicated and far reaching administrative reforms witnessed in the Central Secretariat. It brought a silent reform in work culture, reduced hierarchies and resulted in significant adoption of new technology. It has also enabled responsive communication and enhanced efficiency in processing of receipts.

### **Good Governance Week – December 20-25, 2022**

The Sushasan Saptah 2022 witnessed the Second Nation-wide campaign for Redressal of Public Grievances and Improving Service Delivery. Prashasan Gaon ki Ore 2022 has witnessed significant progress – 50.79 lac public grievances were redressed, 282 lac service delivery applications were disposed, 863 innovations in governance were documented and 194 Vision India@2047 District level documents uploaded on the GGW22 portal till December 24, 2022.

On December 23, 2022, District Level Workshops were held in all 768 Districts of India to deliberate on innovations and vision India@2047. The District level workshops were chaired by a senior retired IAS officer who had served as District Collector in that District. Chief Ministers of States/ LG's of UT's have supported the Prashasan Gaon ki Ore Campaign with regular messages and tweets. It would be pertinent to point out that the Parliamentary Standing Committee of Ministry of Personnel, PG and Pensions in its 121<sup>st</sup> Report had commended the phenomenal success of Prashasan Gaon ki Ore Campaign and recommended that such campaigns should be held more frequently.

Cabinet Secretary chaired a workshop on Good Governance Practices with an experience sharing session on Special Campaign 2.0 and the Initiative for Increasing Efficiency in Decision Making in which 540 officials from all Ministries/ Departments participated on December 23<sup>rd</sup> 2022. The Workshop deliberations envisaged accelerated efforts across Ministries/ Departments in creation of fully digital central secretariat, effective delayering/ delegation/ adoption of desk officer system – the steps outlined by Cabinet Secretary included adoption of e-Office 7.0 in all Ministries/ Departments by end February 2023, complete shift to e-receipts from physical receipts, constant monitoring/ reviews of delayering and delegation of financial powers in monthly reports of DARPG, and enhanced efforts for adoption of desk officer system. Further Cabinet Secretary complemented all Ministries/ Departments for the inspirational work undertaken in implementation of Special Campaign 2.0 and recommended the best practices may be shared with States.

In 2019 and 2021, the Good Governance Day celebrations were marked by release of the Good Governance Index – An Assessment of the State of Governance in States. In 2022, this biennial publication has been extended States/ UT's - Uttar Pradesh, Gujarat, Arunachal Pradesh, Jammu & Kashmir. The National e-Services Delivery Assessment Reports of 2019 and 2021 documented the progress made in e-services delivery by benchmarking portals of Ministries/ Departments. In line with the Prime Minister's vision, DARPG has embarked on implementation of recommendations of

NeSDA 2021, for saturation of 56 mandatory and adoption of 850 optional e-services across all States/ UT's. Consultation meetings with States have been held.

## **Centralised Public Grievance Redress and Monitoring System (CPGRAMS):**

### **One Nation – One Portal**

The CPGRAMS today has been adopted and implemented across all the Central Ministries/ Departments, Attached, Subordinate and Autonomous bodies. Further the CPGRAMS is also being used by several Union Territories. In 2022, 18,19,104 grievances were received by all Ministries and Departments of which 15,68,097 PG cases have been redressed. Of these 11,29,642 cases were disposed by the Central Ministries and 4,38,455 cases were disposed by the States and UTs. The average disposal time of Central Ministries and Departments has improved from 32 days in 2021 to 27 days in 2022. 1,71,509 appeals were received of which over 80% were disposed. Over 57,000 grievances have received the rating of Excellent and Very Good from citizens in the feedback conducted by the BSNL call centre for the period July – November 2022.

A 10-step CPGRAMS reforms process was adopted for improving quality of disposal and reducing the time lines. The 10-step reforms include:

- (i) Universalization of CPGRAMS 7.0 - Auto-routing of grievances to the last mile
- (ii) Technological Enhancements - Automatic flagging of urgent grievances leveraging AI/ML
- (iii) Language Translation – CPGRAMS Portal in 22 scheduled languages along with English
- (iv) Grievance Redressal Index - Ranking of Ministries / Departments on their Performance
- (v) Feedback Call Centre - 50 seater call centre to collect feedback directly from every citizen whose grievance is redressed

- (vi) One Nation One Portal - Integration of State Portal and other GoI portals with CPGRAMS
- (vii) Inclusivity and Outreach - Empowering the remotest citizen to file grievances through CSC's
- (viii) Training and Capacity Building - Conducted by ISTM and State ATIs under SEVOTTAM scheme for enabling effective grievance resolution
- (ix) Monitoring Process - Monthly reports for both the Central Ministries/Departments and States/UTs
- (x) Data Strategy Unit - Established at DARPG for insightful data analytics

In 2022, Ministries/ Departments have disposed 1.14 lac PG cases in August, 1.17 lac PG cases in September, 1.19 lac PG cases in October and 1.08 lac PG cases in November. This is the first time since inception of CPGRAMS that PG case redressal has crossed 1 lac cases/ month. The disposal in State PG cases on CPGRAMS portal has crossed 50,000 cases/ month since September 2022. The total pendency in the Central Ministries is down to an all time low of 0.72 lac cases and in States to 1.75 lac cases.

The Parliamentary Standing Committee of Ministry of Personnel, PG and Pensions in its 121st Report submitted to Parliament in December 2022, has appreciated the 10 step reform measures the Department has taken to bring accountability in disposal of public grievances, appeal facility, mandatory action taken report, feedback call centre. Further the Parliamentary Standing Committee has unfeignedly appreciated the efforts of the DARPG to ensure the availability of CPGRAMS portal in all scheduled languages.

### **The Good Governance Index 2021**

The Good Governance Index (GGI) 2021 Framework covered ten sectors and 58 indicators. The sectors of GGI 2020-21 are 1) Agriculture and Allied Sectors, 2) Commerce & Industries, 3) Human Resource Development, 4) Public Health, 5.) Public Infrastructure & Utilities, 6) Economic Governance, 7) Social Welfare & Development, 8) Judicial & Public Security, 9) Environment, and 10) Citizen-Centric

Governance. The GGI 2020-21 categorizes States and UTs into four categories, i.e., (i) States – Group A; (ii) Other States – Group B; (iii) North-East and Hill States; and (iv) Union Territories.

Gujarat, Maharashtra and Goa top the composite rank score covering 10 sectors. GGI 2021 says that Gujarat registered 12.3 percent increase and Goa registered 24.7 percent increase over GGI 2019 indicators. Uttar Pradesh has shown an incremental growth of 8.9 % over GGI 2019 performance. Jharkhand has shown an incremental growth of 12.6 percent over GGI 2019 performance. Rajasthan has shown an incremental growth of 1.7 percent over the GGI 2019 performance. In the North-East and Hill States category, Mizoram and Jammu and Kashmir have registered an overall increase of 10.4% and 3.7% respectively over GGI 2019. In the Union Territories category, Delhi tops the composite rank registering a 14 percent increase over the GGI 2019 indicators. The GGI 2021 says that 20 States have improved their composite GGI scores over the GGI 2019 index scores. Analysis of scoring suggests that there is a marginal difference among the States in their composite governance scores. This indicates that overall governance in the States of India is moving in the positive direction.

**Top ranking States in the Sectors as well as in Composite Ranks is as follows:**

Sectors	Group A	Group B	NE & Hill States	UTs
Agriculture & Allied Sector	Andhra Pradesh	Madhya Pradesh	Mizoram	D & N Haveli
Commerce and Industry	Telangana	Uttar Pradesh	J & K	Daman & Diu
Human Resource Development	Punjab	Odisha	Himachal Pradesh	Chandigarh
Public Health	Kerala	West Bengal	Mizoram	A & N Island
Public Infrastructure and Utilities	Goa	Bihar	Himachal Pradesh	A & N Island
Economic Governance	Gujarat	Odisha	Tripura	Delhi
Social Welfare and Development	Telangana	Chhattisgarh	Sikkim	D & N Haveli
Judiciary and Public Safety	Tamil Nadu	Rajasthan	Nagaland	Chandigarh

Environment	Kerala	Rajasthan	Manipur	Daman & Diu
Citizen Centric Governance	Haryana	Rajasthan	Uttarakhand	Delhi
<b>Composite</b>	<b>Gujarat</b>	<b>Madhya Pradesh</b>	<b>Himachal Pradesh</b>	<b>Delhi</b>

The Department of Administrative Reforms and Public Grievances has collaborated with the Government of Jammu & Kashmir to publish District Good Governance Index for the Union Territory of Jammu & Kashmir. The District Good Governance Index of the Union Territory of Jammu & Kashmir is unique. The District Good Governance Index aimed to assess the state of Governance in all the 20 Districts of the Union Territory of Jammu & Kashmir. Region specific Governance Indicators were developed to assess the ground realities and meeting the aspirations of the people. The District Good Governance Index provides policy analysis on a wide range of indicators at a disaggregated level and enables critical policy interventions for improving governance models. The District Good Governance Index exercise enabled strengthening of the Directorate of Economics & Statistics through timely publication of datasets. The District Good Governance Index of the Union Territory of Jammu & Kashmir was released by the Union Minister for Home Affairs and Cooperation Shri Amit Shah ji on January 22, 2022.

### **The National e-Services Delivery Assessment 2021**

The NeSDA 2021 follows the long list of publications – GGI 2019 and GGI 2021, NeSDA 2019 and NeSDA 2021, DGGI in J&K, Gujarat, Uttar Pradesh, CSMOP 2019. As an input based index, NeSDA took 16 months of coordination effort with all States and select Central Ministries/ Departments. In assessment of State portals, Kerala remains a front runner and the progress made by Tamil Nadu, Jammu & Kashmir and Uttar Pradesh in NeSDA 2021 is commendable. In Service portals, Rajasthan, Punjab, Jammu & Kashmir and Meghalaya has topped the rankings. All States/ UT's have shown improvements in the promotion of integrated service portals and the number of services being offered on their State portals. India's e-Governance policies have shown improvements



and citizen satisfaction levels have risen. In many ways Technology has succeeded in Bringing Government and Citizens closer.

DARPG collaborates with States and Union Territories to ensure timely implementation of the recommendations of the National e-Services Delivery Assessment 2021 to ensure the all mandatory e-services are rolled out by States and Union Territories in a time bound manner. Further the DARPG coordinates with States and Union Territories to strengthen the State Portals and Service Portals to enhance the ease of living of citizens. The NeSDA 2021 report assessed 1400 e-Services across States and UT's and reported that India's e-Services had grown by 60 percent in the period 2019-2021. 69 percent of the mandatory e-services have been delivered by States/ UT's in 2021 up from 48 percent in NeSDA 2019. 74 percent of the respondents of the Nation wide Citizen survey are satisfied/ very satisfied with the e-services.

**The status of online services in States/UTs are:**

State	No of Online Services	State	No of Online Services	Union Territory/ NE States	No Of Online Services
Punjab	56	Rajasthan	55	J&K	54
Tamilnadu	56	UP	54	Andaman Nicobar Island	40
Haryana	54	MP	50	Delhi	33
Telangana	53	Odisha	53	Chandigarh	34
Gujarat	54	West Bengal	31	Puducherry	35
Kerala	53	Jharkhand	54	Ladakh	7
Karnataka	46	Bihar	39	Dadra & NH & Daman & Diu	3
Goa	39	Chattisgarh	33	Ladakh	7
Andhra Pradesh	50			Dadra & NH & Daman & Diu	3
Maharashtra	48	Uttarkhand	48	Meghalaya	45
Goa	39	Himachal Pradesh	42	Tripura	48
Andhra Pradesh	50			Assam	47
				Nagaland	18

				Arunachal Pradesh	31
				Mizoram	18
				Manipur	14

### **Vision India@2047**

DARPG is amongst the Ministries/ Departments of Government that is formulating its Vision India@2047. India has a time-tested administrative system with adherence to rules and established norms, an elaborate structure and procedures for carrying out functions of Nation Building and creation of an inclusive State. There are also empowered Commissions, statutory boards and autonomous societies where significant institutional capacities exist. The permanent civil service has contributed significantly to continuity and enabled evolution of institutions. The principle of subsidiarity has been followed to decentralize functions to State and Local Governments. The Union Government has primarily focused on core areas of defence, international relations, national security, education, health, infrastructure, social security and social justice, macroeconomic management and national policy making. Policy Analysis remains a critical function of the central secretariat given the imperative of providing high quality policy advise to the apex levels in government. The Central Secretariat Manual of Office Procedures 2022 has been recast to provide for a detailed delegation to all functional levels to minimize delays in processing of receipts.

Consultation meetings with sector specialists were held to understand the retrospective literature we have and the futuristic governance plan. The consensus amongst the sector specialists was that technology will play a critical part in the futuristic governance models of India redefining citizen and government relations where technology is an enabler and citizen is the master. Governance would also be data driven in which evidence based futuristic indices for benchmarking governance would be drawn up. Further there was a lot of emphasis on the foundational and non-negotiable values of ethics and integrity – a quest for Naitik Bharat. The importance of incorporating management practices into 21st century governance was discussed, and one of the interesting proposals was to setup

interactions between young-startup innovators from private sector entrepreneurs and young technology experts with young-innovators in government. Building digital institutions by use of blockchain, designing projects for innovations at district level were also discussed. An inclusive internet ecosystem with thousands of citizen centric services using 6G technology with assured connectivity and speed is to be developed.

## **Conclusion**

The effort is to bring the Government and Citizens together by use of digital technology pursuing Next Generation Reforms with the policy objective of “Maximum Governance – Minimum Government”. This will entail considerable Government Process Re-engineering, Universalizing Access to e-Services, Excellence in Digital Initiatives at District level, Excellence in Adopting Emerging Technologies, Use of ICT in Management. We can be sure that in any future global model of governance, India will play a critical part.

\*\*\*\*\*

## OUR CONTRIBUTORS

**K. KASTURIRANGAN** is an astrophysicist who worked for 35 years with the Indian Space Research Organisation (ISRO) including 10 years as its Chairman. A former Member of the Rajya Sabha and the Planning Commission, he is currently the Chancellor of the Central University of Rajasthan. He was awarded the Padma Shri in 1982, Padma Bhushan in 1992 and Padma Vibhushan in 2000.

**KEWAL KRISHAN SETHI** is an IAS officer of 1963 batch, MP Cadre, who retired in 1998 as Chief Secretary. Post superannuation, he served as National Commissioner, Linguistic Minorities. Presently, he is Chairman of Regional Branch of Indian Institute of Public Administration for Madhya Pradesh and Chhattisgarh and member of the Executive Committee of Hindi Prachar Sabha Madhya Pradesh. His published books are 'Towards Total Planning' and 'Child Rights and Compulsory Education in India'.

**MADAN B. LOKUR** served as a judge at the Supreme Court of India from 4th June 2012 to 30<sup>th</sup> December, 2018. He is presently a Judge in the Supreme Court of Fiji, the only Indian to be appointed a judge of the Supreme Court of another country.

**R A MASHELKAR** is an eminent scientist who served as the Director General of Council of Scientific and Industrial Research (CSIR) and was elected as Fellow of Royal Society (FRS), London. In recognition of his contribution to the Science and Technology sector, Dr. Mashelkar has won over 50 awards and medals, including the Padmashri in (1991) and Padmabhushan in (2000)

**RAGHU DAYAL** did a Masters in History from St. Stephen's College, University of Delhi and then joined the Indian Railways in 1957. He is former Managing Director of CONCOR. He has worked for several International Organisations like UNCTAD, UNESCAP as a Consultant and has written extensively on management issues.

**REENA RAMACHANDRAN** has a double doctorate in Chemistry from Allahabad University & France, and served as Member, Board of Governors, IIT (Kanpur).

She is the Founder President of the Forum of Women in Public Sector (WIPS). And associated with Women's Leadership initiative in All India Management association (AIMA) .

She was awarded 'Mahila Shiromani' by Vice President of India,1989, 'Best Communicator' by Press Council,1989, 'Manager of the Year' by ONGC,1987.

**SANJEEV SANYAL** is the Principal Economic Advisor to the Government of India. An internationally acclaimed economist and best-selling author, he spent two decades in the financial sector and was Global Strategist & Managing Director at Deutsche Bank till 2015. He was named Young Global Leader by the World Economic Forum in 2010.

His best-selling books include Land of the Seven Rivers, The Indian Renaissance and The Ocean of Churn.

**K R SRIDHARA MURTHI** is the Director of Academics and Planning at JAIN Deemed-to-be University, Bangalore and an honorary Director of International Institute of Space Law. He is the Advisory Board of “Handbook of Space Security”- a Springer reference publication. Has made rich contributions to Indian Space Programme in the fields of Space Policy, and in expanding India’s commercial space activities.

**SURESH GOEL** an IFS officer of 1978 batch, retired as Secretary in the Ministry of External Affairs and Director General of ICCR. His credentials as a cultural administrator who has displayed sensitivity towards our own artists and art forms and the need for them to take the message out of India has been well established and recognized by the community of artists in India as well as experts from abroad.

**T. S. KRISHNA MURTHY** held the post of Election Commissioner from 2000-5, the last period of which, he was Chief Election Commissioner of India. He graduated with distinction in History,

Economics and Political Science and holds a Degree in Law. He joined the Indian Revenue Service in 1963. Has more recently advised and reported on the electoral system in Indonesia and was a member of the Commonwealth observation team for overseeing elections in Zimbabwe and Uganda.

**VINAY SHANKAR** did his Bachelor of Engineering (Civil) from IIT, Roorkee, and Master of Science (Economics-Social Planning) from University of Wales, U.K. Having worked in UP PWD, Military Engineering Service and the Indian Railway Service of Engineers, he joined the IAS in 1963, Madhya Pradesh Cadre, and superannuated as a Secretary to the Government of India in 1997. Since then, he has been actively engaged in projects related to conservation of rivers and lakes, cumulative environmental impact assessment and hydro energy with IIT, Roorkee. He is a member of the Board of Directors of the IC Centre for Governance.

**V.SRINIVAS** serves as Secretary to Government of India, Department of Administrative Reforms and Public Grievances and Department of Pensions and Pensioners Welfare. He represents India on the Council of Administration of the International Institute of Administrative Sciences, Brussels. Has a Master's degree in Chemical Engineering from College of Technology, Osmania University.

\*\*\*\*\*

# IC Centre for Governance

## Governing Council

Justice M. N. Venkatachaliah – Chairman  
Former Chief Justice of India

D.V. Kapur  
Former Chairman, Reliance Power Limited  
Fali S. Nariman

Former Member of Parliament, Rajya Sabha  
J.C. Luther

Former Deputy Governor, Reserve Bank of India  
K. Kasturirangan

Member of Parliament Rajya Sabha  
Mahesh Kapoor

Former Advisor, Planning Commission  
Mukund B. Kaushal

Former Secretary, Internal Security, Ministry of Home Affairs  
Nalini Singh

CMD, TV Live India Pvt. Ltd  
Prabhat Kumar

Former Cabinet Secretary  
Pratap Narayan

Former Director General, Fertiliser Association of India  
R.A. Mashelkar

Former Director General CSIR  
R.D. Mathur

Trustee MRA  
Rajmohan Gandhi

Former President, Initiatives of Change  
Sarosh J. Ghandy

Former MD, Tel-con Construction Company  
Shanti Narain

Former Member Traffic Railway Board  
Surendra Singh

Former Cabinet Secretary  
Syed Shahid Mahdi

Former Vice Chancellor, Jamia Millia Islamia  
T.S. Krishnamurthy

Former Chief Election Commissioner of India  
Yogendra Narain

Former Secretary General Rajya Sabha

## **Contributors**

K. Kasturirangan \* Sridhara Murthy \* RA Mashelkar  
Madan B. Lokur \* Reena Ramachandran \* Sanjeev Sanyal  
R Dayal \* Suresh Goel \* T.S. Krishnamurthy  
Vinay Shankar \* K K Sethi \* V. Srinivas

## **IC CENTRE FOR GOVERNANCE**

3, Palam Marg, 3rd Floor, Vasant Vihar, New Delhi-110057

Tele : 91-11-40809939

E-mail: [iccfg@yahoo.co.in](mailto:iccfg@yahoo.co.in) • Website: [www.iccfg.net](http://www.iccfg.net)