The supply glut that has caused the milk price crash is an opportunity to create a skimmed milk powder buffer stock and incentivise investment in milk products. Create a buffer stock of two lakh tonnes of SMP through National Dairy Development Board (NDDB). This would improve the market sentiment and the price line.

Introduce skimmed milk powder (SMP) to the futures market platform. As global SMP prices improve, NDDB can sell these stocks at a profit. Bring SMP under the Merchandise Exports Incentive Scheme (MEIS). Today, butter and ghee are in that category, but not SMP.

Incentivise investments in value-added products in the organised sector — like curd, buttermilk, cheese, ice-cream and even chocolates. This can help farmers stabilise their milk prices.

Expand domestic demand for higher milk consumption through concerted campaigns, especially in the 115 aspirational districts where malnutrition is high.

In these districts, the government could introduce milk in mid-day meal schemes. Use the SMP buffer to supply large quantities to the armed forces, hospitals and other large institutional players.

In order to cut down costs of milk production, India needs to increase the productivity of its milch animals, that is far below the global standards. Cross-breeding with high-productivity animals of foreign breeds and pure indigenous breeds is the way forward.

The country needs to ramp its R&D and agriculture extension department to transform this sector into a vibrant, competitive and more remunerative sector for farmers.

For centuries, livestock has been a critical component of the lives and livelihoods of India's small farmers, pastoralist and indigenous people. Animals and animal products are a vital part of Indian food, farming and agriculture systems. Dairying has become an important secondary source of income for millions of rural families.

Procurement prices have fallen over a period of last few months and the input costs have risen at the same time. Milk prices have fallen by 20 per cent to 30 per cent in several milk-surplus states.

The increase in milk production since 2014-2015 has been unprecedented (6.3% per annum during FY 15 to FY17).

The milk output, instead of falling during the lean (summer) season, registered high growth in 2017-18. The fact that the prices are falling indicates that supplies exceed demand.

In such a situation of glut, India should have been exporting large quantities of skimmed milk powder (SMP). Unfortunately, the global SMP prices have fallen making SMP exports unviable. Not finding a good export outlet has accentuated the milk price crisis in the country.

Only 21% of India's milk production gets processed through the organised sector and the rest passes through unorganised small players. Less money from milk is pushing small dairy farmers in debt.

India is the largest producer of milk (165.4 MMT in 2016-17). The value of milk is more than that of rice and wheat combined. So, it is India's biggest agri-produce.

It is a source of income to small and landless agri-households. 70 per cent of those earning their livelihood from milk are women.
India should now explore alternate models to boost farmers' income and stop relying on MSPs alone. To improve farm income, the challenge now is to find new markets. NITI Aayog is already working on alternative mechanisms. A non-inflationary way to resolve the agricultural crisis is to raise farm productivity through increased investment in irrigation and post-harvest infrastructure. Procurement system of the government needs to be streamlined.

It’s time to consider a transparent, crop neutral and easier to implement income support programme—similar to what Telangana has done. The state government gives a payment of Rs 10,000 per hectare of cultivable land to all farmers irrespective of the crops they raise. Given its relative simplicity and non-market distorting nature, it can be replicated in the whole of India. Agriculture in India needs an innovative solution to free the farmer from excessive government control.

MSP is announced by the Government of India at the beginning of the sowing season. They are recommended by the Commission for Agricultural Costs and Prices (CACP) and approved by Cabinet Committee on Economic Affairs. Government considers some crops are vital for food security. For such crops the government follows a liberal procurement policy known as open ended MSP. The government allows the procurement agencies like the FCI to buy whatever is offered by the farmers for sale at MSP.

Rice and wheat are the two principal commodities where government’s role is pronounced. Cost of production, Changes in input prices, Input-output price parity, Trends in market prices, Demand and supply. Inter-crop price parity, Effect on industrial cost structure, Effect on cost of living, Effect on general price level. International price situation, Parity between prices paid and prices received by the farmers. Effect on issue prices and implications for subsidy. Cereals (7) - paddy, wheat, barley, jowar, bajra, maize and ragi. Pulses (5) - gram, arhar/tur, moong, urad and lentil. Oilseeds (8) - groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesame, safflower seed and nigerseed. Copra, De-husked coconut, Raw cotton, Raw jute, Virginia flu cured (VFC) tobacco and Sugarcane (Fair and remunerative price).
India has reiterated its commitment towards the protection of refugees at various international fora, including the UN General Assembly.

India is a signatory to the New York Declaration for Refugees and Migrants, which was adopted in September 2016.

India has expressed its solidarity with those forced to flee and agreed that protecting refugees and supporting the countries that shelter them are shared international responsibilities that must be borne more equitably.

The Declaration sets the stage for a new framework for refugee protection — the Global Compact on Refugees (GCR).

The Compact is a coordinated effort to strengthen international response to refugee situations and addresses all stages of refugee protection.

Support from the international community in the form of resources.

Establish forums to enable expertise-sharing to promote economic opportunities, decent work and job creation for refugees.

States must identify gaps and opportunities for employment and income generation for refugees.

Vocational training and capacity-building among refugee populations.

Fostering understanding and cooperation among the communities and paving the way for a socially cohesive approach.

Conducting integration workshops for youth and women empowerment initiatives.

A well-defined asylum law would establish a formal refugee granting process with suitable exclusions (war criminals, serious offenders, etc.)

We need a system that enables the management of refugees with greater transparency and accountability.

While the security interests of India must remain paramount, taking care of refugees in India is a moral duty for the state.

Having a National asylum policy predicated on universal principles of dignity, fraternity and safety, could be one such pathway to global leadership.

A migrant is a person who makes a conscious choice to leave their country to seek a better life elsewhere.

They do not enjoy any privileges under any international law.

They are dealt with the country’s immigration rules and regulations which are country specific.

Whereas Refugees are forced to leave their country because they are at risk of, or have experienced persecution.

The concerns of refugees are human rights and safety, not economic advantage.


Refugees have been accorded constitutional protection by the judiciary (National Human Rights Commission vs. State of Arunachal Pradesh, 1996)

The Supreme Court has held that the right to equality (Article 14) and right to life and personal liberty (Article 21) extend to refugees.

Refugee crises may be caused by any number of reasons but the most common are war (Bangladesh), domestic conflicts (Tibet, Sri Lanka), natural disasters (famine), environmental displacement, human trafficking and climate change.

On World Refugee Day (June 20), there is a need to reassess India’s approach to refugee protection, particularly in light of the regional refugee crisis.

Today, India is host to over 200,000 refugees.

India has hosted several persecuted groups such as Tibetans and Sri Lankans.

India is not a signatory to the 1951 Refugee Convention and has no domestic asylum law.

Most refugees have been unable to return to their countries, leading to protracted refugee situations.

Some refugees have been able to generate income by working in the informal sector.

Our data on refugees remain significantly deficient, preventing analysis on refugee flow and their existence.

Colonial laws still cast a long shadow on India’s policies regarding refugees and asylum seekers.

India has done little beyond providing asylum.

There have been some attempts to introduce a refugee law in the country, the latest being the Asylum Bill 2015.

The government continues to adopt an ad hoc approach towards this group.

There is an urgent need for the government to develop a uniform framework for their management during their stay in India.

Due to their unclear legal status and lack of uniform documentation, refugees have limited access to essential services.

Vulnerable women refugees are at the mercy of traffickers.

They are forced to rely on income from odd jobs which is an unsustainable livelihood option that often leaves them exposed to exploitation.

Thus there is a need for national asylum policy in compliant with the principles laid down in the Global Compact on Refugees (GCR).

This will re-establish India’s place as a democratic regional power committed to core humanitarian principles.

It will also provide refugees a chance to give back to the country that has adopted them.

It would bring India’s asylum practices in line with its own democratic, constitutional and cultural values.
In agriculture, Microsoft, in collaboration with the International Crops Research Institute for the Semi-Arid Tropics (Icrisat), has developed AI-enabled sowing app that sends advisories to farmers on the best date to sow, soil-test based fertiliser and manure application, seed treatment, etc.

In 2017, 3,000 farmers in Andhra Pradesh (AP) and Karnataka used the app, resulting in a 10-30% increase in kharif yields.

NITI has partnered IBM to develop AI-enabled yield-prediction and real-time advisory to the farmer on productivity, pest-warming, etc, using data gathered from remote-sensing satellites, soil health cards, IMD etc.

To tackle school dropout, the Andhra Pradesh government has partnered Microsoft to identify those likely to drop out.

Concerns / Challenges

Lack of broad based expertise in research and application of AI.
Absence of access to intelligent data.
High resource cost.
Low awareness for adoption of the technology.
Privacy and security issues.
Shortage of skilled manpower.

Indian technical universities are not doing enough to strengthen the AI ecosystem unlike their global counterparts.

France and China have formalised strategies to harness and realise the potential of AI.
US and South Korea are making tremendous advances in AI.

The strategy should strive to leverage AI for economic growth, social development and inclusive growth.

To truly harness AI's transformative potential, India must address its lack of expertise in AI research and application.

The government must address privacy and data security concerns on a war-footing.

India must foster AI innovations and set up AI-friendly infrastructure to prepare India's job and skill markets for AI-based future.

Banks may look at using AI for enhancing customer experience, security, and risk management.

Benefits

AI could create jobs in the country that would be higher than the number of jobs becoming redundant due to innovation in technology.

Increase efficiency and enhance governance across the government.

Helps in improving the ease of doing business, as well as making the lives of people simpler.

'Make in India' programme can be strengthened and help India in becoming a major manufacturing hub with AI-assisted technology.

Advancements in technology over the last couple of decades—computing evolution (cloud, big data, machine learning, etc), falling costs (cheaper data storage) and growing digitalisation.

Access to technology easing for the masses.

The demand for AI and machine learning specialists in India could rise by 80%.

Recent Developments

Introduction

Way Forward

Opportunities

What is AI?

Artificial intelligence is the branch of computer science concerned with making computers behave like humans.

AI refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem solving and decision making.

NITI Ayog estimates that adopting AI means a 15% boost for the gross value added (GVA) for the economy by 2035.

AI can increase access and affordability of quality healthcare.

In agriculture, it can contribute towards enhancing farmers' income, increase farm productivity and reduce wastage.

It can also improve access and quality of education.

It can help build efficient infrastructure for the increasing urban population.

Develop smarter and safer modes of transportation to address traffic and congestion problems.

National Strategy for Artificial Intelligence (AI)

International Practice
Research shows that open data can add an additional 1.5% to the country's GDP. It promotes transparency, accountability and value creation by making government data available to all.

By encouraging the use, reuse and free distribution of datasets, governments promote business creation, innovative and citizen-centric services.

Data sets such as government budget usage, welfare schemes and subsidies increase transparency and thereby build trust.

It paves the way to develop technology-led innovations which can unlock massive economic value, thereby benefitting even the poorest of poor, the under-represented and the marginalised.

Availability of data on yearly produce of crops, soil data, health cards and meteorological data sets can help companies develop customised crop insurance solutions with specific risk-based pricing.

Data on literacy rates, demographic data and density of educators can help develop customised solutions for villages.

Information on availability of facilities in public hospitals, current occupancy rates, hospital and demographic data can pave the way for curated health-care applications.

It can also help double farmers’ incomes by 2022, provide universal health coverage and micro loans to MSMEs.

The time is now ripe for the government to create a data-driven governance architecture.

Need for developing data management, storage and privacy laws.

Ensure completeness of data stacks opened for use either through machine-readable formats or direct application programme interfaces (APIs).

For example, a comprehensive agri-data set would have digitised data sets on soil data, rainfall, crop production as well as market rates.

Technologies like Blockchain and Internet of Things (IoT), can help in automating data collection and reducing manual intervention and therefore the chances of error.

Combining data sets which can lead to the creation of applications such as farm insurance from weather, soil and crop cycle data.

Encourage data usage like Aadhaar/identity data which has seen exponential growth.

Aadhaar has led to the development of Aadhaar-enabled payment system, and direct benefit transfers which are pushing the "financial inclusion".

When Artificial Intelligence is coupled with open data, there will be a paradigm shift.

Open government data means publishing information collected by the government to all.

It includes government budgets, spending records, health-care measures, climate records, and farming and agricultural produce statistics.

Open government data is a silent but powerful movement unfolding globally.

Over 100 governments have already signed a charter to proactively share data collected by various government departments, for public consumption.

The Ministry of Electronics and Information Technology has made some efforts, including a policy around open data.

India was one of the first to set up the Open Government Data (OGD) platform in India at data.gov.in to provide access to data sets published by Government departments.

India currently houses more than 1.6 lakh data resources.

India has published over 4,015 application programme interfaces (APIs) from across 100-plus departments.

As a result, India’s global ranking by the Global Open Data Barometer has jumped.

While India publishes data points, very little of it is getting utilised by data consumers, scientists and corporates.

Hence the socio-economic impact is limited.
Organ Transplantation in India

Introduction
- Recently organ transplant irregularities were found in Tamil Nadu.
- International patients were given priority in transplants, bypassing long list of Indians.
- In 2017, foreigners got about 25% of all heart transplants in the State and 33% of lung transplants.

Protocol of organ transplant
- Hearts and lungs harvested from brain-dead patients were given to foreign nationals admitted to corporate hospitals.
- The protocol is that an organ should first be offered to an Indian.
- If no Indian is available, an NRI should be considered.
- The question of an international patient arises only when both decline an organ offer.
- Allocation of organs to recipients is based on criteria that include the date of registration and the medical condition of the recipient.
- The wealth, race or gender of a person has no bearing when a person is receiving a donated organ.

Concerns / Challenges
- Hospitals have become so greedy that they don't bother to help poor Indian patients.
- There are also allegations that organs were harvested without the consent of a brain-dead patient's family to meet the needs of foreign nationals.
- The cost of a transplant, especially a heart transplant, in Chennai is so high that only foreigners are able to afford it.
- Problem of organ trafficking.
- WHO states that the sale of organs violates the Universal Declaration of Human Rights.
- The growing disparity between the rich and poor and demand for human organs makes the trading of organs a quick means to riches for some and a relief for others.
- Organ trade leads to exploitation of the poverty-stricken people by tempting them with financial gains.

Facts for Prelims
- Each year hundreds of Indians die while waiting for an organ transplant.
- Acute imbalance between the number of organs donated and the number of people waiting for a transplant.
- Finding a donor is the main issue in the country.
- Lack of awareness and improper infrastructure facilities.
- Administrative hurdles and conservative mindset further affect organ transplantation.
- Lack of a centralized registry for organ donation.
- India has low count of organ donors per million people compared to U.S., Spain and Australia.
- Myths associated with organ donation which needs to be addressed.

Way Forward
- Strict action against Hospitals and professionals who engage in commerce or unethical behaviour.
- Arrangements to air-lift organs, since domestic patients are unable to afford flight facilities.
- Such measures will make it possible to utilise more hearts and lungs, and offer them to domestic recipients.
- Bringing transparency in the organ transplantation programme to ensure that all Indian patients desiring an organ get it.
- Strict guidelines for allocation of organs to foreigners.
- Enrolling all domestic patients through State registries should be the priority for the National Organ and Tissue Transplant Organisation.
- Post-transplant data on follow-ups and outcome of transplants for every recipient must be compiled.
- Enhanced awareness among people is needed to encourage people to donate organs.
- This requires involvement of the civil society, religious leaders and other stakeholders in creating awareness.

NOTTO functions under the Ministry of Health & Family Welfare.
- It is an all-India apex body for coordination and networking for procurement and distribution of organs/tissues and transplantation.

National Organ and Tissue Transplant Organisation (NOTTO)
- Tamil Nadu tops in organ transplantation in the country.
- The Transplantation of Human Organs Act of 1994 makes it illegal to buy or sell human organs in India.
- Priority for citizens enrolled in the State and national waiting lists over foreign nationals is laid down in the Transplantation of Human Organs and Tissues Rules.
- Health is a State subject; Centre can only frame national guidelines. States should implement the guidelines.
- Organs that have been successfully transplanted include the heart, kidneys, liver, lungs, pancreas, intestine, and thymus.
- Tissues include bones, tendons, cornea, skin, heart valves, nerves and veins.
- Worldwide, the kidneys are the most commonly transplanted organs, followed by the liver and then the heart.
- Organ donors may be living, brain dead, or dead via circulatory death.
- Unlike organs, most tissues (with the exception of corneas) can be preserved and stored for up to five years.
- Anyone from a child to an elderly person can be a donor.
The theme for the World Environment Day 2018 - “Beat Plastic Pollution”. The theme invites everyone to make changes in their everyday lives to reduce the burden of plastic pollution on our natural places, our wildlife - and their own health. The ubiquitous nature of plastic means it is one of the most used materials in the world.

Plastics are notorious in terms of pollution and are known for being difficult to recycle. The discarded plastic continues to exist in landfills and oceans, slowly leaching into the eco system or ending up in the stomachs of marine and other animals. It has adversely affected our marine environment, water systems, biodiversity, economies and human health.

Environmental degradation hurts the poor and vulnerable the most. Most plastics are actually downcycled which means recycled plastics are not at par with virgin plastic and are instead transformed to a much lower quality. According to a report, by 2050 oceans are expected to contain more plastics than fish (by weight), and the entire plastics industry will consume 20% of total oil production, and 15% of the annual carbon budget.

There were reports of nano-plastic particles present in water bottles posing serious threats to consumer health. According to a report, by 2050 oceans are expected to contain more plastics than fish (by weight), and the entire plastics industry will consume 20% of total oil production, and 15% of the annual carbon budget.

Once in the environment, it enters our food chain where, microplastic particles are turning up in our stomachs, blood and lungs. A large number of city drains are clogged by plastic bags which are leading to water logging and urban floods as seen in recent times. In developing economies like India, a rise in the middle class population has meant a higher level of consumption — and plastic waste generation.

Over-reliant on single-use or disposable plastic - with severe environmental consequences. About 25,000 tonnes of plastic waste is generated every year in India, of which only 60 per cent is recycled. There is a huge issue of waste management in India. Delhi tops the chart of plastic waste followed by Chennai, Mumbai, Bengaluru and Hyderabad.

Indian waste management Industry has a potential of $15 billion with promising growth prospects. The European Union proposed ban on single-use plastics while urging the collection of most plastic drinks bottles by 2025.

Kenya has banned throwaway plastic bags, and the result is that its national parks are even more attractive and city drains are less blocked, helping reduce flooding. Rwanda has done it too, making Kigali one of the world’s cleanest cities.

U.S., Canada and the Netherlands have regulations to stop the use of microbeads in personal-care products. In Germany, consumers get a small refund when returning a plastic bottle. More than 98% of plastic bottles are returned.

The recycling efforts are failing to keep pace with production. Current standard water treatment systems do not filter out all of the microplastics. It is creating an environmental crisis comparable to climate change. Cattle and other animals unknowingly consume some of this plastic material which is not digested, end up with painful death. This will have an impact for the farmers and on the Indian economy. Pollutants also upset primary food production in waterbodies by preventing the entry of sunlight into water. Plastic pollution in beaches also impact tourism. The ban on plastic carry bags below 40 microns in many states has not yielded the desired results.

Citizens must act as both responsible consumers and informed citizens; demanding sustainable products and embracing sensible consumption habits into their own lives. Beating plastic pollution will require reducing single-use plastic products which require a change in behaviour. Effective enforcement of existing rules and regulations governing plastics. ‘Zero-effect, zero-defect’ khadi product is a major agent in humanity’s fight against plastic.

For more than 60 years, khadi has been linked with India’s fight for freedom and today it has emerged as one of the most eco-friendly products. We can provide the best Indian practices to the world and can bring best practices from the world to India. More emphasis on circular economy so that we can reduce waste, drive greater resource productivity and help reduce the environmental impacts of our production and consumption. Raising awareness for “a cleaner and greener environment that can lead us to sustainable development”.

Producers can clearly label products and inform consumers how the waste should be disposed of. Market interventions such as pricing of plastic bags have proved to be effective in some countries, encouraging shoppers to carry their own bags. Investment in research and development for developing alternatives to plastics, and innovations in re-use and recycling are essential. We must ensure that material prosperity does not compromise our environment.

UN and the governments must consider bringing conventions for beating plastic pollution at the global level like Montreal protocol for CFC. It is our responsibility to ensure that our future generations live in a clean and green planet, in harmony with nature. With the United States working on its way to quit the Paris Climate Agreement, it’s the right time for India to lead the world in the war against climate change and pollution.
The Central government has revived the idea of setting up an asset reconstruction or asset management company, a sort of ‘bad bank’.

The stockpile of bad loans has had several ill-effects on the economy at large.

The bad bank will require significant capital to purchase stressed loan accounts from public sector banks.

Stressed assets of banks are making it difficult for new lending.

The chances of private participation are low unless investors are allowed a major say in the governance of the new entity.

This is constraining new investments in projects that can power the economy.

Bad bank will not address more serious corporate governance issues plaguing public sector banks that led to the NPA problem.

As bad debt keeps rising, it raises the costs for the government to finance the PSBs.

Setting up a new institution would be very time-consuming.

High NPAs force banks to keep their lending rates high to boost their profits.

Challenges on its ownership structure as well as the pricing of bad loans taken over from banks.

Private Asset Reconstruction Companies (ARCs), Joint Lenders Forum (JLF), Strategic Debt Restructuring (SDR) and Scheme for Sustainable Structuring of Stressed Assets (S4A) haven’t proved successful in resolving bad debts.

The larger focus must be on the ‘Twin Balance Sheet’ (TBS) problem of corporates and banks.

Bad Bank is expected to solve these problems, by relieving the banks of their NPAs.

Instead of recapitalising the banks year after year, it would be better for the government to focus on recovery.

Bad bank has been experimented in several countries especially after the financial crisis of 2008-09.

Just setting up one PARA will not be enough to get the banking sector back on track.

It has witnessed some success in Malaysia, Sweden, Spain and few other countries.

The most efficient approach would be to design solutions tailor-made for different parts of India’s bad loan problem.

It will help relieve the banks of their NPAs and expedite ways for the corporate borrowers to settle their debts.

A single government entity will be more competent to take decisions rather than individual PSBs.

The Central government has revived the idea of setting up an asset reconstruction or asset management company, a sort of ‘bad bank’.

Former RBI governor Raghuram Rajan said that it would simply mean the transfer of NPAs from one entity to another.

A bad bank is an entity that buys NPA-affected assets of banks and financial institutions (FIs), mostly at a discounted market price.

Banks may have to take hefty hair-cuts or discounts while selling the loans, even at the cost of their profitability.

It then works to recover and turnaround the assets through professional management, sale or restructuring.

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A weak currency will offer limited relief to exporters.

Falling rupee will help exports of services more than those of goods.

This is because overall merchandise exports have an average import intensity of as much as 60%, with limited value addition in many segments.

IT stocks don't have major import expenses.

The rupee’s fall came at a time when some developed markets, especially the US, are turning more protectionist.

Exporters say, in the absence of any reform in transportation and logistics costs, the rupee’s fall alone is unlikely to help exports substantially.

India is among the 5 countries which are least vulnerable to currency pressures amid strengthening of the US dollar.

India’s low dependence on foreign currency borrowing to fund its debt burden limits the risks of depreciation says rating agency Moody’s.

The CAD remained modest relative to GDP and is largely financed by equity inflows, including foreign direct investment.

India’s significant build-up of foreign exchange reserves in recent years provides a support buffer to help mitigate external vulnerability risk.

India’s large and relatively stable domestic financing base limits external vulnerability.

Although India’s debt affordability is relatively weak, the average maturity of debt is close to 10 years and over 96 percent of it is in local currency.

RBI intervention in the forex market is the short-term solution.

Over a longer period, reducing dependence on imports and attracting consistent foreign direct investment through friendly policies may make the currency less vulnerable to external shocks.

Recently the rupee hit its all-time low against the dollar breaching the 69 a dollar mark that prompted the central bank to intervene in the currency market by selling dollars.

The strengthening US dollar since mid-April has prompted a sharp currency depreciation.

Even as rupee hit its all-time low, Moody’s continues to believe that India is least vulnerable to currency pressures.

Foreign portfolio investors (FPIs) have pulled out a cumulative $9.4 billion from equity and bond market since January.

The US Federal Reserve’s rate hikes have made dollar assets give more returns thereby making emerging market assets look less appealing.

Higher crude oil prices.

Escalation of a global trade war especially US-China trade war.

Absence of credible domestic reforms to cut huge logistics costs.

High import intensity in some key segments like petroleum and gems and jewellery.

Fall in the currencies of emerging market peers.

The current account deficit (CAD) has widened due to rise in oil prices.

Global volatility is much higher than in August 2013 when the rupee had touched its previous low of 68.83.

The currency’s weakness makes imports costlier.

Rising crude prices and weakening exchange rate will lead to higher retail fuel prices.

This will translate into higher inflation.

A sharp rise in inflation will be detrimental to growth, especially when investment is just reviving.

RBI estimated in its monetary policy report in April that for every 5% fall in rupee, retail inflation will increase by 20 basis points.

It will be costlier for students studying in overseas universities as this is the time when they purchase dollars towards fees.

A falling rupee can be a worry for those planning a holiday abroad.

Importers of capital goods will see shrinkage in margins as well.

An already weak gems and jewellery sector will be hit harder.
Initially, the East India Company (EIC) was involved in the administration of religious institutions. Temple employees were appointed by government officials. Under the orders of the public officer of the district, a religious offering was made at temples for a good monsoon. Laws were enacted for superintendence of all lands granted for the mosques and Hindu temples with the colonial government. All this annoyed Christian missionaries and members of the clergy in England. Consequently, in 1833, the Court of Directors of the EIC sent instructions to the colonial government. The Directors wrote that the interference of British Functionaries in the interior management of native temples, the customs, habits and religious proceedings shall cease. It was in this manner that the seeds of secularism were sown in India. The colonial government was directed to disentangle itself from Indian religious institutions. The wall of separation between temple and colonial state in India was achieved in 1863, when a law was enacted in this regard.

However, this colonial vision of secularism was rejected by India’s founding fathers. Indian leaders felt that government entanglement in religious institutions was essential, even in a secular state. No progress has been made in the evolution of a uniform Civil Code. There are deep religious sentiments prevailing among different religious communities. It limits the path to a truly secular society in India. The Supreme Court had observed in the Bommai case that if religion is not separated from politics, the religion of the ruling party tends to become the state religion. During the time of elections, most of the political parties completely forget the noble ideal of secularism and woo the voters on communal or caste lines.

The failure of the government to evolve a just economic order and eliminate poverty also sets a setback to secularism. Many public rituals like bhoomi pujan, breaking of coconuts on inaugural occasions, performing ‘aarti’ and applying ‘tilak’ are perceived by Hindus as cultural or nationalistic expressions, but to non-Hindus, these are manifestations of Hindu culture. Such rituals are performed even on state functions and therefore, create unnecessary misgivings about the neutrality of the State.

Schools today have become havens of social isolation where children of similar economic and social backgrounds are unaware of the kind of social diversity that exists outside their little worlds. Since secularism has been declared as a part of the basic structure of the Constitution, governments must be made accountable for implementing it. Setting up of a commission on secularism for ensuring adherence to the constitutional mandate on secularism. Separation of religion from politics. It is of such urgency that no time should be wasted in bringing this about.

It is time for India to adopt true secularism. Secularism has been discussed in India primarily as a state policy towards religious groups. The debate on secularism began by pointing to the difference of the Indian variation to its Western counterpart, either by pointing to an idea of a ‘principled distance’ or samadharma samabhabha, where all religions are treated as equal.

Our Constitution acquire its secular character from the words in the Preamble, collective reading of many of its provisions, particularly the various fundamental rights. Secularism and Democracy are two remarkable achievements of independent India. Secularism in India refers to the equal status and treatment of all religions. Secularism in India is a positive, revolutionary and comprehensive concept which takes within its sweep all the communities in India following several religions. Indian secularism recognizes the importance of religion in human life. Diversity can only be effective with secularism as a foundational value.

India’s survival as a multireligious, multilingual, multicultural society will depend on how successful it is in working its secularism.

Uniform Civil Code: Article 14—equality before law; Article 15—prohibition of discrimination on grounds of religion, race, caste, sex or place of birth.

Politics and Religion: Discrimination in public employment on grounds of religion is prohibited by Article 16.

Failure of the Government in Evolving a Just Economic Order: The provisions relating to “Right of Freedom of Religion” of the Articles 25 to 28 make India a secular state.

Cultural Symbols and Secularism: The 42nd amendment of the constitution inserted the term “secular” in the preamble of the constitution.

Constitutional Precepts: The constitution, in the preamble professes to secure to all its citizen’s liberty of belief, faith and worship. Caste system or untouchability cannot be practised in the case of entry into public Hindu temples.

Concerns / Challenges: Article 29 of the Indian constitution assures that the state shall not impose on a minority community any culture other than its own. Art. 30 grant the minority community, the right to establish and administer their own educational institution.

Re-imagining Secularism: In focusing on the question of distance between religion and state, the idea that secularism essentially promoted a social philosophy of life got sidelined.

Secularism is not merely about how religious groups are treated by the state. What it meant is to forge positive and proactive solidarity between religious groups in their everyday social and cultural life.

The role of the state has to be to forge ties between different cultural groups, not merely religious but also caste, ethnic, regional, linguistic, among others. All of these ties concern secularism as a social philosophy.

So India Needs to Rethink How It Looks at Secularism.
India has historic ties with the grouping as an observer over the past 12 years. The relationship India shares with the members of SCO are historical. 

The relationship India shares with the members of SCO are historical. 

SCO will strengthen India’s relations with Central Asian republics and provide a new opportunity to pursue the “Connect Central Asian Policy.” 

The SCO would also be a new channel to enhance bilateral ties with China and Russia. 

Experts say India’s inclusion may even bring down Beijing’s overarching influence over the SCO. 

India is likely to get greater access to major gas and oil exploration projects in Central Asia. 

India must aim to further enhance connectivity, given the existing strong cooperation bilaterally with existing member countries. 

Sectors such as education, tourism and even medical tourism, can be focused upon to further strengthen the SCO platform. 

Joint commitment, respect for human rights and the rule of law, will build and strengthen the cooperation needed to respond to global challenges. 

To ensure fair globalisation, nations must have the necessary domestic resources and capacities to steer their economies and development agendas. 

Openness and partnership between countries can make a critical contribution to strengthening security and bringing about prosperity. 

Connectivity in the SCO region must be given priority. 

Increasing awareness of our shared cultures can help boost tourism. 

SCO is a Eurasian political, economic, and security organisation, the creation of which was announced on 15 June 2001 in Shanghai, China by the leaders of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan. 

The original six nations, with the exception of Uzbekistan, were previously members of the Shanghai Five group, founded on 26 April 1996 in Shanghai. 

India and Pakistan joined SCO as full members on 9 June 2017 at a summit in Astana, Kazakhstan. 

Currently SCO comprises eight member states, namely India, Kazakhstan, China, Kyrgyzstan, Pakistan, Russia, Tajikistan, and Uzbekistan. 

Observer states include Afghanistan, Belarus, Iran and Mongolia. 

SCO has six dialogue partners, namely Azerbaijan, Armenia, Cambodia, Nepal, Turkey, and Sri Lanka. 

SCO has two permanent bodies — the SCO Secretariat based in Beijing and the Executive Committee of the Regional Anti-Terrorist Structure (RATS) based in Tashkent. 

The Shanghai Cooperation Organisation is a Eurasian political, economic, and military organisation. 

The SCO’s objectives are centred around cooperation between member nations on security-related concerns, military cooperation, intelligence sharing and counter-terrorism. 

SCO assumes greater importance after entry of India and Pakistan, the United Nations has said. 

The expansion of SCO now makes this a powerful and strategic regional grouping. 

Strengthening mutual trust and neighbourliness. 

Promoting effective cooperation in politics, trade, economy, research, technology and culture, as well as education, energy, transport, tourism, and environmental protection. 

Making joint efforts to maintain and ensure peace, security and stability in the region. 

Moving towards the establishment of a democratic, fair and rational new international political and economic order. 

Several joint infrastructure projects have been completed in SCO member states that have improved conditions for cross-border cooperation and boosted development capacity. 

Positive regional dynamics in Central Asia and closer interaction among countries. 

18th SCO summit was held in China’s Qingdao. 

It is for the first time the Indian prime minister attended the SCO summit after India became full-fledged member of the grouping. 


SCO leaders made joint appeal to youth against terror. 

In the joint Qingdao Declaration of the Council of Heads of State of SCO, India was the only member to refuse to endorse China’s One Belt, One Road (OBOR) project. 

The decision was taken as part of New Delhi’s policy of not compromising on territorial issues. 

Multilateralism provides the holistic structure for political and economic relations in the world. 

For example, international problems, especially sustaining rules for trade and investment, involve numerous countries concurrently. 

These international problems cannot be dealt with effectively within the national domain or even bilaterally. 

Domestic goals cannot be accomplished without coordinated multilateral action. 

To create fair, just and lasting solutions to critical matters of peace and political, economic and social security. 

The sustenance of an effective multilateral organization will significantly benefit the expansion of the bilateral relationships.
A well-nourished child is one-third more likely to escape poverty. They will learn better in school, be healthier and grow into productive contributors to their economies. Good nutrition provides the brainpower to build the economies of the future.

The government announced that it would release an annual “state of nutrition” report, detailing India’s level of stunting, malnutrition and feature best practices for States to scale up nutrition interventions. PM’s Overarching Scheme for Holistic Nourishment (POSHAN) scheme to boost nutrition among children and women.

Nutrition must be placed at the heart of efforts to end poverty, fight disease, raise educational standards and tackle climate change. Our policy response has to move from “food security” to “nutrition security”.

Political will to drive “best buys” such as sugar taxes and mass media campaigns on healthy diets. Sustained efforts to promote millets and pulses production and distribution under food security programme.

Regulatory and fiscal measures to decrease the availability, affordability and promotion of unhealthy foods, while making healthy foods more accessible. For example taking the lead from a directive by the Delhi High Court, that India should ban the sale of junk food in and around schools.

Recent Lancet study on India showed that higher taxes on junk food can actually lead those on lower incomes to live healthier lives. Obesity management, prevention and treatment should be provided as essential health services.

The best practices of states which are successful in reducing stunting, anaemia and malnutrition are to be studied, and successful models are to be adopted at the national level. Research suggests that $1 spent on nutritional interventions in India could generate $34.1 to $38.6 in public economic returns.

Ingenious tribal women are growing plants of nutritious value following their age-old tradition and other people must follow it by including such plants in their backyard. Fortified food can be incorporated into mid-day meals, public distribution shops and anganwadi centres.

Boosting nutrition levels across the country is one of the biggest low hanging fruit in the Indian public policy sphere. If we can conquer space, we can conquer malnutrition.

India is facing dual challenges of undernutrition and obesity. As the country aspires to fulfill its economic and social development goals, nutrition is one area which requires greater attention.

26 million children suffer from wasting (a low weight-for-height ratio), more than in any other country. The country has the second highest number of obese children in the world.

Between 1980 and 2015, obesity doubled for children and tripled for adults.

An additional 2.6 million children will be obese in India by 2025, a trend that will not reverse without action.

Research shows that Indians have higher levels of body fat and lower levels of lean muscle when compared to many other populations.

One of the primary reasons for children being undernourished is that often their mothers are undernourished.

Women without education or without much voice in their families often fail to ensure adequate diets for their children.

Malnourishment in a girl, combined with early marriage, has a cascading effect of health complexities across generations.

Poverty, dietary issues, poor sanitation and low social status of women.

Inadequate iron intake can lead to iron deficiency anaemia (IDA) which leads to permanently impaired cognitive abilities.

Rising obesity is putting pressure on already fragile health systems in India by posing high risk of cardiovascular diseases, diabetes and some cancers.

High burden of premature mortality

Indian children eating more junk food while becoming increasingly sedentary.

Poor nutrition affects early childhood development, learning and earning potential with life-cycle effects on national health and economic growth.

India has the highest levels of malnutrition and the highest number of stunted children in the world.

The pace of decline of under nutrition is far below what numerous countries with similar growth trajectories to India have achieved.

India pays an income penalty of 9% to 10% due to a workforce that was stunted during their childhood.
The sector needs not just an immediate infusion of capital, but also policy measures and structural changes. Linking sugarcane pricing to a revenue sharing formula to address the regular boom-bust cycle the industry goes through. The sugarcane prices (input costs) to be linked to the price of the final product, sugar, and other by-products like molasses. Implementation of the C Rangarajan committee suggestion of rationalisation of sugarcane prices with sugar prices. It will bring down the country's oil import bill. It will fulfill the government's mandate to have 5% ethanol blending of petrol. Put in place a long-term ethanol policy on pricing, and enable higher pricing of better quality ethanol. This will encourage new investments and help in diversion of sucrose to ethanol and to balance out the excess production of sugar.

India is the world's second largest sugarcane producing country. (First - Brazil) Sugarcane is cultivated in tropical and subtropical regions. Uttar Pradesh is the largest sugarcane producing state in India. (Second - Maharashtra). Its cultivation started around 327 BC in the Indian subcontinent.

Unlike rice and wheat, where the government procures the crop at MSP, sugar cane farmers sell their produce to sugar mills at government-notified Fair and Remunerative Prices (FRP). The four main by-products of the sugarcane industry are cane tops, bagasse, filter muds and molasses.

Sugarcane is usually distributed on Makar Sankranti or Pongal festival. Ratoon cropping is growing a fresh crop from the stubbles or suckers of the plant crop without replanting. It is also referred to as stubble cropping, re-harvesting, second crop, etc. This practice is widely used in the cultivation of crops such as rice, sugarcane, banana, and pineapple.

Peninsular India has tropical climate which gives higher yield per unit area as compared to north India. The sucrose content is also higher in tropical variety of sugarcane in the south. The crushing season is also much longer in the south than in the north. The co-operative sugar mills are better managed in the south than in the north. Most of the mills in the south are new which are equipped with modern machinery.

Introduction

The Union cabinet announced Rs 70 billion bailout package to ‘deal with the current crisis in the sugar sector’. Of the Rs 70 billion package, only Rs 11.75 billion has been allocated to pay the pending dues of sugarcane farmers. The rest, Rs 57.32 billion, is aimed towards providing financial assistance to sugar mills for investing in infrastructure. The cabinet decision also included the setting of a minimum selling price of Rs 29 per kilogram for sugar.

Present Crisis

The crisis that the sugar industry is facing is the result of excess production of sugar. This has lowered prices resulting in a liquidity crunch for sugar mills. This has in turn led to pending sugarcane dues for farmers. Mills have delayed payments for cane of more than 200 billion rupees. India's estimated annual consumption of sugar is 25 million tonnes, production in 2017-18 touched 31.6 million tonnes. Mills have failed to export large quantities due to lower prices overseas.

Sugar Industry Crisis

Brazil and Australia initiated a legal investigation into whether India's support for its sugar sector has violated WTO restrictions.

The sugar industry and farmers are likely to be in a similar crisis next year too as domestic production is likely to be in excess of domestic consumption. The government's package has focused heavily on long-term investments in sugar industry, the benefits of which will not accrue to sugarcane farmers.

Concerns / Challenges

The government providing aid to the sugar industry for upgrading the infrastructure would benefit the industry in the long-run, but fail to deal with the current crisis. The global prices have fallen 17 percent in 2018.

Measures also fail to address the issue of low sugar prices and high cane costs. Minimum price of Rs 29 per kilogram fails to address the problem as the cost of producing sugar is around Rs 36 per kilogram.

Reduced banking support to the sugar industry for the past four years.

Facts for Prelims

Ratoon cropping

Difference between the Sugar Industry of North and Peninsular India
To address failings in food security.
To recognise and mainstream issues including increasing natural disasters and climate adaptation.
Given the current crises in India, it is time we prepare a third generation right to food legislation that recognises that a climate-as-usual scenario no longer exists.
Agriculture that sustainably increases productivity, resilience, reduces GHGs and enhances achievement of national food security.
The Climate-smart practices include soil and nutrient management, water harvesting, pest and disease control, resilient eco systems etc.
Enabling farmers to adopt climate-smart practices that could lead to rural economic growth and ensure food security.

Need for third generation right to food legislation

Climate-smart agriculture:

Food Security

Concerns / Challenges

Inadequate distribution of food through public distribution mechanism and food adulterations in distributed food.
Lack of inter sectoral coordination.
Improper implementation of nutritional programmes.
Agrarian crisis
Soil degradation, water stress and drought are affecting agricultural produce.
Climate-smart agriculture for Sustainable agriculture.
Emphasis on indirect interventions like access to water, sanitation and hygiene.
Given a strong correlation between sanitation and malnutrition, a comprehensive approach is required.
Policies must deliver universal, rights-based nutrition services, which overcome disparities across gender, communities and geographical regions.
Long-term relief measures in the event of natural disasters.
Food Fortification, bio fortification of plant/crops to combat micronutrient deficiency.
Enhance livelihood security.

Third Generation Food Security Law

Assessing the Food Security Act

The National Food Security Act does not guarantee a universal right to food.
It restricts the right to 75% of the Indian population.
The claim under the Act would not be available in times of “war, flood, drought, fire, cyclone or earthquake”.
The right to food becomes most valuable in these circumstances.
NFSA predominantly mentions just rice and wheat, and that too for only some citizen.
Given that a major reason for micronutrient deficiency in India is because of a cereal-based diet, the NSFA does not address the issue of malnutrition and nutritional deficiency adequately.
The NFSA is framed in such a way that the courts can’t go beyond the provisions of the NFSA in terms of what it could order the government to give citizens.
NFSA addresses issues of access, availability and utilisation, and is largely silent on the issue of stability of food supplies.
The Act does not address the impact of climate change on Indian agriculture and measures to overcome it.
Thus there is a need for ‘third generation’ approach towards food security due to increased vulnerability to climate change and natural disasters.

Way Forward
Excessive withdrawal of groundwater across India is lowering the water table, and also contaminating water with uranium.

People are using the contaminated wells as their main source of drinking water.

Groundwater is the primary source of drinking water and irrigation in India.

These findings highlight a major gap in India’s water-quality monitoring.

As the Bureau of Indian Standards does not specify a norm for uranium level, water is not tested regularly for it.

The chronic effects of uranium consumption are still unknown.

The groundwater contamination across India must be probed, and safe sources must be identified.

We need comprehensive systematic studies to establish the chronic health effects of uranium exposure.

India’s water agencies must make groundwater management a priority to protect people from the harmful effects of exposure to uranium.

Make testing for uranium a routine part of groundwater quality monitoring.

Evaluation of human health risks in areas of high uranium prevalence.

Development of adequate remediation technologies, and implementation of preventive management practices.

Include a uranium standard in the Bureau of Indian Standards’ Drinking Water Specification.

Exploring new ways to prevent or treat uranium contamination will help ensure access to safe drinking water.

Behavioural changes that promote conservation and adoption of efficient water use practices to reduce ground water use for irrigation.

Managing water resources is the key to create a water-secure future.

There are reports of widespread uranium contamination in groundwater across India that demands an urgent response.

Scientists have found widespread uranium contamination in groundwater from aquifers across 18 states in India, much above the WHO provisional standard for the country.

A study has found over 30 micrograms per litre (mcg/l) of the heavy metal are found in parts of northwestern, southern and southeastern India.

Drinking such water can damage one’s kidneys, and the World Health Organization prescribes 30 mcg/l as an upper limit.

Evidence of uranium contamination has accumulated from across India over the last decade.

A 2015 Bangalore study, for example, found uranium levels of over 2000 mcg/l in the southern part of the city.

Other studies found levels of over 600 mcg/l in Andhra Pradesh and Telangana.

More recently, parts of Gujarat and Rajasthan recorded undesirable uranium levels in their waters.

The mechanism by which uranium enters groundwater is still under research.

In Rajasthan and other northwestern regions, uranium occurs mostly in alluvial aquifers.

In southern regions such as Telangana, crystalline rocks such as granite seem to be the source.

When groundwater is over-extracted from such soils, the uranium is exposed to air, triggering its release.

These hypotheses must be explored, because they will help determine where to find safer water.
Urban Local Governance

Introduction

Limitations of 74th Amendment

- The functions which a State government is expected to devolve to the local government — do not include urban transportation, housing or urban commons.
- According to 74th Amendment a municipality need not be constituted in areas which are declared as industrial townships. This will keep the local governments weak.
- Unlike the 73rd Amendment which provides for three levels of panchayats, power in urban areas is concentrated in a single municipal body (whether it is a municipal corporation, municipal council or town panchayat).
- Failure of States to implement the provisions of the 74th Amendment.
- Local governments are financially constrained and do not have the administrative capacity to carry out its functions.
- Normally, the world over, the size of the local governments taken together is to the tune of around six percent of the national GDP. In case of India, it is less than one percent.
- Cities are never likely to be surplus entities given our tax design.
- The financial recommendation by the State Finance Commission is not accepted by many states.

Concerns / Challenges

- Political empowerment of local government that furthers local democratic accountability.
- Higher level governments must devolve funds to the local bodies to fund their mandate.
- The financial recommendations by State Finance Commission should be treated with utmost seriousness.
- ULBs must be allowed to come together and form virtual entities which can then take exposure to financial markets through loans and debt route.
- It is important to have clarity in the assignment of functions to ULBs.
- Capacity building of the ULBs to enter into PPP contracts.
- "The future of 'happy' cities requires that elected urban local bodies must be empowered and their institutional and human capacities sufficiently strengthened.
- Need to attract fresh investment in order to upgrade urban infrastructure across the country.
- Practical and imperative steps to empower elected city governments must be taken by all state governments.
- It is not enough to improve ease of doing business at the national level; similar ease is necessary at city level to improve delivery of basic services.

Disempowerment and Depoliticisation

- Twenty-five years ago, the Constitution underwent a significant transformation with the passage of 74th Constitutional Amendment.
- It gave constitutional status to democratically elected urban local bodies.
- Despite a constitutional mandate, urban local governance has not measurably improved the conditions in India’s cities.
- Traffic congestion, water crisis, poor sanitation, increasing crime and unaffordable housing characterise urban living in India today.
- One of the prime reasons for this inefficiency is lack of structured devolution of authority and lack of investment in building human and institutional capacities.
- Countrywide, urban local bodies generate less than a third of their own revenue.
- Political support and capacity for revenue generation is lacking, except in some southern and western states.
- Organisational systems and accounting procedures in urban local bodies have not been modernised.

Way Forward

- Elected representatives at the city-level are rendered powerless by making them subservient to the State government.
- In most municipal corporations, while the mayor is the ceremonial head, the executive powers are vested with the State government-appointed commissioner.
- Urban development authorities and public corporations are accountable to the State government, not the local government.
- Even urban planning and land-use regulation (globally a local government function) is with State government-controlled authorities.
- Programmes such as the Smart Cities have special purpose vehicles (SPVs) which have "operational independence and autonomy in decision making and mission implementation".
- The creation of parallel institutions that disempower the elected local government shows how higher levels of government distrust local politics.
- Even for performing functions that are within its purview (such as levying local taxes or undertaking civic projects above a certain budget) the local government requires State government permissions.
- Hence, municipalities are not yet autonomous units that can be genuinely called as the "third tier" of government in India’s federal system.
India’s water crisis has implications for the health of the entire population. Farmers suffer crop losses. Decrease in tree cover, shrubs and grass in the catchment areas. Queues for government water tankers and public taps are already a common sight in Indian slums. Policies like giving free electricity to farmers or financial support for groundwater extraction results in uncontrolled exploitation and wastage of resource. Primarily water is not valued in India. “People think it is free.” There is great awareness now about air pollution; however, India’s water crisis does not get that kind of attention. Inter-State river disputes. Adverse climatic conditions are believed to be the main factor for reduced flow in streams. Drying up of the streams and increasing erratic pattern of rainfall. In cities and towns, lack of infrastructure to deliver piped water to homes. Poor data management and an abject failure to properly price water. Where data is available, it is often unreliable due to the use of outdated collection techniques and methodologies. Deepen our understanding of our water resources and usage and put in place interventions that make our water use efficient and sustainable. Augmentation of watersheds that can store more good water, for use in agriculture and to serve habitations. Strict pollution control enforcement. Decentralisation of irrigation commands, offering higher financial flows to well-performing States through a National Irrigation Management Fund. Groundwater extraction patterns need to be better understood through robust data collection. With steady urbanisation, augmenting sources of clean drinking water supply and treatment technologies will encourage reuse. Pollution can be curbed by levying suitable costs. Poor maintenance of pipelines, consistent leakage and illegal tapping of water are some of the issues that need to be addressed on a war-footing. Adopting rainwater harvesting techniques is the need of the hour. A legal mandate will work better than just competition and cooperation; it would make governments accountable. These forward-looking changes would need revamped national and State institutions, and updated laws.

The NITI Aayog report on Composite Water Management Index said that India is facing its ‘worst’ water crisis in history. About 60% of the States were marked as “low performers” and this was cause for “alarm”. The report has predicted that by 2030, the country’s water demand is projected to be twice the available supply, implying severe water scarcity. Nearly 600 million Indians faced high to extreme water stress. About 2,000,000 people died every year due to inadequate access to safe water. Twenty-one cities, including Delhi, Bengaluru, Chennai and Hyderabad will run out of groundwater by 2020, affecting 100 million people. Critical groundwater resources, which accounted for 40% of India’s water supply, are being depleted at “unsustainable” rates and up to 70% of India’s water supply is “contaminated”. If the present situation continues, there will be a 6% loss in the country’s GDP by 2060. The combination of rapidly declining groundwater levels and limited policy action is likely to be a significant food security risk for the country.

Ranking of states/UTs will ensure that principle of competitive and cooperative federalism is actualised in India’s water management system. It will help build pressure on states that have not performed well to improve their water management techniques. It will provide useful information for States and concerned Central Ministries and Departments enabling them to formulate and implement suitable strategies for better management of water resources. Taps in Shimla went dry this summer, posing an unprecedented water crisis in the hill town. Failure of State governments to check unplanned development and exploitation of water resources. The vegetation pattern has changed, tree cover is shrinking and unscientific dumping of debris in water streams is rampant. The debris blocks the natural course of water bodies. Increasing number of tube wells resulting in depletion of groundwater. Changes in farming patterns lead to consumption of more water for irrigation and also change the soil profile because of the use of fertilizers. The states ranked lowest – like Uttar Pradesh, Haryana and Jharkhand – are home to almost half of India’s population along with the majority of its agricultural produce.
It is a farming practice that believes in natural growth of crops without adding any chemical fertilizers and pesticides.

The four wheels of ZBNF are Bijamrita, Jwamrita, Mulching and Waaphasa.

Bijamrita is a natural way of seed treatment using local cow urine and cow dung.

Jwamrita is made using water, local cow dung, local cow urine, jaggery, dal flour and soil.

Waaphasa is the aeration in the soil.

ZBNF is different from organic farming.

Intercropping is an important feature of ZBNF.

Practising composting on the farm itself, so that soil organic matter increases.

Storing water in the farm ponds for use in adverse conditions.

Insects and pests are managed using neem leaves, neem pulp and green chillies.

Establishing farmers' federations and self-help groups, and placing farmers at the forefront of knowledge creation and dissemination.

Besides reduced input cost, farmers practising ZBNF gets higher yields.

Elimination of chemical pesticides and promotion of good agronomic practices.

Promote regenerative agriculture, improve soil biodiversity and productivity.

Ensure decent livelihoods to smallholder farmers.

Restore ecosystem health through diverse, multi-layered cropping systems.

Anyone who is having half an acre of land can start ZBNF.

Using ZBNF techniques, one can convert even the most infertile land into a fertile one.

Women's empowerment and nutrition.

Agricultural scientists in India have to rework their strategy so that farming is in consonance with nature.

We need a global transition to a more resilient and sustainable agriculture that is less dependent on agrochemicals and draws more on natural biological and ecosystem processes.

Across the world, agriculture is facing multiple setbacks, in the form of extreme weather events like floods and droughts or factors such as soil degradation, soil salinity and water shortage.

To feed the global population of 9.6 billion by 2050, as projected by a United Nations report, scaling up food production is important.

Ensuring food security, producing more with less resources and building the resilience of smallholder farmers are also important in creating a food-secure future.

The neoliberalization of the Indian economy led to a deep agrarian crisis that made small scale farming an unviable vocation.

Privatized seeds, inputs, and markets are inaccessible and expensive for peasants.

Indian farmers increasingly find themselves in a vicious cycle of debt, high production costs, high interest rates for credit, and volatile market prices of crops.

Under such conditions, ‘zero budget’ farming promises to end a reliance on loans and drastically cut production costs.

The phrase ‘Zero Budget’ means without using any credit, and without spending any money on purchased inputs.

‘Natural farming’ means farming with Nature and without chemicals.

Everything required for the crop comes from nature itself.

Ensuring food security and producing more with less resources.

For building the resilience of smallholder farmers for creating a food-secure future.

ZBNF is the right solution to fight climate change and create resilient food systems.

Fighting drought is one of the main objectives of ZBNF.

The Food and Agriculture Organization (FAO) of the UN advocates environmentally-friendly farming methods that can take us to a more sustainable future.

Importance for chemical free food consumption is growing rapidly.

Chemical farming has made food a poison and also has reduced the yield by making lands barren.

Farmers' welfare and sustainable practices are vital for a sustainable and productive economy.

ZBNF constitutes an effective strategy for achieving SDGs targets.

ZBNF is a set of farming methods, and also a grassroots peasant movement.

It has attained wide success in southern India, especially the state of Karnataka where it first evolved.

Farmers in Andhra Pradesh have practised ZBNF and have witnessed good results.

Himachal Pradesh Government has launched ZBNF project which aims to increase agriculture produce and the income of farmers by the year 2022.