# Rural distress

Rural unemployment is at a 45-year high while the consumption expenditure of rural families has fallen by 9 percent between 2011-12 and 2017-18, as per the report of National Sample Survey Office. Between 2011-12 and 2015-16, the income of farmers grew by just 0.44 per cent a year, and has not risen since then.

**Union Budget 2020-21 -**

- Budget allocation for PM-KISAN has been kept the same at Rs 75,000 crore, while the budget for MGNREGS has gone down by Rs 10,000 crore—from Rs 71,002 crore (revised estimates) for 2019-20 to Rs 61,500 crore in 2020-21.
- The government has massively reduced the food subsidy bill—from Rs 1.84 lakh crore to Rs 1.15 lakh crore. FCI, whose share in the food subsidy bill last year was R1.51 lakh crore, spent just Rs 75,000 crore.
- The subsidy on fertilisers has been reduced by Rs 9,534 crore—Rs 83,434 crore to Rs 73,900 crore. This has been done ostensibly to discourage the use of chemical fertilisers and promote organic ones. The government has allocated a paltry Rs 12.5 crore to promote the use of organic and biological sources of nutrients.
- The government has reduced allocations to Market Intervention Scheme and Price Support Scheme (mis-pss) and Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA). The budget for PM-AASHA has been reduced to a third—from Rs 1,500 crore in 2019-20 to Rs 500 crore.

**Privatisation of rural economy -**

- The government has brought in three 'Model' Acts that show its intent to bring in private players in the agrarian economy - **the Model Agricultural Land Leasing Act, 2016; the Model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act, 2017; and the Model Agricultural Produce and Livestock Contract Farming and Services (Promotion and Facilitation) Act, 2018**. The government wants all states to adopt these Acts but so far only three - Uttar Pradesh, Uttarakhand and Maharashtra - have complied, and that too in part.
- These Acts formalise and facilitate involvement of big companies in agriculture. For instance, in the Model Agricultural Land Leasing Act, 2016, the Act will not only make landowners secure about their right over the land, but also encourage companies to lease large tracts and undertake initiatives for captive farming.
- The Model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act, 2017, ends the monopoly of state-level Agricultural Produce Marketing Committees in organising and controlling agriculture markets or *mandi*s.
- In the Model Agricultural Produce and Livestock Contract Farming and Services (Promotion and Facilitation) Act, 2018, formalises contract farming. It provides a legal framework to agricultural production (including livestock and poultry) based on a pre-harvest agreement between buyers (such as food processing units and exporters) and producers (farmers or farmer producer organisations).

**Government response -**

- The government plans to set up and run warehouses and cold storages on public-private partnership (PPP) model at the block level. So far, all such government facilities were solely owned by FCI and the Central Warehousing Corporation.
- To improve connectivity for transporting produce, the government has proposed train (Krishi Rail) and flight (Krishi Udaan) facilities. These too will aid big companies more.
- Government plans to expand Kisan Urja Suraksha Evam Utthaan Mahabhiyan scheme to aid 2 million farmers set up standalone solar pumps and help another 1.5 million farmers solarise their grid-connected pumps. Under the scheme 30 per cent of the amount is given by the Centre, 30 per cent by the state and 40 per cent by the farmer, of which 30 per cent can be sourced through bank loan.
- The government has increased the allocation to the Pradhan Mantri Fasal Bima Yojana—a scheme launched in 2016 to secure farmers against natural calamities and crop loss—from Rs 14,000 crore in 2019-20 to Rs 15,695 crore for 2020-21.

# Are we prepared for a pandemic?

A pandemic is an epidemic occurring worldwide, or over a wide area, crossing international boundaries and usually affecting a large number of people, as per the World Health Organisation. A pandemic of a new, highly infectious, airborne virus—most likely a strain of influenza—to which most people lack immunity, is inevitable.

**The case of coronavirus -**
The COVID-19 has already spread to 27 countries and infected over 40,000 people. Earlier outbreaks—SARS in 2003 and the Middle East Respiratory Syndrome (MERS) in 2012—were also caused by coronaviruses, but were not declared pandemics.

**Arrival of Zoonotic -**
- Though we do not know when and where the next pandemic will surface, we do know how it will emerge. The next pandemic will be a zoonotic disease. Zoonotic diseases are caused by infections that spread from animals to humans. Though no direct has been established between COVID-19 outbreak and climate.
- Climate change leading to warming temperatures and melting of ice is exposing new viruses to the ecosystem. Researchers recently found 33 viruses trapped in the Tibetan glacier. Out of these, 28 were completely new to science and all of them had the potential to cause an outbreak.

**Way forward -**
- The answer to this question depends on three conditions: nobody knows what virus will cause the pandemic; how virulent will it be; how many people would be killed or infected; and, if any symptomatic treatment will work.
- Since the world was sure that the next pandemic would be a flu pandemic, efforts have centred around developing the universal flu vaccine—the one which will give protection against existing and future strains of flu.
- WHO's ambiguous position on COVID-19 should force countries across the world to devise strategies, build health and emergency infrastructure.

# Target beyond reach

In 2015 when India announced that 40 percent of the 100 GW of solar power targeted under the National Solar Mission (NSM) 2022 will be sourced from solar rooftop (SRT) systems, the task appeared simple.

**Details -**
Data with the Ministry of New and Renewable Energy (MNRE) shows that by December 2019 the country has added only 2.3 GW from grid-connected SRT systems.

**International practices -**
SRT systems account for 57 per cent of Australia's total solar power capacity. The figures are over 70 per cent for Germany, 36 per cent for the US and almost 50 per cent for Brazil.

**Why poor performance in India?**
- SRT sector has largely remained a non-performer in India because installing it and recovering the investment is an arduous task for residential consumers.
- Banks consider the projects as high-risk loan despite the Reserve Bank of India including the sector in its "priority sector lending" norms.
- Subsidies on SRT systems, as assured by the government, are also hard to come by.

**Commercial adoption -**
- The only segment that appears to have benefitted are commercial and industrial (C&I) establishments. They are responsible for 70 per cent of all SRT systems.
- Since the power tariff for commercial installations in India is much higher than what it is for the residential sector, C&I establishments can recover their capital investment in just five years.

- However, under the Grid Connected Rooftop (GCRT) Solar Programme (Phase-II), the C&I establishments will no longer receive government subsidy. This might dampen the interest of the only segment that has exhibited an appetite for SRT systems.

**Way forward -**
- The government should offer easy financing options, set up a larger fund for SRT subsidies and ensure their faster disbursal.
- There is a need for structural reforms in electricity tariff. For a large segment of households, electricity tariffs do not reflect the true cost of electricity supply. Reserving these subsidies only for the poor and agricultural communities will force high-income households to shift to cheaper SRT systems.

## Farm raiders

Yellow locusts from Pakistan raid Rajasthan and Gujarat every year. The insect has a lifespan of 90 days. It arrives in July, breeds, and the new generation leaves for Pakistan-Iran by October. The swarms chase greenery and raid regions that have just had monsoon because that is the best time to find food and breed.

**Increase in attacks -**
Usually, India faces less than 10 swarm attacks annually, but in 2019 there were over 200. There is no official declaration on the number of attacks so far. Apart from the spike in the number of attacks, the size of the swarms was more than twice the usual, say eyewitnesses.

**Reason for increased attacks -**
There were two climatic anomalies in India in 2019 that explain the unusual frequency and size of swarm attacks.
- One, monsoon in western Rajasthan arrived in May—over one-and-a-half-month early from its usual date of July 1. This created food and breeding conditions for locusts early on and invited them.
- Two, intermittent rains continued till November ensuring that the locusts keep getting food and do not depart on their usual time of October.

**Precaution is better than cure -**
- As per the procedure, sandy areas where green vegetation is available and desert areas which have received recent rainfall must be regularly surveyed for live locusts or locust eggs.
- Areas that were attacked previously or where people have spotted locusts should also be watched.
- The procedure also says that areas where temperature from sunrise to mid-day stays between 20°C and 38°C should be surveyed because this is the optimum temperature range for locusts to breed.

**What should be done?**
- Since swarms move across borders, they cannot be dealt with without international cooperation. For instance, before the Iran Revolution in 1979, Pakistan and Iran took joint actions against locusts in April, but the practice ended. There should be a meeting between India and Pakistan every month to manage locust attacks.
- Even after there is information, dealing with locusts is difficult because they move with the wind and there is no certainty where they will attack. What can be done is to monitor the possible regions and spray pesticides if there is a known swarm resting at night.

## Lurking in the shadows

Arsenic contamination in groundwater is one of the most crippling issues in the drinking water scenario of India.

**Details -**
- In India, arsenic contamination was first officially confirmed in West Bengal in 1983.

- Close to four decades after its detection, the scenario has worsened. About 9.6 million people in West Bengal, 1.6 million in Assam, 1.2 million in Bihar, 0.5 million in Uttar Pradesh and 0.013 million in Jharkhand are at immediate risk from arsenic contamination in groundwater, says latest data published by the National Rural Drinking Water Programme (NRDWP) of the Ministry of Jal Shakti.

**What must be done?**

- The mitigation measures—that are currently focused on drinking water—must have a more comprehensive approach to ensure arsenic-free water for drinking and agricultural products. It means that the government must check for arsenic in water used for agricultural produce.
- Both the Union and State governments must work toward facilitating research that can investigate the accumulation of arsenic in crops and addressing the agricultural concerns of the affected regions.
- They must watch out for arsenic percolation in the food chain and the possibilities of biomagnification.
- The government needs to also conduct a larger study on the arsenic contamination of our food chain and its health impacts to understand its spatial spread through the agricultural supply chain.