Brochure AIPSN Campaign on 75 Years of Independence (Long version)

Independent modern India, free from British colonial rule, came into being on 15th August 1947 with the unfurling of the tri-colour at the Red Fort in Delhi by India's first Prime Minister Jawaharlal Nehru, who famously spoke of India's "tryst with destiny." India's journey since then has been remarkable by any standards. Yet there have also been many disappointments, and there is considerable anxiety about the future.

India's Constitution in effect from 1950, along with several later amendments, enshrined the "Idea of India" forged during the freedom movement, comprising a democratic polity, unity in diversity of India's multiple cultures, social justice, freedom of thought and expression, equality of all citizens before the law without discrimination on grounds of religion, caste, language, ethnicity or gender, and a commitment to build a welfare state. These values are also linked to, and indeed require, a citizenry imbued with critical thinking or scientific temper. The Constitution also provided for a federated system of governance involving the Union of India and the States, with separation of powers between legislature, executive and judiciary, and strong autonomous institutions.

Independent India started on an ambitious course of planned, self-reliant industrial development, quite unique among contemporary developing countries. Public sector undertakings (PSUs) were established in core, mainly heavy industrial sectors. Emphasis was also placed on frontier areas of science and technology (S&T) such as nuclear energy and space, and on building advanced capabilities through premier education and research institutions. Contrary to the myth that this was a "Nehruvian socialist" model, the Bombay Plan drawn up by private corporate leaders in 1944 had itself proposed this State-led pattern, since they admittedly lacked the capital and capabilities required, and chose to focus on consumer goods and light engineering.

Parliament adopted the Industrial Policy Resolution in 1956 and the pathbreaking Scientific Policy Resolution of 1958, a first among nations, thus underlining the importance of S&T and self-reliance for development of Independent India.

The world admired India's progress along this path, democratically managing one of the most diverse countries in the world. Of course, there were also many failures and weaknesses along the way, many having relevance even today.

Self-Reliance In the early 1970s, India was at par with leading developing countries in industrial development. However, following the example of post-War Japan, Asian nations such as South Korea, Hong Kong, Taiwan and Singapore leaped ahead industrially and in other human development indicators. These so-called "Asian Tiger economies" rapidly built-up indigenous S&T capabilities in mass manufacturing and in the leading technologies of the time such as automobiles, consumer durables, capital goods, electronics, cameras and later micro-processors and computers. This was not achieved through multi-national companies (MNCs) setting up manufacturing units in

these countries but, in a planned manner, autonomously by domestic companies with government support and locally developed products and brands, which today have global presence or even leadership in some sectors. Basic scientific and applied research, along with high state funding of education and public health, were also part of this effort.

Despite its industrial strong base, India missed the opportunity during these "lost decades," and its self-reliant capabilities kept falling behind ever since. PSUs by and large did not adequately modernize or scale-up, and the private sector remained content with a protected domestic market, and made little effort to build up autonomous capabilities and technologies. Despite huge incentives, private sector R&D investments in India have remained negligible over many decades.

After India embraced neo-liberal economic policies in the 1990s, self-reliance was abandoned based on the erroneous belief that it was an outmoded concept, and that modern technologies could always be bought from developed countries or brought in by MNCs.

This never happened. Indian corporates entered into collaborations with foreign companies for domestic assembly or sub-contracted manufacture. The present government has gone out of its way to attract FDI, shockingly even in the crucial defence sector, claiming this would boost *atmanirbharta*. But almost no new know-how has yet been absorbed or developed, and no globally competitive Indian product or brand has been launched. The share of manufacturing in the economy has declined, exports have stagnated, even losing out to neighbouring Bangladesh and SriLanka, and the much-touted goal of reaching \$5 trillion GDP is a distant dream.

Today, the world is at the cusp of the "fourth industrial revolution" comprising Artificial Intelligence (AI), Internet of Things (IoT), 5G, electric or fuel-cell vehicles and battery storage systems, autonomous vehicles etc. Countries that possess relevant know-how and technology will dominate coming decades. No country or MNC will give away this know-how, which can only be acquired indigenously through determined self-reliance, as shown by India in space, nuclear energy and defence to some extent.

This calls for a major role for PSUs, since only they have the capability and size to develop advanced technologies, as witnessed in the early decades. It is frankly beyond the private sector, except for a handful of entities, given their poor track record in R&D. Yet, the present government is on a privatization spree, selling off PSUs except in a very few strategic sectors. Natural resources and infrastructure built up through public funds are being handed over to crony capitalists through "asset monetization." Without PSUs empowered with autonomy and adequate support, and without an appropriately funded education system, India will find it very difficult to face the challenges of the knowledge-era.

Education & Health The Asian "Tiger" countries consistently invested 4-6% of GDP each on R&D, education and health, all crucial factors behind their dramatic progress. In comparison, India fell far behind from the outset, with severe impact on human development. While premier

institutions of higher learning and research were opened even in the early decades, school education has remained a major weakness throughout.

India's expenditures on health and R&D are languishing at about 1% respectively, and only about 3% on education against 6% recommended by all committees. Despite reaching 90% enrolment in elementary education, enrolment at higher stages have continued to drop to currently around 50% at secondary level, and even worse for female students.

The Right to Education Act (RtE) of 2009 made free and compulsory education between 6 and 14 years age a right but, despite being law, RtE has now been virtually abandoned under the National Education Policy (NEP). NEP gives so much prominence to online education that government may even deny the importance of enrolment or drop-out in physical schooling!

A public health system to deliver preventive and primary health care was not taken up strongly in the early period nor strengthened later. India lags behind many low-income countries as regards basic health indicators. In 2016, India ranked 145 out of 195 countries in a Health Care Quality Index (Lancet, 2019).

The positive impact that greater attention to public health and education can make is revealed by the high human development indicators in states such as Kerala and Tamil Nadu, close to levels in developed countries, while national averages are close to those in sub-Saharan Africa.

Unfortunately, inequalities between urban and rural areas, well-off and poor students, and between upper and lower castes have become deeply ingrained in both the education and health sectors. All these structural weaknesses in public health were cruelly in evidence during the Covid-19 pandemic, with the exception of Kerala which demonstrated the strength of its public health system.

Given weaknesses in the government education and health systems, the private sector has expanded rapidly in both education and health, including in rural areas, deepening inequities. Liberalization and withdrawal of the State have worsened these trends. Even government departments and PSUs now reimburse employees' expenses at private hospitals, and insurance-based services have gained ground, further strengthening the private sector. Around 75% of hospitals and tertiary health facilities in India are in the private sector, and thus oriented towards the better-off. The Indian people incur over 60% of out-of-pocket expenditures on health.

Fees have risen sharply even in state-run professional education institutions. Private colleges and universities especially in engineering and medicine have proliferated, often with poor infrastructure, malpractices such as capitation fees, deficiencies in reservation and access, and poor quality of education and employability. Many such institutions have witnessed drops in intake or have closed leaving students in the lurch. Today even industrialists lament the lack of suitably skilled and educated manpower in the country.

India also suffers from a serious deficit of doctors, nurses and paramedics. Rising fees have led to brain drain on the one hand and to debt traps on the other.

NEP will further aggravate these tendencies due to its emphasis on commercialization and "vocationalization" of undergraduate courses. High fees for 4-year "vocational" undergraduate courses have already started in many Colleges and Universities, with unknown response of

employers. The S&T and Innovation Policy (STIP) also does not take account of these trends, and continues to shy away from meaningful public investments in R&D, only imagining that private and foreign investment would somehow happen. Again, the future appears uncertain.

Agriculture & Rural Employment Agriculture too was relatively neglected in the early post-Independence decades. Persisting low foodgrain production and several near-famine years, as well as a devastating and frankly humiliating dependence on food aid especially from the US, prompted a major push to augment agricultural production in the late 1960s through the so-called Green Revolution (GR). GR focused on wheat and rice in Punjab, Haryana and West UP, and was based on large inputs of high-yielding varieties, irrigation water, inorganic fertilizers, and mechanization. GR brought dramatic improvements in production, and saw India become a major agricultural producer, undoubtedly transforming agriculture in India, but with many negative consequences which will haunt the country for decades calling for urgent corrective measures. Overuse of chemical fertilizers, depletion of soil health, severe depletion of groundwater and water-logging, skew in favour of larger farmers, high indebtedness, loss of indigenous varieties, change of cropping patterns, sharp decrease in cultivation of millets and over-reliance on just two crops with decreasing returns are some of these impacts.

The recent farmers' agitation is also related to the skewed socio-economic impacts of the Green Revolution. Agricultural universities, which made important contributions to GR, also got inter-twined with interests of large farmers, mechanized industrial farming, and linkages with Western institutions. The famous extension system for the GR collapsed over time, leaving farmers dependent on MNC agri-businesses for support services.

Investment in agriculture declined after GR, and most other regions especially in eastern India were neglected, along with crops other than wheat and rice, and rainfed agriculture pursued by around 65% of farmers, perpetuating rural poverty and pushing rural-urban migration.

Despite the "self-sufficiency" that India has attained in food production, a large proportion of the Indian people still do not get two square meals a day. India ranks 101 out of 160 countries according to the World Hunger Index 2021, lower than Bangladesh (76) and Pakistan (92). All these reports show that India is not likely to meet the Millennium Development Goal (MDG) of "zero hunger" by 2030.

Clearly, problems are not restricted only to quantity of food production, but relate to socio-political realities of inequality and access. These deficiencies in the Indian agriculture and food system need to be addressed urgently, particularly increasing diversity, raising productivity in rainfed areas, building climate resilience, and redressing inequalities in food and nutrition..

Whatever the gains in agriculture, rural poverty and employment in general were explicitly addressed only from the 5th five-year plan onwards, through poverty alleviation and related self-employment programmes. Unfortunately these could not achieve their objectives, with some official evaluations showing that only 14% of beneficiaries went above the poverty line. It was only much later in the early 2000s, that the demand-driven NREGA scheme, which was pushed by

progressive forces and civil society organizations, provided much relief for the rural poor. The strength and potential of NREGA were revealed during the pandemic, when migrant workers returned to their villages and required livelihood support. However, rural poverty and large-scale un-/under-employment persist as structural problems, calling for imaginative solutions to provide sustainable rural off-farm employment.

Environment & Climate Change Environment regulations in India were initiated much after Independence since their importance was not realized earlier. India's subsequent adoption of a variety of legislations and other regulations largely flowed from either international agreements or pressure by popular movements in India.

The 1972 UN Conference on Environment in Stockholm triggered several policy measures in India, notably Article 48A under the 42nd Amendment requiring the state to protect and preserve the environment, followed later by the Water Act 1976, Air Act 1981 and Environment Protection Act 1986. Policy measures on hazardous wastes, ozone-depleting substances and emission reduction commitments also flowed largely from international agreements.

On the other hand, the "Chipko" movement, the Silent Valley agitation, prolonged popular movements and civil society action to protect rights of tribals and other forest dwellers resulting in the Forest Rights Act, many struggles related to growing human-animal conflicts and the need to protect wildlife habitats, all catalyzed major measures. The Bhopal Gas Tragedy, which the PSM responded to multi-sectorally, catalyzed a number of laws and regulations governing industrial pollution. All these broadened the scope of peoples participation in decision-making on developmental projects.

Environmental policies and implementation in India have had a mixed record, due to push-back from corporate interests and supporting political and bureaucratic forces, and inadequate support from mainstream political parties.

Forests in both quality and area, as well as forest rights of tribals and others, continue to be threatened. Industrial accidents including those involving hazardous materials continue to occur due to lax if not collusive regulatory action. To some extent, wildlife sanctuaries especially of keystone species like the tiger, are doing relatively well albeit in small areas constantly under threat by various "development" projects with negative impacts upon forest dwellers. Therefore the ecosystem is being severely damaged, along with lives and livelihoods of millions of people dependent upon it.

The present government is deliberately and actively undermining environmental regulations so as to promote "ease of doing business," and driving States into a "race to the bottom" in their competitive bid to attract investments. Environmental impact assessment (EIA) procedures and mechanisms have been severely weakened, making project approvals the default norm and rejections extremely rare. Efforts at systemic dilution through the EIA 2020 Notification was put on hold in the face of strong opposition by experts, civil society organizations and peoples movements, although piecemeal changes are being quietly introduced or implemented, such as sanction of small sections of the Char Dham Highway in the fragile Himalayas and amendments to the Forest Rights

Act to allow easy approvals. The PSM has long demanded a fully autonomous institution for EIA and recommendations regarding approvals, conditions for the same or rejection with reasons.

On climate change, the government has thankfully continued the earlier Copenhagen policy of emission reduction commitments, but limited to only a very few sectors. Many sectors with greater co-benefits for people, better energy equity and re-oriented low-carbon development pathways are not being addressed. Government is also totally neglecting adaptation and building resilience to climate impacts in several crucial sectors such as agriculture, sea-level rise, urban flooding, frequent landslides and other effects of extreme rainfall events, on which urgent action is required.

Despite victories for popular movements in many battles, the longer war continues. Environmental regulations remain a theatre of daily confrontation calling for constant vigil by civil society and peoples movements.

Idea of India, Scientific Temper During the past 74 years, the Indian republic has also faced many challenges to participatory democracy as well as to core values and ideas emanating from the freedom movement and embodied in our Constitution. These challenges have risen to crisis proportions under the present government.

The most grave challenge earlier was when democracy itself was formally suspended during the Emergency of 1975-77. Fortunately, this was reversed due to massive popular resistance leading to the ousting of the then government in the next elections. However, tendencies towards centralization, moving away from accountability and participatory democracy, and undermining of constitutional safeguards have recurred from time to time, underlining the need for constant monitoring and resistance when required.

The federated system of governance involving both the Union and the States is being trampled under a new de-facto unitary structure, contrary to the Constitutional system and subsumed under numerous centralizing schemes.

In contrast, efforts propelled by popular movements have been made to enrich participatory democracy and enhance social welfare. Decentralization of governance was taken up in Kerala, West Bengal and to some extent in Karnataka. The Right to Information (RTI) Act, amendments to the Forest Rights Act, the Food Security Act, the impactful National Rural Employment Guarantee Scheme, decentralized Peoples Planning, the Total Literacy Programme initiated by the PSM earlier and the later Right to Education (RtE) Act, as well as numerous efforts to improve environmental regulations are some examples, mostly arising from popular movements. However, all these measures have seen headwinds and even reversals. The present government has strongly opposed such rights-based approaches and the forces championing them, and is constantly seeking to reverse their gains in participatory democracy.

The current atmosphere of executive non-accountability and dominance over all institutions, misuse of agencies, flouting of Constitutional norms, and intolerance of dissent in both the polity

and in civil society, are like an "undeclared Emergency" according to Constitutional experts, public intellectuals and civil society organizations.

Governmental and supporting non-state organizations today pose perhaps the most serious challenge to the edifice of the Constitution and the very Idea of India. The current dispensation has put majoritarianism and "cultural nationalism" at the forefront of efforts to build a so-called Hindu Rashtra undermining the secular state, pluralism, multi-culturalism and unity in diversity which are admired the world over. Policies such as the CAA-NPR-NRC, brutal lynchings and harassment of minority community citizens on various pretexts, are dividing the people and threatening to tear the country apart. Traditional food habits of many communities in different parts of the country, from the North-East to Kerala, are continually attacked putting forward upper-caste Hindu practices as the norm. Hindi is sought to be imposed on non-Hindi speaking States and people in many ways so as to project an exclusive "Hindi-Hindu" culture. A constructed Vedic-Sanskritic past is being projected as the repository of all Indian knowledge and culture.

Of particular concern to the PSM, and most Indian scientists, leading lights of the government and the ruling dispensation have repeatedly tried to impose an imaginary narrative of ancient Vedic-Sanskritic science as the most ancient and superior knowledge system, even compared to modern science. Impossible capabilities such as internet in the period of the Mahabharata, and interplanetary space travel over 8000 years ago, have been projected. Myths and legends are offered as irrefutable evidence beyond question. Critics of such improbable claims, and those who defend evidence-based reasoning, have been attacked as westernized and "anti-national."

Critical thinking and pluralism including in seminars and discussion groups have been repeatedly attacked, for instance in the Central University of Hyderabad, JNU, IITs in Chennai and Mumbai. Books, plays, films and their makers have been banned or attacked by mobs. Champions of scientific temper such as Narendra Dabholkar, Govind Pansare, M.M.Kalburgi and Gauri Lankesh were murdered. Science and creative thinking cannot flourish without pluralism of opinion and freedom of expression, or through blind subservience to authority figures or faith.

The government has also shown blatant disregard for evidence-based policy making and lack of respect for data even from respectable research institutions, even holding back official reports and data when they do not support government narratives. This was clearly witnessed with respect to demonetization and the Covid-19 pandemic. These tendencies too go against critical thinking and a scientific approach. Planning for the future must surely be based on critical examination of present and past experience.

What does the future hold? India desperately needs to restore its post-independence identity as a forward looking country, building its autonomous self-reliant knowledge especially in science and technology for the global economy of tomorrow, promote its major public sector industries to achieve these goals along with those private entities with a commitment and dedication to achieve self-reliance. India also needs to re-establish Constitutional values of unity of diversity so

that all States, cultures and people of all religions can move forward determinedly each in their own unique way. India must take forward its values of pluralism, freedom of expression, autonomy of governance institutions, social justice and ecological sustainability. None of this can happen without a robust public education system and an effective primary health care system. Together these call for systematic planning and a welfare state.

India currently has a substantial youth population, with over 600 million persons under the age of 25. Development experts believe this "demographic dividend" can be a tremendous asset for the future, provided the youth receive requisite basic and higher education and appropriate skills. Otherwise, un-skilled and under-educated youth could also form the basis for deep social unrest and undesirable socio-political tendencies.

Above all, no country can progress if its people are divided against each other. The British colonialists perpetuated their rule over the Indian sub-continent through their conscious policy of divide and rule, ultimately leading to partition of the country along religious lines. It was the strength of the independence movement that it brought together all diverse groups under a common umbrella to achieve the common goals of independence, progress and welfare of all, respecting unity in diversity without discrimination on communitarian grounds. No country can progress if its people are divided against each other. 75 years after Independence, can we allow ourselves to be divided again?

The future beckons India, especially its youth. To achieve its due, India needs to re-generate, re-imagine and take forward the values and aspirations of its freedom movement in the contemporary context, learning from all the missteps, failures and missed opportunities over the years.

The Peoples Science Movement will take this message to the people during this 75th anniversary year through grassroots dialogues and other mass contact programmes.