

Policy Initiatives for the New Government

Building a 'New India'



**Vivekananda International Foundation
India**

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Vivekananda International Foundation
3, San Martin Marg | Chanakyapuri | New Delhi - 110021
Tel: 011-24121764
E-mail: info@vifindia.org
Website: www.vifindia.org
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Preface

On May 30, 2019, the National Democratic Alliance (NDA) government led by Prime Minister Modi was sworn in after the NDA registered an unprecedented 350 seats in the Lok Sabha. The new government will undoubtedly continue to implement the various good policies that it initiated in 2014-2019. However, the ambition of building 'New India' will require deeper reforms in a variety of areas.

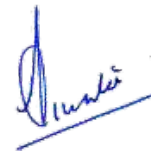
Governance needs to be improved, national security institutions must be strengthened, diplomatic capabilities enhanced, and a nationwide mission of innovation initiated. The problems of youth, farmers, workers, women, and children also need to be addressed. None of this will be possible without the requisite political will, and sustained economic growth. The government approach has to be that of continuity and change. While earlier reforms needs to be continued and deepened, a new set of reforms encompassing economy, agriculture, health, education, political parties will be required. The institutions of democracy will have to be strengthened.

The country, with large unsettled borders, is facing a more challenging security environment in view of global uncertainties, the rise of China, US-China rivalry, the backlash against globalization, the chaotic situation in cyberspace, climate change and other factors. The government will need to build more clarity on what defines 'India's National Security', as the times may compel it to take sides on critical issues. Navigating between the US on one hand and Russia and China on the other hand will be a challenge. New challenges require questioning, both existing perceptions and framing new questions, to develop new thinking and new approaches. The government should be alive and proactive in the face of these challenges and flexible enough to devise strategies to meet them.

A well balanced, forward looking foreign policy backed by adequate resources is needed to harness the benefits of international cooperation for national development and security. Foreign policy cannot be just an enterprise of the Ministry of External Affairs. A coordinated and synergetic approach involving the MEA, Ministry of Defence, Ministry of Commerce, Ministry of Finance, and sectoral ministries is needed. In fact, better coordination among various state institutions can by itself become a source of national advantage.

The Vivekananda International Foundation has done some thinking on what the new government can do in the near future. Based on the many discussions, writings, task forces and numerous interactions conducted over the last few years, the VIF in this paper, has suggested some broad reforms in the areas of foreign policy, defence, governance and select sectors of the economy. We hope that the suggestions will prove useful, as the new government sits down to govern the country for the next five years.

New Delhi
19th June 2019



Dr Arvind Gupta
Director VIF

1. Strengthening Foreign Policy Implementation

Prime Minister Modi's foreign policy has been characterised by: Neighbourhood First; Act East; Security and Growth for All in the Region (SAGAR); Link West; Connect Central Asia; Indo-Pacific; etc. An all-round and vigorous engagement with neighbours, the countries in the extended neighbourhood and far off regions, has been the hallmark of the new Indian foreign policy. Managing relations with China, strengthening India's capabilities against terrorism, using foreign policy as an instrument for achieving domestic growth have underlined India's diplomacy. India is also an active participant in leading multilateral and regional institutions.

Preparing India to deal with global uncertainties marked by the growing rifts between major powers, is a key challenge. What will be the shape and contours of a multipolar world and what will be India's role in such a world? Such questions need to be answered and foreign policy adjusted in accordance with the emerging new realities. Foreign policy should also become a powerful tool in building a 'New India'.

Implementation of foreign policy initiatives in a timely manner has assumed great urgency. Be it the neighbourhood, BIMSTEC, ASEAN, or the Indian Ocean countries, implementation of committed projects needs to be speeded up. There is a concern among India's development partners that unlike China, India is unable to implement projects in time and within the original estimates. There is some truth in such comparison.

The scope of diplomacy has expanded and encompasses many different dimensions besides the political i.e. defence, economics, technology and cultural diplomacy. These are specialised areas in which the help of experts is essential. There is a need to build and enhance diplomatic capacity.

Trade and investment are critical for India's engagement with the rest of the world. The world is eyeing India's vast market and growth potential. India must leverage its market size to its advantage.

India's share of international trade is low and its exports have been growing slowly. India is often involved in complex trade negotiations in multilateral forums. Several countries are using the asymmetries of economic interdependence in trade to enforce sanctions as instruments of coercion. Importance of e-commerce and cross-border trade flows in India's economic engagement with the world will require in-depth diplomacy. The government should focus on strengthening the implementation aspects of the foreign policy.

Recommendations

- The government should issue a Foreign Policy Concept Paper which diagnoses major challenges and outlines feasible coordinated policies, resource commitments, and actions designed to carry out the guiding principles of India's foreign policy.
- A new agency, the Development Partnership Agency (DPA) should be created out of the present DPA divisions of the MEA, subsuming other relevant agencies that are presently outside the ambit of MEA, like the EXIM Bank of India etc. Such an agency should have its own steady budget, a board of governors, a planning department and an implementation agency responsible for the execution of projects. The agency should draw on experts from different fields. The private sector should be involved in the conceptualisation of the projects right from the beginning. Projects should be undertaken only if they are viable and not on the basis of political considerations.
- Agencies like the EXIM Bank of India and Export Credit Guarantee Corporation should be strengthened. India should start shipping lines to ports situated in strategically important geographies.
- An Office of Political Military Affairs in charge of defence diplomacy should be set up in the Ministry of Defence for working closely with the MEA. A cadre of defence diplomats should be created. This office should be responsible for implementing defence cooperation projects with other countries and should have its own budget.
- Culture should form an important part of India's foreign policy. The Indian Council of Cultural Relations (ICCR) should pursue cultural cooperation in line with the strategic interests of the country. A long term plan on how India's history, culture

and civilisational values can be integrated with India's foreign policy aims and diplomacy, should be worked out.

- Indian diplomats should be trained in India's history, culture and soft power. The MEA should design a course on India's history, culture and soft power, which should be mandatory for every Indian diplomat to pass, during the first five years of service.
- India's diplomatic service is too small for the expanding tasks. The number of diplomats should be increased. The government may set up a task force to make suitable recommendations in this regard. The task force would also examine the method of recruitment of diplomats, experts, training etc.
- A coordinated approach between the MEA, Ministry of Finance, and Ministry of Commerce is needed. India's trade negotiations cannot be left just to the Ministry of Commerce. India should have an all-of-government approach to international trade and trade negotiations.
- India should consider setting up an office of the International Trade Negotiator to coordinate India's approach to international trade negotiations.
- The MEA should work closely with the office of the National Security Adviser (NSA) to ensure that India's security concerns are properly reflected in India's diplomacy. The platform of the National Security Council, which is headed by the Prime Minister, should be used effectively.
- The role of the NSA in the government's transaction of business rules should be clearly defined to avoid the clash of interests.

2. Defence

The role of defence in a nation's policy framework cannot be overemphasised. It promotes not just security, but even diplomacy and the economy. India will require stronger armed forces to deal with the insecurities of a world in transition. The defence sector requires major reforms. In particular, attention should be paid to improve defence planning, defence budgeting, indigenisation of defence manufacturing, evolving a military doctrine for hybrid warfare, cyber and space warfare.

Recommendations

- Appoint a Chief of Defence Staff (CDS).
- Promulgate a National Security Strategy/ or at least issue 'Strategic Guidance' for the Armed Forces of India to give a sense of direction to capability development.
- Evolve and issue guiding principles for allocating the defence budget. Get the proposal of 'non-lapsable' defence budget for Capital Acquisitions going.
- Get the National Defence University, in the pipeline 17 years, functional.
- Operationalise Cyber, Space and Special Operations agencies with full support and integrate them with national structures.
- Review, prioritise and clear the backlog of the Defence Acquisition Council (DAC) approved defence acquisitions. About five lakh crore worth of Acceptance of Necessity (AONs) orders are currently pending!
- Implement recommendations of committees for reforming the Defence Acquisition Organisation.
- Approve integrated perspective plans of armed forces and technology perspective plans of the Defence Research and Development Organisation (DRDO) and work out the methodology for assuring budgetary support.
- Initiate concerted measures to enhance participation of private sector in defence to complement defence public sector undertakings (DPSUs) and to support small and medium enterprises (SMEs) and start-ups, to become competitive and contribute to indigenous weapon platforms.

- Evolve comprehensive guidelines for international defence cooperation to support decisions relating to military-to-military cooperation, joint exercises, defence trade and technology cooperation and to enhance defence exports. Set-up a cadre of defence attaches.
- Resolve the contradictions arising out of US sanctions prohibiting defence acquisitions from Russia.
- Clear the backlog of major acquisitions lying pending for last two years – acquire on 'Strategic Considerations'.
- A sincere, comprehensive dialogue with armed forces and veterans to clear the misgivings in the mutual relationship. Get the armed forces on board with the government.
- Focus attention on improving the civil – military relationship at all levels.
- Initiate measures to enhance institutional synergy between the Armed Forces, Paramilitary Forces and Central Armed Police Forces. Need to have a very mature body of credible professionals to initiate the Goldwater–Nichols kind of reforms - right now - at the beginning of the tenure of this government.
- Build capacity of the armed forces in cybersecurity:
 - Policy and Strategy for Development and Employment of Cyber Power
 - Indian Armed Forces Doctrine for Application of Cyber Power and Information Operations
 - Organisation for Cyber Deterrence, Synergy, Staffing and Adaptation of Cyber Force
 - Human Resource, Training and Certification
 - Technology, R&D, Standards and Integrity of Data
 - Integration and Development of Concepts for Application of Cyber Power for effective Cyber Deterrence
 - International Engagement and Legal Framework

Defence Production

India needs to make major efforts for setting up indigenous defence production capabilities. The reliance on import of defence equipment introduces vulnerability into national security. The Make in India programme has also not taken off properly.

Recommendations

- Indigenous production of major platforms involving the private sector under the Strategic Partnership Model has already been initiated by identifying a number of platforms for the Navy. Similar initiatives must be taken for major platforms required by the Army and Air Force.
- The system of offset needs to be overhauled by introducing better evaluation, monitoring and including services into the remit of offsets. Offsets should not be limited only to defense technologies. It should incorporate strategic technologies which are useful for the nation, like technical education, skill development etc.
- DRDO should be converted into a Defense Technology Commission on the lines of Space Commission and Atomic Energy Commission.

Fostering an Innovation Ecosystem in defence technologies

It is important to nurture small and medium enterprises (SMEs) to create niche technologies that have application in national security. Many countries (e.g. US, China, Israel etc.) have effective policies to support and nurture the SMEs. India needs a well thought out policy to support SMEs to help create a vibrant ecosystem. The government will have to play a major role in the development of SMEs and innovation ecosystem in defence.

Recommendations

- Create a funding mechanism to support the SMEs. Many countries already have such mechanisms.
- Invest in a proper audited market survey about the capabilities of SMEs in India. The survey should go into the details of the capability of each SME to avoid false claims.
- DRDO should be persuaded to share lab resources with the SMEs.
- Establish a Directorate of Applied Innovation, which matches individual innovators to military products.
- India should expedite the setting up of fabrication houses in the country.

- Since there are no fabrication facilities (FAB) in India, Indian researchers have to go to Israel or Taiwan for fabrication where the cost is very high. The government should negotiate with Taiwan, Israel, and other countries to gain access to their fabrication houses at discounted rates. Special government-to-government agreement should be signed with these countries under the rubric of S&T cooperation.

Management Restructuring of Ordnance Factories Board (OFB)

The existing management structure of the Ordnance Factories was conceived in early 80s by the Rajadhyaksha Committee when the OFB was part of Army Budget and was solely catering to Army and was given all orders on a nomination basis. Since then, a lot of changes have taken place. Defence production has been opened up to the private sector and FDI has been permitted in defence. The OFB has been unable to compete on commercial terms with DPSUs and Private Companies in supply of arms and ammunition for the Army. Nomination facility for the OFBs has been largely discontinued wherever there are other manufacturers. The OFB has also been tasked to compete internationally to export, etc.

Recommendations

- There is need to make the OFB more accountable and that this can be done by corporatising its management structure and converting it into a DPSU.

3. Internal Security

While traditional challenges like J&K, left wing extremism, communalism remain potent, the country is facing many fresh internal security challenges that are arising out of changing nature of job markets, misuse of social media, religious conversion, extreme weather events, extremism and radicalization of the youths, unplanned urbanization, unmet aspirations of the youth, internal and external migration etc.

Recommendations

- Invest more in the modernisation of police, Central Armed Police Forces by increasing the capital budget.
- Set up a counter-terrorism coordination centre (CTCC) where both the centre and the states will subsume their sovereignty. The CTCC will focus on intelligence customised to Indian needs. It should be backed up by multi-agency centres, state multi-agency centres, institutions of the Finance Ministry like Fin CERT, ED etc.
- Set up a fresh intelligence commission to update and modernise the intelligence agencies as well as their sub-groups.
- Upgrade and reform the National Security Council structure.
- Launch a forensic mission including cyber forensics in the country.
- Establish a National Cyber Crime Centre.
- Upgrade the country's capacity to deal with smuggling of narcotics.
- Strengthen focus on dealing with organised crime, crime- terrorism nexus.
- Pass a refugee and asylum law to deal with the problems of illegal migration.
- Fill the vacancies in the courts.
- Train lawyers and judges in modern day crimes.
- Build capacity of states for dealing with modern crimes.

4. Police Reforms

Police reforms are long overdue. The public image of the police is negative. The capacity of the police to maintain law and order, to tackle new age crimes like: parallel crime, gender violence issues; managing the burgeoning traffic in cities, and dealing with organised crime mafias, is severely limited. The state government has not been able to fill these vacancies.

Over the years, many reform commissions and committees have been constituted and upwards of 300-400 recommendations have been made. In 2005, the Ministry of Home Affairs (MHA) went through all of them and shortlisted 49 important recommendations to be implemented without further delay. The first and most vital was to reframe the Police Act in use which is an 1860s act. The government accepted this recommendation and this can be seen on the website of the MHA. The former AG Soli Sorabjee formulated the New Model Police Act and states were asked to adopt it. Though many have done so, they are leaving out the most vital recommendation (to concentrate on the civil police and turn them into officers as in most advanced countries) which is part of the Act.

Recommendations

- Reforms listed out in the 49 items of the Ministry of Home Affairs need to be accelerated.
- Many states have adopted the Model Act, but have chosen not to implement a vital clause.
- Minimise political interference in the police force by implementing the recommendations of the Dharmavira Commission.
- Absorb the well trained and disciplined soldiers retiring from the Armed Forces into the state police and Central Armed Police Forces.
- Improve the living conditions of policemen.
- Improve training of the police force from the lowest to the highest rung.

5. Separation of Investigation and Prosecution

The deteriorating quality of investigation and prosecution needs to be addressed on priority. Only then, can public faith in the rule of law in the country be restored.

Recommendations

- As has been done in many advanced countries, the prosecution decision would be separated from the investigation process by having a distinct and separate Directorate of Prosecution manned by experts.
- This would prevent shoddy investigation, instil confidence in the public that the real perpetrators of crimes will be brought to justice, and make the investigation agency more professional and careful.
- This would be on the lines of the Crown Prosecution Service in the UK and the District Attorney' Office in the USA.

6. Criminal Law and Justice

India needs to take a fresh look at criminal law and justice as society is changing rapidly. New crimes are rearing their ugly head. India's justice delivery system is already under pressure.

Recommendations

- The changing nature of crime with international and national ramifications (drug trafficking, human trafficking, arms smuggling, cybercrimes, etc.) makes it imperative now to designate 'Federal Crimes' and entrust them to a ***'Federal Investigation Agency'***.
- This matter has been kept in abeyance for too long. Steps should be taken to have a time bound discussion with the states and conclude this matter.
- Clearly a majority of the crimes would continue to be the responsibility of the states, but the criminals who commit crimes with national ramifications, would no longer take advantage of the fact that the country is yet to take a decision on this important matter.
- Strengthen and modernise the daily functioning of the Courts.
- Review and revise the Code of Criminal Procedure (CrPC) (enacted in 1973) and Evidence Act (enacted in 1872).

7. Cyber Security and Affiliated Programmes

The cyber world is an entrenched reality of life in India today. The strengthening of cybersecurity requires urgent attention. The country's critical infrastructure is vulnerable to cyber-attacks. Cybercrimes are increasing exponentially. The armed forces also have to be ready for meeting the challenges of cyber warfare. The importance of data for the country's well-being, prosperity, and security is growing.

Recommendations

- Revise and update the National Cybersecurity Policy 2013.
- Revise and update IT Act 2000, as amended in 2008. Introduce a replacement for Sec 66A which has been struck down by the Supreme Court, on grounds of violation of privacy.
- A rational policy on data localisation should be adopted. Sensitive data should be localised. The bill prepared by the Justice Srikrishna Committee and approved by the cabinet, should be enacted into law immediately.
- Set up cloud data centres in India. Renewable energy could be used to power the data centres.
- Support data-driven innovation by start-ups (emphasising right to privacy) to help them emerge as unicorns from India.
- Support the growth of machine learning, big data analytics and artificial intelligence in the country, paying special attention to their application in different sections of the commercial economy. Due attention should be given to the cybersecurity aspect of the new technologies.
- Establish multiple centres of excellence to evaluate and certify innovation of start-ups.
- Simplify government procurement procedures. Give preference to indigenous products certified by centres of excellence. Payment cycle should also be transparent and timely without any obstacle.
- Establish a Cyber Defence Academy to develop capabilities in cyber warfare, attribution, and for training of defence forces. Industry should be allowed to participate in the academy after following the required suitable procedure.

- Develop Indian cyber standards that are applicable to foreign equipment.
- Set up a cybersecurity university to train cybersecurity professionals required in different fields.
- Strengthen research in cryptology.
- Establish a Cyber Advisory Council to advise the NSA.

8. International Trade

The importance of international trade for building 'New India' cannot be overstated. Despite years of economic growth, India's share of international trade is relatively low. Exports are largely seen as a mechanism to pay for imports. New issues like e-commerce, cross-border data flows, data localisation etc. are engaging the world's attention.

India is also under pressure to conclude the Regional Comprehensive Economic Partnership (RCEP) agreement, and to join the ongoing negotiations on e-commerce. The WTO is in the danger of becoming dysfunctional. The US-China trade war presents opportunities as well as challenges for India. India's trade with China is highly skewed in the latter's favour. India needs fresh thinking on international trade.

A higher trade profile/ deepening of India's international economic engagement will help India negotiate better on a variety of issues. There is need to let go of the antiquated mindset that India can grow by its own efforts. One needs to understand that international politics and access to resources, opportunities and technologies go hand-in-hand.

Recommendations

- Design a workable programme for doubling India's exports in the next five years.
- Negotiate RCEP smartly ensuring that India's deeper concerns are not ignored. India should leverage its vast market potential to achieve the desired results.
- Have a clear strategy for the reform of WTO, IMF and World Bank.
- In order to increase trade, establish a conducive industrial and logistic infrastructure. Improve port infrastructure, connectivity, etc. Revamp Export Promotion Councils. Implement a trade facilitation action plan to reduce transaction costs by 10 per cent.
- Establish a standards and compliance infrastructure.
- Implement the CII Championship Manufacturing Industries Initiative to identify 28 industries in 9 sectors, to enable them to become the top industries by 2025.
- Setup an integrated office of the International Trade Negotiator.

9. Agriculture

Taking measures to reduce agrarian distress, improving terms of trade for the farmers, combining technology with agricultural practices and bringing parity between income of farmers and those working in non-agricultural professions are central pieces to promote farmers' welfare and to catalyse the growth of this sector.

Positive externalities such as the penetration of mobile phones in rural India need to be better leveraged by the government to create a platform on the basis of which grassroots level change can be inculcated.

Recommendations

- The Government of India has created several schemes such as the Kisan Credit Card (KCC) and the Pradhan Mantri Fasal Bima Yojana (PMFBY) to support small and marginal farmers with agri-financial services. These schemes should be strengthened and extended.
- However, such efforts need to be complemented with the greater participation of the commercial agri-financial services sector in the country to achieve the goal of doubling farmers' income.
- The government needs to address the barriers to expansion of institutional lending in agriculture sector that are aggravated due to the relatively small size farming operations, the incapacity to furnish collateral to the formal lenders, the lack of information on creditworthiness on the basis of historic performance and weather/market related risks.
- BJP ruled states need to enact a Model Land Acquisitions Law.
- Priority should be given to enhancing credit and insurance coverage. According to recent reports of the National Bank for Agriculture and Rural Development (NABARD), approximately 30 per cent of agricultural households still borrow only from informal sources (NABARD, 2018); while only 29 per cent of the 12 crore farmers in the country have crop insurance cover at present.

- The Agriculture Produce Market Committee (APMC) Act needs to be either abolished or substantially reformed to facilitate the creation of a large market for agriculture produce.
- The Fertiliser Control Order (FCO) should be liberalised to provide the farmers access to newer products, including micro-nutrients. There is need to rationalise the GST tariffs for fertilisers and micro-nutrients.
- A national mission for popularising drip irrigation techniques should be launched. Drip irrigation techniques, and actual large scale buildings of canals for irrigation, could be taken up as CSR activities, by the government and private sector.
- Encourage agricultural exports.
- Using remote sensing for predictive crop modelling, improving water use efficiency, enhancing agri-financial services (e.g. creating farm credit rankings, augmenting farm insurance coverage, commodity trading etc.) and enabling evidence-backed agriculture policy making.

Food Subsidy

Food subsidy is the single largest subsidy element in the Union budget. Increasing MSP (minimum support price) every year without increasing sale price or CIP (central issue price) of food grains under public distribution system, is increasing the subsidy burden every year. To control fiscal deficit, Government of India (GOI) is not releasing full subsidy to Food Corporation of India (FCI), the gap therefore, is being met with loans. Interest burden on these loans is also borne by the government. Loan burden of FCI was Rs 91,353 crore in 2014-15. This figure increased to Rs 2,53,733 crore in FY 2018-19.

Recommendations

- The NFSA (National Food Security Act) provides for increase in CIP, but this has not been done so far. CIP still remains Rs 3 per kg for rice, Rs 2 per kg for wheat and Rs 1 per kg for coarse grains.
- Increase in CIP by Rs 1 per kg will reduce the annual subsidy burden by Rs 5,000 crore. At least CIP should increase in line with the MSP.

10. Water

India is facing acute water distress due to climatic factors, rising pollution, lack of water governance etc. The water supply shortage in major metros and big cities can be expected to increase in the coming years. This can cause conflict not just among people, but also cause friction between states in India.

Like 'Swachh Bharat', the PM must personally champion drinking water; India must tackle the water crisis in mission mode; without water, there is no civilisation.

Recommendations

- The National Water Framework Law, under article 252 of the Constitution, should be finalised and adopted at the earliest.
- The Inter-State River Water Dispute Act 1956 should be amended to facilitate the regulation of inter-state water disputes.
- Draft River Basin Management Bill, which proposes the establishment of a separate river basin authority should be passed immediately.
- A national agency for a quasi-judicial determination of basin surplus and deficit, should be set up urgently.
- Surplus water of the Brahmaputra needs to be utilised, through the Himalayan link on priority. This will require the cooperation of neighbouring countries.
- Planning, development, and management of the river basins should be done at the basin level in an integrated and holistic manner.
- Water shed development activities, rain water harvesting, district level irrigation planning should be pursued and coordinated under a river basin organisation.
- Waste water from urban, industry and agriculture should be counted as a source of water and factored into basin planning. Urban planning should address the issue of mixed waste water from household and industry.
- Apart from the Sewage Treatment Plants (STP), which are expensive, proven low-cost wastewater treatment technologies should be encouraged.
- Constructed Wetland which help treat wastewater through natural methods, should be encouraged across the country.

- Water users should be charged for the volume of water supply, the volume of water return and the pollution load that is discharged back into the water bodies.
- A nationwide mission for the restoration of dead or dying water bodies and wetlands should be launched.
- The public should be encouraged to reduce, reuse and recycle waste water.

11. Power

India needs affordable energy and power for growth. A number of fundamental reforms have been carried out in recent years, but a lot more needs to be done.

Recommendations

- Ratification of the draft Electricity (Amendment) Act 2018 will lead to the separation of carriage and content. This will increase competition at the supply level.
- Promotion of open access to create a vibrant power market by providing market access to retail customers.
- Promotion of new power exchanges to ensure liquidity in the power market. Promotion and implementation of Block-Chain based solutions in the Indian power market.
- Promotion of e-mobility with adequate charging infrastructure.
- Implementation of the small grid.
- Promotion of locality-based power generation plant like bio-marks, waste to energy etc.
- Revival of stressed generation capacity.
- Decommissioning of costly aging power plants.

A. Hydropower

From the perspective of grid stability, hydropower is extremely important owing to its rapid ramp up potential as demand increases. Hydropower reservoirs/ basins also act as a bulwark against droughts/ water scarcity. The government of India vide notification dated March 8, 2019 had declared all hydropower to be renewable energy. However, the financials, policy flip-flops, frequent intervention by judiciary following motivated activism, and the wide-spread corruption at the state level in the formalising of power purchase agreements continue to hinder private sector investment.

Recommendations

- Government needs to deal with political activism with a firm hand that has so far ensured that the sector does not pick up and the less developed states in the Northeast, Uttarakhand and Himachal Pradesh.

B. Gas

Moving towards a gas based economy will help meet India's commitments under the Paris Convention on Climate change. The current share of gas in India's energy profile is only six per cent, as against 24 per cent globally. GAIL's consolidated strength across the gas value chain in India can be leveraged by the government to steadily move towards a gas based economy. However, this will also require strengthening GAIL's capacity to implement government policy for expanding the pipeline network and City Gas Distribution (CGD programme). Both these require huge capital expenditure (pipeline Rs 32,000 crore and CGDs Rs 12,000 crore). GAIL's long term LNG contracts (14 MTPA) have strategic significance for India's energy security.

Recommendations

- Any ideational schemes for separating the marketing and transport of gas at GAIL or even setting up a separate subsidiary to undertake gas marketing needs to be discouraged by the government. In either case, the remaining company will be too impaired to generate capital through internal accruals or market borrowing for expansion of pipeline and CGD network.
- GAIL provides open access to its gas pipelines on a digital platform and has set aside 25 per cent of pipeline capacity to be used as common carrier on a non-discriminatory basis. However, this latent capacity can be better employed as currently only eight per cent is actually being utilised.
- Other companies desirous of participating in the gas sector should be encouraged to invest in infrastructure by expanding the pipeline network.

C. Nuclear Power

Major countries plan to maintain a substantial share of nuclear power in their future energy profile: US (20 per cent); Russia (25 per cent); Japan (20-25 per cent despite Fukushima). China plans to increase its share of nuclear power from the current 2 per cent to 10 per cent by 2030. In India's case, this will remain two per cent, unless urgent steps are taken to increase investment and cost competitiveness. Nuclear power is also needed for reducing the carbon footprint to address environmental issues. Wind, solar and other renewables are intermittent sources of energy, and have to be backed by stable, base-load power. This can only be provided by nuclear power. India also needs to maintain its technological lead in a strategic area.

Recommendations

- Nuclear power should be given a level playing field with renewables, in terms of the 'must run' status and other incentives.
- Necessary policy decision binding on all DISCOMS, to make it mandatory to ensure Power Purchase Agreements (PPAs), include running of NPP's as base load and at rated Plant Load Factor.
- Dormant Joint Ventures set up between NPCIL and NTPC and other energy sector PSUs must be activated to increase the needed investment in this sector.
- Government intervention and financial support is needed as NPCIL can neither raise equity from stock market, nor generate additional capital from internal sources.

12. Project Implementation

The government has with all good intentions announced several projects, several of them for infrastructure development. However, the review and monitoring mechanisms which are absolutely vital for effective project management have been inadequate, resulting in the PMO getting saddled with this responsibility.

Recommendations

- Induct professionals in key ministries dealing with project formulation and implementation. In particular, professionals at senior positions in the government could be inducted laterally.
- Reform the government procurement system. Procurement on the basis of lowest tenders compromises quality, resulting in poor implementation. Emphasis should be on acquiring best technologies.
- The concept of lifecycle costing must be put into practice.
- Oversight mechanisms, while necessary in a democracy to check corruption and maladroitness, also have the potential of killing initiative as officials become more cautious and delay taking decision. Suitable guidelines should be issued to protect those taking decisions in good faith.
- Carry out a thorough administrative reform of rules and procedures governing the functioning of the bureaucracy. In particular, the methods of recruitment and promotion should be reviewed to lay emphasis on merit and efficiency.
- Decision making is highly centralised. De-centralisation with accountability and transparency should be instituted.
- Review mechanisms should be strengthened. The government may consider inducting personnel, both serving and superannuated, into the review mechanisms. Such personnel could be from government institutions / PSUs and from the corporate sector, with a proven track record of establishing successful businesses and project management with multi- sectoral exposure. As a nation, we lose a large part of this talent to other countries / MNCs abroad.

- The government could encourage mid-level bureaucrats to pursue professional certifications such as PMP as well as organise regular short-term training programmes in agility practices such as SCRUM, XP, LEAN, Kanban etc.

13. Cooperative Federalism

Cooperative Efforts between the Centre and the States will pay high dividends in education policies, poverty alleviation schemes, public private partnership in infrastructure projects, social audit of welfare schemes etc.

Recommendations

- An Interstate Council would be the most important institution to implement the idea of cooperative federalism.
- Apart from the plenary, it will be organized in distinct sub committees to discuss specific issues.
- It will be mandated to meet regularly in different parts of India. Regional issues will be taken up specifically at the meetings of this Council.
- The Interstate Council should be empowered to do periodic evaluation of all essential government programmes with emphasis on 'social audit' as regards their efficacy and outreach, especially to the intended beneficiaries. A start can be made of all major central and centrally sponsored schemes.
- A GST Council template of decision making structures should be set up on sensitive issues involving both centre and states such as in education, health, water, climate change etc.
- Key national security decisions (i.e. border security, coastal security etc.) should be taken in consultation with states. A *Centre-State Institution on National Security* should be setup.

14. Enhancing Governance and Economy

Strengthening governance will strengthen economic performance. A number of steps can be considered.

Recommendations

- Create Super Ministries: Consolidate ministries and departments for holistic and rational decision making and implementation.
- Consolidate public sector banks; privatise one or two; set performance conditions for further capital infusion. Give binding assurances on non-interference in operational decisions.
- Direct RBI to review India's Inflation Targeting Regime. Appoint a committee to evaluate its effectiveness and consider whether a return to the old 'Multiple Indicators Approach' would serve India better.
- Direct RBI to direct banks to price their loans completely autonomously; government needs to allow its banks to compete with each other on loan pricing. Interest rates on loans should not be in accordance with the base rate or on Marginal Cost of Lending Rate.
- Create a culture of accountability from the Union Cabinet to the public; then Secretaries; then further down.
- Order an independent review of India's statistical apparatus; review GDP data and methodology; make both public. Restore credibility.
- Abolish UGC; AICTE - free up higher education. Governments across political hues have advocated a single higher education regulator as this can help clean up the regulatory mess in higher education, do away with overlaps and create an ecosystem conducive to nurturing institutes of excellence.
- The government needs to ensure it has high quality objective feedback on its policies. It should empower NITI Aayog and CEA to speak truth to the government; they need not speak in public about government policies.
- Continue lateral hiring into the civil services; increase the numbers substantially.
- Review the Terms of Reference of the Fifteenth Finance Commission and reduce anxieties regarding infringement of federal autonomy.

- Prioritise public transport; allow integrated tickets between buses and metro rail.
- Work with the Delhi government to introduce electronic road pricing on key arteries during peak hours.
- GST tariff in several sectors needs to be reduced in order to encourage broader compliance and move towards formalisation of the economy.
- With the exception of alcohol, for which a constitutional amendment may be required, all other products, including petrol, diesel and electricity need to be brought in under the ambit of GST.
- The Northeastern states and Uttarakhand, where the consumption is lower presently (GST being a consumption based tax) need special focus & relentless push from the centre to develop their infrastructure, industrial base and economic eco-systems. With most of them also being border states, it is a national security risk if these states continue to lag behind their peers. (The early signs of insurgency in its various forms are already visible in these states).

15. Non-Banking Financial Corporations (NBFCs)

For a country that arguably has the largest number of NBFCs in the world, most lending activities occur in the informal sector, which is a significant systemic risk and needs to be corrected urgently. The health of NBFCs requires far greater scrutiny. Who is monitoring the health of NBFCs? While the RBI has the powers, its bandwidth to effectively discharge its duties towards NBFCs needs to be studied.

A. Asset and Liability Management (ALM) Challenges for NBFCs

Availability of long term borrowing is a key challenge particularly for NBFCs that fund long term assets like housing, real estate, infrastructure etc. This forces NBFCs to rely on short term funds that result in ALM mismatches. Post the liquidity crisis, the credit spreads for NBFCs have increased significantly, impacting the business model of NBFCs.

Recommendations

There is a need to open up alternate sources of long term funding for NBFCs. Providers of long-term funds like Employees Provident Fund Organisation (EPFO), insurance companies etc. can be mandated to invest certain portion of their funds in long term non-convertible debentures (NCDs) of high-rated NBFCs, with minimum capital of say Rs 1,500 crore and a debt to equity ratio of less than 5x.

a) Life Insurance Companies have an exposure to banking, financial services and insurance (BFSI) sector per portfolio that is capped at 25 per cent. So in a balanced fund, this limit is shared with equity exposure. Also the 25 per cent limit includes a whole host of banks and PSUs as well. At the same time, the exposure to government securities (G-secs) is 50 per cent. In an environment where statutory liquidity ratios (SLRs) are coming down, we would suggest a reduction in the Gsec exposure and an increase in the pure debt exposure to NBFCs and Housing Finance Companies (HFCs) subject to some prudential guidelines.

b) Pension funds are another source of long term money. At the moment, the guidelines state investment mix to be:

- 45 – 65 per cent in G-secs / State Development Loans (SDLs) / government guaranteed bonds
- 20 – 45 per cent in corporate bonds (PSU and Private)
- 5 – 10 per cent in equity
- 5 per cent in money markets (optional) (Capped for short term debt & related instruments for composite schemes – up to 10 per cent)
- 5 – 10 per cent in mortgage backed deals (optional) (Capped for asset backed / trust structured investments for composite schemes – up to 5 per cent)

It is recommended that the limit for corporate bonds be increased to 40-45 per cent, which it was earlier, so that more money is available from this segment as well.

c) Banks on the Prompt Corrective Action (PCA) framework of the RBI have liquidity, but are unable to provide this credit to the sector at large due to current regulations. One option is for such PCA banks to lend to healthy PSU banks, who then can lend this to NBFCs and HFCs.

B. Short-term Liquidity Window for NBFCs

In the event of short-term liquidity issues at system levels, NBFCs faces significant challenges. Like banks, even NBFCs should be provided a short-term liquidity window on an ongoing basis.

Recommendations

- Introduce a Repo window like banks, for NBFCs if needed, introduce cash reserve ratio (CRR) at 5 to 10 per cent of total assets.

C. Examination of Housing Finance Companies (HFCs)

One of the reasons for the liquidity crisis was that HFCs were borrowing short and lending long. In addition, under the garb of HFCs, a lot of developer financing was taking place. Mutual funds lend to these HFCs assuming it is highly safe, but these HFCs also have a developer portfolio. Also, there are regulatory arbitrages for

registering under National Housing Bank (NHB) as HFC is compared to operating as NBFC under RBI regulations.

Recommendations

- Split the retail housing finance and wholesale housing (developer) finance business of players into two entities or increase the percentage of retail housing finance in the total portfolio of housing finance companies.
- Retail housing finance companies can grow in line with the government priorities.

D. Roadmap to access public deposits

NBFCs find it difficult to grow beyond a point, unless they can have access to the large deposit base (such as banks).

Recommendations

- Provide NBFCs of a particular size, credit rating and asset quality with the capability to tap into public deposits up to a certain limit based on their net worth, NPA etc. These public deposits can be insured.

E. Liberalise ECB norms for larger NBFCs

Recommendations

- The end-use restriction on the funds raised through issuance of *rupee denominated bonds (RDB)* commonly known as “masala bonds” could be made more liberal so that they can become a means for the NBFCs to raise funds.
- Two key segments that would benefit immensely include project / construction financing and asset reconstruction companies. At present, as per RBI, proceeds from masala bonds can be used for real estate activities other than for development of integrated township / affordable housing projects. As such, several NBFCs do not get this benefit.
- Project / construction finance is an extremely important area of focus for a developing economy such as India. Development of infrastructure requires long term funding due to the large capital expenditure required. Given that several

NBFCs specialise in wholesale funding, access to *external commercial borrowing (ECB)* / RDB for construction finance could significantly aid higher growth and development.

- Asset reconstruction companies provide a focused approach to resolution of non-performing loans by isolating them from the financial system and facilitating development of a distressed assets market.
- Allowing *Asset Reconstruction Companies (ARCs)* to access ECB / RDB for working capital purposes or for NPA acquisition would be a positive. The maximum tenure could be up to five years.
- There can be an overall cap linked to asset size or net worth.

16. 5G

China increasingly uses its cyber capacities for espionage. Dependence on Chinese companies to provide equipment for 5G network will further increase India's vulnerability in cyber warfare, in case of conflict with China. Security of critical national infrastructure, or cyber deterrence would be impossible to maintain without ensuring network security. There is yet no technology that is capable of detecting a back door in telecom equipment. The US has banned Huawei 5G equipment. India, unlike European countries, should be wary of China owing to direct geopolitical conflict and security threats arising from the China-Pakistan nexus.

The higher speed promised by 5G network is needed for autonomous driving and remote surgery. These have limited application in India. Introduction of 5G to provide better entertainment cannot be allowed to compromise national security.

Recommendations

- Upgrading network speed should go hand in hand with building indigenous technological and industrial capacity, to avoid import dependency especially on Chinese equipment and increasing cyber vulnerability. Foreign companies should be encouraged to set up manufacturing capacity in India and provide cost competitive alternatives for Chinese equipment.
- Present regulations like banning Chinese telecommunications equipment in forward areas, are not enough. In fact, this leaves the core areas of civilian, military and corporate governance vulnerable. Physical location is not important for security of telecommunication network.
- We need to put off the decision to deploy 5G technology on a commercial scale until more competition from alternate supply chains is available. Upgrading a dedicated network for the exclusive use of armed forces as required can be done separately.

17. Creation of Jobs through Innovation

The era of lifelong jobs based on skills acquired by means of a onetime school/ college education may be coming to a close. Rapid technological changes have created a mismatch between the jobs and the available skills. It is ironic that though Indians lead some of the biggest innovative companies in the world, India does not rank as a major innovation hub in the world.

The government will need to make a concerted effort towards consistency of policy and transparency of its procedures. In doing so, job creation will happen as a natural by-product of increased entrepreneurship and private sector investment.

Recommendations

- Economic and political stability is (long-term) built on productivity increase rather than job creation only. Use of technology innovation and integration will help realise productivity gains. But labour intensive services should also not be ignored.
- Crash measures have to be taken for reskilling and up-skilling of labour, to work in new industries and with new technology.
- The rural-urban migration needs to be arrested as it increases the numbers of job seekers in urban areas, thus raising unemployment figures. This will require slew of farming and non-farming measures.
- Labour laws should be reformed. They must be fair to both employers and employees.
- Technology integration requires more applied research cooperation between academia and companies. In India's academic system, the faculty is responsible for topics/areas – not for outcomes. However, successful (applied) research today is multi-disciplinary and involves constant interaction with companies.
- There are a plethora of existing technologies in India that can be integrated to open up new sectors for employment generation. For e.g., the government can push big data analytics in agriculture, resulting in great returns for both sectors.

- Technology innovation requires a suitable environment – especially for real-world testing. Focus should also be on strengthening both the start-up culture and venture capitalism in India.
- There is a need to study the successful applied research funding systems of Germany and Switzerland (such as *InnoSuisse*) and try to replicate them in India.

18. Higher Education

The salience of science and technology has increased in every country as globalisation rides on technology. Security and technology are also interlinked. Artificial intelligence, machine learning, big data analytics and robotics are emerging as fundamental technologies that will shape our future. While India has traditionally been strong in science and technology, much more needs to be done. In particular, the quality of the science, technology, engineering and mathematics (STEM) education should be improved.

Recommendations

- Expenditure on higher education must be raised from 1 per cent to 1.5 per cent of GDP.
- Professional development of teachers to address the issues of the process of teaching-learning.
- Undergraduate science courses should include the history and philosophy of science. There has to be a revival of India as a scientific civilisation.
- Introduce B.Tech (vocational) in the conventional B.Tech discipline on a massive scale.
- Introduce skill-based courses through online and app based platforms.
- Setup an institution for popularisation of science that brings together school and college students and private sector through competitions in coding, robotics, hacking etc.
- The infrastructure at engineering and medical colleges, both government and private sector, needs a complete overhaul. Modern day products and technologies are markedly absent from the classrooms and labs.
- A six month mandatory internship, on the shop floor in a factory, or at a project site, would greatly help in exposing final year engineering students to industrial practices and make them more employable.

- Fresh engineers need to be ranked via a competitive exam similar to the GATE conducted by the IITs. This eliminates the bias relating to government / private colleges and family affluence / caste etc.
- The government needs to monitor the academic credentials in medical entrances more stringently. Of the 13.5 lakh students who appeared for NEET last year, a mere 40,000 qualified for admission in the general category. An equal number gained admission on the basis of reservation.
- The fees of medical colleges need to be regulated by an effective national regulator (*Medical Council of India needs to be disbanded*) with quasi-judicial powers. The fee in private medical colleges for a five year MBBS course is now in the range of Rs 80 lakhs to a crore. This can only breed corruption and sub-optimal medical education and medical practices.
- Medical education needs to include modern day technologies in detection and treatment of cancers, heart disease, diabetes, tuberculosis etc., which are increasingly making their presence felt in India.

19. Healthcare

A. Strengthening Preventive and Promotive Healthcare

Under the Ayushman Bharat Yojana launched in 2018, the preventive and promotive components of addressing healthcare holistically, will be delivered through the health and wellness centres.

Recommendations

- Community health centres and district hospitals must be strengthened with an emphasis on primary care and referral mechanisms.
- Issues relating to sanitation, drinking water, nutrition etc. (that have a huge bearing on preventive healthcare) needs to be addressed appropriately and simultaneously through efficient inter-ministerial cooperation.

B. Patient Safety

A Harvard Institute of Health study, recently revealed that in India around 5.2 million medical errors are reported annually, which is totally unacceptable. Though National Accreditation Board for Hospitals and Healthcare Providers (NABH) accreditation has succeeded in bringing into focus the concept of patient safety, there is a long way to go.

Recommendations

- Regulations must be made simpler focusing on patient safety, and effectively implemented.
- The Patient Safety Implementation Framework [2018-25] of the Ministry of Health and Family Welfare (MOHFW) needs to be promoted through the government, associations and NGOs.
- Likewise the standards on electronic medical records by the MOHFW should also be implemented on a priority basis.

C. Reforms in Medical Education

The quality of healthcare in our country is a derivative of the quality of medical education. There is a huge shortage of doctors and more so of specialists. India has

currently half of the recommended figure of 23-healthcare workforce per 10,000 population and about 1 doctor per 1600 population against World Health Organisation (WHO) norm of 1 doctor per 1000.

Recommendations

- It is recommended that all hospitals with 300 beds and above be upgraded to medical colleges for undergraduate training.
- The number of post-graduate seats should be enhanced in the National Board of Examinations and MCI affiliated institutions, with quality closely monitored.
- Further diploma courses which help towards training intermediate specialists must be encouraged. Fellowships being offered by the various speciality associations and other institutions of excellence could be duly recognized.
- Reforms in the nursing and the allied health sectors need to be carried out to ensure that India becomes a global supplier of healthcare workers, while meeting its own requirements.
- The National Education Policy guidelines by Dr Kasturi Rangan with regard to medical education provide excellent recommendations to be followed.

D. Infrastructure

India has currently less than 1-bed per 1000-population, against the suggested WHO norm of 3.5- beds per 1000. We need to augment it in the public and private sectors. Further there is gross geographical inequality as most tertiary care beds are confined within Tier-I/II cities, making healthcare inaccessible to large majority of population.

Recommendations

- The government needs to proactively engage with private sector to start 100 bedded hospitals in Tier-III cities.
- It is very important that government hospitals be strengthened. The present ratio of government-to-private institutions needs to be reversed, so that at least 50 per cent of all care in the country is delivered by the government.

E. Restructuring of Government Health Insurance Schemes

Government has launched an ambitious scheme by way of PMJAY/ Ayushman Bharat Yojana towards achieving universal health coverage.

Recommendations

- As 85 per cent of tertiary care beds in the country are with the private sector, involvement of private sector is a must for success of any health insurance scheme.
- There is a huge discrepancy in fixing rates of medical procedures under the schemes. The government needs to undertake costing exercise of medical procedures in various settings, like category of city and level of specialization.
- Considering that no new investment is coming into hospital industry and that many of the hospitals are closing down, it is necessary that we address financial sustainability issues confronting hospitals, immediately and appropriately in order to provide universal health coverage for all.

20. Civil Aviation

The UDAN initiative of the previous government had been welcomed by the common man under which a significant number of small airports were commissioned. However, these airports remain under-served, which could also be on account of the poor health of the airlines sector.

Recommendations

- Increasing competition in the domestic airlines industry may help to regulate fares, without needing frequent government intervention.

21. Environment and Climate Change

Climate change is emerging as an existential threat for the planet. The future of 1.3 billion people is at stake. India cannot remain immune from the adverse impact of sea-level rise, coastal erosion, extreme weather events, melting of glaciers, long spells of drought, reduction in agricultural productivity etc. The developed countries are indifferent to the plight of developing countries. The issue of climate change has been diluted in international negotiations. India will have to depend upon its own efforts to deal with the repercussions of climate change. At the same time, it will be pressurised to reduce its emissions by cutting down on fossil fuels. India has already undertaken several missions under the National Climate Change Mission.

Recommendations

- Amend the Constitution to insert "Environment and Climate Change" as an item in the Union list.
- Develop indigenous capacity in clean technologies so as to avoid dependence on Western countries.
- Improve efficiency in the industrial, agricultural and transport sectors.
- Set up a climate change fund to support R&D in climate change and encourage start-ups in clean energy.
- Give preference to clean energies like nuclear and hydro energy, in addition to renewable energy. This could be done by treating nuclear energy at par with renewable energy.
- Launch a national mission for restoration of wetland and wastelands.
- Infrastructure development should not be at the cost of environment and ecology. Incorporate ecology in the planning of infrastructure.
- Ensure a proper balance between development and environment.
- Address water, air and land pollution issues.
- Complete the climate change missions, including renewable energy mission, on time.
- Create awareness about climate change.

22. Labour and Social Security

India currently lacks a social security network to assist a person / family in the event of job loss.

Recommendations

- For a start, social security could be ensured by providing insurance against job loss, (provided the service has not been terminated by the employer for criminal reasons) with every employee in the formal sector paying a monthly premium. In the event of a job loss, 75 per cent of the person's last drawn compensation, could be paid via the insurance corpus for a period of six months.
- By initially experimenting with the formal sector, there will be a likely demand pull in the informal sector to move towards the formal economy, at greater speed.
- Implementation of fixed term contract laws in all states, so that private sector investments pick up and the revised labour codes are uniformly implemented in all states.

23. Infrastructure Development

A. Infrastructure Development (EPC): International

Recommendations

- The EXIM Bank / MEA / Finance Ministry need to examine together if the Strategic Partnership model (envisioned for the defence sector) can also be applied to overseas engineering, procurement and construction (EPC) projects, where government of India has a strategic interest.

B. Infrastructure Development – Domestic:

Recommendations

- The cycle from tender publication to the award of EPC contracts needs to be drastically reduced.
- The mobilisation advance provided by PSUs / government departments to winning bidders should be optional, and at the request of the bidder. (The advance often ends up inflating project costs, due to the high interests being charged by the PSU).
- Pre-qualification criteria need to be sufficiently tightened to allow only serious players with relevant experience to bid for large contracts.

C. Roads, Highways and Central Motor Vehicle Rules

Recommendations

- Key projects that need to be fast tracked include
 - *Bharatmala Pariyojana Phase-I*: complete 24,800-km by 2021-22.
 - Special Accelerated Road Development Programme for the Northeastern region.
 - *Chardham Mahamarg Vikas Pariyojna*.
 - Re-building of roads in other hill states.
 - Connecting interior villages with the respective national / state highways.

- Presently single lane national / state highways constitute approximately 26 per cent of the total highway length in the country. This needs to be brought down to less than 10 per cent via road widening.
- Land acquisition needs to be fast tracked.
- Cycle times from tender publication to award of contract needs to be reduced to less than 30 days.
- Contract enforcement needs to be tightened.
- The Fast Tag system of toll payment needs to be uniform across the country, on all toll roads.
- **Maintenance budget of highways / condition:** The present budget itself appears to be 40 to 50 per cent of the actual requirement, resulting in a situation that only the “highly visible” roads receive significant maintenance, while the interior roads are often neglected.
- Severe penalties need to be imposed and rigidly enforced for obstructing traffic flow on national / state highways and toll roads, for reasons other than accidents.
- India lacks a quick recovery system in the event of a vehicle breakdown. In cities and urban clusters, it is common to find traffic choked on account of a broken down vehicle on even a single lane on a major/ arterial road. The ANWB operates an effective vehicle recovery system in the Netherlands. This system needs to be studied and suitably implemented in phases across the country.
- **Road worthiness of vehicles:** European countries have a system for annually certifying the roadworthiness of every vehicle at its authorised workshops across the country. India will need to put in place similar a system to ensure road and vehicle discipline, given the very large number of vehicles on road.
- **Pedestrian traffic:** Usually when highways are constructed, pedestrian crossings are not sufficiently catered for. Foot over-bridges and underpasses, especially near villages / habitation along highways, need to be included and constructed at the design stage itself.
- **Planning for the future:** Autonomous (self-driving) vehicles are being tested in developed countries and it is only a matter of time before these become a commercial reality. Rather than resisting this technological change, fearing

perceived job losses amongst drivers / taxi unions, India needs to embrace the change and in fact, lead the world in its implementation.

- Planning for autonomous vehicles will require intelligent transport management systems to be installed along India's roads – this aspect needs to be factored in.

D. Metros and Public Transportation Systems

Public transportation system in India needs vast improvement in view of rapid pace of urbanisation, the need to decongest roads and reduce carbon dioxide emissions.

Recommendations

- Metros are needed in all State capitals and key commercial cities in the country – approximately 40 to 50 cities.
- Multi modal public transportation ticketing and connectivity needs to be implemented in metros and large cities.
- Urban agglomerates such as the NCT of Delhi need to recognise the satellite towns of Muradnagar, Modinagar etc. upto Meerut, and connect them via Metro. . This is also applicable to Gurgaon – Bhiwadi; Mumbai – Navi Mumbai; Chennai – Vellore etc.

E. Railways

Railways are the lifeline of India's economy, connectivity and progress. The railway infrastructure is old and needs modernisation and upgradation. Emphasis should also be placed on modernising the regular working and service of railways.

Recommendations

- Completion of DFC by FY 20- land acquisition issues persist.
- DFC feeder routes to be completed simultaneously.
- Mumbai- Ahmedabad High Speed Rail needs to be completed on schedule.
- Speed enhancement of freight trains from current average 24 kmph to at least 50 to 60 kmph, average. Significant improvement needed in handling, loading and unloading facilities.

- Expansion of the rail network into under-served areas. Himachal and Uttarakhand are prime candidates for such expansion in the immediate future.

F. Ports

India's port infrastructure needs to be modernised to give boost to international trade

Recommendations

- Projects under the *Sagarmala* programme need to be expedited.
- Dredging in India needs to be opened up to allow international participation in the dredging of major commercial ports to increase draft depth.

Chabahar

Chabahar is a strategically important project for India. It is a key pillar of India's bilateral relations with Iran. Unfortunately, the implementation of the project has been slow. There is also a lurking danger that China may step into a project which is important for us.

- Despite the Chabahar contract having been signed in the presence of the PM in 2016, the main 10 year contract is still not operational. Neither any equipment under \$85 million grant committed by GOI has reached the port, nor has \$150 million credit promised by GOI, been provided to the Iranian side. As Chabahar has been exempted from US sanctions, it should be possible to provide equipment and credit committed by GOI at the earliest.
- In the absence of a long term contract, the Indian presence in Chabahar is limited to an interim contract. This is welcome, but not sufficient at a time when the Afghan situation is worsening and the Chinese presence rising in Gwadar.
- Till the promised equipment is provided, the existing arrangement for running the interim contract should not be disturbed. Replacing existing contractors who are running interim operations with MOM contractors for the 10 year contract, will only disturb the present arrangement without operationalising the long term contract, which requires the equipment and credit, promised by GOI.
- Chabahar is a strategic project designed to reduce Afghanistan's dependence on Karachi port. The government's objective is not to divert traffic from

neighbouring Iranian ports to Chabahar but to bring in additional traffic. This has to be coupled with measures to increase transit traffic to Afghanistan.

- Regular shipping services should be initiated between Indian ports and Chabahar. The existing shipping service makes sea-freight to Chabahar more costly than freight to Bandar Abbas, despite Chabahar being much closer to India.
- Till such time, as the railway from Chabahar to Zahedan is completed, as promised during PM's visit, road connectivity between Chabahar and Zahedan has to be improved. This is essential for making Chabahar, the port of transit to Afghanistan, which is the main reason for GOI's interest in the port, along with the US exemption.
- There is a need for the full evaluation of the progress of the Chabahar project by a PMO committee to identify and remove the hurdles in the way of the operationalisation of the main contract and thus increase the transit traffic to Afghanistan.

G. Role of Artificial Intelligence, Drones in infrastructure development

Recommendations

- Use of low flight drones for surveying, mapping and O&M needs to be permitted by government for infrastructure development, after due security check.
- Centres of excellence need to be established via industry / industry forums, with government grants if necessary, and tie-ups with research labs in Europe / US, for India to remain competitive with neighbouring countries in terms of infrastructure development.

24. Shipping

India aims to expand its navy from 140 to 200 ships to protect its interests and counter the growing Chinese influence in the Indian Ocean. To achieve this build-up without excessively straining its limited resources, indigenous ship-building industry has to be encouraged. This will be in keeping with PM's Make in India programme and also generate employment. India like China, has the advantage of large market, which is necessary to justify the capital investment needed for ship-building. However, to use this advantage, the government must entail new policies.

The Indian fleet carried 42 per cent of the trade till the early 80s. This has shrunk to eight per cent currently. This is because of the erosion of the policy of "imports on free on board (FOB) basis and exports on cost, insurance, and freight (CIF) basis". It has resulted in an outgo of more than \$50 billion per annum in terms of shipping fee. This amount is sufficient for both expanding the fleet and strengthening ship-building industry.

Recommendations

- Reaffirming and strictly implementing the Right of First Refusal will strengthen Indian shipping. This does not mean price preference; Indian shipping companies will have to match the price offered by foreign shipping companies.
- Access to cargo is linked to the progressive registering of ships under Indian flag. This would be done without discriminating between Indian and foreign-owned ships. This would ensure Indian control on the merchant fleet for use during emergency and for bringing their operations under Indian government policy
- Progressively requiring a greater percentage of Indian flagged vessels to be built in India.
- Indian shipping companies and ship building industry need specialised long term financing, at competitive rates. A maritime development fund should be created for this purpose.

- There is a need to provide Indian shipping and ship-building industry, a level playing field through fiscal measures such as removal of integrated goods and services tax (IGST) on ships, which cannot be made in India currently.
- Port charges will have to be brought down to ensure that Indian ports are competitive. At present, port charges of Jawaharlal Nehru Port (JNPT), lowest in India are four to seven times higher than those of the Colombo port.
- According to the UNCTAD 2017 report, transport and insurance costs are much higher in India than in developed countries (15 per cent of GDP as against 11 per cent of GDP). Unless this differential is reduced, Indian companies cannot become part of the international supply chain.
- India needs a new initiative for shipping and ship-building to complement the *Sagarmala* project, which is for the port-based development of coastal regions.

25. Steel Industry - An Engine of Economic Growth

The key drivers of economic development whether the consumer sector, manufacturing, construction or infrastructure are all heavily dependent on steel. The National Steel Policy (2017) envisions India's crude steel capacity increasing from 130 million tons (MT) in 2019 to 300 MT by 2030-31; with per-capita consumption growing in tandem from 70 kg to 160 kg. With its strong multiplier effects, it is imperative that the government facilitate growth of the sector and help the manufacturing sector achieve its target of contributing 25 per cent of the country's GDP.

The Indian mining industry is probably one of the most regulated sectors in the world. Mining lessees have to comply with several statutes.

Recommendations

- Introduce a system of allocating mineral concessions to private sector producers in line with the allocation process for PSUs i.e., with a fixed allocation commitment on per ton basis.
- Mines must wait five to seven years for the FC, when the stipulated timelines mandate that the grant be given in 330 days and 520 days respectively.
- **Facilitating land acquisition**– For large projects, the government should consider relaxing some of the stringent conditions under The Right to Fair Compensation & Transparency in Land Acquisition, Rehabilitation & Resettlement Act, 2013, such as the social impact assessment & compulsory mandate of consent from at least 80 per cent of the landowners along with increasing the compensation for land.
- **Developing a seamless multi-modal logistics system**– Last mile connectivity, whether inbound or outbound, remains a huge concern for operational efficiency.
- **Rationalising Mining Taxation**– Whereas for most mineral rich countries the effective tax on mining is around 40 – 45 per cent, the same for India works out to 65 per cent after including the DMF (District Mineral Foundation) and NMET (National Mineral Exploration Trust) levies.

- **Encouraging sustainable development**– To promote 100 per cent recyclability, the government should incentivise the use of industrial by-products by reducing the tax burden (e.g., reduce the 18 per cent GST on LD slag in line with GST on blast furnace slag and fly ash of 5 per cent)
- **Amendment of Section 21(5) of the MMDR Act – Sec 21(5)** is intended to deal with mining cases without a valid mining lease or cases of wilful mining outside the stipulated leasehold area. Yet a Supreme Court judgment in 2017 required even minor operational deviations within a valid mining leasehold to be categorised as ‘mining without lawful authority’ and to therefore attract the maximum penalty (100 per cent value of the mineral extracted). It is imperative that violations of other statutes like the Environmental Protection and FC Acts need to be dealt under the provisions of the respective statutes without applying Sec 21(5) of the MMDR Act. This is necessary to prevent a situation wherein the state governments can start issuing demand notices for alleged deviations / illegal mining citing the SC judgment.
- **Demand creation**—As per the National Steel Policy (2017) the aim is to escalate production of crude steel to 300 MT but the biggest challenge for this, would be creating the necessary demand.
- To **promote use of steel** and ensure that the Industry is not at an unfair disadvantage, government can consider the following policy measures:
 - Consider Life Cycle Assessment while evaluating a project
 - Create an Export Promotion Council for Steel
 - Curbing of non-essential imports
 - Free Trade Agreements (e.g. RCEP10) – Keep Chapters 72 & 73 on the negative list; Negotiate stringent rules with regard to origin and longer staging periods; Have stronger bilateral safeguard measures in place.

26. Disaster Management

It is an accepted norm in disaster management, that no development can be sustainable unless disaster mitigation is ingrained into the developmental project. This is because any major disaster puts the country back ten years on the economic front, leave alone the loss to life and property.

The tsunami in 2004 caused havoc in the Indian sub-continent. However, after the INCOIS was setup in Hyderabad, India today has a state-of-the-art Tsunami Early Warning System. It caters to all the neighbouring countries, including West Asia and South Asia, providing one or two hours advance prediction about the precise point of landfall. Thus, there has been qualitative improvement in Indian preparedness as far as cyclones and tsunamis are concerned.

An effort was made to promote regional cooperation on disaster management with the SAARC countries on the pattern of ASEAN AHA Centre (ASEAN Coordinating Centre for Humanitarian Assistance). But that fell through.

Recommendations

- India is already planning to set up an international standard training institution for the National Disaster Response Force (NDRF) at Nagpur. This new training institution should have provision for training the trainers of BIMSTEC countries, using the same training equipment and methodology to ensure synergy at the time of a major disaster.
- The BIMSTEC Weather and Climate Change Centre at Noida should be upgraded to a BIMSTEC Disaster Management and Climate Change Centre. This upgraded centre should be a think tank on the lines of the ASEAN AHA Centre:
 - Firstly deliberate on the regional preparedness and resilience of each country;
 - Secondly, synergise efforts to institutionalise regional cooperation among member countries;

- Thirdly, exchange and share best practices among the BIMSTEC member countries;
 - Fourthly, ensure effective activation of the inter-governmental disaster management process and;
 - Lastly, lay down a structured protocol of the 'doables' of member countries as part of preparedness.
- To put in place a comprehensive 'National Earthquake Risk Mitigation Project' (NERMP) for capacity building of engineers, architects and masons in a time bound manner.
 - To put in place an effective techno-legal regime to ensure strict adherence to the National Building Code and building by laws. The National Building Code, which is an advisory may be made mandatory with appropriate modifications. There is a need to have a techno-legal regime for rural areas as well.
 - There is a need to adopt innovative construction technologies that are adaptable, sustainable, and cost-effective, and can be used for creating large scale livable and affordable housing at rapid pace.
 - Disaster resilience should necessarily be inbuilt in all infrastructure projects as a part of achieving Sustainable Development Goals. There is a need to integrate seismic hazard reduction as a part of the national development plan.
 - Disaster Risk Reduction (DRR) activities may be brought within the ambit of the CSR activities by the Ministry of Corporate Affairs.
 - A National Disaster Management Authority (NDMA) proposal to establish a 'National Mitigation Reserve' to cater to 2.5 lakh people in the plains and one lakh in the mountains in the aftermath of a major disaster, needs to be approved. It is proposed to have rolling reserves to be automatically recouped after use from central government funds allocated to a state during disaster.
 - The seismic hazard map needs to be revised (it was last revised in 2002, according to the NDMA).
 - Considering the likelihood of hill towns getting cut off by earthquake induced landslides, modify one major road that connects with the rest of the country and ensure that one airport remains functional.

- There is a need to capture the significant advancements in rehabilitation techniques. With proper analysis methods (linear/ non-linear) and performance-based assessment, cost effective techniques could be identified.
- A multi-sectoral plan should include networking of hospitals for mass casualty management.

About the VIVEKANANDA INTERNATIONAL FOUNDATION

The Vivekananda International Foundation is an independent non-partisan institution that conducts research and analysis on domestic and international issues, and offers a platform for dialogue and conflict resolution. Some of India's leading practitioners from the fields of security, military, diplomacy, government, academia and media fields have come together to generate ideas and stimulate action on national security issues.

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3, San Martin Marg, Chanakyapuri, New Delhi – 110021
Phone: +91-11-24121764, 24106698
Email: info@vifindia.org, Website: <http://www.vifindia.org>
Follow us on [twitter@vifindia](https://twitter.com/vifindia)