

> Perspective: Demystifying Demonetization

> In the Marxist Heartland

# FARMERS' FORUM

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Issues and Ideas for Indian Agriculture

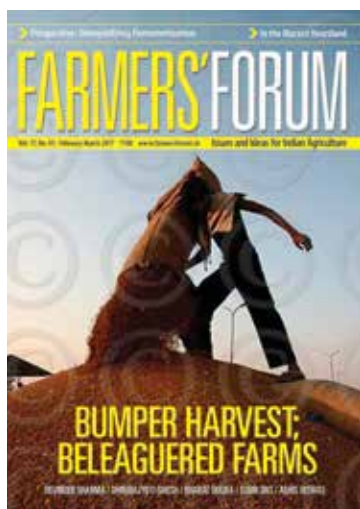


## HEALTHY HARVEST; DISEASED LIVELIHOOD

DEVINDER SHARMA | DHRUBAJYOTI GHOSH | BHARAT DOGRA | SUBIR DAS | ASHIS BISWAS







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# Fatal Forecasting and the Farm Sector

**A**s a farmer's organization, one is constantly challenging the conventional wisdom, which is unanimously agreed upon by even those who disagree on possibly everything else. The palpable fear of food insecurity that has been ingrained in Indian minds; perhaps with some justification given the country's history of food shortage and famine in this case.

The famine of 1770 affected north India leading to millions of deaths. The East India Company had destroyed food crops, forcing farmers to grow indigo plants for dye, along with opium poppy; it increased the tax on agricultural produce from 10 per cent to 50 per cent; it also banned stockpiling of rice. The seasonal food shortage caused by drought was quickly worsened and converted into a famine.

In 1798 AD, Thomas Robert Malthus wrote in 'An Essay on the Principle of Population' that: "The power of population is indefinitely greater than the power in the earth to produce subsistence for man", which basically meant that population growth could not be sustained. The Bengal famine of 1943 killed upwards of three million. Churchill as prime minister of England had ordered food to be taken from India to build stockpiles (not consumed) for allied troops fighting World War II.

As India changed policies during the Second Five Year Plan, food shortage here became so severe in the 1960s that Lal Bhadur Shastri had to ask the people to skip one meal a week so that food was available for the masses. Foodgrain from the USA was sent directly to the hinterland where no food was available in a phenomenon that was termed 'Ship to Mouth'. William and Paul Paddock wrote a book in 1967 that became very popular: 'Famine 1975! America's Decision: Who Will Survive?'

It was then suggested that nations like India were so hopeless that USA's aid would be a wastage. The advice was that such nations that "can't-be-saved nations" should be left to their fate; to die of starvation. Another ill-informed and short-sighted economist, who became very famous, Paul R. Ehrlich, wrote a bestseller, *The Population Bomb*, arriving at the same conclusions as Malthus and Paddock.

Most of those who today decide how the ordinary Indians live their lives — whether they be policymakers, economists, scientists and politicians — were brought up in such trying times, reading, studying and being influenced by such literature. Today, at one end of the spectrum there are academics who constantly seek to validate their own ingrained fear of India's inability to grow enough food. At the other end are agriculture input companies, commodity firms, speculators, traders and NGOs that have incorporated food fears into their business model for profiteering.

**POLICIES MADE BY NATIONS, INCLUDING INDIA, ARE OUT OF SYNC WITH STATED GOVERNMENT OBJECTIVES**

## FOOD INSECURITY IS A FACTOR OF HUMAN HABITS AND CHOICES, IT IS A PROBLEM OF AVAILABILITY AND ACCESS; NOT THE INABILITY OF THE PLANET TO SUSTAIN ITS PEOPLE

Between the two ends they manage to create, what can be called, the “fatal forecasting” phenomenon for the farm sector. So deeply have they managed to seed this that the entire and massive scheme of trade, public distribution and work-for-food programmes, technology and farm interventions, whereby food production and availability increased substantially, has failed to make a dent the sense of insecurity.

Matters have worsened over time with new dangers becoming apparent; the consequences of climate change. Doubling production by 2050 to meet the demand of 9.2 billion people is thus a daunting task. Yet, even conceding these realities, possibilities exist as would be apparent from the yield gap between research centres and the best farm in any village and between best and worst farms in a village.

Simply taking focused measures to bridge these gaps will increase yield by 20 per cent. Availability and utilization of better sowing and harvesting machinery will increase yield by another 20 per cent. There is also the case for increasing the scope of farming: 70 per cent of the earth is covered in oceans but only two per cent of the food comes from oceans. This two per cent from the oceans provides 16 per cent of world's protein requirement. Yet not just fish, even sea weeds are untapped.

The impact of new technologies like ‘genome editing’ is not fully understood but the potential is undeniable. Increasing photosynthesis in plants that consume about one per cent of sunlight or improving plant uptake of nutrients from about 40 per cent at present is a possibility. The animal food economy takes up 30 per cent land and 50 per cent fresh water as 10 kgs of calories required to make one kg of meat emerges as the real killer.

Yet disruption is the name of the game. In 20 years there will be meat on the table made from plant extracts or laboratory grown meat that will have the taste and texture of real meat. This disruptive idea will free land and water for other use. Only three crops provide 66 per cent of the food requirement: wheat, corn and rice. Even these three crops are not utilized properly or entirely and there are 50,000 edible plants to choose from.

Disruption would mean diversifying diets to beat the odds. Today, 30 per cent of the food is wasted and this can be reduced to less than 10 per cent. That means more food on the table without adding more land or inputs. Essentially, mankind and certainly India have interpreted the nature of the problem incorrectly.

India has never run out of food in the last 10,000 years nor will it do so in the distant future. Food insecurity is a factor of human habits and choices, it is a problem of availability and access but not the inability of the planet to sustain its people. There is a history of underestimating human ingenuity.

India is not as naturally endowed with environmental assets as other nations. It has only two per cent of the arable land and two per cent of the world's water to feed 16 per cent of the world population. The country's challenges are more daunting than those facing large parts of the world. Therefore the urgency to set things right.

More importantly, there is need for a new matrix to measure growth and security. The most important investment should be made in calculating the true cost of food. Without knowing the true cost of food, policymakers cannot make informed choices and investments. The bottomline, given this failure, is that government policies made by nations, including India, are out of sync with stated government objectives. ●



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*Devinder Sharma*

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# To the Editor

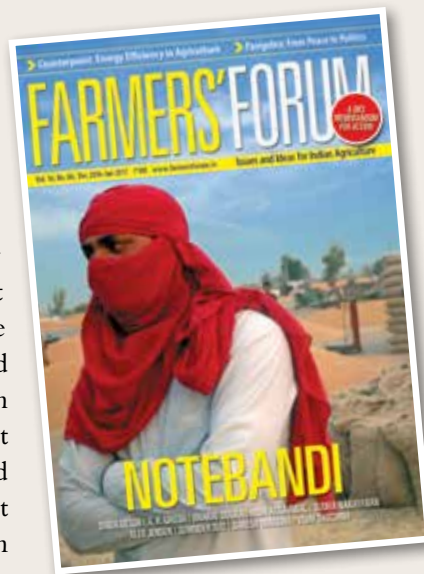
## Notes of sorrow

Sir,— Apropos of your editorial “A Move Far from Noteworthy” (*Farmers’ Forum*, December 2016-January 2017), I totally agree with your view that the economy slowly grinded to a near stop on account of “notebandi”. Yet people seem to have been convinced that there was a bold reform underway to strike at the root of the black money menace and many are continuing to support the step. Those who have been badly hit only hope and pray that this ill wind will soon blow over. One wonders when the national debate over anything of critical import, particularly for those living at the bottom of the pyramid, “far lower than the echelon termed the middle class, which does not populate the social media chatrooms”, as you so appropriately characterize them, will shift to the reality on the ground and not remain confined to the perceptions of the bold and the beautiful set and their values? *Farmers’ Forum* must take the lead in changing this narrative.

**Shailesh Sharma**  
Ranchi, Jharkhand

## Whither co-operative bank customers

All the glib talk about the zero impact of demonetization is strange especially for the poor farmers who bank entirely with the co-operative banks as you point out in your Comment, Time to Relearn the Economics of Co-operative Banking (*Farmers’ Forum*, December 2016-January 2017). It is unimaginable that the interests



## Excellent initiative

Changing the agriculture narrative through the budget: The BKS Memorandum (*Farmers’ Forum*, December 2016-January 2017) presented a concise and complete account of what the farmers need and how the budget can respond to these needs. This is an excellent Bharat Krishak Samaj initiative and I hope you find some takers in the ministries of finance and agriculture.

**Kuldeep Verma**  
Faridabad, Haryana

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Log in to check out all  
the earlier issues.**

of some 120 million customers from the 33 state co-operative banks and 367 district co-operative banks, were just brushed under the carpet by the RBI as they were barred from depositing old bills in their own accounts or even exchanging petty cash. Is there no sense of justice anywhere when it comes to the farmer?

**Maresh Solanki**  
Surat, Gujarat

## Lend us an ear

Changing the agriculture narrative through the budget: The BKS Memorandum (*Farmers’ Forum*, December 2016-January 2017) presented a concise and complete account of what the farmers need and how the budget can respond to these needs. This is an excellent Bharat Krishak Samaj initiative and I hope you find some takers in the ministries of finance and agriculture.

**Surinder Soni**  
Kanpur, Uttar Pradesh

## Sad story

Farm Policy Shifts through Budget Pronouncements by Naresh Minocha (*Farmers’ Forum*, December 2016-January 2017) was a most interesting account of the how the lip service to the farmers grew over the years while his condition deteriorated. As the rhetoric grows louder, Indian agriculture struggles to stagnate at a four per cent growth rate. How pathetic is that?

One wonders about how the promise to double the farmer’s income will play out because so far it has been a lot of talk without any convincing action or even sensible thinking from the powers that be.

**Kukund Kajaria**  
Meerut, Uttar Pradesh



MANAGING INDIA'S SERIAL DEATHS:

# Anatomy of Farm Suicides

Devinder Sharma



The year 2017 opened up on a rather depressing note. A day after the new year was ushered in, the National Crime Record Bureau (NCRB) released its latest report on farmer suicides. The trend shows a steep rise, with 12,602 farmers committing suicide in 2015, the latest year for which data has been collected. On an average, one farmer ended his life every 41 minutes somewhere in India.

Compiled farm suicides figures released officially so far, between 1995 and 2015, a period of 21 years, show that 3,18,528 farmers have committed suicide. This is nothing but a serial death dance being enacted on the farm. Call it by any name, the unending saga of farmer suicides is certainly an outcome of the faulty economic policies promulgated all these years deliberately keeping farmers impoverished.

Agriculture has been systematically rendered economically unviable because of which farmers have been pushed into a vicious cycle of indebtedness. Over the years, the appalling distress levels have only worsened. Even the latest NCRB data shows mounting indebtedness



**DEVINDER SHARMA**  
is an award-winning journalist and activist in the food and trade policy space

third of the total farm suicides reported in the country actually happening within its borders.

In addition, Karnataka, Telengana, Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Tamil Nadu are the states with a large number of farm suicides. Nearly 87 per cent suicides, a total of 11,026 suicides, have been collated from these seven states. The country's map shows that these states are closely knit geographically and form a big farm suicide block extending from central India to the coastal regions.

No farmer suicides have been reported from Bihar, Jharkhand, West Bengal, Himachal Pradesh, Uttarakhand, and Jammu & Kashmir, Nagaland, Mizoram and Goa. Bihar reported seven suicides among farm workers, 604 in Tamil Nadu, 21 in Jharkhand and 709 in Madhya Pradesh.

If one were to include both cultivators and farmers in one category, the death toll of 12,602 persons who died on the farm in 2015 is two per cent higher than the toll of 12,360 reported a year earlier, in 2014. This confusion of segregating farmers and agricultural workers was created separately last year because the government wanted

## The unending saga of farmer suicides is the outcome of faulty economic policies of all these years, deliberately keeping farmers impoverished

and farm-related issues to be the primary reason behind farmer suicides.

There are other two important causes: poverty and illness, which can be clubbed in the same category. Both are directly related to declining incomes. How deeply the farmers are buried under indebtedness becomes evident from a study by the Chandigarh-based Centre for Research on Rural and Industrial Development (CRRID).

According to it, 96 per cent of the rural households in Punjab have incomes lower than the expenses. In all, 98 per cent of the rural families remain indebted. If this is the depressing scenario in Punjab, the frontline agricultural state, one shudders to think of the fate of farmers in rest of the country.

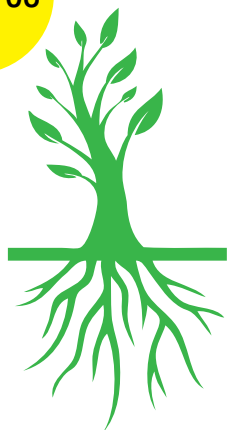
With 4,291 suicides recorded, Maharashtra tops the chart. This is a little higher from the 4,004 farm suicides reported a year earlier, in 2014. For two consecutive years – 2014 and 2015 – Maharashtra has been holding the dubious distinction with a

to show a decline in suicide numbers.

Adding the death toll in both the categories – 5,650 farmers and 6,710 agricultural workers, the total for 2014 was 12,360, which was five per cent higher than the farmer suicides taking place in 2013. In other words, farm suicides have been on an upswing despite the valiant efforts to downplay the tragedy.

The latest NCRB data thus, curiously, shows 100 farmers committing suicide in Punjab in 2015, for instance. In addition, 24 agricultural workers have ended their lives. The total farm suicides recorded in Punjab then is 124. This is far less than the 449 farm suicides that the Punjab government has officially acknowledged!

What happened? The effort to downplay suicides emerges from a trend that Chhattisgarh started in 2011 when it began showing zero farm suicides, four in 2012 and again zero in 2013. In the latest data, 954 farm suicides have been recorded in Chhattisgarh.







Scaling down the number of farmer suicides to paint a rosy picture for the farm sector does not, however, conceal the terrible agrarian crisis that prevails. That is loud and clear.

One way to understand the gravity of the farm crisis is to see the rise in the numbers of farmer suicides. Ever since memory serves, farm suicides in Vidharba or the Marathwada regions of Maharashtra have made the national headlines. What was being conveniently overlooked because of these numbers was that these suicides were only a symptom of a bigger malaise that prevailed. The dark underbelly, therefore, had somehow remained hidden.

It has all been part of a design. This is how: Soon after demonetization was launched, the State Bank of India (SBI) had written-off ₹7,016-crore of 63 wilful defaulters. This included ₹1,201-crore of Vijay Mallya of Kingfisher Airlines, who has been on the run for quite some time now. An article in Business Standard (February 24, 2016) defines wilful defaulters as: “truant borrowers” – corporate and individuals – who, despite having the capability to repay, do not cough up the money. They are alleged to be doing it wilfully. “For lending banks, getting money from them is often a long legal battle”.

In simple words, they are habitual offenders. They knowingly draw money from the bank with the clear objective of not repaying. What is shocking is that the SBI has actually written off the outstanding loans of these habitual offenders. Surely, the banks should have found a legal way of putting them behind bars.

What is even more baffling is the explanation given by finance minister Arun Jaitley in Parliament. *Hindustan Times* (November 17, 2016) reported that the finance minister asked opposition members in Rajya Sabha not to go by the literal meaning of write-off. “There is a little bit of malapropism involved in this. Don’t go by the literal meaning. Write-off does not mean loan waiver. Loan still remains. You still continue to pursue”, he said, leaving one wondering about who is engaging in malapropism.

The SBI chairperson, Arundhati Bhattacharya, later tried to downplay the entire saga of writing-off the loans of 63 wilful defaulters. These loans are not waived off but have been put under a separate head called Accounts Under Collection. Accordingly, the bank will continue to follow up abiding by the recovery process.



This explanation seems to be a very simple cover-up to protect the wilful defaulters. If the banks have failed to recover the outstanding loan with interest from these defaulters all these years, what special recovery mechanism have they now discovered to get the money back? Needless to add, this 'write-off' business is a privilege extended only to the rich borrowers.

As if this is not enough, the government also tries to protect their identity. The government had earlier refused to divulge the names of 57 borrowers who owed ₹85,000-crore to the banks. "Who are these people who have borrowed money and are not paying back? Why this fact that the person has borrowed money and not paying back be not known to the public", asked a bench headed by the Chief Justice of India, T. S. Thakur.

While the rich get this privilege, there is hardly a day when newspapers do not carry reports of farmers committing suicide in one part of the country or the other. A majority of these suicides are because of the outstanding loans that farmers are unable to repay. There has been a farmer who has taken his life for his inability to pay back an outstanding loan of as little as ₹1.5 lakh. The other day a Punjab farmer tied up his five-year old son to his chest and jumped into a canal. He owed ₹10 lakh to banks and the reason that he took his son along in the journey to death was because he felt even his son would not be able to repay the loan in his lifetime.

However, one does not find any rich defaulter committing suicide. They either run away from the country or are clubbed into the category of 'wilful' defaulters or just defaulters and receive immunity. These defaulters are first put under a separate head Accounts Under Collection and after some time the performing assets in bank books become non-performing assets and are eventually written off. Between 2012-15, ₹1.14 lakh crore of non-performing assets have been written off. The Public Accounts Committee informed Parliament in July 2015 that another ₹6-lakh crore of NPAs have piled up.

As far as the farmers are concerned, first one wonders why the outstanding loans of farmers and for that matter the aam aadmi are not put under a separate head of Accounts Under Collection. Let the banks continue with their effort to recover the basic loan amount. The latest NCRB report clearly states that 80 per cent suicides are because of harassment by banks. As in the SBI case with the 63 defaulters, farmers should also be told that their



loans have been 'written off'. This would have saved them the humiliation that they undergo when they default. This step alone could have saved the lives of 50 per cent of the roughly 3.18 lakh farmers who have committed suicide in the past 21 years.

Second, why must the names of defaulting farmers along with their pictures be pasted on the notice boards in tehsil headquarters? They seem like petty criminals. It is primarily because of the humiliation that defaulting farmers have to undergo that they commit suicide. If the names of rich defaulters are to be kept secret why should the name of defaulting farmers be made public? The bias is clear.

The systematic destruction of agriculture is also why the demand for reservation quota in government jobs is such an important priority for the caste-based protests that have been seen in recent times – Patidars in Gujarat, Gurjars in Rajasthan, Jats in Haryana and Uttar Pradesh, Lingayats in Karnataka/Maharashtra and so on.

Even though the mobilization is on caste basis (like the Maratha agitation in Maharashtra), such mammoth outpouring on the streets cannot happen unless a wave of anger runs through the community. The rape of a Maratha girl at Kopardi in Ahmednagar





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₹5,873); for Urd it is (-)₹6,663). Even for the much publicized cotton crop for which the Vidharba region is known, the net return is only ₹2,949 per hectare.

Considering that cotton is sown in June and its harvesting begins in October, with the pickings going on to November, December or even January, the average income per month from cultivating cotton comes to a paltry ₹700 per hectare. With such low income levels, even lower than what the MNREGA workers earn, one wonders how the Maharashtra farmers have been surviving all these years.

The Maratha anger is, therefore, justified. What is true for Maharashtra is also true for the rest of the country, including Gujarat, Karnataka, Rajasthan, Uttar Pradesh and Haryana, which have recently witnessed mass protests for reservations. The glitter and power exhibited by one per cent or a minuscule section of the same Maratha, Jat, Patidar communities controlling politics as well as business, hides the fact that a majority of the remaining 99 per cent somehow slogs along.

The Economic Survey 2016 makes that loud and clear. Accordingly, the average income of farming families in 17 states of India is just ₹20,000 a year, which means the average monthly income for a

## 90 per cent of those committing suicide in Maharashtra belong to the Maratha community. One should try to understand how devastating the economics of agriculture has been there

district on July 13 last year may have been the trigger but the common factor that binds the protestors is the economic despair that prevails.

Since 90 per cent of those who committed suicide in Maharashtra belong to the Maratha community — and given that Maharashtra tops the farm suicides chart — one should try to understand how devastating the economics of agriculture has been. To understand a little better, consider the latest report of the Commission for Agricultural Costs and Prices (CACP) to check farm income levels.

Sugarcane occupies roughly 4.5 per cent of Maharashtra's cultivable lands and guzzles roughly 71 per cent ground water. How is the remaining 96 per cent of the farmers faring? In the case of paddy, the net return per hectare is ₹966, which means that, if worked on a monthly basis, it will come to less than ₹300 a month.

For Ragi, Maharashtra farmers actually incur a loss of ₹10,674 per hectare; for Moong it is (-)

farming family is a paltry ₹1,667.

Considering that 57 per cent of the 130-crore population of the country is directly or indirectly engaged in agriculture, the continuing neglect and apathy has created a simmering discontent. With farming becoming economically unviable, accompanying rural enterprises too remained in gloom. In addition, with public medical, health services and education replaced by the private sector, they are becoming prohibitively expensive as rural India is silently facing the brunt of economic reforms.

Numerous studies show how many reasonably well-to-do rural families have slid into poverty when someone in the family suffers a medical emergency. At a time when public health services are being starved of resources, the biggest financial burden of privatization of health services is being borne by the poor.

Education too has gone beyond the reach of the average farmer. The suicide note left behind







## The average income of farming families in 17 states is just ₹20,000 a year, which means the average monthly income for a farming family is a paltry ₹1,667

by a 22-year-old graduate student, Gopal Babarao Rathod, son of a small farmer from Yavatmal in Maharashtra, who died in the last week of August, raises the question. He reminds one of the flawed economic policies, explaining that the rural youth, like their more fortunate counterparts in the cities, too have aspirations.

He asks: “A teacher’s son can easily afford to pay a fee of ₹100,000 to become an engineer but tell me how a farmer’s son can afford so much fee?” He then goes on to say: “why is it that the salaried employees get dearness allowance without even asking for it whereas farmers are denied adequate compensation for their produce?”

The penetrating questions that the young student left behind cannot be ignored for long. The economic security that a government job provides, whether it is of school teacher or a village patwari, the revenue worker, is what drives the demand for reservation. If a chaprasi can get a minimum basic salary of ₹18,000 per month along with other

allowances, a farmer has all the reasons to ask why he is being deprived of parity in income. The Maratha uprising in Maharashtra or more recently the Jat reservation stir in Haryana should, therefore, also be seen as an outcome of the widening inequality that has been created knowingly. It can be ignored only at the country’s peril.

Agriculture economists and policy makers often shift the blame to low crop productivity, failure to go for crop diversification and lack of irrigation. Farmers in Maharashtra commit suicide because of low productivity and low irrigation goes the common refrain. If this argument is to be believed, why do farmers in Punjab, the food bowl, commit suicide?

At a time when doubling farmer’s income in the next five years has become a catch phrase, the Niti Aayog, Nabard, agricultural universities, research institutes, public sector units and everyone even remotely concerned with agriculture is talking about ways to double farmers income. While the number of seminars/conferences on doubling the





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farmers income has also doubled in the past few months, farmers are increasingly sinking into a cycle of deprivation.

Two years after a back-to-back drought, demonetization has further reduced the farmer's income, with estimates suggesting a 50 to 70 per cent drop in farm incomes, especially those of vegetable growers.

Interestingly, none of the debates and discussions on public platforms produce any new thoughts. The arguments invariably revolve around the same principles – increasing crop productivity, expanding irrigation, crop insurance and strengthening the electronic national agricultural market platform (e-NAM).

What is more surprising is that those who talk of allowing markets to provide higher farm incomes are the ones who get assured salary packets every month. In addition, every six months, they get a dearness allowance, which has now been merged with the basic pay.

In India, only 1.3 per cent of the population is salaried, including the private sector. Against this, 57 per cent of the population, around 600 million, is comprised of farmers. The minimum wages that these employees get are computed as per the recommendations of the

Indian Labour Conference, 1957.

Accordingly, the minimum wage should be based on the minimum human needs, for which a set of norms have been laid out:

- Three consumption units for one earner in a standard working family, with the earnings of woman, children and adolescent in the family being disregarded.
- Net intake of 2,700 calories for an average Indian adult of moderate activity.
- Per capita consumption of cloth of 18 yards per annum, which would mean, for an average workers family of four, a total of 72 yards.
- Rent corresponding to the minimum area provided for under the subsidized industrial housing scheme for low income groups.
- Fuel, lighting and other miscellaneous items of expenditure to constitute 20 per cent of the total minimum wage.

Subsequently, an order issued by the Supreme Court in 1991 laid out a set of six criteria for working out a minimum wage: children's education, medical requirement, minimum recreation, including festivals, ceremonies, provision for old age and marriage, which should constitute 25 per cent of the wage. Further, it stipulated that the minimum wage include a dearness



allowance compensating for inflation.

In other words, these criteria actually provide for a minimum monthly salary required by a family for a decent and honourable living. Strangely, the same criteria, which provide assured income to economists, scientists and planners, is completely ignored when they talk of doubling farmer's income.

This smacks of double standards, protecting their own salaries while leaving the majority population to face the vagaries of markets. Ask the farmers who threw tonnes of tomatoes on to the streets of Chhattisgarh recently and that too despite a bumper harvest, about what the tyranny of the market entails. Ask the families of those sugarcane farmers who committed suicide in Karnataka/Uttar Pradesh waiting for months for cane arrear payment as to what markets are all about.

It is primarily to address the extreme levels of inequality that prevail, which is perpetuated by an economic design and has nothing to do with crop productivity, that one has been asking for a separate farmers' income commission that provides an assured take home income package to farmers every month for several years now.

If crop productivity is the reason for the ongoing farm crisis, there is no reason why Punjab farmers should be committing suicide in big numbers. In a state that has 98 per cent assured irrigation and where the per hectare yields of wheat and paddy match international levels, there is no reason for these farm deaths.

As per the Economic Survey 2016, the per hectare yield of wheat in Punjab stands at 4,500 kg/hectare that matches the wheat yields in the United States. In case of paddy, the average yield is 6,000 kg/hectare, quite close to the paddy productivity levels in China. With such high yields and with abundant irrigation available why should farmers be dying in Punjab?

If one is still not convinced, there is more insight into how progressive Punjab farmers are. In a study, Prof H. S. Shergill, emeritus professor at the Panjab University, has compared Punjab agriculture with that in developed countries using mechanization, chemical technology, capital intensity and productivity measures.

The number of tractors per 1,000 hectares is 122 in Punjab compared to 26 in USA, 76 in U.K., 65 in Germany; fertilizer use is 449 kg/hectare per year that compares rather favourably with 103 kg in USA, 208 kg in U.K., 278 kg in Japan; irrigated area is 98 per cent in Punjab compared to 11.4 per



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cent in USA, 2.0 per cent in U.K., 35 per cent in Japan; and the cereal yield per hectare and per year is 7,633 kg in Punjab, 7,238 kg in USA, 7,460 kg in France, 7,008 in U.K. and 5,920 kg in Japan. With such a high level of intensive farming, which is what economists have been asking for, why are Punjab farmers committing suicide?

The problem, therefore, is somewhere else. It is primarily a question of income security.

Using the same criteria that the Supreme Court had laid down in 1991 and also following the same decent living norms prescribed by the Indian Labour Conference, 1957, a few economists, researchers and agricultural activists (self included) came together for a workshop in Hyderabad in December to work out an income security model for farmers.

This was followed by another workshop in Kerala – in which 10 economists and policy researchers participated – in the first week of January to ascertain the payment that farmers deserve for the ecosystem services they protect while undertaking crop cultivation. Led by the United Nations, measuring ecosystem services is now becoming a global norm in computing what is called the green economy.

While farmers and many civil society organizations have been demanding the implementation of





## A national workshop on the reasons for income insecurity in farming calculated that the annual economic loss that farmers suffer is ₹12 lakh crore

Swaminathan Committee report that proposed 50 per cent profit over the cost of production, what is not being realized is that since only six per cent farmers get the benefit of MSP, there is no mechanism to support the remaining 94 per cent of the farmers.

My idea of providing farmers with an assured income package every month also includes the 94 per cent of the farming community that has been suffering silently all these years. MSP certainly will remain as one of the ways to provide a guaranteed income to farmers but other ways to provide assured income to rest of the farming community must be worked out.

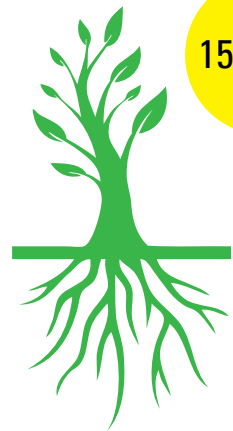
When the lowest ranking government employees are ensured a monthly pay of ₹18,000 per month and the non-agricultural workers with a daily wage of ₹351, the state cannot ignore and leave food producers of the country with meagre incomes that pushes them into a debt spiral forcing them to either leave farming or commit suicide.

Estimates based on the minimum prescribed

living standards show that the farmers suffer a huge economic loss for providing cheaper food. After a national workshop to ascertain reasons for the prevailing income insecurity in farming, it was calculated that the economic loss farmers suffer every year works out to ₹12-lakh-crore.

This is the huge price the farmers pay for subsidizing the nation by providing cheap food. In any case, using internationally accepted norms for monetizing ecosystem services, the farmers' share in caring for and protecting the environment and biodiversity justifies payment to the tune of ₹14,000 per hectare.

This is a conservative estimate and should form the basis for the entire deliberations the country is having on doubling the farmer's income. The time, therefore, has come to look beyond crop productivity, contract farming and privatization of marketing structures as the way forward for achieving this end. Unfortunately, economists have mistaken public and private sector investment in farming as income generation. ●





WAITING FOR THE LA NIÑA EFFECT

# Economy-Farm Connect: Crisil Projections for 2017







**O**n the face of it, post-demonetization 2017 may appear to be a case of the 2016 story repeating itself. The year 2016 began ominously with both the International Monetary Fund and the World Bank paring their global growth outlook for the year amid increasing signs of debility in the emerging markets. India muddled through the demonetization shock that hit the farm sector hard and the aftermath remains.

The Indian future (2017), however, promises to be better provided the rains remain supportive. A slowing world implies prices of crude oil and the commodity complex, which will remain battered, will bolster the fiscal math. The sluggishness in global demand will prolong the agony for exporters though. Crisil's projections for the 2017, in as much as they pertain to the farm and rural sector, are presented here.

The good news is that the Indian economy has weathered two successive monsoon failures plus damage from unseasonal rains in early 2015 with no deleterious repercussion on inflation and

If there is a third consecutive monsoon failure, consumption and private investment recovery will be delayed anew. If the monsoons are normal, Crisil predicts consumer price inflation (CPI) to stay soft at five per cent and unchanged from fiscal 2016. This also assumes "lesser decline in global oil and commodity prices and sticky services sector led components of consumer prices".

Another important segment to be watched is the non-agriculture sector linked to agriculture. It goes without saying that an improved outlook for the rural economy will positively impact non-agriculture sectors such as manufacturing and services. The rural economy has a 51 per cent share in manufacturing and 26 per cent share in services.

Inflationary pressures in the economy will also need watching because, despite the overall decline, inflation in rural areas has softened to a lesser extent and also remains higher than urban inflation. In the first nine months of 2016-17, rural inflation has fallen only by 100 bps compared with a 200 bps fall in urban inflation. This, coupled with the hit to rural incomes has eroded purchasing power. (See figure 1)

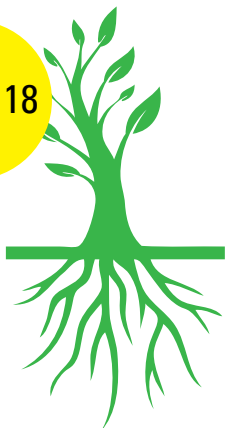
## A normal monsoon will be critical to the pace of recovery. Beyond farms, Crisil projects a moderate recovery, driven mainly by a rise in manufacturing growth

growth. A normal monsoon in fiscal 2017 will give agriculture a one-time growth kicker because of the low-base effect of the last two years. This should lift sagging rural demand and, by extension, overall GDP growth. Weather experts presage a La Nina event this year that lavishes rains.

### La Niña effect

Crisil's base case assumes a normal southwest monsoon accompanied by favourable temporal and regional distribution. "Recent weather developments support this assumption. Weather experts have said El Niño conditions will decline in the coming months and things will return to normal by the first quarter of next fiscal. Based on 26 El Niño events since 1990, half of the incidents have been followed by a neutral year, while 40 per cent have been followed by a La Niña event — where sea-surface temperatures cool and there is higher rainfall. The Australian Meteorological Bureau estimates that a neutral or La Nina condition is equally likely in the second half of calendar 2016, while a repeat occurrence of El Niño is least likely".

Given this, agriculture will grow at an aforementioned trend level of four per cent on a weak base caused by two consecutive poor monsoons. Therefore, in the base case, Crisil expects the GDP to grow 7.9 per cent in fiscal 2017. The major impetus will come from the farm sector as non-agriculture growth picks up 10 bps over the



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A normal monsoon in fiscal 2017 will give agriculture a one-time growth kicker because of the low-base effect of the last two years. This should lift sagging rural demand and, by extension, overall GDP growth



previous fiscal to 8.6 per cent. Crisil drives home the point that “the quantum and sustainability of the pick-up in growth will depend a lot on the munificence of the rain god”.

“Private consumption recovery, so critical to stoking private corporate investment, has been firing on one cylinder so far — urban demand — even as rural distress remains at elevated levels”. A normal monsoon will thus be critical to the pace of recovery. Beyond farms, Crisil projects the recovery to be moderate, driven mainly by a rise in manufacturing growth.

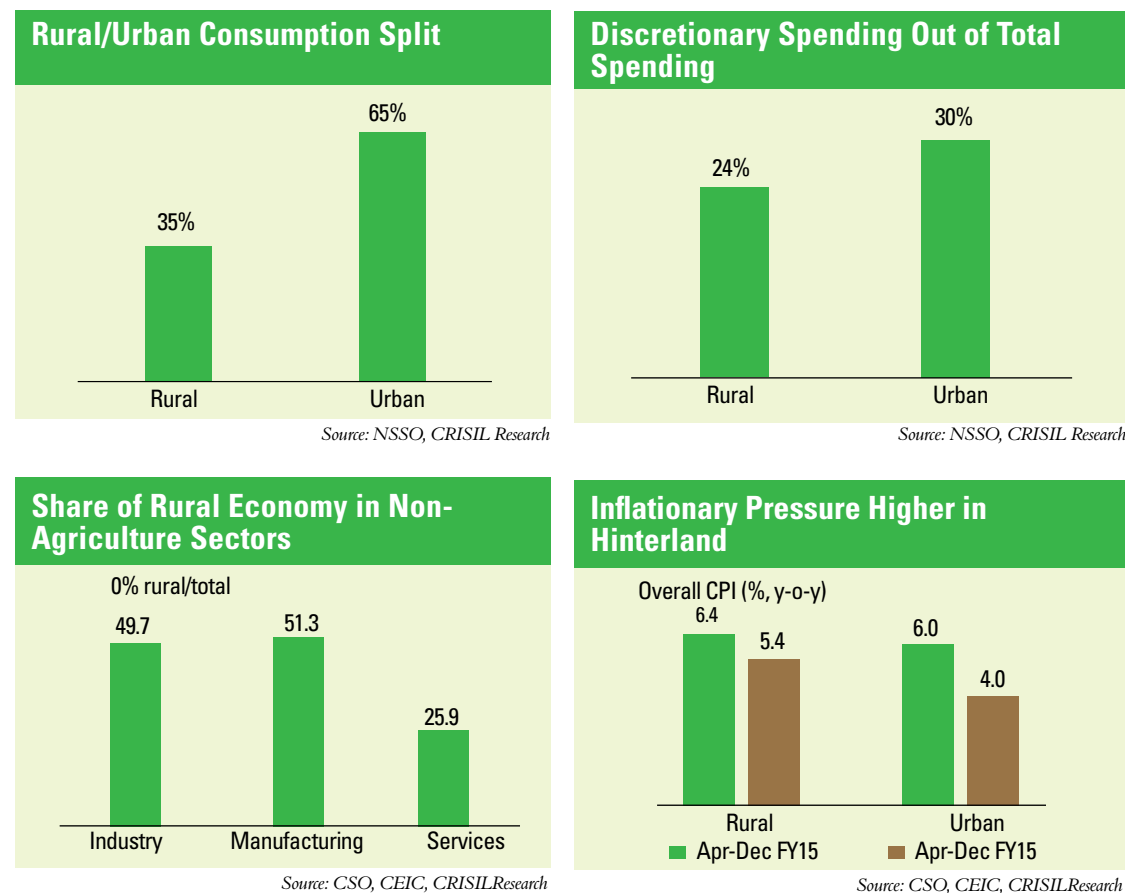
“Next fiscal, assuming a normal monsoon, the lagged impact of interest rate reductions will also start filtering through in the first half. Crude oil prices are expected to remain low and have been assumed at an average of \$42.5 per barrel. In addition, we expect Pay Commission payouts, low inflation and easy monetary conditions to support overall demand”.

On its part, the government has tried to “frontload productive investments in roads, railways and defence this fiscal — with major success in road building — and we expect this



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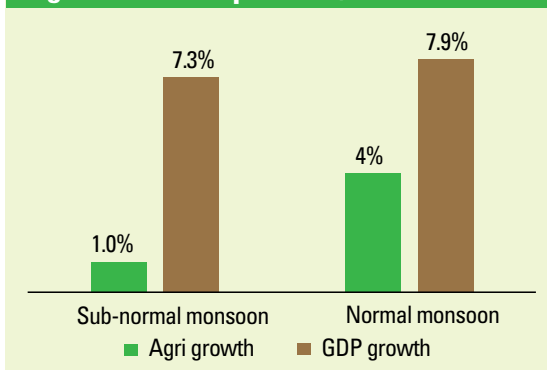
**Figure 1 :**





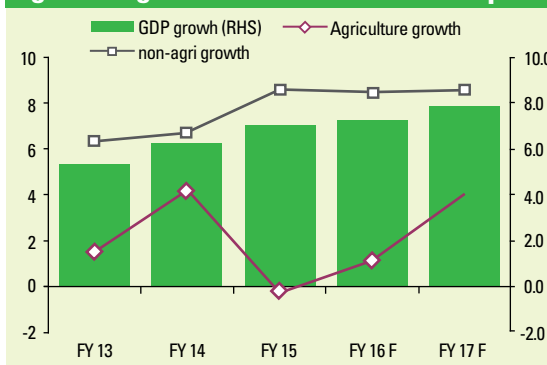


**Figure 2: GDP Equations, Fiscal 2017**



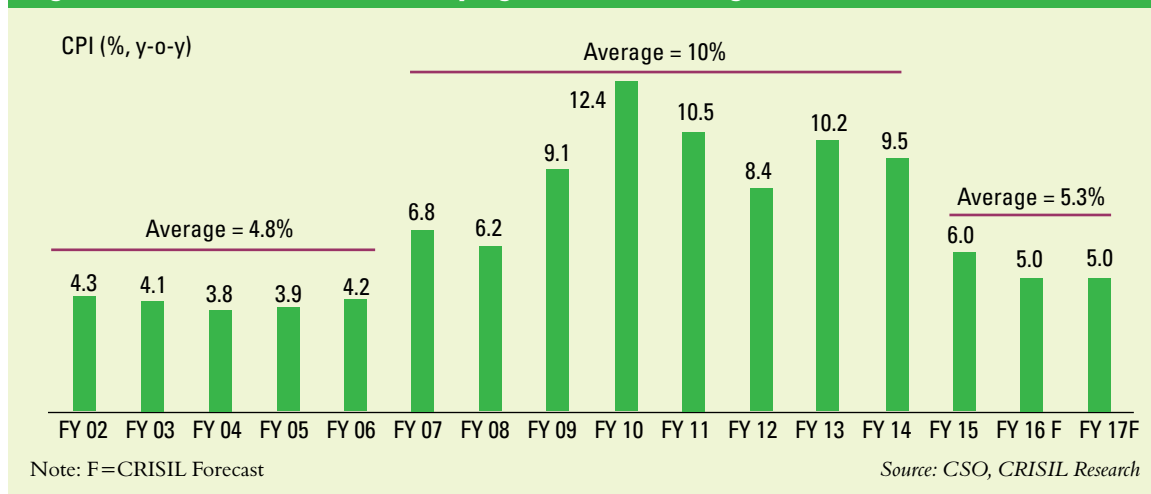
Source: CSO, CEIC, CRISIL Research

**Figure 3: Agriculture will Provide the Impetus**



Source: CSO, CEIC, CRISIL Research

**Figure 4: Inflation eases after staying elevated for long**



trend to continue in the next. Execution under the National Highways Authority of India has increased by 43 per cent year-on-year in terms of number of kilometres constructed till November 2015”, says Crisil. It expects road investments to increase 2.9 times in the next five years compared with the last five years.

Crisil also expects inflation to be soft in fiscal 2017 with CPI staying soft at five per cent or unchanged from fiscal 2016. This assumes a normal monsoon, lesser decline in global oil and

commodity prices and sticky services sector-led components of consumer prices. “Last fiscal saw the CPI fall 100 bps five per cent from six per cent in fiscal 2015”. This was supported by:

- a sharp decline in food inflation despite the weak impact of monsoon;
  - depressed global prices of oil and commodities; and
  - slack domestic demand and excess capacities that eroded the pricing power of manufacturers.
- Under the circumstances, Crisil expects







## For inflation to ease further and stay within the RBI bound of four per cent $\pm$ two per cent, there is need for structural reforms to fix chronic supply-side constraints

average inflation between fiscals 2015 and 2017 to come down to around 5.3 per cent, nearly getting halved from the 10 per cent recorded between fiscals 2008 and 2014. Going forward, for inflation to ease further and stay within the RBI bound of four per cent  $\pm$  two per cent, the government will have to undertake structural reforms to fix chronic supply-side constraints. “This is especially critical in sectors such as agriculture where weather-related shocks are frequently causing large price spikes and also in sectors such as health and education where inadequacy of good quality supply has kept inflation high and sticky”, says Crisil.

The three assumptions driving Crisil’s outlook on CPI inflation for the next fiscal are:

### Assumption 1: Food Inflation to Stay Benign

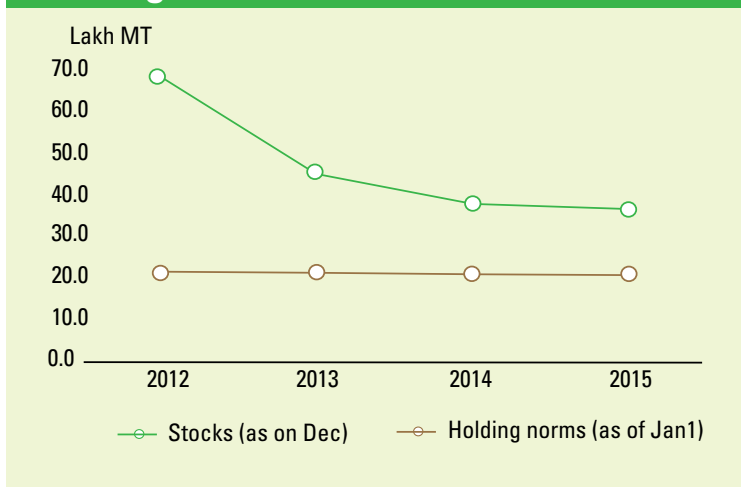
#### No Further Weather-related Shocks

This means that we assume “a normal southwest monsoon in the next fiscal, a pickup in 2015-2016 rabi sowing followed by a healthy crop and active food-supply management by the government. The last two years have seen a sharp fall in food stocks, especially rice and wheat, while procurement has been more or less constant. But even at these levels, stocks remain





**Figure 5: Foodgrain Actual Stock Versus Holding Norm**



Source: Ministry of Agriculture, CRISIL Research

above the required norm and can be used in case of an adverse shock to production.” (See Figure 5).

### Only a mild pick-up in global food prices

The benefit from falling global food prices could diminish somewhat next fiscal. For the first time in four years, global food prices are expected to rise in 2016 but this will be a mild 1.5 per cent in 2016 as per World Bank estimates, after the 15 per cent drop seen in 2015. That unlikely to drive food inflation up.

### Moderate increases in minimum support price

Assuming the monsoon is normal and global food prices remain low, Crisil expects the government to announce lower increases in minimum support price (MSP) next year. “In the past, sharp increases in MSP – over 10 per cent per year average for paddy and 15-20 per cent for pulses between fiscals 2010 and 2013 – had a huge role to play

in keeping food inflation persistently high. Fiscal 2014 onwards, moderate hikes in MSP – at four per cent for paddy and 3-6 per cent for pulses – have helped tame food inflation. In fiscal 2017, the MSP for pulses and oilseeds could see moderate hikes so as to incentivize production, while that for rice and wheat could be much lower”.

### Better pulses supply management

In fiscal 2016, pulses were the only food category where inflation had spiralled due to domestic production shortfall and relatively firm global prices. The government is setting up buffer stocks of pulses by procuring tur and urad and can also use the price stabilization fund to procure stocks that are to be allotted to states based on demand and the rest is sold through designated outlets to consumers within a year of procurement. “In the event of any price spike in pulses, the government can liquidate stocks to tame domestic prices”.

This fiscal, a mix of factors brought down food inflation, says Crisil. This includes “better food-supply management by the government, higher production (especially cereals), declining global prices, moderate MSP hikes and utilization of the price stabilization fund to subsidize the cost of imported pulses. To top it all, dented rural demand came in handy. Most of these factors are expected to remain supportive next fiscal, too. The jury remains out on rural demand, though. To reiterate, the critical assumption is that monsoon will be favourable failing which the declining trajectory in food inflation will alter”. ●

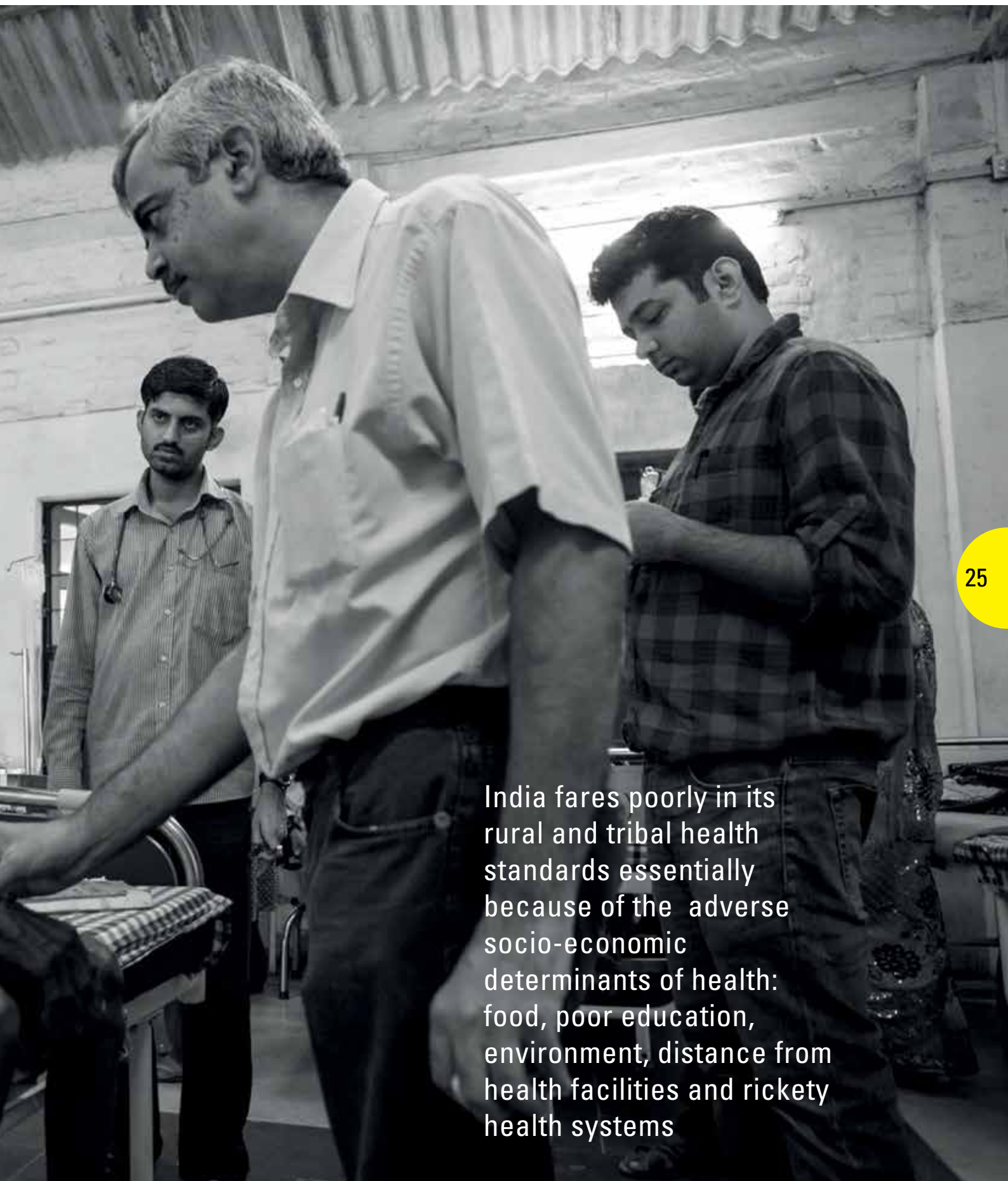


# Diagnosing the Wider Cause of Rural Disease

*A Jan Swasthya Sahyog Report*

24





India fares poorly in its rural and tribal health standards essentially because of the adverse socio-economic determinants of health: food, poor education, environment, distance from health facilities and rickety health systems



**D**isease is the biological embodiment of deprivation and nowhere is this as clear as in the field of rural and tribal health in India. These segments fare far worse on all possible counts and parameters when compared to urban health due to a variety of reasons though essentially this is because of the adverse availability of the socio-economic determinants of health: food, poor environment and distance from health facilities, education and poor health systems.

Given that almost all diseases in much higher numbers and in more complex forms are rampant among rural and tribal people, as physicians and health workers, interested primarily in the whys and hows of health, disease and with the primary objective of reducing inequity in health care among rural and tribal poor, the Jan Swasthya Sahyog has investigated regimes of political and economic values and policies that condition tacit aspects of sociocultural practices that, in turn, impact the cause and occurrence of disease – specifically, the role of structural violence.

The poor of India, especially the adivasis, have been caught in the vice-like grip of a policy regime that has transferred common property resources to private entities for profits to boost the gross domestic product (GDP), displacing the lives and livelihoods of all those who lived close to the land. The centralizing nature of the global economy fuelled by subsidized energy has displaced all forms of non-mechanized and decentralized

### Health Programme for Rural Chhattisgarh

The Jan Swasthya Sahyog, literally the People's Health Support Group, is a collective of health professionals and workers, many of whom were trained at leading medical institutions in the country like AIIMS which has been running a health programme in rural Chhattisgarh in central India. A primarily service-based programme, JSS serves tribal and rural communities, covering over 1.5 million people in what could arguably be the epicentre of underdevelopment. It also trains health workers at the village level and nurses and doctors at a higher level, conducts research on key health problems of the rural poor and provides advocacy based on careful documentation to positively impact rural health care.



The poor are caught in the vice-like grip of policy transferring common property resources to private entities to boost GDP

production, eliminating millions of livelihoods and resulting in increased food insecurity. According to the economist, Utsa Patnaik, the average Indian family's grain consumption had fallen by 110 kg between 1991 and 2005.

In tribal areas, falling BMI — thanks to severe malnutrition — is a prime source of disease and death (See Box 1, 2 and 3). Others are just as harsh. From snake bites to rabies, malaria, eclampsia, postpartum haemorrhage, cancer,





## Phagni Bai

Phagni Bai Baiga, a mother of four, had wrapped a shawl around herself, as she waited for her two saris to dry. She was at her parent's home in Littikhola, a small village at the base of a mountain in Bilaspur district. Asked how she was doing, she smiled and said "good". She added that her son, too, was much better now and that his swollen stomach had "gone down".

Things were, however, far from good. Phagni Bai's husband had contracted tuberculosis two years ago but was cured by JSS doctors and workers. A year later, Phagni Bai developed symptoms of TB but did not come to JSS. The family was worried about having to arrange for ₹700 to meet expenses once again. So Phagni wasted away in the remote village of Kurdar on top of the mountain. A few months later, her nine-year old son also began to waste away from TB.

The main source of livelihood for Baiga families in Kurdar is weaving baskets from bamboo collected from the forest. The baskets sell for ₹15 to ₹20 each. One had to walk for as many as five hours one way to gather bamboo, evading the vigilant eyes of the forest department.

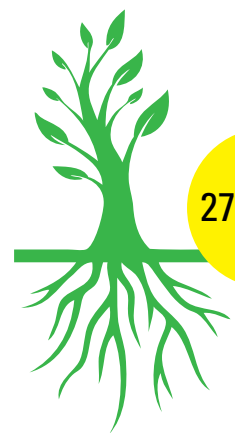
When her husband fell sick, Phagni Bai was the only one who could work and the family income dropped to ₹300 a week. There was no money to buy enough broken rice from the market to supplement the monthly subsidized 35 kg at Re 1 that they got from the ration shop. The family had to eat less. As her husband recovered, Phagni became too weak to work, passing on the mantle of earning a livelihood to her husband.

At this time Phagni Bai aged 30, height 151 cm, weighed 25.7 kg and her body-mass index was 11.3. Her son Raja, aged 9, height 91 cms weighed 10 kg with a BMI of 12. The disproportionately large appearance of Phagni's shoulder joints, her high collar bone lurking beneath her clothes, the swollen belly of her child tells of the vicious cycle of losing control

over natural resources and livelihood, food security and health like nothing else could.

diabetes, tuberculosis, epilepsy, infertility, HIV, congenital heart disease, palsy, psychosis to rheumatoid arthritis, silicosis, urosis, vitamin B12 deficiency and alcohol addiction the range is deadly and long.

Over the last 16 years, Jan Swasthya Sahyog has set up a modest community health programme in rural Bilaspur, catering to over 2,500 villages in north-western Chhattisgarh and south-eastern Madhya Pradesh. The idea is to





## Ramkali Baiga

Ramkali's wrists seemed oversized for her wiry forearms as she tried to lift a handwoven cotton saree. She had been admitted at the JSS hospital in Ganiyari. At the age of 22, she weighed 24.6 kg, was 147 cm tall with a BMI of 11.38.

Married into a Baiga family across the border in Madhya Pradesh, Ramkali had to walk 10 hours to get to her in-laws. The landless family survived on broken rice bought from the open market, the cost of which severely restricted the intake of each individual. Her father-in-law had died of TB, followed by her husband.

With an immune system severely compromised due to inadequate food, it was only natural for Ramkali to get infected by TB. "He was emaciated like me" and had been treated with a 'suji-botel,' she explained matter-of-factly, referring to the quacks who pushed injections and administered saline water for most maladies.

Before coming to JSS, Ramkali had been living with her parents in the village of Bijrakachar. We caught up with Ramkali's parents Mahuku and Mangli Baiga, cooking dinner in the open field across the road from JSS.

"If we had more rice at home, we would cook more", said Mahuku. Over the years they had lost access to the fruits, herbs and animals from the forest. "Parts of the forests have been illegally taken over by some people who use it to rear cattle and sell milk in the cities". Mahuku's agitation was palpable.

Although the family owned five acres of land, it yielded only three quintals of rice. A plot of that size in a moderately fertile area should have yielded between 40 to 50 quintals.

Mahuku remembered bewar (slash and burn agriculture) from his younger days under which they would scatter seeds of kutki, maria, salihar, bajra, makka, jhurga (kutki, ragi, bajra as millets, and maize and lobia as pulses) and many more varieties of grain. Such agriculture was not allowed anymore and the varied nutrition such grains provided has been replaced by a single type of rice. Traditionally, Chhattisgarh has had 22,000 varieties of paddy as well as a large variety of other grains.

In the 10 days that Ramkali was in hospital, she did not gain any weight. The doctors were concerned. She was on a drip, one drop at a time entering her body and yet the next day she wished she was home, taking care of her five year-old daughter.



The locals have little save basic agro-forestry from which they can earn a livelihood. For the rest they engage in some seasonal farming and grow a little rice and some vegetables

observe and manage massive levels of hunger, malnutrition, resultant illnesses and much avoidable mortality.

Much of the experience has been documented along with disease patterns and distribution among the populace. Papers have been occasionally published in peer reviewed journals. The JSS seeks to explore and to understand their causes – not just their proximate biomedical causes but also the social, economic and cultural roots of these diseases.

The aim is not just to cure disease but also to prevent disease. After treating thousands of patients from remote villages in recent years JSS has been going into the homes and hamlets of their patients to better understand the living conditions, livelihoods, food, nutrition, poverty, struggles and environs of the patients. These visits and studies have been documented in a report titled An Atlas of Rural Health — Chronicles From Central India. ●





## Dhansaye Nagone

The headlights shone on a thin frame of a man in a blue fleece and a cloth wrapped around his head and ears. He was hanging on from the edge of a diesel auto-rickshaw, much the way he hung on for survival in an economic system that counted on his cheap labour but without letting him count on a decent survival.

Thirty-six year old Dhansaye Nagone weighed just 43 kg in May 2010 when he was caring for his sister admitted with TB in JSS. At that weight he was already susceptible, as Dhansaye's history in the OPD showed. In the intervening 10 months, Dhansaye lost another eight kgs. Despite such telltale signs, a major medical institution in Bilaspur had failed to diagnose his condition. Dhansaye spent ₹550 buying medicines that were completely useless for him.

"I asked the doctor to take a better look since my sister had already fought with TB a few months ago. But the doctor shooed me away", Dhansaye had said with resignation. For the poor, incompassionate, expensive, exploitative, irrational and uncontextual healthcare were as much killers as the diseases themselves.

Dhansaye lived with his wife and three children in the city of Bilaspur and drove a cycle-rickshaw for a livelihood, earning up to ₹75 a day. The family, which paid a monthly rent of ₹400 and an electricity bill of ₹100, subsisted mainly on 35 kg of grain (15 kg wheat + 20 kg rice) bought at a BPL (below poverty line) price of ₹2 per kg from the ration shop.

These stories are typical of cases seen at JSS at every OPD. In 2011, JSS treated 587 cases of TB with the average patient BMI of 16.17 – a substantial increase over 470 cases in 2010.

Nine per cent of patients had BMIs of less than 13 – a level below which is medically considered incompatible with life. In 2015, 58 per cent of people with tuberculosis seen at JSS had a BMI of less than 16 – a cut-off for severe undernutrition and a level at which the body fat is zero. Despite the best treatment, the chance of dying at or below a BMI of 16 is at least three times higher than if it is more than 16. Mind you, the BMI is only a measure of wasting, losing weight after gaining weight. If you have low weight and height due to chronic or longstanding food deprivation from childhood onwards, you would be severely undernourished, and yet show a normal BMI.

A rising GDP at the cost of falling BMI certainly did not bode well for the health of the nation. In fact, it should be unacceptable to any civilized society.



## Where Prevention is Better than Cure

Doctors examine patients carefully, listen to them and conduct various tests. However doctors at Jan Swasthya Sahyog, a pioneering effort of dedicated doctors to take quality health care to the remotest and poorest villages in parts of Chhattisgarh and Madhya Pradesh, felt the need to go beyond this.

The aim is not just to cure disease but also to prevent disease. After treating thousands of patients from remote villages in recent years they felt the need to also go to the homes and hamlets of their patients so that they can better understand the living conditions, livelihoods, food, nutrition, poverty, struggles and environs of their patients.

These visits and studies that a path-breaking document titled An Atlas of Rural Health- Chronicles From Central India has resulted published by Jan Swasthya Sahyog can be contacted at Village and Post Ganiyari, District Bilaspur, Chhattisgarh, 495112, email-janswasthya@gmail.com



A photograph of a man in a white shirt and dark trousers standing in a vast field of pink and white flowers. The field is densely packed with these flowers, and the man is positioned in the center-left of the frame, looking towards the right. The background shows a line of trees under a clear sky.

DOCTOR OF DRY BORE WELLS  
OR WATER GANDHI:

# The Name is Ayyappa Masagi

## *A Farmers' Forum Report*

**W**hen three “urban farmers”, Ayyappa Masagi and his friends, Ashok Kadarmandalagi and Chandrakumar, had a lush green vision amidst Karnataka’s parched regions, they knew exactly how to bring the vision to life. They purchased 16 acres barren land, abandoned by farmers because there was just no water to farm at Kurubarahalli village within the Holavanahalli Hobli in Koratagere Taluk of Tumkur District, Karnataka in 2012.

Four years down the line, they have created seven urban lakes not just to harvest their 16 acres

land but also have rainwater flowing through the adjacent stream. They have recharged five existing bore wells with the lake water, adopted tree-based agriculture, known as agro-forestry and non-irrigational agricultural systems. Ayyappa Masagi has founded the Water Literacy Foundation at Kallappa Layout, Amruthahalli, Bangalore – 560092 to take his knowledge to anyone who cares to learn.

There are other rainwater harvesting structures too, including compartment bunding and 43 soak pits and infiltration wells. They planted over 6,000 saplings back in 2012 that now stand seven meters tall. The farm is now so water rich that all five bore wells yield more water than any of the surrounding bore wells, says Praveenkumar, programme





Roses, roses all the way

manager at Ayyappa Masagi's project.

Praveenkumar was a subject matter expert with Aditya Birla Minacs, who quit his job to make the water miracle happen along with the Ayyappa team and he trains farmers on water conservation. "Our results were not limited to this R&D experimental and instructional farm but extended to neighbouring farmers who too reaped unbelievable benefits, even in drought like situations in 2016!" he says.

From Akshay Patra to MTR Foods; from pharmaceutical industries like Cipla to Pepsi Food, the Water Literacy Foundation has proved its credentials in varied fields. The message is always about wise and innovative use of water. "Water is perhaps the only divine element that appears in solid, liquid and

*The proof of the pudding lies in the eating. How perfect is Ayyappa Masagi's formula? Scientists are welcome to visit him and ask pertinent questions. Farmers' Forum will be happy to critically discuss questions and doubts. There are clear caveats: Recharging through bore wells requires very careful treatment of the water being used to recharge. Recharge of ground water has taken decades before there is a stable rise in water table in many cases. Mere planting of trees does not lead to rainfall; many other factors are involved. The science and technology differs with different circumstances. There is no one size fits all formula. The only truth is that water literacy is extremely important for India's water security.*

gaseous states on earth; has been life-giver; yet with human beings becoming life-takers when it comes to water", says Ayyappa Masagi. The annihilation of India's water started with the green revolution and industrialization. Sugar factories, pharmaceuticals, textiles, tanneries and many other industries started discharging their liquid waste into the living water bodies like ponds, lakes and rivers and land; dumped their solid wastes into non-perennial water bodies, killing them for good; wiping them off the face of the earth, says the WLF.

The globalization, privatization and industrialization mindsets are focused only on consuming water reserves and not on increasing and sustaining the sources. India's river-linking projects are as destructive as wars. The country needs water literacy on how to save water, how to use water and how to recycle and reuse water. Only then will it be liberated from water issues, Ayyappa says.

The Karnataka story in which Ayyappa got involved began with Nazeersab, former minister of rural development 1983, who paved way for a bore well culture to provide water to the parched and drought-ridden regions. His intention was noble but no one thought of framing the 'dos and the don'ts' of drilling for water; where to drill and where not to drill; or how to sustain the ground water. These were totally ignored in a curious state of myopia that seemed to have affected the water experts and think-tanks. They clearly did not foresee the disaster that bore wells would cause in the coming days!

Yet there has been the Kurubarahalli magic. More





importantly, the magic has been spreading. In 2014–15, Ayyappa Masagi's neighbouring rose farmer obtained a very satisfying yield. By 2016, more success was reported. A farmer, around 500 meters from the Masagi farm, had a bore well around 1,000 feet deep that yielded no water. Suddenly, while digging the earth, the farmer struck sub-soil water in the form of an endless spring. This motivated seven other farmers in the vicinity to search for water only to be rewarded with such miraculous results.

The Masagi oasis had impacted some 50 acres belonging to eight farmers and, as the word about this success spread in the semi-arid and drought prone region, the horticulture department and media rushed to examine the Ayyappa Masagi rainwater harvesting concept. It soon got the sobriquet: miracle of artificial ground water recharging. This was not, however, rocket science, as Ayyappa Masagi explains, but was doable by every farmer with little guidance and support from experts and government: "If every farmer harvests rainwater, there would be nothing called water scarcity or drought".

"One for all and all for one', should be our co-operative mantra in fighting water issues. This strategy is the way to address all our local and global water issues. It is not surprising that this was our forefathers' way of life and the uniqueness of Indians", Ayyappa points out.

What is his way of bore well recharging? What are the what? why? when? where? and the different types?

Ayyappa Masagi answers but not before harking back to the forefathers who revered water and were judicious water users because they knew the importance of rainwater harvesting and hence made the best use out of it. They knew the ecological imbalance that would arise if water was transported from one place to another hence all their irrigated farming was only near the ponds, lakes and rivers. They also knew how important careful selection of crops based on the availability of water was. It makes sense that successful civilizations flourished around the rivers.

Masagi goes on to explain the three kinds of rainwater harvesting that he categorizes as natural, cultural and suicidal. Initially people harvested water as a community; not just rainwater but also grey water generated in the course of everyday activity. Given the eco-friendly way of life, they were water friendly in the true sense and could harvest 30 per cent of the rainfall. This was stored



The art and science of direct bore well recharging:

- Any bore well that has yielded a couple of years of water is ready to take rainwater for rejuvenation. More the number of years it has yielded water, more the volume of rainwater that it can take back!
- Active bore wells can and should be recharged to restore the balance of water extraction and water recharge  
Target bore well that is selected for direct bore well recharging should be at least 500 – 800 metres away from rest of the bore wells
- If there are any ponds, lakes, kalyanis and such like near the target bore well, they can be used as buffer tanks as well as pre-silt up tanks.
- A thorough filtration system is required to filter silt and floating sediments from rainwater before it is injected into the target bore well.





**When open wells went dry, people were patient enough to wait for the rains to recharge them. This was a cultural practice. People drew only replenishable sub-soil water**

in earth as soil moisture, sub-surface water, sub-soil water, deep soil water and underground water in what was entirely a natural process.

In the 1900s, there came the open wells that even a husband and wife could work together to excavate and own. There was no harm in this practice as it was regulated and there was little water wastage to begin with. The use of open wells was helped along by water wheels driven by cattle, camel and men, turbines, lift irrigation and such others. When open wells went dry,

### Going against nature

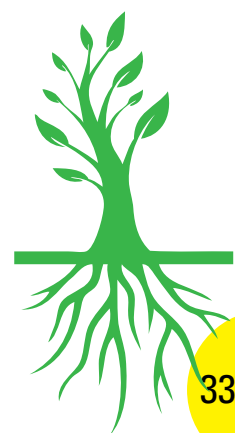
Clearly little thought is spared for the great disaster being created with the depleting water resources even when sustainable use of water was within one's means and within the remit of India's traditional knowledge. Instead, water starved India started looking for water where it was not to be found. India's think-tanks, policy makers, politicians and bureaucrats, ignorant of grass root level issues and indigenous and sustainable solutions, focus on exchequer-burning projects like river diversion, river-linking, inter-state river-linking and dam projects that are highly destructive to the greenbelt and agricultural areas and also lead to dislocation and resettlement of communities in the project areas. A handful of environmentalists may shout from the rooftops but unfortunately the wrong people are in the right places.

— Ayyappa Masagi

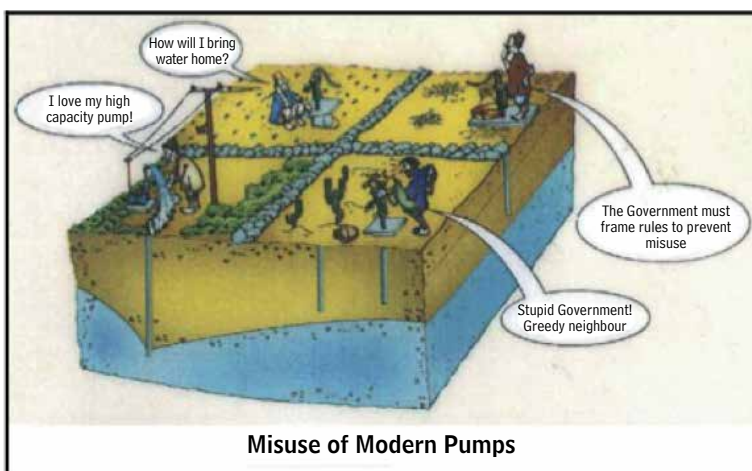
people were patient enough to wait for the rains to recharge them. This was a cultural practice and people drew only sub-soil water that would get replenished with seasonal rains year after year.

Then came the era of bore wells (see image). The image depicts how water that belonged to all was consumed by the rich and mighty leaving nothing to the poor and more needy. Psychopathically, with each passing year, technology developed, water demand increased and volume of water extracted from ground increased. Water levels plummeted!

The underground water reserves that took thousands, if not millions, of years to form was under severe threat in just a couple of decades thanks to non-judicious usage, lack of ground water recharging efforts, unfair distribution of water, loopholes in framing bore well drilling rules and



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drawing water from the ground, amongst others, as India drifted from a water rich status where one could strike water in as shallow depths as five feet to a sorry state where adequate water is not found even in depths of 1,000 feet-1,500 feet.

This is suicidal!

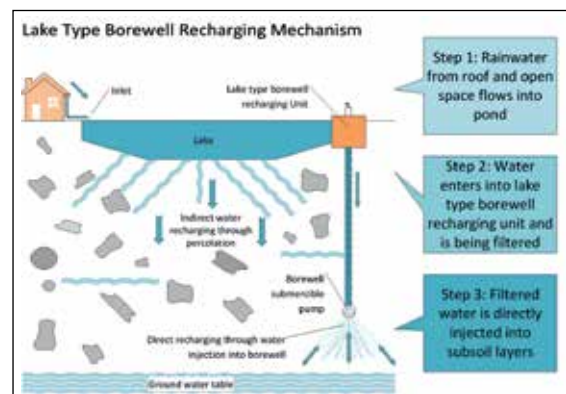
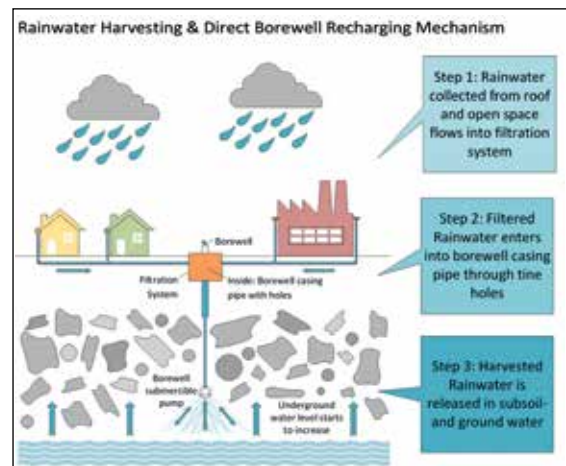
Rainwater harvesting is simply not about collecting roof rainwater – there is more to it and this includes designing region and requirement specific projects based on specific parameters that determine how the bore wells will be charged; whether directly or using indirect means. First, certain parameters must be considered, says Ayyappa Masagi:

- Rainfall volume of the region
- Rainwater catchment area
- Soil type and topography
- Purpose of rainwater harvesting
- Rate of percolation
- Water table
- Rainfall intensity
- Financial feasibility
- Contour
- Water requirement and other factors to include both direct bore well recharging and indirect recharging of underground water table.

Underground water too is classified as sub-surface, sub-soil, deep soil and ground water (see image)

Essentially, the success of rainwater harvesting depends on respecting the fine interlink between all the four different waters and only when rainwater is appropriately stored in these regions do water issues get addressed. “To accomplish this we have our own 100+ innovative rainwater harvesting techniques that are offered to customers, based on permutations and combinations, considering the parameters listed afore. This has been our public position: if one adopts all the RWH systems mentioned in one go, we can guarantee that

**After exhausting water from ponds, lakes, rivers and ground water, we are launching a new attack on clouds, in the name of cloud seeding, to get rain. This will be catastrophic in its consequences**



one’s water issues would be addressed even with regard to rainfall. However, RWH systems can be implemented phase-wise, based on one’s financial strength”, says Ayyappa Masagi.

Saving water, its judicious use and reuse as was practiced until three or four decades ago hold the key. “We forgot simple and highly nature friendly practices and, after exhausting water from ponds, lakes, rivers and ground water, we are launching a new attack on clouds, in the name of cloud seeding, to bring rainwater. This is unnatural, against nature and will be catastrophic in its consequences. We believe this is going to create a desert in the sky, which only time can testify”, Ayyappa Masagi cautions.

Clearly, he knows because while it rains on his farm, it does not on the farmland that is 300 meters away. There is no mystery behind this rainfall phenomenon. The secret lies in the hydrological balance that has been restored at the 16-acre WLF farm with endeavours like rainwater harvesting (multiple lakes, bore well recharging and infiltration wells), non-irrigational agricultural systems, organic farming, animal husbandry and tree-based agriculture with the adoption of integrated farming systems.

The farm is like an evergreen forest surrounded





by semi-arid regions and farmlands and, when clouds pass by, they are easily attracted to the trees at the Masagi farm and drop a few showers before moving along. It is almost comparable to the rain shadow areas where one side of the hills gets rain while the other remains dry.

The point is that while some rain does fall for sure, any certainty around rain is rare while uncertain rain is common. The response to this situation is to be ever prepared to harvest the rain. “We should be ready with the right rainwater harvesting systems to harvest rainwater whenever, whatever and wherever it falls. We should also be ready with containers to store rainwater. In my 30 years of experience, mother earth emerges as the biggest tank that is at par with seas and oceans. It can take in all the rain water unlike the synthetic or RCC tanks, wells, ponds, streams and rivers and even dams that overflow during extremely heavy rains”, says Ayyappa Masagi.

India’s bane has been overexploitation of resources. Reportedly, village Marandahalli in the Kolar District of Karnataka has 500 bore wells with a population of 700. This and several such factors are responsible for India’s water woes. Praveenkumar enumerates the most important reasons:

- Water illiteracy across urban, rural and industrial India including the water experts and government officials of water management
- Lack of rainwater ownership
- Transportation of water from water source to individual homes (issues being: pumping expense, huge infrastructural investment, unplugged leaks, pipe damages, tank overflows, unregulated and unrealistic usage of water at sinks, washrooms, toilets, and such others)
- Water management, which was safe in the hands of the community, was taken over by government agencies
- Privatization and industrialization of water supply
- Blatant misuse of water due to unrealistic life style (vehicle washing, verandah and portico cleaning with hose and many such)
- Poor technology in filtering water leading to discharge of huge volume of water to provide potable water
- No thoughts on reuse, recycle and recharge
- Encroachment of lakes, dumping thrash and debris in lakes, denotification of lakes to convert them into playgrounds, malls, bus stands and human settlement areas



### Damage control

Mining companies draw huge volumes of water to wash the ores and should responsibly recharge the ground water by constructing ponds and a series of infiltration wells.

Water conservation should be made a must in farming and industries. If farmers adopt compartment bunding, soak trenches and soak pits, traditional and innovative sub-surface drip irrigation, plastic mulching and such like, it is possible to cultivate around an acre land with only 1,000 litres of water for over a week. Through our systems, we are watering the plants directly at the root level unlike surface level in traditional watering systems. Theoretically, not a single drop of rainwater is wasted in this new system”.

— AYYAPPA MASAGI

- Lake contamination
  - Unregulated sand mining
  - Destruction of kalyanis
  - Excessive usage of chemicals in farming
  - Deforestation that lead to uncertain rains
  - Lack of trust in indigenous water harvesting and farming methods
- “The rate at which we are losing our water resources and the solutions that the government and ordinary Indians are adopting, exposes the total lack of analysis of the conditions. Yet, what is required to be ascertained is simple”, says Ayyappa Masagi.
- Availability of water
  - Importance of trees in attracting rain clouds
  - Water issues and water scarcity





- Logical distribution of water (by whom/to whom?)

This is not done and “the bottomline is that, as a country, we have failed in water calculation! Our solutions are limited only to drawing existing water reserves rather than sustaining the existing water reserves and creating new ones. I am more than willing to share my 30 years of knowledge in rainwater harvesting and non-irrigational agricultural concepts to make India a water rich nation again”.

There are also issues around what is feasible and where. Direct bore well recharging is not feasible nor advisable if garbage dumping yards, sewage pits, open defecation areas, waste from animal slaughter houses, poultry farms, meat shops are around and industrial solid and liquid is strewn recklessly in its respective rainwater catchment areas. In cases like these, indirect recharging concepts have to be adopted to recharge bore wells, Praveenkumar explains.

In an area of 250 meter radius around the target bore well, different RWH systems like soak pits, infiltration wells, patta bunding, compartment bunding, tree-based agriculture, agri ponds, lakes and nala bunds have to be constructed as per the

“If you want water, go to an open well; If you want fruits, go to my instructional farm; If you want to see me, read my book or, call me, at + 91 9448379497”, says Ayyappa. (rainwatermasagi2000@yahoo.co.in) Water Literacy Foundation, #347, Parvathi Nilaya, Kallappa Layout Amruthahalli, Sahakarnagar Post Bangalore – 560092, Karnataka, India. [www.waterliteracy.com](http://www.waterliteracy.com) [www.rainwaterconcepts.co.in](http://www.rainwaterconcepts.co.in)

customers’ financial and infrastructural feasibility.

Matters are to be treated differently if drinking and farming bore wells are close to streams. The traditional way of harvesting stream water is by constructing check dams. However, check dams are incapable of harvesting significant volume rainwater and are eventually damaged due to inferior construction materials and practices and also due to sabotage. Besides, they are vulnerable to huge incoming silt that reduces water percolation.

Considering these drawbacks, “we have developed our innovative stream water harvesting techniques called sub-surface dyke, underground

**Harvesting stream water with check dams does not yield significant volumes. Check dams are also often damaged due to inferior construction materials and practices and due to sabotage**





bund-cum-lake, lake with lake type bore well recharging unit, percolation with polyurethane sheet tanks and nala bund with polyurethane sheets. If the catchment area is huge, we can construct earthen dams that are nothing but miniatures of historical dams of India”, Ayyappa Masagi explains his innovation.

These are really ideal for large streams that carry water only on the rainy days and become waterless the next day. We need to construct nala bunds every kilometre along the stream flow and supplement the main system with sub-surface dykes to prevent the hidden flow (see image) from flowing further while letting the visible flow downstream benefit the next village.

The hidden flow that is blocked from flowing further starts finding new escape routes such as springs or dry gaps and flow only to end up in nearby open wells and bore wells that seems to be is nothing but a magic to the ordinary person. The image shows how hidden flow finds new route to appear in nearby open wells and bore wells.

Significantly, soil layers in and around lakes, feeder canals, streams and rivers catchment areas are naturally water rich. This is why bore wells and open wells are rich in yield. The greater the water one draws from these wells, the more is the water that appears after some time. This is nothing but seepage water. Usage of seepage water to recharge dry bore wells, which are usually deeper than the aquifers

that are water rich due to seepage, is possible.

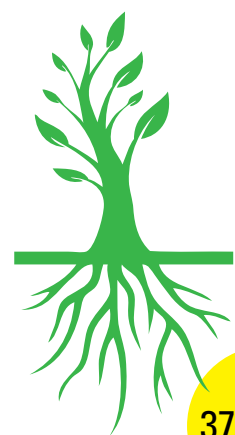
“For much better and quicker results, one can adopt underground bund-cum-lake, lake with lake type bore well recharging unit and percolation with polyurethane sheet tanks. Locally available construction debris, bricks and coarse sand could be used as filler material. Ayyappa Masagi’s direct bore well recharging innovation is about collecting, filtering and storing rainwater in the sub-soil and groundwater aquifers to recharge and sustain bore wells even to manage the draught like situations.

Unlike the lakes and traditional rain water soak pit system where rain water passes through hundreds of earth layers before reaching the sub-soil and ground water aquifers, through this technology rain water is thoroughly filtered and injected into the bore well directly so that the rain water directly reaches the aquifers from where a bore well is extracting water.

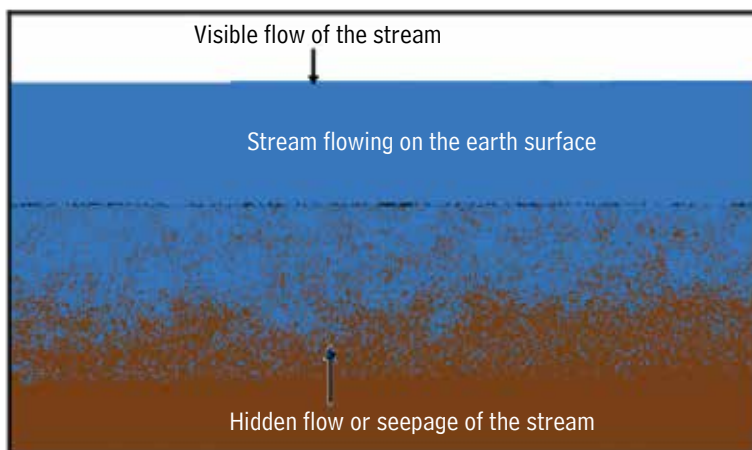
Questions have been asked about the efficacy of filtration systems around the bore well. Ayyappa’s research says that filtration systems have been filtering particles to the range of 90-120 microns roughly (one average human hair is 150 microns).

“We are happy to share the data collected from India’s leading packaged drinking water manufacturer, where a plastic Netlon mesh is used for filtering along with boulders and gravels of different sizes. The greenish and reddish water seen in the photo is actually a kilometre of highway rain water and 30 acres of neighbouring land water apart from 10 acres of company plant rain water. This water becomes clean after going through our in-built filtration system called a lake type bore well recharging unit. There have been no complaints so far from the company’s quality team”, says Praveenkumar.

If this direct bore well recharging system



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meets industrial customers' expectations, one is reasonably assured that the technique is one that farmers/village communities can make use of recharging the groundwater aquifers, so as to withstand the drought like situations, especially in dry land region. With direct bore well recharging technology, "we want to address water scarcity faced in Indian villages, especially of our farmer brethren. We would use rainwater and boost the process of more rain water going into the earth's sub-surface and groundwater aquifers faster. With water rich bore wells, we are confident that government would be able to supply water to the Bottom Of the Pyramid", says Ayyappa Masagi.

A totally different area around water wastage is waste water and this makes grey water harvesting very important. Water coming out of bathrooms (excluding the sewage) and kitchens both in urban and rural settings should be harvested for the following reasons:

## Grey water harvesting is very important; water coming out of bathrooms (excluding the sewage) and kitchens both in urban and rural settings should be harvested

- 1 Prevention of water body contamination as this water is huge in volume and directly contaminates them
- 2 Harvested grey water recharges the sub-soil, deep soil and ground water reserves progressively; everyday
- 3 Reusing the used water reduces pressure on fresh water supply
- 4 Transportation of and power consumption for fresh water supply is regulated

Grey water can be harvested at individual household levels in urban areas and in villages

where a series of infiltration wells could be constructed along its flow, Ayyappa Masagi adds.

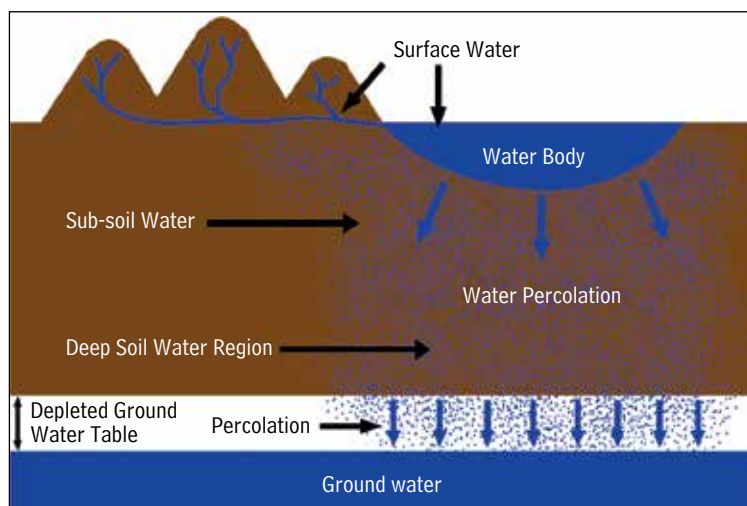
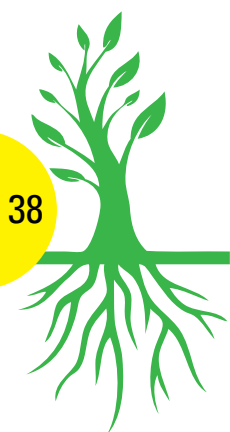
Next comes the very critical ownership question. It is very important to have community participation, especially from farmers in the region. Farmers have to be sensitized about the importance of 'in-kind' support and benefits that they would reap with large scale rainwater harvesting. When large scale RWH projects are taken up, say in about 30 to 40 acres, bore wells belonging to individual farmers have to be recharged too in order to increase and sustain bore wells for drinking, domestic and agricultural requirements. Including more and more bore wells for recharging is nothing but counter balancing the water extraction that has been happening all these years with more water recharge, explains Ayyappa Masagi.

It is equally important to have the government buy into the idea, he believes. Government 'stakeholdership' is important for the sustenance

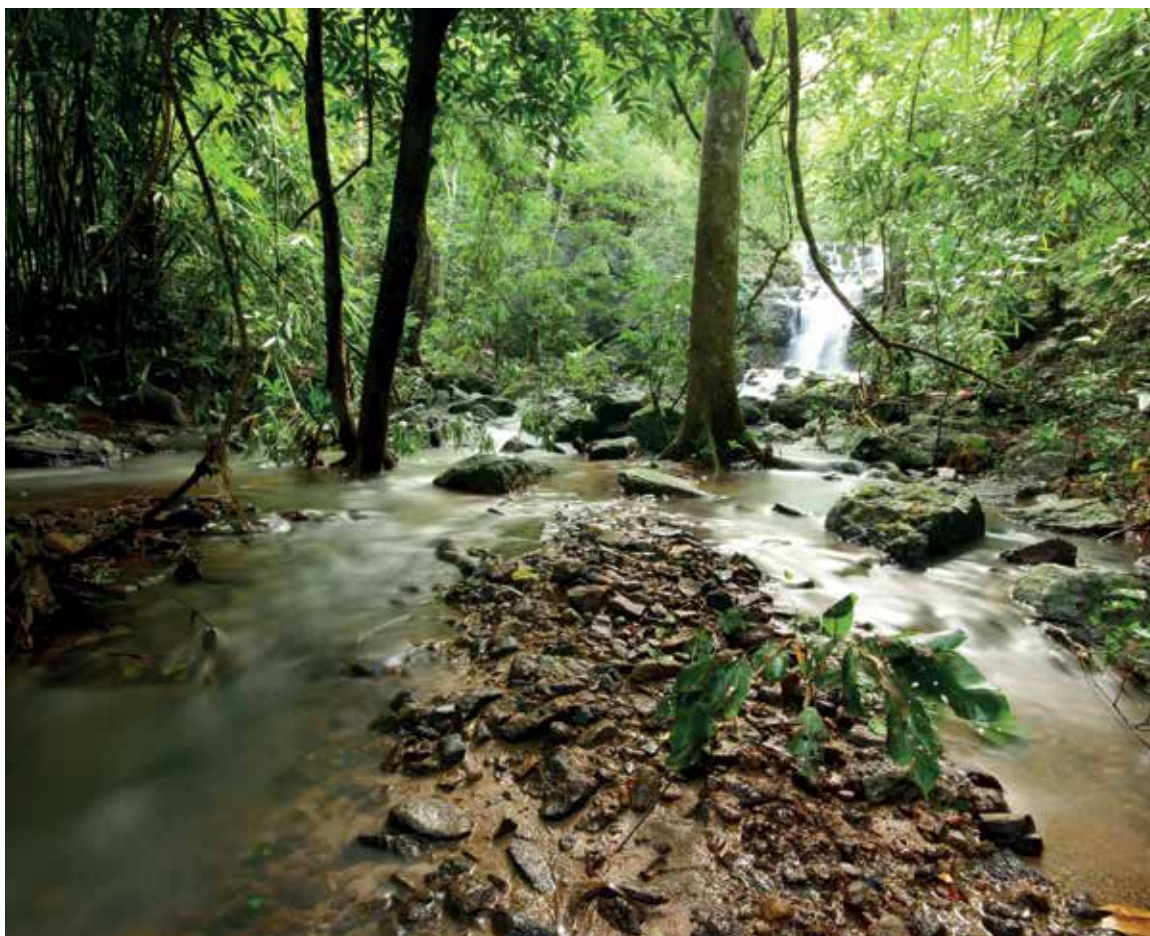
of the project because when rainwater is harvested, it comprises rain that falls in the farmers' and the government land and eventually benefits the entire community. "When water is drawn from bore wells, it is usually the water from aquifers that stretch 0.5 kms to three kms. We never think of where the water comes to us from. Why should we worry about where rainwater is stored upon harvesting? If we question the latter, the act of drawing water from bore wells becomes equivalent to stealing", Ayyappa Masagi makes a point.

Therefore the need for water literacy. "Bore well recharging is a noble act of paying back to mother earth with interest for consuming water all these years. Rainwater harvesting is thus not just about filtering and storing roof rainwater in urban areas but must become a lifestyle; a culture that sustains our water bodies across rural, urban and industrial India", Ayyappa Masagi says.

'Save rainwater' should thus not be a mission limited to water agencies but driven across government agencies as each and every agency is finely and intricately bonded with water access. The forest department should increase afforestation on a war path to attract rain clouds and regulate certain rains. Agencies like the KSPCB (Karnataka







State Pollution Control Board) should check contamination of lakes and promote the recycling and reuse of water to reduce the load on fresh water supply and contamination. Like the human heart that pumps blood throughout the body, lakes pump (percolate) harvested rainwater into the earth's layers to make them appear as the source in open wells and bore wells.

Just like citizens pay for water, the government should levy charges on grey water generation that automatically cuts down the usage volume. The ultimate objective is to promote the water conservation message by printing messages on daily usage items, transportation systems, bill boards, bus stands, theatres, social media and everywhere.

Ayyappa Masagi's philosophy and his science are integrated. "Man is born out of nature and human solutions have to be intricately bonded with nature. It is in this bonding that the success of our missions lie. It is in this faith from which we find solutions to the missing rains; our success with reversing the trend of farmers and farm labour moving out of their farmlands and, instead, making them come back to their farmlands to farm and obtain assured crop yields". ●

Form IV (See Rule 8)  
Ownership Statement of Farmers' Forum English Bi-Monthly

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I, Ajay Vir Jakhar, do hereby declare and confirm that the above particulars of Farmers' Forum English Bi-monthly are correct and true.

Place: New Delhi  
Dated: 1st March, 2017

Sd/-  
Ajay Vir Jakhar  
Signature of Editor, Printer & Publisher



FAIDA HEE FAIDA

# Bharat Benefitting from Green Enterprise

Dhrubajyoti Ghosh







As many as 13 Indian states – West Bengal, Uttar Pradesh, Assam, Andhra Pradesh, Bihar, Chhattisgarh, Delhi, Jharkhand, Maharashtra, Madhya Pradesh, Manipur, Rajasthan and Karnataka — and Bangladesh and Nepal have woken up to the remarkable benefits of Faida (Food and Agriculture Integrated Development Action) Bharat! The overall area covered so far is about 5,000 acres, according to conservative estimates.

What is this remarkable initiative that has excited so many farmers across the states and countries? Faida Bharat was born in 2009; putting into action the entrepreneurial vision of former Indian Council of Agricultural Research (ICAR) scientist, Raghuvansh Mani Pandey, founding trustee, and agriculture expert Sukumar Sarkar.

The two shared a vision of propelling a set of decentralized initiatives to encourage agricultural prosperity and promote urban prosperity as an additional benefit. The combination of initiatives would encourage the ordinary citizens to generate capital that would finance 'poison-free agriculture'. This would include farming and animal husbandry



**DHRUBAJYOTI GHOSH** is amongst the foremost thought leaders in the environmental space

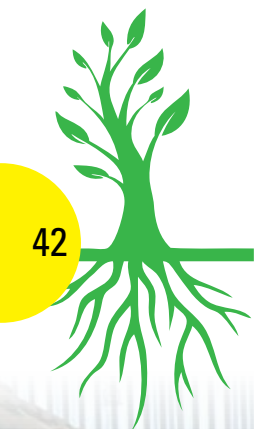
at the village level. They started this initiative with an organic manure prepared by a combination of ingredients in their model farm in Jaukabad, Jaunpur in Uttar Pradesh. The company doing so was named Sanjeevani Biotech.

Today, Faida Bharat, which is run as a Trust, has caught the imagination of rural folks in 13 Indian states, apart from neighbouring Bangladesh and Nepal. The business model is explained by the founding trustee in his various public addresses in different villages and through the Faida Bharat website and Facebook page

The decentralized model propagated by them comprised a producer co-operative society consisting of 100 families in a village that would produce food to be procured by one consumer society in the sub-division/ district/ state-level, to create small decentralized markets. Under this model, the capital would be generated by urban centres in more ways than one.

Taking advantage of villagers who have settled in cities but have links with their homes, Faida — that calls this diaspora non-resident villagers — integrates them into the enterprise as finance

**Faida Bharat encompasses a vision of propelling a set of decentralized initiatives to encourage agricultural prosperity and promote urban prosperity as an additional benefit**







providers motivated by the need to improve their own quality of life by encouraging poison-free agricultural production.

The idea has also captivated those interested in consuming healthy, high-quality food in urban centres, who have come forward to finance and own animal wealth in the form of cows. Cows would provide both milk products and contribute to the making of manure for chemical pesticide-free agriculture and be used in a variety of other profitable ways.

A village producer society would work with up to 25 milch cows; not more than that. The profit accruing from the ownership of the cow would be divided in a 50:50 ratio between the owner and the producer. This project is called the Nandalal Gaushala Project and is a part of the Faida basket of initiatives.

Faida holds that chemical pesticide-free agriculture should spread through decentralized financing instead of looking to the government for

### The Really Smart Village

"We can give a call to all the people belonging to every village, who have left the village for earning of their livelihood to the cities, to come back to their birth place. These non-resident villagers may provide a powerful initiative to build smart villages" and create the opportunity to develop with the participation and co-operation from each and every individuals. "This will be a win-win situation for all".

— Raghuvansh Mani Pandey

© Dinodia







finances. This means that at the village level, the farmer should apply the manure that comprises a combination of rock phosphate, gypsum, pyrite, lime, mustard dressings (khol), neem fruit dressings (khol) and vermicompost, blended in a ratio that is decided according to the nature of the soil in that geographic region.

This effectively neutralizes the havoc wrought by using DAP (di-ammonium phosphate) in the soil. Using this manure will lower the farmer's production costs and increase his yield and is a practice that should consistently be replicated. To encourage decentralization and to incentivize farmer participation, the products grown by the farmer would be sold under the brandname of his/her own mother at consumer retail outlets.

At the village level, the key factors to look at would be food production to encourage a poison-free kitchen, animal husbandry through the cow-rearing projects, good physical and mental health and happiness of the villagers and a viable self-employment model that encourages unemployed youth to gainfully engage themselves in agribusiness activity. The corresponding schemes to facilitate these would be:

### Integrated Well Being

The Bengal-based Samir Kumar Dey dreams of opening an integrated Health, Education and Employment Centre (Hee) centre, as conceptualized by Faida. He spent the first 10 years of his working life away from his native Konkasai village in the Kharagpur II block in West Medinipur and built up a capital base working in a marketing job in Raipur, Chattisgarh.

Samir came back to his native village and, alongside a town-based job, he is building up Banedi Bazar, a brand that will market rice produced locally using Sanjeevani manures. "My wife and I are building up a dream whereby my marketing experience will be used to benefit poor women in the village who will become employed as a part of this agricultural initiative. I am grateful to Faida for that".

The Banedi Bazar brand will also have other non-agricultural products that will cross-subsidize the turnaround time that is needed to bring the agricultural initiative up on its own strength".





## Co-operative members purchase their raw materials from the co-operative and sell their products to the co-operative, which adds value to the products and markets them



1 Maa Sarada Food Production and Distribution Project/Scheme (promoting poison-free agriculture and agro-based activities in rural India)

2 Nivedita Rural Health Scheme

3 Sri Ramakrishna Education Scheme

In case of co-operatives, the members will purchase their raw materials from the co-operative and shall sell their products to the co-operative. The co-operative will value add to the products and market them. The Faida initiative is all about taking an integrated view of production, processing and marketing.

As the Faida secretary, Sukumar Sarkar, says: "Self sufficiency through one's own hard work can ensure prosperity but this needs to create more self-employment in the town as well as in villages; we have to make all the people self-sufficient". Faida has taken a well-planned route towards that end.

- 2009: Faida Trust created.
- 2009: Natural Manure & Pesticide Company

(Sanjeevani Biotech)

Products: (a) Natural Manure Sanjeevani-2, (b) Plant Growth Stimulant. Sanjeevani-1

- 2009: Marketing company (Kumar Logistics)
- 2011: Organic pesticide; Sanjeevani-3, Sanjeevani-4 and Sanjeevani-5
- 2011: Organic seeds company (Kumar Agro Seeds Company)

Products; wheat, rice basmati, rice non basmati, mustard, dal (arhar, matar, chana, moong)

- 2012: Faida model farm house based on farming, dairy and agribusiness and Faida producer society created
- 2013: Chemical pesticide and poison-free food company: Bani Food Products making chakki wheat, rice (brown basmati, basmati, brown non-basmati, non-basmati), mustard oil, chakki dal (arhar, matar, chana, moong varieties), garlic, badam, sugar-free potato chips, maize and honey.



The basic data to be collected to determine what the action plan should be is:

- The population of a village and families (male, female, children, sick, young boys and girls)
- Quantification of the land and what can be produced on such land
- The source and quantum of water and wetlands (for irrigation and drinking)
- Number of domestic animals (according to class, source, the income and expenditure)
- Number of domestic birds (according to class, source, the income and expenditure)
- Number of people who have migrated from the village, permanently or temporarily, if possible with their current position, profession and income
- Number of educated people in the village (male, female)
- The markets or haats serving the village
- The commodities traded in the market and their financial value
- The amount of village produce being sold in the market and its financial value
- Daily financial out flow of the village from every market/haat
- Expense of the family/village on education and what part of such expense is incurred in the village.

Armed with this information, Faida Bharat can work out a strategy to change things.



## There are plans for a health and education centre on wheels, accompanied by a doctor, to dispense medical services to those who approach the mobile centre

By 2014 the initiative was firmly and professionally entrenched and it saw the expansion of the retail chain business. In 2015, the Smart Village was conceptualized, as a counterpoint to the concept of Smart City that was rapidly gaining currency nationwide at the behest of the Prime Minister.

Writing to the powers that be about his thoughts on the Smart Village concept, Raghuvansh Mani Pandey said: "Every village can become a centre for employment (with the help of e-commerce), education and health (Hee). The e-commerce aspect involves providing opportunity for unemployed rural youth to generate and process agricultural produce. Each Hee centre needs about ₹5 lakh to be invested and the first efforts are underway in Varanasi to translate this into reality".

There are nearly 22 lakh NGOs working in India, an average of more than three NGOs per village and he urges that the country "mobilize" the NGO



population "to adapt a village and concentrate its activity on each village" and convert all villages into smart villages.

There are also plans to have a Hee centre on wheels where medical facilities will be extended to all those who approach the mobile centre. It will carry a travelling doctor and will move about during a particular time of day to attend to anyone wishing to avail of the services. The mobile centre will be connected to a permanent centre using appropriate technology. ●



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BUDGET 2017

# Cutting Allocations; Increasing Hype

Bharat Dogra







**U**nion budget 2017-18 was generally expected to be sensitive about

the needs of farmers, who are passing through difficult times in recent years. There was even additional and special reason for this year's annual budget to take better care of needs of the farming community, given the grievous and the entirely avoidable distress it suffered on account of demonetization.

Helping the farm sector to recover from the consequences of demonetization that accentuated the existing crisis, particularly for the small and marginal farmers, would call for a very sympathetic budget. Clearly, this has not been the case even though every ruse was used to create an impression of a very pro-farmer budget; as has been the practice in earlier years. The current budget's reality falls far short of its rhetoric.

The budget 2017-18 allocation for the Union Ministry of Agriculture and Farmers' Welfare has been increased to ₹51,026 crore; a very modest increase of ₹3,053 crore from the revised estimate for the previous year. In terms of percentage share of the total budget, the allocation of the agriculture ministry has actually declined from the revised estimates of the previous year. Similarly, the allocation of this ministry as a proportion of the GDP has also declined compared to the revised estimates of the previous year.

The Centre for Budget and Governance Accountability (CBGA) has, in its budget analysis, said that "the budget allocated for the farming community seems inadequate in the aftermath of demonetization and its adverse impact on the rural economy".

For a slightly longer-term understanding, one must consider the share of expenditure by the agriculture ministry (including interest subvention) in total central (actual), which had declined earlier from 2.10 per cent in 2012-13 to 1.96 per cent in 2015-16. In the revised estimate for 2016-17, this had risen to 2.39 per cent while declining slightly to 2.38 per cent in the budget-estimate for 2017-18.

Similarly, the share of expenditure (actual) by the agriculture ministry (including interest subvention) in the GDP declined from 0.30 per cent in 2012-13 to 0.26 per cent in 2015-16. This recovered to



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0.32 per cent in 2016-17 budget revised estimate only to decline again to 0.30 per cent in the budget estimate for 2017-18.

In 2016-17, the presentation of budget data was cynically changed with interest subvention arbitrarily shifted from the finance to the agriculture ministry, without this being stated clearly in the budget speech. This led to the false impression of a very big increase in the allocation for agriculture that was lauded for several hours in post-budget discussions on television. Such classification changes should be indicated clearly so that there is a proper understanding of the reality.

What this data reveals is that both as a share of overall government expenditure and a share of the GDP the actual expenditure of the agriculture ministry in recent years, as well as the latest budget estimate for this, have remained at very modest levels. There have been slight ups and downs per year but the overall level is quite low and has remained so during this period.

18. Have adequate resources have been provided for this?

The budget estimate for this in the previous budget was ₹5,500 crore but this had to be raised to a revised estimate of ₹13,240 crore to settle the arrears claims, as the Finance Minister explained in his budget speech. Yet only ₹9,000 crore has been provided for 2017-18; far lower than the allocation in the revised estimate!

Another aspect of this allocation that needs to be questioned is the extent to which this is financed by the Krishi Kalyan Cess. As the CBGA has points out, the government has substituted the entire premium for the Fasal Bima Scheme with the revenue accrued through the Krishi Kalyan Cess, thereby belying hopes that the Krishi Kalyan Cess will be used for more special and comprehensive efforts for finding a way out of farmers' crisis.

Additionally, this cess is being used to part meet the interest subvention requirements. If the Krishi Kalyan Cess is used only for meeting routine

## As shares of government expenditure and of the GDP, the actual expenditure of the agriculture ministry, including the latest budget estimate for this, have remained at very modest levels

The actual share of agriculture ministry's expenditure in GDP was 0.30 per cent (actual) in 2012-13 and it is exactly the same (0.30 per cent) in the budget estimates for 2017-18.

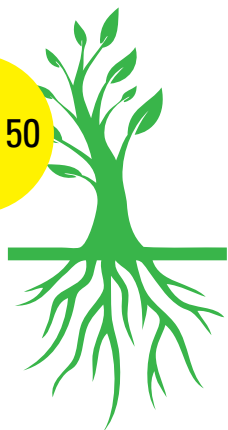
The finance minister's evident pride that the target of agriculture credit in 2017-18 has been fixed at a record level of ₹10 lakh crore needs to be looked at carefully too. Such figures are anyway likely to increase at least marginally in any year and deserve no applause. What deserves condemnation is that most of this credit actually goes not go to farmers but to agribusiness. The numbers are clubbed together with other benefits for farmers to present an exaggerated picture of what is being given to them. This is not fair to real farmers at all who lose credit meant ostensibly for them to agribusinesses. The two accounts should be separated to clearly state what amount is actually available for real farmers.

In case of the Pradhan Mantri Fasal Bima Yojana or the Prime Minister Crop Insurance Scheme, the budget has proposed that the scheme will increase coverage from 30 per cent of the cropped area in 2016-17 to 40 per cent of the cropped area in 2017-

expenses that the government should meet from other sources, the original hope that the cess will fund a special and comprehensive scheme for resolving problems of farmers will be belied.

Another aspect of crop insurance demanding immediate attention — and should have received some attention in the budget speech — is that the benefits of crop insurance are really not reaching some of the most crisis-ridden farmers, as many farmer organizations have complained. Badly drought affected villages in Bundelkhand are rife with such complaints from many farmers. While talking of increasing coverage, there is need to first make some essential reforms in the implementation of crop insurance.

The budget allocates ₹7,377 crore for the Pradhan Mantri Krishi Sinchai Yojana or the Prime Minister Agricultural Irrigation Scheme, compared to the actual expenditure of ₹7,781 crore in 2015-16. This declined to a revised estimate of ₹5,182 crore in the revised budget for 2016-17. In other words, compared to the actual expenditure in 2015-16, there was a big decline in the following year with the trend persisting in the latest budget







### MGNREGA-Rhetoric and Reality

Apart from the allocations for agriculture, programmes and schemes important for the welfare of rural India deserve a close look. The Mahatma Gandhi National Rural Employment Guarantee Scheme is clearly one such. It is a legally mandated scheme for ensuring livelihood and employment support and its importance has clearly increased at a time when the farm sector has been badly disrupted by demonetization and other factors. The budget speech has announced a record allocation but the reality is different.

Due to the poor allocations in the previous year and the much greater need for work, allocations were later increased. This was welcome. When compared to this revised budget, the increase in this year's budget is only one per cent or so. Clearly, a much higher rise was needed in the existing circumstances. Even this negligible increase is an illusion as there are huge pending dues from previous year.

It needs to be noted that the budgetary allocation for MGNREGA, as a percentage of GDP, has declined from 0.30 per cent in 2012-13 (actual) to 0.28 per cent of the GDP in the budget estimate for 2017-18.



although not as sharply.

The Rashtriya Krishi Vikas Yojana saw the estimated ₹5,400 crore provided in the 2016-17 budget reduced to ₹3,550 crore. The budget estimate in the latest budget is ₹4,750 crore, significantly lower than the budget estimate for the previous year.

The budget allocation for the National Food Security Mission for the previous year was ₹1,700 crore but this was reduced in the revised budget estimate to ₹1,280 crore; a huge cut. Unfortunately, budgets for both Rashtriya Krishi Vikas Yojana and National Food Security Mission were cut last year as evident from the much reduced revised budget. One hopes that this sad experience will not be repeated this financial year. The budget estimate this year for the National Food Security Mission is ₹1,720 crore; almost the same as the budget estimate for the previous year.

There is clearly a very pressing need for preserving traditional wisdom in agriculture and related activities and for farming activities based on this wisdom particularly the on-farm preservation of the tremendous diversity of traditional seeds. All this important work can be done under the Paramparagat Krishi Vikas Yojana. It is disconcerting that during the previous year even the budget estimate for this scheme, at a meagre ₹297 crore, was further reduced to a revised budget of ₹120 crore.

Farmers in many villages are very keen to work on protection of traditional wisdom; particularly vis-a-vis traditional seeds. The budget for this



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## The Sad Grandma Syndrome

There were pre-budget expectations that pensions for the most needy elderly people, overdue for increase, would be up. As the coverage of the social security provided by these schemes needs to be increased, significant increase in allocations of pensions for vulnerable elderly people, particularly in rural areas, was expected.

The need for this has increased thanks to widespread migration from several areas of rural distress that has increased the vulnerability of the elderly, left alone in villages. In addition, the disruption caused by demonetization very recently has increased the need for pensions.

One of the biggest budgetary disappointments has been that the allocations for the main

pension schemes for vulnerable people has not increased at all. The allocation for the Indira Gandhi National Old Age Pension Scheme at ₹6,127 crore in this budget is actually a little less than the allocation in the previous budget of ₹6,131 crore.

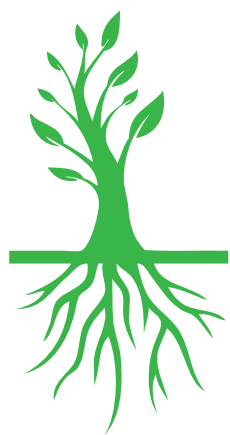
Widows constitute an extremely vulnerable group but there is no increase in the allocation for their pensions even to make up for the price rise. The allocation for the Indira Gandhi National Widow Pension Scheme has remained the same as in the previous year at ₹2,222 crore.

Allocations for Indira Gandhi National Disability Pension Scheme has actually declined marginally from ₹279 crore in the previous budget to ₹274 crore this year.





## In the previous year the budget estimate for the Paramparagat Krishi Vikas Yojana scheme, at a meagre ₹297 crore, was further revised to ₹120 crore



crucial scheme, however, got cut by more than half during the previous financial year. This year the budget estimate for this scheme is ₹350 crore and one only hopes that the sad experience of the previous year will not be repeated.

Notwithstanding the consensus on the need to increase oilseed production and to reduce the dependence on imported edible oils, some of which now have an increasing possibility of being contaminated by GM oilseeds and hence can be very hazardous, the budget for this gets axed. It

was because of the wide recognition of the need for increasing oilseed production that the National Mission on Oilseed and Oil Palm was started and the expenditure on this account was ₹500 crore in the previous year's budget but reduced drastically to ₹376 crore in the revised estimate. This year the budget estimate is ₹403 crore, which is lower than the budget estimate for the previous year.

Is cashless assuming a different significance vis-a-vis budget allocations? Big plans with cashless support? ●



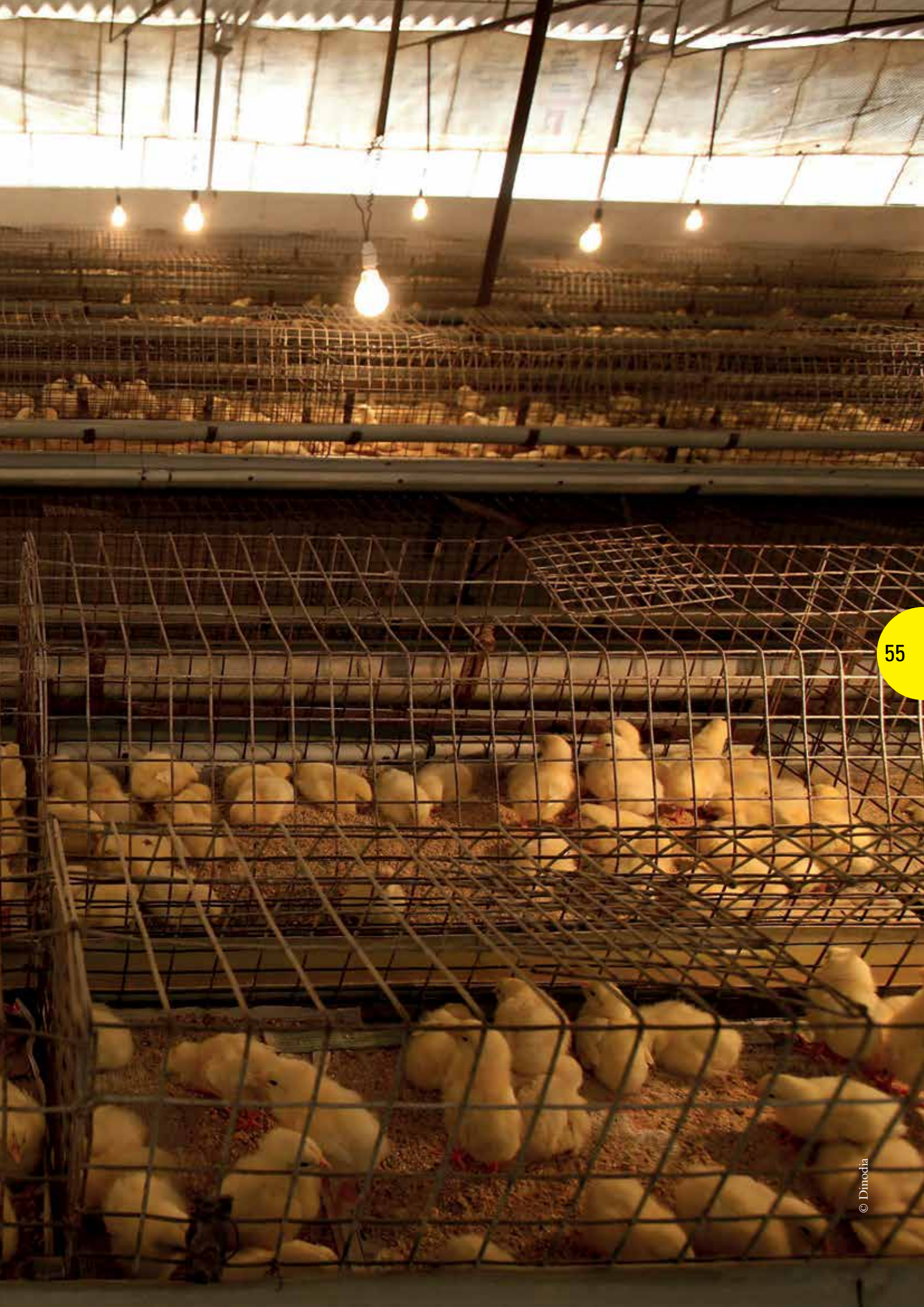
DEMYSTIFYING DEMONETIZATION

# Farm Produce, Poultry and Plantations

Subir Das









The Prime Minister's peremptory order on November 8, 2016 that ₹500 and ₹1,000 notes, issued by the Reserve Bank of India, were to be taken out of circulation with immediate effect, meant that 86 per cent of the cash in circulation (by value) disappeared from the hands of the people. The reasons are not important — there being no consensus what they were — the consequences are.

It would be worthwhile to examine the effect of demonetization particularly on the agricultural sector, where transactions predominantly take place in cash and in a situation where the government did not have enough new notes ready to replace the old notes. Indeed, for the initial 45 days, the RBI distributed new ₹2,000 notes that did not have easy acceptability for there was no one to change them into smaller denominations.

There is little doubt that the farm sector took a devastating hit — first person accounts from all over the country bear testimony to the plight of the farming folk — as agriculture growth that had



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Survey conceded “an aggregate supply shock to the extent that cash is a necessary input for economic activity (for example, if agricultural producers require cash to pay labour” though it downplayed the damage.

The demonetization order having come in the midst of the winter sowing season, the first impact was on farmers left without cash even to buy seeds. Rural India would have had an impossible task sustaining itself had it not been for the remarkable “jugaaru” culture that predominates the countryside. The announcement came at a time when farmers were sowing or preparing to sow rabi crops and winter vegetables. The government has held that the increase in area under rabi (up by 5.9 per cent over last year as on January 13, 2017) was a sign of zero impact of demonetization, choosing to ignore the ground reality.

Ramesh Chand and Jaspal Singh, Member and Consultant of Niti Aayog ([http://niti.gov.in/writereaddata/files/document\\_publication/Demonetisation\\_Agriculture\\_Blog.pdf](http://niti.gov.in/writereaddata/files/document_publication/Demonetisation_Agriculture_Blog.pdf)) have drawn this conclusion on the basis of the position

## The demonetization order having come in the midst of the winter sowing season, the first impact was on farmers left without cash even to buy seeds

contracted 0.2 per cent in 2014-15 and grew no more than 1.2 per cent in 2015-16, largely because of back-to-back droughts — faced another onslaught.

Agriculture was expected to grow at four per cent this year, (October 2016 Crisis) but demonetization changed things adversely again. Even the Economic

that: “Normally rabi sowing is completed on 88 per cent area by December 30. This year it has been completed on more than 91 per cent area”, ignoring the fact that a growth in rabi area was a courtesy the nine per cent higher production of kharif foodgrain given a handsome monsoon. A higher winter crop was, in any event, on the cards.

Live Mint (January 30, 2017) says: “In 2016-17, following a normal monsoon, the first advance estimates of national income released earlier in January projected a 4.1 per cent growth for the farm sector — a rebound based on nine per cent higher production of kharif foodgrain and optimistic winter crop production targets”. The Economic Survey provides perspective in saying that though aggregate sowing of rabi wheat and pulses (gram) exceeded last year's planting “whether this will lead to a commensurate increase in production will depend on the extent to which farmers' access to inputs — seeds, fertilizer, credit, and labour — was impeded by demonetization”.

### The Spread of Woes

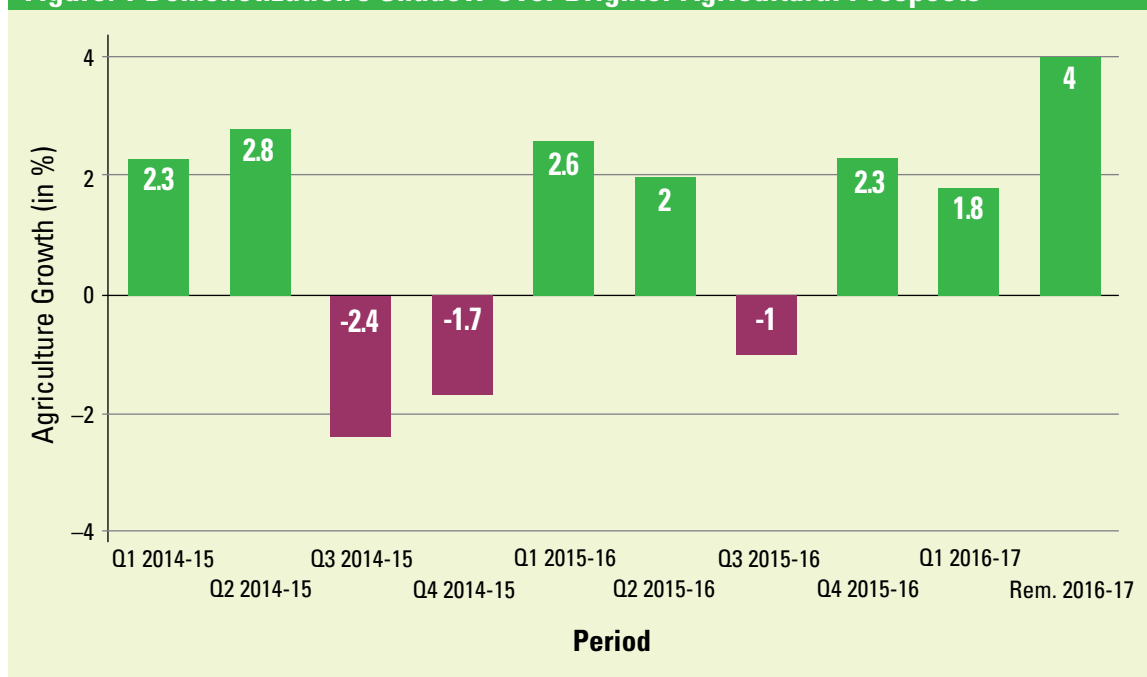
Demonetization could also affect supplies of certain agricultural products, especially milk (where procurement has been low), sugar (where cane availability and drought in the Southern states will restrict production), and potatoes and onions (where sowings have been low). Vigilance is essential — to prevent other agricultural products becoming in 2017-18 what pulses was in 2015-16 in terms of supply deficiencies and consequential higher inflation.

— Economic Survey 2016-17





**Figure: 1 Demonetization's Shadow Over Brighter Agricultural Prospects**



\* Note: For 2016-17, number represents prospective growth figures.

Source: Key Economic Indicators, Office of the Economic Advisor

The rabi offtake of fertilizer (till December 21, 2016) was significantly lower than in the corresponding periods in 2014-15 and 2015-16 by 7.47 per cent and seven per cent respectively. This goes contrary to the claim about area sown. Lower usage of fertilizer will bring down productivity of yields leading to significantly lower crop. Keeping these in view, there are serious doubts about the accuracy of government estimates.

The horticulture and pisciculture are integral parts of the farming space all tell their own story. While final statistics are unavailable, a look at the developments around the demonetization are significant. On November 7, the regulated wholesale fruit market at Vashi in Navi Mumbai checked in around 250 trucks, each carrying 10 tonnes of farm produce. A similar number of trucks arrived the next day at the market run by the Agriculture Produce Marketing Committee (APMC). This number dropped to 170 trucks the next day. Overnight, there was a drop of nearly 30 per cent in the inflow of fruits<sup>1</sup>.

There is no data yet on either area or production estimates for the horticulture sector in the 2016-17 crop year despite horticulture output surpassing that of foodgrain since 2013. The “estimates of



<sup>1</sup> The Mint, November 18 2016, Demonetization: Farm produce supply chains feel the pinch. The currency note ban has disrupted business for the largest APMC markets, farmers in Maharashtra, Gujarat, Delhi and Kerala



weekly progress of sowing during the kharif and rabi crop seasons, even now, are based on 'eye estimates' reported by states (and not based on actual field surveys or satellite images)".

Meanwhile the poultry sector complains of a ₹1,500-crore loss. The ₹95,000 crore industry that impacts some 25 million plus people has not been able to dispose of some 25 crore eggs that were scheduled to be sold in the October-December period. V. Harshavardhan Reddy, vice-president of the Telangana Poultry Breeders Association, has been vociferous in his complaints. "For poultry, November to February is the peak demand season in view of festivals. The change crunch in this season has brought disaster. To reduce losses, the only way is to cull the birds which will impact on our investment and manpower", he said. (Note ban impact: Hyderabad's famous chicken biryani industry hit, poultry farmers in state of crisis; Firstpost)

Farm dependant employment has been hit across sectors. Innumerable reports talk of agricultural workers having been forced to go back to their far flung villages during the busy sowing season due to inability of land owners to provide work due to the cash crunch. The government's decision on November 14, 2016 barring rural co-operative banks from accepting old notes or even changing them came as a blow to farmers and land owners at the peak of



## The government's decision barring rural co-operative banks from accepting old notes and changing them was a blow to farmers and land owners at the peak sowing season

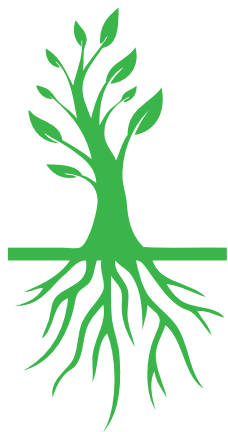
the sowing and growing season in addition to restrictions on withdrawal of money.

Indeed, even figures from the labour ministry tell their own story that places the Economic Survey's area-under-rabi-up line in perspective. It shows that the despite higher sowing of winter crops, rural wages are growing at a sluggish pace. December 2016 (peak the winter sowing season) saw nominal wages for ploughing up 4.3 per cent year-on-year to ₹292 per day, says labour ministry data released in February 2017. This is higher than the 3.9 per cent growth in the drought afflicted December 2015 but lower than the 6.6 per cent growth in December 2014, and markedly below the high growth seen in 2013 (26 per cent) and 2012 (18 per cent), when the monsoon was normal.

The increase in farm activity and an estimated record production in 2016-17 of key crops like rice, wheat and pulses notwithstanding, nominal wages have been flat. This is attributed to notebandi.

Reports from across the country talk of farmer distress in selling produce that got harvested just prior to the demonetization announcement or during November and December, 2016. Ramesh Chand and Jaswant Singh suggest that: "No effect of demonetization was seen on prices of major crops like paddy, soyabean and maize in the month of November and their wholesale prices in APMC mandis of the country were around three per cent higher in November as compared to the month of October".

They deign to concede that prices of maize







and soyabean fell in December but add that paddy prices were higher than in the previous two months and compared to the previous year. Many other prices dropped in December. While paddy has support prices in many states, other prices are normally reflective of the supply-demand situation at that point of time.

Demonetization added an extra factor and the ability of the buyer to pay was shattered. The problem was compounded by a good harvest of vegetables and other horticulture crops. Thus farmers were faced with a situation where their higher supply was not backed by adequate demand because the buyers did not have money to pay.

Images on television and print about farmers throwing away their produce in disgust and desperation as their perishable produce did not get buyers are not easy to forget. While prices were expected to fall due to higher supplies, this was accelerated and prices fell more than warranted due to the inability of purchasers to pay due to

## Index Numbers of Wholesale Price in India (Base: 2004-05=100) Review for January, 2017

The official Wholesale Price Index for All Commodities (Base: 2004-05=100) for January, 2017 rose by 1.0 per cent to 184.6 (provisional) from 182.8 (provisional) for the previous month.

The annual rate of inflation, based on monthly WPI, stood at 5.25 per cent (provisional) for January, 2017 (over January, 2016) as compared to 3.39 per cent (provisional) for the previous month and -1.07 per cent during the corresponding month of the previous year. Build up inflation rate in the financial year so far was 5.31 per cent compared to a build up rate of -0.40 per cent in the corresponding period of the previous year.

### Inflation for important commodities

Primary articles (Weight 20.12 per cent)

The index for this major group declined by 0.2 per cent to 255.7 (provisional) from 256.3 (provisional) for the previous month.

### Groups and items showing variations during the month:

The index for 'Food Articles' group declined by 1.1 per cent to 267.2 (provisional) from 270.1 (provisional) for the previous month due to lower price of arhar (15 per cent), gram (14 per cent), masur (7 per cent), urad (6 per cent), moong (4 per cent), egg (3 per cent), fruits and vegetables (2 per cent) and tea, rice, bajra and wheat (1 per cent each). However, the price of jowar (5 per cent), ragi and poultry chicken (4 per cent each), fish -inland - and condiments and spices (2 per cent each) and maize, pork, fish-marine and beef and buffalo meat (1 per cent each) moved up.

**The index for 'Non-Food Articles' group** rose by 2.5 per cent to 231.3 (provisional) from 225.6 (provisional) for the previous month due to higher price of flowers (23 per cent), raw rubber (10 per cent), copra (coconut) and raw cotton (7 per cent each), raw silk (6 per cent), sunflower (5 per cent), castor seed and safflower (kardi seed) (3 per cent each) and soyabean (2 per cent). However, the price of mesta (19 per cent), gingelly seed (4 per cent), cotton seed (3 per cent), linseed, coir fibre, rape and mustard seed and niger seed (2 per cent each) and raw wool and hides (raw) (1 per cent each) declined.



shortage of cash. This was further reflected in the food inflation figures for the month ending January, 2017 published by the Office of the Economic Advisor, Ministry of Commerce [www.eaindustry.nic.in/cmonthly.pdf](http://www.eaindustry.nic.in/cmonthly.pdf). The main impact was seen on the WPI on vegetables and onions on a year-on-year basis.

How has demonetization impacted the tea plantation sector in North India? North India had witnessed a particularly favourable year in terms of crop. Thankfully, the season was at its fag end when demonetization was announced and there was little impact on the crop. However, on the demand side, there were indications of lower offtake as consumers were reluctant to buy at normal levels due to absence of cash. Household purchases were cut and this effected the demand. Thus prices of teas from the plantation sector saw a decline due to lower demand.

The matter will hopefully get rectified with a reversal in trend in the coming months and not before the tea sector labour suffered. Tea garden workers are paid in cash every week or fortnightly. Due to restrictions in cash withdrawals these payments became difficult. Workers were not paid up to a month in some instances. The state administration

### Nominal Wages Still Sticky

Based on higher than normal (five-year average) sowing of rabi crops and a record kharif production, the agriculture ministry has estimated foodgrain production at a record 272 million tonnes in 2016-17, over 8 per cent higher than the year before. In January, the government estimated that the agriculture growth rate would bounce back to 4.1 per cent (in 2016-17) after a dismal 1.2 per cent the year before and a 0.2 per cent contraction in 2014-15.

However, nominal wages continue to be sticky, implying only a marginal rise in real wages, despite a record ₹53,000 crore spent on the rural employment guarantee scheme during 2016-17.

Even for non-agricultural occupations like masonry, daily nominal wages grew 6 per cent in December 2016 (year-on-year). This is similar to the growth seen in December 2015, a drought year, but significantly lower than the 21 per cent and 17 per cent growth in nominal wages in December 2013 and 2012, respectively.

— <http://www.livemint.com/Politics/kmlsHQq4K2KjPNvnQvI6CO/Rural-wages-growing-at-a-sluggish-pace.html>







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## Workers are reluctant to take payment into bank accounts as the branches/ATMs are remote and they have to travel a long way to withdraw money

in tea growing states finally helped out by drawing cash from state coffers and paying and the tea companies in turn paid the state administration.

This problem is not resolved as the workers are reluctant to take payment into bank accounts as the branches/ATMs are remote and the worker has to travel a long way to withdraw money. The industry is working with the banks to open cash disbursement points closer to the workers quarters. Another aspect that requires consideration is that of the local haat or bazaar. Normally, on wage day a local bazaar comes to the tea gardens. This enables the tea workers to make the necessary purchases for daily use. This took a huge beating in the last three months and still continues to suffer. Thus a number of people dependent on the local bazaar suffered huge loss of business.

In a year when the monsoons have been good more or less in the whole of India, the farming community was expecting a boon in terms of income. Many areas, like Vidarbha, were in the throes of bad monsoon for many years leading to erosion of capital and income till 2015-16. This was expected to be the year of recovery leading to a rise in consumption in rural areas and larger transactions. Demonetization has put a brake to this.

Though the results of the agri sector for the first half will be good, the second will see an erosion in much of the gains. The government has been showcasing the near mythical benefits of demonetization. The government's own Economic Survey tells a somewhat different story, admitting that paucity of statistics makes for a hazy situation. "There have been reports of job losses, declines in farm incomes and social disruption, especially in the informal, cash-intensive parts of the economy but a systematic analysis cannot be included here due to paucity of macro-economic data".

However the Economic Survey admits that "cash-intensive sectors (agriculture, real estate, jewellery) were affected more". It goes on to talk of "job losses, decline in farm incomes, social disruption, especially in cash-intensive sectors". ●





# A 'LIFT' FOR 'PRAGATI': In the Marxist Heartland

**Ashis Biswas**

A slow train, stopping at every halt; call them stations if you will; with little more than 10 minutes of slothful movement per stop, after one crosses Bolangir in Odisha, is the 'easiest' route to Jagdalpur. Victuals are in limited supply and it is a good idea to stock up on snacks. Almost 23 hours after I board the train at Howrah Station, serving Kolkata, I step off into the cold night at the Koraput station to find Prabhakar Adhikari, secretary, Pragati, Koraput, waiting for me.

Pragati is a voluntary organization (established January 1992) working on improving the quality of life of the rural poor in district Koraput, Odisha, India. Its stated mission is to "facilitate and strengthen vibrant people's organizations at different levels of society that will protect, utilize, control and manage local resources and,



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through collective action, ensure dynamic socio-economic change for sustainable development by advocating for pro-poor governance and bring women, children, tribals and downtrodden, to the mainstream of the society". Here it is trying to bring water to the parched lands.

Certainly Koraput is the place for such a mission to be in; rich in resources and richer in paradoxes, Koraput is a picture of abject poverty amidst amazing plenty. It was ranked 541st, among 599

Indian districts (*see box*). This is the land of the chronically poor, where the Naxalites entrench themselves and counter ultra forces engage in battles to dislodge them.

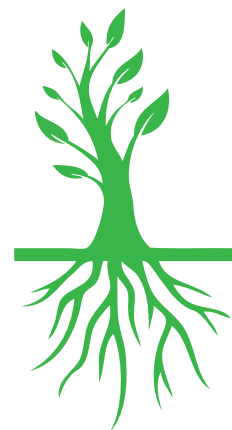
That the solution lies in development; not battle is curiously lost on the two parties as the locals remain trapped between the devil and the deep





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## The Pragati intervention (supported by the Tata Trusts & Trocaire, Ireland) has impressed; with solar-powered lift irrigation



and takes a couple of hours by car over a reasonably maintained highway.

A meeting had been organized in the premises of the local government school and more than 20 women turn up initially. Then come the stragglers and another five men trickle in. Along with the Pragati staff, there is a total of around 35 people. Most of them are from the Gadhwa tribe.

The older women wear knee-length saris wrapped around the entire bodies for some are without blouses; most sport twin golden studs on both sides of the nostrils; the traditional three-dot tattoo on the elbows; and thick silver anklets. The adolescents dress like young girls anywhere in a small town/village setting. A tribal girl, a Christian, probably in her late teens, wears a salwar kameez.

The men are in diverse clothes ranging from jeans to lungis. Some are intoxicated that, apart from embarrassing some of their peers, is not a major issue as this is the marriage season. They are all aspiring farmers but their two main concerns are scarcity of irrigation water and the limited NREGA opportunities. It is the same story everywhere. For Bhorsi, the story is doubly troubled because the river is just about a kilometre away.

The story that unfolds here is about lift irrigation and the difference that it can make to these lives. While there are the usual non-communicative individuals in all the group meetings, the majority does talk; a little surprising, especially in mixed caste/tribe/sex groups. Pragati's work for about two decades here has generated a certain amount of familiarity with the locals and it shows in more ways than one.

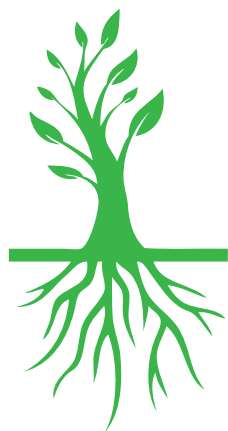
The Pragati intervention (supported by the Tata Trusts & Trocaire, Ireland) has been impressive, with solar-powered lift irrigation, bringing much-needed water to the outlying areas. Yet considerable acreage continues to be left out and will remain thus even if the number of solar pumps is multiplied manifold. With small, scattered holdings, typical of tribal land ownership, limited capital for investment and restricted exposure to other farming systems,

sea. Pragati shows the way forward, in a manner of speaking.

After a night at Athithi Bhawan, the nearby hotel attached to the local mandir, poorly maintained and with negligible service, one is treated to a large vegetarian repast in the morning before setting off to one of the field sites. Mine is to be a three-day visit to see Pragati at work amidst reports of Odisha policemen being killed with their vehicle blown up, allegedly, by Maoists, in a landmine blast on NH 26 near Sunki in Koraput district. The blast is supposedly a retaliation by Maoists to a joint security operation in the cutoff area of Malkangiri district in October 2016. Thirty Maoists were killed in that operation.

There is nothing disturbing of such nature in evidence at the Bhorsi village here; save the humiliating poverty. Bhorsi village is in the Kotpad block in Koraput, close to the Chhattisgarh border





most of the land will lie fallow in the dry (non-monsoon) seasons, perpetuating the cycle of rural poverty.

The locals originally grew millets that were more wholesome but have now turned increasingly to rice. They grow some vegetables like cabbage, cauliflower, chilli, mustard seeds in the poor laterite soil. People have meat on special occasions. Several other surprises are in store for me: the Khond and Gadwa tribes do not eat pork. Even pigeons are not eaten but worshiped; they represent bounty.

Matters are further compounded by the lack of a local soil testing centre. The nearest such facility is over a 100 kms away and offers no outreach programme. There is a need to rectify this and many other things. First, the various plots need to be mapped out to get an idea of the farthest holdings. There is also need to identify women headed households and other particularly vulnerable groups.

## An inspection of the job cards and the corresponding bank pass books for MGNREGA exposes the large scale discrepancies

There are problems galore: no effective maintenance system to handle breakdowns of solar pumps, we are told. Pragati assures the locals of help on this score in a system where even the little planning, which has been put in, is incomplete.

The government school is a typical example. It is reasonably well constructed with both bathrooms and a functional hand pump. However, there is no real egress for the waste water that is collected in a make shift excavation within the school premises. This could mean a breeding site for mosquitoes in a malaria-prone zone. The ramp to assist the differently abled are poorly constructed with the railing having fallen off and no provision to re-install it.

Fortified by a filling lunch of rice, daal, vegetables and some excellent chicken at a roadside dhaba, we make our way to Dungriguda, a mixed village in the same block. It has about 300 households of whom 30 per cent is Gadwa, 25 per cent dalit and the rest are largely OBCs. The problems are similar and Pragati has intervened with its lift irrigation schemes here as well. However, the river is about two kms away and the irrigation cover only reaches the fields and farms close to the river. There are two to three borings that are used for drinking water but during the summers, these go dry, by and large.

With the shortage of water such a critical issue,





one would have expected the MGNREGA schemes to have been more rigorously implemented. A close inspection of the job cards and the corresponding bank pass books exposes the obvious and large scale discrepancies. Moreover, no one has ever worked for more than 46 days. Clearly, there is no political will to make a difference and many able-bodied men and women are forced to migrate to other parts of the state and the country.

If opportunities are shrivelled, even worse is the lack of negotiating power of local labour during the dry season. There are regular incidents of labour contractors making false promises of good jobs in other states. The harsh reality is that once they leave, they are given just about enough to eat and sent back after two or three months without any monetary compensation whatsoever.

The value of education is lost on the locals as well. The local government school does not excite the tribal community to enroll their children. Even the other communities do not feel that education would be a major game changer. As a result, there are very few Class 10 pass outs from the village.

Day two takes us past the MiG factory at Semliguda to a Pragati run Farmers' Field School. Other Pragati staff accompany us from there on another hour long drive on a motorable road through delightfully scenic countryside with huge reservoirs surrounded by hills. Off the highway,

## KORAPUT

On the one hand it presents a picture of scenic beauty with rolling mountains, tumbling rivers, beautiful valleys and a pleasant climate; and on the other hand, there is the abject poverty of its tribal population, which has hardly been touched by modernity. Koraput's majority tribal and scheduled caste population, as well as wide-spread under-development, poverty, malnutrition and illiteracy, makes it one of the most backward districts of India. Predictably, Koraput was ranked towards the bottom; 541st, among the 599 Districts across India, surveyed by the US-India Policy Institute (USIPI) and the Centre for Research and Debates in Development Policy (CRDDP), New Delhi. The report of the survey, which took composite development - measured in terms of economic development and the indices of health, education and material well-being - into consideration, was released on January 29, 2015.

—[http://www.indiablooms.com/ibns\\_new/news-details/0/27196/koraput-lingering-threat.html?fromNewsdog=1&utm\\_source=NewsDog](http://www.indiablooms.com/ibns_new/news-details/0/27196/koraput-lingering-threat.html?fromNewsdog=1&utm_source=NewsDog)



the vehicle takes the ascending rubble trail of what had once been a motorable road. This is close to the Andhra border and deep inside “Maoist territory”.

We meet no ultras; only several farmers at the demonstration site where many individual farmers have used lift irrigation and vermicompost to turn mono crop land into lush vegetable gardens replete with corn, chilies, cauliflower and such other vegetables.

Our next stop is Totaguda; passing through numerous tiny hamlets with the usual terraces for winter vegetables. Totaguda, a Khond village, comprises a tiny community of only 15 households near the top of the hill. It largely looks down-at-heel but the Pragati team has worked conscientiously to design and operate a solar lift irrigation system whose success is evident in the green shoots of the young rice growing all around.

The usual village group of both men and women, with little children around, engage us with their aspirations of becoming successful rice farmers. No one has never even thought of migrating save for one young man. He owns the only bike in the village and is constructing his own brick building.

It is heartening that note that none of the children here show visible signs of malnutrition. In fact, none of the kids in the region who hang around our discussion look very poorly fed. Whether this is a result of Pragati’s work in improving agriculture or whether there are enough food reserves is not clear. As we drive back, the vegetable cultivations come closer and one can see chilies, okra and such others growing along the terraced fields. Obviously, the local lift irrigation systems are working well.

Another hour’s drive takes us to Sariaput, a Khond village at the bottom of a hill. We sit for a chat with the locals; several men but one particularly vocal. He is a Gandhian; in his seventies; small sprightly and, of course, garrulous. Inspired by JP Narayan, whom he has personally met, he is one of the

**Children here show no visible signs of malnutrition. No kid, hanging around our discussions, looks very poorly fed**

“social revolutionaries” of his village.

He has played a major role in the re-greening of the hills. About two decades ago the hills were completely denuded. He has even composed a song to inspire the villagers to go in for greening. This village looks a much better off compared to Totaguda. There is no electricity though; only an assurance from the government and some newly erected concrete poles. Most of the houses are pucca and set off against the green hills at a distance. Sanitation units have also been promised but, the superstructure of the toilet apart, there is nothing.

The next stop is Pragati’s field office at Padwa village, close to Koraput town. The participants include Prabhakar Adhikari and the executive director, managers and senior co-ordinators and I share my thoughts on the visit. Lunch follows and then a trip to Hotel Alishaan, much better appointed than the earlier accommodation. In the evening, Binaynanda Suna, PA to the MLA from Nabarangpur, a pillar of the local Lutheran Church and an alumnus of the Coady International Institute drops in. Binu is a former class mate from Coady! We exchange pleasantries as we are meeting after 13 years! Rev Livingstone, who, among other things, is the custodian of church properties in the Jeypore-Koraput area, drops in as well.

It was time to get back and the early morning finds me back on the slow coach to Kolkata; the rather tiresome Sambaleswari Express. Yet the experience is most rewarding. Travelling alongside is the CRPF commandant of a particularly severely Maoist affected area. Needless to say, interpersonal relations between the two of us are not very congenial as he dismisses Dr Binayak Sen as a “Naxalite” while his own commitment to the “federal structure of India” he considers to be pucca.

I wonder what this “federal structure of India” means to those tribals whose chronic hunger, continued exploitation, lack of education and health care are direct consequences of India’s silent, systemic and structural violence. ●





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