STRATEGY FOR NEW INDIA @75 – PART 1

REPORT BY NITI AAYOG
Introduction:

As India completes 75 years of Independence in 2022, the government’s premier policy think-tank National Institution for Transforming India (NITI) Aayog, on December 19, 2018 released ‘Strategy for New India @75’.

National Strategy for New India defines clear objectives for 2022-23. The Strategy was released by the Union Finance Minister Arun Jaitley. It is an attempt to bring innovation, technology, enterprise and efficient management together, at the core of policy formulation and implementation.

The strategy is divided into four main sections:

Sections

Drivers Infrastructure Inclusion Governance
The section ‘Drivers’ is further divided into 11 sub-sections-

1. Growth
2. Employment and labor reforms
3. Science, Technology and Innovation
4. Travel. Tourism and Hospitality
5. Doubling Farmer’s income (I): modernizing Agriculture
6. Doubling Farmer’s income (II): policy and Governance
7. Doubling Farmer’s income (III): value chain and rural infrastructure
8. Housing for all
9. Industry with ‘Make in India’
10. Financial Inclusion
11. Minerals

1- GROWTH:

Objectives:
- Accelerate GDP (Gross Domestic Product) growth to 8 per cent by 2022-23 from 6.7% in 2017-18.
- To grow in an inclusive (overall), sustained (keep going process), clean (fair) and formalized (definite shape) manner.
- Make the country a $4-trillion economy by 2022-23 from $2.7 trillion in 2017-18.
• Raise investment rate from 29% to 36% of GDP.
• Increase exports of goods and services from USD 478 billion in 2017-18 to USD 800 billion by 2022-23.

**Current situation:**

• India is the fastest growing major economy in the world in the medium term.
• The share of manufacturing in India’s GDP is low relative to other low and middle-income countries.
• Growth has been highest in capital intensive sectors like automobiles and pharmaceuticals in spite of large scale labour-intensive manufacturing. (while India has inherent labour and skill cost advantage).
• Inflation rate is low and stable.
• Fiscal deficit is declining.
• In 2016-17 the share of government (central and state) capital expenditure in total budget expenditure as 16.2% and their contribution to fixed capital formation was approx. 4% of GDP.
• India’s tax-GDP ratio is very low as compared to the other countries as shown in the table:

<table>
<thead>
<tr>
<th>Tax – GDP ratio (in %)</th>
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<tbody>
<tr>
<td>India</td>
</tr>
<tr>
<td>OECD</td>
</tr>
<tr>
<td>Brazil</td>
</tr>
<tr>
<td>South – Africa</td>
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<tr>
<td>China</td>
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</tbody>
</table>

**Constraints:**

• Overall growth can be accelerated by a number of measures across different policy areas, which are focused in this strategy.
WAY FORWARD:

To improve the investment:

- To raise the rate of investment, boosting both private and public sector is required.
- India should aim to increase its tax-GDP ratio to at least 22% of GDP from 17% by 22-23. For this, efforts are needed to-
  1. rationalize both corporate and personal income tax.
  2. easier the tax process.
  3. improve administration of GST to increase tax collection.
- Demonetization and GST will be helpful to achieve this target.
- Government’s contribution to fixed capital formation is needed to increase to at least 7% of GDP by 2022-23 from 4% in 2016-17.
- Areas wherein higher public investment will be easily absorbed are - housing and infrastructure.
- To attract foreign direct investment, the govt. may consider the liberalizing FDI norms across sectors.
- The govt. should continue to exit non-strategic central public sector enterprises (CPSEs) to attract private investment.
- Public-private partnership (PPP) mechanism, suggested by Kelkar committee is needed to be encouraged to promote private investment.

Macroeconomic stability through prudent fiscal and monetary policies:

- to reduce the high interest cost burden on the government budget, the govt. has targeted a gradual lowering of the govt. debt-to-GDP ratio.
- The existing Fiscal Responsibility and Budget Management (FRBM) has been built in the form of ‘escape and buoyancy’ clause which emphasize on the need of govt. flexibility while setting the annual targets.
- Expenditures which build human capital like health and education sectors, should be excluded from estimates of revenue expenditure.
- Inflation needs to be contained within the stated target range of 2 % to 6%.

Efficient financial intermediation:

- The Gujarat International Finance and Tech city (GIFT) (onshore trading in rupees and other derivatives), should be leveraged to push the financial sector liberalization.
- India’s long - term investment needs enable alternative (to banks) sources of credit.
• There is a need to deepen financial markets with:
  1. easier availability of capital
  2. greater use of financial markets to channel savings

**Focus on exports and manufacturing:**

• Import tariffs should come with measures to raise productivity.
• Power tariff structures may be rationalized.
• The government has recently established a dedicated fund of INR 5,000 crore for enhancing 12 “champion service sectors” to help in growth of services and other sectors.
• Strengthen the governance and technical capabilities of Export Promotion Councils (EPCs) by subjecting them to a well-defined, performance - based evaluation and closing down or re-structure the unable EPCs.
• Explore closer economic integration within Cambodia, Laos, Myanmar and Vietnam, using the BBIN and BIMSTEC framework.
  **BBIN** - (Bangladesh, Bhutan, India, Nepal)
  **BIMSTEC** – (The Bay of Bengal Initiative for Multi - Sectoral Technical and Economic Cooperation).
• All state govt. should speedily implement fixed term employment (FTE) to promote flexibility in labour provisions across sectors.
• By 2022-23 we should complete projects such as DMIC (Delhi - Mumbai Industrial Corridor) and freight corridors which reduce delivery time and improve connectivity.
2. Employment and labour reforms:

OBJECTIVES:
- Complete codification of all central labour laws into four codes by 2019, namely-
  1. Law on wages
  2. Law on safety and working conditions
  3. Law on industrial relations
  4. Law on social security and welfare
- Increase female labour force participation to at least 30% by 2022-23.
- Encourage increased formalization of the labour force by reforming labour laws, working condition, fair wages and social security.
- Data Collection, storage and Dissemination (Importance of data collection is discussed in way forward).

CURRENT SITUATION:
- Of India’s total workforce of about 52 crores, Agriculture employed nearly 49% in India while in other countries is as follows-

![Figure 2.1: Share of workforce employed in agriculture](image-url)
• Distribution of work force in the different sectors and their contribution in the GVA (gross value added) in India is as follows:

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Workforce (in %)</th>
<th>Contribution in GVA (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>49</td>
<td>15</td>
</tr>
<tr>
<td>Industries</td>
<td>13.7</td>
<td>23</td>
</tr>
<tr>
<td>Services</td>
<td>37.5</td>
<td>62</td>
</tr>
</tbody>
</table>

• Due to migration of workers from agriculture to other sectors and addition of new entrants to labour force (called net addition to workforce), the Indian economy will need to generate nearly 70 lakhs jobs annually.
• India’s informal sector employs approximately 85% of all workers.
• The female labour force participation rate in India was 23.7% in 2011-12 compared to 61% in China.
• Of the four codes, the one on wages has been introduced in the Lok Sabha and is under examination.
• Several schemes like ‘Mahatma Gandhi National Rural Employment Scheme’, ‘Mudra Yojana’, ‘Prime Minister’s Employment Generation Programme’ and ‘Pradhan Mantri Rojgar Protsahan Yojana’ have been put in place to help generate employment.

CONSTRAINTS:
• **Productivity**- A large share of India’s workforce is employed in informal and unorganized sectors where wages are very low and these sectors are not covered by labour regulations and social security.
• **Employment Data**- We currently lack timely and periodic estimate of the work force.
• **Skills**- Only 47% of highly educated are employable
• **Social Security**- India has a dualistic labour market i.e. a large part of the labour market is unorganized in nature, not covered under social security.

WAY FORWARD:
• **Enhance skills and apprenticeship programme**: 1. The LMIS (Labour Market Information System) should be made function urgently.
  2. Ensure the wider use of skill training programme and apprenticeships for both male and female.

• **Enhance female labour force participation:**
Ensure the implementation of acts like maternity benefit (amendment) act 2017, sexual harassment of women at workplace act in formal as well as informal sectors.

- **Improve data collection on employment**: by ensuring that data collection survey is completed as per schedule and by increasing the use of administrative data to track regularly the state of employment.

- **Labour law reforms**: 1. Strengthen labour courts to resolve disputes quickly, efficiently, fairly and at low cost.
  2. Expand the Minimum Wages Act, 1948 to cover all jobs.
  3. Enforce the payment of wages through cheque or Aadhar enabled payments for all.
  4. Improve working conditions and social security by targeted programme, compulsory registration of all establishment and by allowing online complaints.
  5. Complete the codification of labour laws at the earliest to simplify and modify labour laws and to improve working conditions.
3-Science, Technology and Innovation:

OBJECTIVES:
- India should be among the top **50 countries** in the Global Innovation Index by 2022-23.
- 5 of our scientific research institutions should be amongst the top 100 in the world.
- India should aim to spend **at least 2% of GDP on R&D**.

CURRENT SITUATION:
- India policy makers have taken several initiatives to promote science, technology and innovation which is shown in the figure:
  - 1971: Department of Science and Technology established, Promotes basic research via:
    - Research and funding schemes through Science and Engineering Research Board (SERB) and other in-house programmes
    - Autonomous Institutions (AIs) under DST were set up
  - 2003: Science and Technology Policy brought together Science and Technology
  - 2006: National Innovation Foundation was set up to fund grassroots innovations
  - 2013: Science, Technology and Innovation (STI) Policy formulated.
  - 2016: Atal Innovation Mission launched

- We currently have more than 1100 R & D centers set up by multinational companies (MNCs) such as IBM, Google, Microsoft, Intel, Lupin, wockhardt etc.
- Examples of India’s progress in strategic and defense technologies are:
  - Development of Brahmos
  - Advanced air defense supersonic interceptor missiles
  - Diverse missile and rocket systems
  - Remotely piloted vehicles
  - Light combat aircraft etc.
- Examples of India’s achievement in space technology are:
  - Upgrading from SLV to ASLV
  - Upgrading from PSLV to GSLV
The first moon orbiter project Chandrayan-1
Mars orbiter Mission
Launch of 104 satellites

- India is now **third largest** country in terms of the number of startups. Government has set up the Atal innovation mission (AIM) to transform radically to encourage innovation, entrepreneurship and start up system.
- Contribution of the Indian scientists in the ground-breaking work are:
  - 37 Indian scientists play the key role in the discovery of ‘gravitational waves' that received the Nobel prize in 2017.
  - In the discovery of a neutron star merger at Laser interferometer gravitational wave observatory (LIGO, USA).

**CONSTRAINTS:**
- R&D expenditure is very low in India with 0.7% of GDP while in other countries it is:

<table>
<thead>
<tr>
<th>Country</th>
<th>R&amp;D expenditure (% of GDP)</th>
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<tbody>
<tr>
<td>India</td>
<td>0.7</td>
</tr>
<tr>
<td>China</td>
<td>2</td>
</tr>
<tr>
<td>Brazil</td>
<td>1.2</td>
</tr>
<tr>
<td>Israel</td>
<td>4.3</td>
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</table>

- Share of the private sector in R&D investment in India is **only 30%** while in advanced countries it is **65% to 75%**.
- The number of scientific R&D professionals in India is **218 per million** population while in **China it is 1113** and in **USA it is 4019**.
- The link between research, higher education and industry is weak and nascent in India.
- The lack of career opportunities in basic sciences leads to the diversion of potential researchers to the other sectors.
- ‘lab to land’ time is too long.
- Frequent violation of **Preferential Market Access** (PMA) is an issue leading to large-scale imports of foreign products and services.
- Start-ups do not get much needed support by the government as well as public procurement.
- There has been poor progress in the affordable technologies for rural areas such as in agriculture, micro-irrigation, agro-processing.

**THE WAY FORWARD:**
• An **empowered body** is needed to steer holistically the management of science in the country.
• A non-lapsable “**District Innovation Fund**” in each district may be created to promote grass root innovations.
• **AIM** has already launched **Atal New India Challenges** to create products from technologies.
• AIM has set up over **1000 Atal Tinkering Labs** (ATLs) around the country. It is aimed to take this number to at least 5,000 by 2019 and 10,000 by 2020.
• Foreign collaborators, consultants, visiting faculty, adjunct scientists, etc., need to be involved in pursuing R&D in the emerging areas.
• AICs (**Atal Incubation Centers**) is expected that more than 100 world-class incubation centers will be up and running by 2020.
• To promote ‘**Make In India**’ initiative, in all government procurements, international competitive bidding for both products and services should be resorted to only when Indian manufacturers are unable to supply products/services of comparable international quality.
• Value addition centers may be set up in each of the institutions such as **CSIR, DRDO, BARC, ICMR and ISRO** to develop their marketing skills.
• Public funded research institutions should focus to the development of socially relevant technologies in areas such as clean drinking water, sanitation, energy, affordable healthcare, organic farming, etc. These technologies have large potential for commercialization.
• Quarterly workshops may be organized for creating awareness about the **DIPP’s Public Procurement Order 2017** (which aims to promote Make in India products/services).
4- Travel, Tourism and Hospitality:

OBJECTIVES:
- Increase India’s share in global international tourist arrivals from 1.18 per cent to 3 per cent.
- Increase the number of foreign tourist arrivals from 8.8 million to 12 million.
- Double the number of domestic tourist visits, from 1,614 million in 2016 to 3,200 million visits.

CURRENT SITUATION:

Contribution of travel and tourism in India, 2016

- India moved up 12 places from 52nd to 40th in the World Economic Forum’s Travel and Tourism Competitiveness Index in 2017.
- India has 35 world heritage sites, 10 bio-geographical zones and 26 biotic provinces, that’s why it has significant potential to increase the number of tourist arrivals.
- Contribution in national income:
  - Foreign Exchange Earning of USD 2017 - 18 = 22.92 billion
  - Foreign Direct Investment (FDI) in 2016-17 = 0.9 billion
  - Share in total FDI from April 2000 to October 2017 – 3%
  - Share in employment:
    - Direct jobs – 5.8 % of India’s total employment
    - Indirect jobs- 3.5 % of India’s total employment
    - Total share – 9.3 %
  - Government has undertaken several measures to facilitate tourism, such as:
    - Introduced tourist visa on arrival
    - the “e-Tourist Visa” for tourists from 150 countries
o a round-the-clock, toll-free tourist helpline in 12 international languages
o develop islands as tourist destinations
o improve connectivity and develop niche offerings such as medical tourism and pilgrimage-based tourism.

CONSTRAINTS:
entry/exit:
o low awareness about e-visa facility
o process of applying for a visa still cumbersome.
o number of repeat visits and accompanying persons are limited under medical-visa.

Infrastructure and connectivity:
o Deficiencies in infrastructure and inadequate connectivity to some heritage sites.
o India has very few various tourist circuits or segments such as the Golden Triangle (Delhi- Agra-Jaipur).

Promotion and marketing:
o online marketing/branding remains limited
o campaigns are not coordinated
o Tourist information centers are poorly managed

Skills:
o limited number of multi-lingual trained guides
o limited understanding of the benefits and responsibilities associated with tourist growth

THE WAY FORWARD:
Entry/exit for tourism:
o Increase e-visa awareness globally
o launch an e-visa regime to attract clientele from the Meetings, Incentives, Conferences and Exhibitions (MICE) market
o validity period of e-visas may be increased to 10 years.
o Simplify the process of registering online with the Foreigner Regional Registration Offices (FRRO).
o Increase the number of visits (currently 3 visits in a year) and accompanying persons (currently 2 persons) under e-medical visa.
Infrastructure and connectivity:
  o Schemes are already undertaking the development or maintenance of heritage sites such as: Swadesh Darshan and National Mission on Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive (PRASHAD) schemes
  o Conservation and development of all heritage sites should be undertaken and completed through either government funding or through NGOs/Corporate Social Responsibility (CSR) activities.
  o Improve flight connectivity by the Ministry of Civil Aviation’s Regional Connectivity Scheme – UDAN (RCS-UDAN).

Building tourist circuits or segments:
  o Develop the marine leisure industry
  o Promote river cruise tourism by making the entire stretch of National Waterway No. 1, the River Ganga, from Allahabad to the Farakkah Barrage, fully navigable.
  o Build deep-water marinas in the coastal areas
  o fully utilize the Swadesh Darshan and existing schemes to promote India’s Buddhist circuit
  o Develop 100 “Smart Tourist Destination Sites”
  o Develop 100 “Model Swachh Tourist Destinations”
  o Develop at least five “Beach Destinations” as Develop as exclusive tourism zones.
  o Develop at least five “World Class Museums”
  o Plan and develop five globally competitive and world-class national circuits from entry to exit.

Skill Development:
  o expanding the number of implementing agencies for delivering the Ministry of Tourism’s “Hunar Se Rozgar Tak” initiative to create employable skills.
  o Local crafts persons, masons, carpenters and laborer should be engaged for heritage conservation and restoration activities to create jobs.

Promotion and marketing:
  • Launch targeted promotional campaigns in Asian countries such as China, Thailand, Malaysia, Singapore and South Korea, using digital media.
  • Consider establishing cultural centers in additional countries to spread Indian culture worldwide.
• Provide foreign exchange counters at each tourist site.

**Doubling the Farmer’s Income:**

During **1993-1994 to 2015-16**; annual growth rate in farmer’s income is **3.3 %**. Doubling farmers’ income between 2015-16 and 2022-23 will require an annual growth rate of **10.4 per cent** in farmers’ real income. This can be done by various measures such as:
(I) modernizing agriculture
(II) Policy & Governance
(III) Value Chain & Rural Infrastructure

**5- Doubling the Farmer’s Income (I): Modernizing Agriculture**

**Objectives:**
- Modernize technology
- Increase productivity and agro-processing
- Diversify crops
- Generate income and employment

**Current situation:**
- **Low yield level:** The existing yield levels of a majority of crops remains much lower than the world average due to:
  - Low irrigation
  - Use of low-quality seeds
  - Low adoption of improved technology.
  - Inefficient utilization of land resources due to lack of multiple cropping.
  - Staple crops (cereals, pulses and oilseeds) occupy **77 per cent** of the total **Gross Cropped Area (GCA)** but contribute only **41 per cent** to the output of the crop sector.
  - High Value Crops (HVCs) contribute an almost similar amount to total output as staples do, but they occupy only **19 per cent** of the GCA.

<table>
<thead>
<tr>
<th>Crops</th>
<th>GCA (total gross cropped area)</th>
<th>Contribution in total output</th>
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### Drivers

<table>
<thead>
<tr>
<th>Staple crops (cereals, pulses, oilseeds)</th>
<th>77%</th>
<th>41%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVCs (high value crops)</td>
<td>19%</td>
<td>Approx. 41%</td>
</tr>
</tbody>
</table>

- **New development**: Over the past few years, new development initiatives aimed at modernizing agriculture have been introduced such as:
  - Pradhan Mantri Krishi Sinchai Yojana (PMKSY) aims to expand irrigation coverage.
  - Area under micro irrigation has grown 2.5 times in the last four years.
  - 3.76 crore SHCs (Soil Health Card scheme) have been distributed under the second cycle which will focus on job creation and entrepreneurship development.

### Constraints:

- Use of outdated and inappropriate technology led to low productivity of crops and livestock.
- Both production and marketing suffer due to the absence of adequate capital.
- Agricultural research in the country is constrained by resource inadequacy, regulations and intellectual property rights (IPR).

### The way forward:

#### (I) Productivity and efficiency:

- Irrigation coverage needs to be increased to 53 per cent of **Gross Cropped Area** (GCA) by 2022-23 through micro-irrigation.
- Increase adoption of hybrid and improved seeds through **Dynamic seed development plans**.
- The **Indian Council of Agricultural Research** (ICAR) along with State Agricultural Universities (SAUs) should develop climate resilient varieties of crops suitable for the 128 agro-climatic zones of the country.
- The central government should develop model guidelines for seed licensing.
- Link **SHCs with Kisan credit cards** and make SHCs mandatory for subsidies. Ensure proper functioning of the SHC labs.
- Regulate pesticide use
- employing rural youth and promoting entrepreneurship nationwide.
(II) Strengthening extension systems:

- **The ATMA (Agriculture Technology Management Agency) programme** needs to be reoriented to include bottom up planning at the district and block levels to develop Strategic Research Extension Plans (SREP).
- **Public Private Partnership in KVKs:** With each KVK in possession of approximately 50 acres of land, KVKs should incubate private sector initiatives in extension delivery.
- **Market led extension:** to aware farmers regarding:
  (i) crop selection
  (ii) demand for and supply of crop produce,
  (iii) expected price of commodity and
  (iv) availability of infrastructure facilities for storage, transport and marketing of produce.
- **Value added extension:** It helps in converting raw agricultural produce to processed products. It contributes towards increasing farmers’ income.
- **Sustainable water usage in agriculture:** About 83 per cent of water is used in agriculture. Therefore, more efficient irrigation technologies, water harvesting, and better crop selection must be encouraged to save water.

(III) Diversification:

**Promotion of High value crops:**

- **Encourage diversification to HVCs:** The area under fruits and vegetables needs to increase by 5 per cent every year.
- **Establish regional production belts for HVCs:** need to be find out and supported through the Mission on Integrated Development of Horticulture (MIDH).
- **Use of hybrid technology in vegetables:** At present, only 10 per cent of the cropped area under vegetables is under hybrids. It can be increase by 1.5 to 3 times and provide a significant increase in income.
- **Rootstocks for production of fruits:** Measures should be taken to standardize and promote usage of rootstocks to produce fruits.
- **Smart horticulture:** using techniques such as high-density plantation, protected cultivation and organic production are needed is called smart horticulture. A mission on smart horticulture may be setup to identify and promote new technologies.
- **Strengthen market for organic products:** creating a market for niche products is recommended. Such as, Spices unique to a state can be
branded by the Spice Board to encourage the production of organic spices.

- **Convert agricultural waste**: Recycling and utilizing agricultural waste would give a further fillip to farmers’ income.

**Promotion of Livestock and fisheries:**
- **Breed indigenous cattle with exotic breeds**: This will enable greater gene coverage, reduced diseases and greater resilience to climate change.
- **Promote and develop bull mother farms**: Employing multiple ovulation and embryo transfer technologies, these farms can significantly enhance milk productivity.
- **Village level procurement systems**: Installing of bulk milk chillers and facilities for high value conversion of milk are needed to promote dairy in states.
- **Convergence of schemes in fisheries sector**: Integrate the Blue Revolution scheme with MGNREGA to promote aquaculture.
- **Capacity building for fish breeders and farmers**: Establish fish co-operative organizations and run village level schemes in coordination with panchayats to disseminate best practices and research.

**6. Doubling Farmers’ Income (II): Policy & Governance**

**OBJECTIVES:**
Create the policies which can promote:
- income security for farmers along with India’s food security.
- private sector in agricultural development to transition from agriculture to robust agri-business systems.
- the emergence of ‘agripreneurs’ (like entrepreneurs) so that even small and marginal farmers can capture a higher share of value addition from ‘farmgate to fork’.

**CURRENT SITUATION:**
- Corporate investment in agricultural infrastructure has not exceeded 2 per cent.
the policy structure was focused on increased production and productivity to ensure food security for India not on increased farmer’s income.

The current government has taken several steps to improve private investment in agriculture such as:

- **100 per cent Foreign Direct Investment** (FDI) was allowed in 2016-17.
- The **SAMPADA scheme** targets creation of food processing infrastructure.
- The budget allocation to the food processing sector was doubled in the Union Budget 2018-19.
- Introduction of the **Model Agricultural Produce and Livestock Marketing Act (2017)**,
- **Model Contract Farming Act**, 
- new guidelines for agro-forestry are some other key policy initiatives taken over the past few years.

**CONSTRAINTS:**

- **Fragmented (disorganized) land holdings:**
  Average farm size is 1.15 hectares and small and marginal farmers hold less than 2 hectares which led to:

  - less use of new technology \[\Rightarrow\] less productivity \[\Rightarrow\] less income

- **Low price realization:**
  There exists a large gap between farm harvest prices (FHP) and retail prices, shown in the figure:
- **Non-farm employment:**
  Lack of non-farm employment opportunities has resulted in excessive dependence on agriculture.

- **Agricultural credit:**
  Despite an allocation of more than INR 11 lakh crore of commercial credit, access to institutional credit remains a constraint.

- **Agricultural trade:**
  Exporters of agro-commodities are not successful in raising their share in global markets because of uncertainty in the foreign trading regime.

**WAY FORWARD:**

- **Marketing reforms:**
  by adopting the [Model Agricultural Produce and Livestock Marketing Act (APLM)](http://example.com), 2017, these reforms may be provided:
  - setting up of markets in the private sector,
  - allowing direct sales to exporters/processors and customers
  - farmer-consumer markets
  - e-trading
  - single point levy of market fee
- Amend Essential Commodities Act:  
The Essential Commodities Act should be replaced with a modern statute that balances the interests of farmers and consumers.

- Stable export policy:  
a coherent and stable agricultural export policy, ideally with a five to ten-year time horizon is required.

- Price realization:  
The government should consider replacing the Commission on Agricultural Costs & Prices (CACP) by an agriculture tribunal in line with the provisions of Article 323 B of the Constitution to examine the following:
  - Replacing the Minimum Support Price (MSP) by a Minimum Reserve Price (MRP)
  - An effective and technology driven Agriculture Advisory Service may be considered on the lines of those of the United States Department of Agriculture (USDA) and the European Union (EU).
  - Crop insurance needs to be modified to - Promote weather-based insurance and Increase non-loaned farmers’ insurance coverage.

- Contract farming:  
Encourage states to adopt the Model Contract Farming Act, 2018 which specify the price and quality at which the farmers’ produce will be purchased. This protects the farmer in cases where prices fall below the MSP.

- Land aggregation:  
  - Encourage states to adopt the Model Agri-Culture Land Leasing Act, 2016: which improve land access to small and marginal farmers through land leasing. The Model Act spells out the rights and responsibilities of both landowners and tenants.
  - Digitize land records: Complete digitization of land records is a must for effective implementation of land leasing.
  - Promote farmer producer organizations (FPOs): There are now 741 FPOs in the country, the benefits accorded to start-ups under the Start-up India Mission need to be extended to FPOs as well.
• **Research & development:**
  o **Focus on precision agriculture:** Support research on energy friendly irrigation pumps, micro irrigation, climate smart technologies, internet of things (IoT) to prepare for future challenges.
  o **Raise research spending:** currently at 0.3 per cent, needs to be increased to at least 1 per cent of agricultural GDP.
  o Create a knowledge hub to disseminate best practices
  o The Indian Council of Agricultural Research (ICAR) and State Agriculture Universities (SAUs) should focus on providing recommendations across the farming value chain, covering production, post-production, processing and other value-addition activities.

• **Innovation:**
  o **zero budget natural farming by Subhash Palekar:** it is providing increased income to farmers by reducing cost of production, raising yields and improving the quality of agricultural produce.
  o **patented herbal inputs:** to improve soil quality and make plants more pest resistant.
  o **organic farming techniques:** which have also helped improve incomes of cultivators and dairy farmers.

• **Non-farm income:**
  o Shifting farmers to agro-business and farm-related skills which are currently in short supply led to increase farmer’s income.
  o To accelerate growth in the manufacturing, services and exports sectors to wean labour away from agriculture. This will result in higher productivity and income for farmers.
7. Doubling Farmers’ Income (III): Value Chain & Rural Infrastructure

OBJECTIVES:
- Creation of modern rural infrastructure and an integrated value chain system.
- Leverage the value chain to boost India’s exports of food products.
- Create occupational diversification and quality employment opportunities.

CURRENT SITUATION:

(I) Currently running schemes:
- The SAMPADA scheme: aims to modernizing processing activities and decreasing agri-waste.
- ‘Operation Green’: aims to promote farmer producer organizations, agri-logistics, processing facilities and professional management of such operations.
- The SAUBHAGYA scheme: aims to household electrification.
- The Pradhan Mantri Gram Sadak Yojana (PMGSY): aims to full village electrification and accelerating the pace of connecting habitations.
- The electronic national agriculture market (e-NAM) 2016: aims to create a unified national market. So far, 479 mandis across 14 states and UTs have been integrated on the platform.

(II) Required efforts areas:
- Agriculture infrastructure:
  - such as rural markets, warehouses, cold chain, farm machinery hubs and public irrigation need upgradation.
  - The recent 2018-19 budget announcement to develop the existing 22,000 Rural Periodic Markets (RPMs) into Grameen Agriculture Markets (GRAMs) will offer better market access to small and marginal farmers.
- Inefficient cold chain infrastructure:
  - post-harvest losses is estimated at INR 92,561crore annually as storages are single commodity storages and unevenly distribution of storage among states.
  - Inadequate cold-chain infrastructure hampers India’s food exports. The European Union (EU) issued more rejections and destroyed more consignments.
CONSTRAINTS:

- Low public and private investment
- Inequality to acquire land for setting up of market yards
- Lack of finances, manpower and proper facilities in marketing infrastructure
- Poor maintenance and linkages of rural roads
- Lack of separate feeders for supply of power to agriculture and domestic electrification in some states
- Products don’t meet export quality standards due to lack of agriculture best practices. Interventions at the farm or producer level are needed.

THE WAY FORWARD:

(I) Markets and value chain:

- **Infrastructure status for agriculture value chains:** Warehousing, pack-houses, ripening chambers, and cold storages, including those set up at the village and block level. The budget announcement of developing Gramin Agricultural Markets (GrAMs) will help in it.

- **Link production to processing:** Village level collection centres for fruits and vegetables should be linked to larger processing units.

- **Food processing:** Enhancing food processing industry is needed for value addition in vegetable and fruit crops. The government has now shifted its attention to promoting “agripreneurs” for rapid modernization of the agriculture sector.

- **Warehouse upgradation:** The Department of Agriculture and Farmers’ Welfare (DACFW) should draw up guidelines to promote warehouse based post-harvest loans and e-NWR (negotiable warehouse receipts) trading.

- **Convergence in government initiatives:** Coordination is needed between the initiatives of the Ministry of Agriculture, Food Processing, and Commerce to develop effective procurement linkages, processing facilities, retail chains and export activity.

- **Strengthen railway freight operations:** Railway freight operations should be strengthened through temperature-controlled containers and loading and unloading facilities to reduce post-harvest losses and connect land-locked states to export markets.

(II) Rural roads, electricity and mechanization:
- Maintenance of rural roads through women SHGs has been experimented with by some states (Uttarakhand for example) and has been found to be very promising. This model could be replicated by other states.
- Agriculture connections and electricity supply feeders should be separated from domestic rural electricity supply.
- Small farm implement mechanization hubs for every 1000 ha and big machinery hubs for every 5000 ha of cultivated area by private entrepreneurs are required.

(III) Export enablers:
- **Develop export-oriented clusters**: The Agricultural and Processed Food Export Development Authority (APEDA) has been championing the development of export-oriented clusters with common infrastructure facilities.
- **Increase the number of testing laboratories**: It is essential for health certificates for exports. Private laboratories should be extended to fill the shortage.
- **Augment cargo handling facilities at airports**: APEDA (Agricultural and Processed Food Export Development Authority) has suggested augmenting the capacity of the Ahmedabad Air Cargo Complex and Mumbai Airport to handle agricultural cargo.
- **Regulatory frameworks to combat rejections in export markets**: Regulatory frameworks regarding use of pesticides, growth hormones, and antibiotics for marine produce need to be developed and implemented effectively to curb the rejection rate in the export market.
(8) Housing for all

OBJECTIVES:
- Provide every family with a pucca house, with a water connection, toilet facilities, and 24x7 electricity supply and access.
- Build **2.95 core housing units in rural areas** and **1.2 crore housing units in urban areas**.

CURRENT SITUATION:
- The Ministry of Rural Development and Ministry of Housing and Urban Affairs indicate a housing shortage of nearly 3 crore units in rural areas and 1.2 crore units in urban areas.

<table>
<thead>
<tr>
<th>Areas</th>
<th>Shortage of houses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>3 crores</td>
</tr>
<tr>
<td>Urban</td>
<td>1.2 crore</td>
</tr>
</tbody>
</table>

- Major schemes:
  **(I) The Pradhan Mantri Awas Yojana (Gramin – PMAY-G):**
    - Launched in 2016
    - Provides per unit assistance of INR 1,20,000/- in plain areas and INR 1,30,000/- in hilly states/integrated action plan districts/difficult areas.
    - PMAY-G is converged with Swachh Bharat Mission (Gramin) and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
    - Aim to build one crore rural houses in three years between 2016-19.
    - During 2016-17, about 32.14 lakh houses were constructed.
    - 44.54 lakh houses had been completed by the end of March 2018.

  **(II) The Pradhan Mantri Awas Yojana (Urban- PMAY-U):**
    - Its four pillars are-
      a) in-situ slum redevelopment;
      b) affordable housing through a credit linked subsidy scheme;
      c) affordable housing in partnership between public and private agencies and
d) subsidy for beneficiary-led individual house construction or enhancement.

- Against the mission target of 1.2 crore, 44.36 lakh houses have been sanctioned and 4.01 lakh houses had been completed by the end of March 2018.

**CONSTRAINTS:**

- Limited private sector participation
- Multi-level approval system
- Rise in the number of slum dwellers
- Predominance of conventional construction practices
- Lack of access finance
- Capacity constraints to design mass housing projects
- Insufficient number of trained masons

**WAY FORWARD**

Multi-pronged approach to resolving constraints
(I) **Access to Finance:**
- the Department of Financial Services should consider a sub-category under priority sector lending (PSL) for affordable houses.
- The Union Budget 2018-19 announced the setting up of an Affordable Housing Fund in the National Housing Bank (NHB).
- The Budget for 2018-19 has already announced increased allocations for PMAY (Gramin) to INR 33,000 crore and to INR 25,000 crore for PMAY (Urban) through internal and extra budgetary resources.

(II) **Technology for construction:**
- Sixteen new emerging technologies have been identified, evaluated and promoted under PMAY(U).
- A Global Housing Technology Challenge has been launched.
- The replacement of old-style public housing to a modern, space optimizing housing design, which is used successfully in of the East Kidwai Nagar redevelopment project in Delhi may be replicated wherever possible.
- A National Mission for Slum Rehabilitation will bring a greater focus on making the country slum free.

(III) **Reducing costs:**
Fiscal support should be provided to companies that use recycled products made from waste.

A single window approval system adopted to reduce the time taken to construct houses in urban areas.

‘Rental-cum-ownership housing’: Financial engineering, like ‘rental-cum-ownership housing’ in which houses are initially offered on rent and ownership is transferred to the tenant once the cost of the unit is recovered, should be adopted.

(IV) Efficient use of land:

- India should now focus on vertical growth.
- The land lying idle with various sick/loss-making public-sector undertakings (PSUs) of the central/state governments may be used.

(9) Industry with ‘Make in India’

OBJECTIVES

- Double the current growth rate of the manufacturing sector by 2022.
- Promote in a planned manner the adoption of the latest technology advancements, referred to as ‘Industry 4.0’.

CURRENT SITUATION:

- India is the fifth largest manufacturer in the world with a Gross Value Added (GVA) of INR 21,531.47 billion in 2017-18.
- A Compound Annual Growth Rate (CAGR) of around 7.7 per cent between 2012-13 and 2017-18.1.
- The World Bank ranked India 100th among 190 countries in the Ease of Doing Business (EODB) in 2018. This was a jump of 34 positions since 2014.
- Manufacturing as a percentage of the gross domestic product has remained at about 16 per cent.
- The Department of Industrial Policy & Promotion (DIPP) has been engaging with states/UTs to enhance the ease of doing business.
• Make in India:
  o Make in India Action Plan aimed at increasing the manufacturing sector’s contribution to 25 per cent of GDP by 2020.
  o The Start-up India initiative to promote entrepreneurship and nurture innovation
  o Aims to promote the Micro Units Development and Refinance Agency (MUDRA).
  o It has also undertaken massive re-capitalization of public sector banks to ease availability of credit to micro, small and medium enterprises (MSMEs).
  o Aims to setting up of industrial corridors, to boost manufacturing.

CONSTRAINTS:

Technology adoption (industry 4.0):
Industry 4.0 refers to the adoption of new technology like artificial intelligence, data analytics, machine-to-machine communications, robotics and related technologies. It is a bigger challenge to SMEs.

Challenges to doing business:
- Getting construction permits, enforcing contracts, paying taxes, starting a business and trading across borders continue to constrain doing business.

WAY FORWARD

Demand generation:
- Mega public projects such as Sagarmala, Bharatmala, industrial corridors, and the Pradhan Mantri Awas Yojana (PMAY) can stimulate domestic manufacturing activities.
- Harmonize Indian quality standards with global standards in many sectors.
- E-commerce should be encouraged as it has an impact on generating demand, expanding manufacturing, employment generation and greater transparency.

Augmentation of industrial infrastructure:
- Set up a portal to monitor projects
- NITI Aayog’s Development Monitoring and Evaluation Office (DMEO) can help set up the portal.
- Self-sufficient clusters: self-sufficient clusters of manufacturing competence are needed to provide single window clearances to entrepreneurs and investors.
- A greater connect between government-industry-academia is required to identify the changing requirements in manufacturing and prepare an employable workforce.
- For India to become the world’s workshop, we should encourage further FDI in manufacturing.

Ease of doing business:
- Introduce a “single window” system in all states that facilitates all required licenses and approvals.
- For geographical planning and ease of environmental clearances, adopt the system of using Geographic Information System (GIS) based maps at all levels.
- Replicate in other states the Gujarat Pollution Control Board (GPCB) Environmental Audit Scheme based on third party certification.

**Industry 4.0:**
- The Indian Institute of Science, a few select Indian Institutes of Technology (IITs), National Institutes of Technology (NITs) and other premier engineering colleges should create specialized training programs on ‘Smart Manufacturing’ to address the shortage of high-tech human resources.
- The Department of Heavy Industry (DHI) should develop the Central Manufacturing Technology Institute (CMTI), Bangalore, as a Centre of Excellence for pursuing R&D in Industry 4.0 technologies and systems.
- Industries adopting Industry 4.0 standards could be provided support for a fixed period of time.

**(10) Financial Inclusion**

**OBJECTIVES**

- **Banking for the unbanked:**
  - Bank accounts: Ensuring universal access to bank accounts.
  - Digital payment services: Providing access to digital payment services.
- **Securing the Unsecured:**
  - Insurance and Social Security: Ensuring universal coverage of insurance of life and retirement planning services.
  - Low cost access to credit

**CURRENT SITUATION:**

**(I) Launched schemes to promote financial inclusion:**
- Pradhan Mantri Jan Dhan Yojana
- Pradhan Mantri Mudra Yojana
- Stand-Up India Scheme
- Pradhan Mantri Jeevan Jyoti Bima Yojana
- Pradhan Mantri Suraksha Bima Yojana and
- Atal Pension Yojana

**III) Progress seen regarding bank accounts:**
- According to World Bank data –
  \% of bank accounts in India = \text{2014} – 53 \% \text{ of adults} \hfill \text{2017} – 80\% \text{ of adults}
- ‘Jan Dhan Yojna’ is having the credit of this increment.

**III) Unawareness of mobile payment:** Awareness and use of mobile payments in India had been low (1\% in 2016) which is clear by these data of the year 2016:

(IV) Credit access in India: In terms of credit access, India is moving faster. In 2016, number of loan accounts is shown in the table:
Bank credit to GDP ratio is in India 51% as compared to 98% in China, in 2016.

**CONSTRAINTS:**

- Lack of financial literacy
- Costly traditional banking operations
- Conservative regulatory approach to new technologies

**WAY FORWARD:**

(I) Enhance financial literacy:

- An Arthik Shiksha Abhiyan may be integrated in the regular school curriculum.
- Efforts should be complemented by mass media campaigns.

(II) Assess the performance of banking correspondents and give better incentives.

(III) Facilitating growth of online and paperless banking: The following actions are required to promote paperless banking:
o Ease transaction limits  
o Push digital signature for loan accounts  
o Expand digi-locker services

(IV) Improve assessment of credit-worthiness for households and informal businesses:
  o Create a new data-sharing framework using the ‘JAN DHAN’ and ‘Aadhar’ platforms to enable easier access to credit.  
o Existing gaps in land records should be filled.  
o Digital central land holding register should be maintained.  
o A common cyber security framework is needed.

(V) Leverage payment platforms to improve payment system in underserved areas:
  o Indian post payment banks can bring a revolution in payment system as post offices are very familiar in rural areas.  
o USSD channel (it doesn’t need internet) for payment should be promoted for government and non-government payments.

(VI) Attract more households towards financial products:
  o Financial products like equity, insurance, bonds, pension schemes etc. Should be more consumer friendly, simplified ans easy to understand.  
o Restrictions on payment of incentives and bonus to agents should be removed.  
o Regulatory framework should be overhauling to check the mis-selling financial products to households.  
o KYC restrictions in the capital market should be eased.  
o The lock-in period for gold bonds should be reduced to make them more attractive.