Hold a straw poll

If you still haven't figured out the climatic changes wreaking havoc across India, ask the ubiquitous farmer who weathered many storm fronts in 2017

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he "Person of the Year" is the weather. And the face of 2017 is the farmer, who has borne the brunt of weather changes, from unseasonal rain to drought. This is the year, when India has had drought at the time of flood. And flood at the time of drought. This is the time of seasons of despair and it is time we recognised this so that we can respond—better and faster.

But this "weather" headline has been lost in the cacophony of our news. We don't get to read this often enough because of three reasons. One, because the change is not yet recognised; scientists who study weather are still uncertain and tentative of the world around them. They want to play safe. Two, because we have no way of listening to voices that are not established and based on so-called "good science". In this way, the view of the farmers who are witnessing changes happen is dismissed; or just not heard. Then there is the fact that they don't know the fancy term of climate change. For them weather is weather and it is changing for the worse. Three, we do not hear this headline often because it only screams when it affects the cities or the middle-classes—farmers have to die or something really severe has to happen before it makes it to news. This news is about everyday events—the gradual changes that we are seeing. This news is about remote places and people. This news is not our news.

But it needs to be. This is why, in my view, the biggest headline of 2017 is not the toxic and deadly air pollution in our cities. It is bad. Very bad. But it is not half as bad as the catastrophe of weather changes that are bringing widespread human grief and distress across India's rural areas.

When the death of six farmers in Madhya Pradesh—killed during protests for a minimum support price (MSP) increase—made national news, it did so because it was too big to ignore. When farmers voted against the ruling party in Gujarat it has brought out the fact that there is something real and serious happening. But still these are only glimpses; they are symptoms of a deeper and much more insidious malady. This is not recognised. It is not understood.

It is time policy recognised the strife and understood that this is about a new normal—a normal where nature has turned against people. This "normal" is because we have abused nature; burnt fossil fuels to build our economies and our wealth; and, these emissions have today turned weather to be different and devastating.

So, 2017 is about the contradictions that will plague us more and more in the coming years. Consider how in some parts of the country, the agrarian crisis was about plenty, as crop production was good. But farmers were still in trouble. Why, because the glut meant that there was no value for their crop. But this was not only a story of plenty. The fact is that this "plenty" came after seasons of bad yield, because of rain-failure; or variable and extreme weather. That's why it was literally the last straw that broke the camel's back. After many seasons of despair, they finally got a bumper crop; they could have made good their losses, paid back their loans. But now there was no price for their produce.

In other parts of the country, the situation is equally dire, but equally different. Here, farmers take loans, sow seeds, invest in labour into growing their crop and then comes a devastating weather event—too much rain; too little rain; too cold or too hot or a freak hailstorm. Something. But it's a killer.

This is not an anomaly. The anomaly is the new normal.

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There are many issues here. First, we need to recognise this shift—only then can we begin to put in place the systems of forecasting and information dissemination at the precision and scale that is needed. As yet we are doing too little, too late. One weather event is caught in time, but many others slip through our scientifically opaque lenses.

Two, we need to do much more to account for this additional risk of weather and the cost that has been borne in the food we grow. Today, the price of food is caught in a warp—on the one hand, governments work hard to keep the price of food low, because of food inflation that makes consumers unhappy and because it is the largest procurer of that food. India's food procurement programme is massive and critical. It is what keeps famine away. Government buys food and supplies it through the public distribution programme. But this means keeping the price of procurement low.

On the other hand, there is the farmer, who not only needs remunerative prices, but also needs the price to account for the increasing number of crop failures—not because of his or her

> doing-but because weather turned adverse. This means that the country's MSP needs to be revamped to include not just the input costs, but also the variability of weather that leads to crop losses.

> It also means that we cannot use global markets to distort the price that food costs in India. Let us be clear, governments across the world support their farmers. Let us also be clear that the World Trade Organization's (WTO) rules against agricultural subsidies for rich farmers have not meant that these have gone away. They have just gone into new boxes and have been camouflaged. It is our weakness that we cannot call this bluff and expose this hypocrisy.

> Today, it is our tragedy that our farmers are the victims of two global processes—call them the true "foreign hands". One, the failure of climate change negotiations to mitigate emissions at a scale and pace that would not impact the world's poorest. Two, the failure of global trade negotiations that have managed to turn the tables so that the poorest and most marginalised of the world are seen as the perpetrator to global fair trade practices.

> Our real tragedy is that we have lost our voice. We cannot even take these issues to the global stage and argue our case. The question is why? It is because the global media is out of our reach—the bubble world is about its own intolerance and its own positions. It has no place for positions that come out of this space. It is

because our research is inadequate—in this case our own special bubble—the social media created news space ensures that these inconvenient stories do not make it to our world. It is time in 2018 we discussed this challenge. We cannot allow our world to be so polarised that we cannot even begin to comprehend the change that is happening outside.

Vegetarianism: To be or not to be

But let's get back to 2017. The issue that rocked our news last year concerned the issue of eating meat—or about bovines that were holy and so not to be slaughtered for food. The fact is that this debate—highly emotional, charged and intolerant—never made the connection between the already fragile farmer's economy and livestock production. The fact is in India, ownership of livestock is more homogenous than the ownership of land. The fact also is that livestock are the critical risk management strategy of farmers; it is their coping mechanism for frequent crop failures or other adversities. Livestock is the economic security, or call it



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insurance of the poor. We cannot take away the value of the animal. The "productivity" is milk, manure and then meat and leather. Take this away, you de-monetise their assets.

But this is not to say that meat production is good for the environment. In fact, data proves otherwise. Globally, agriculture contributes roughly 15 per cent of all greenhouse gas emissions and half of this comes from meat production. It also has a huge footprint in terms of land and water consumption since an estimated 30 per cent of the world's land not covered with ice is used to grow food, not for humans but for livestock. A 2014 University of Oxford study on British diets found that meat-rich diets—defined as eating more than 100 g of meat per day per person—emitted about 7.2 kg of CO2 per day as compared to 2.9 kg of CO2 emitted by vegan diets.

But this is where we need to differentiate, between "luxury" meat and "survival" meat. We need to discuss how the meat is grown and how much it is eaten. The environmental destruction is not an inevitable consequence of meat production. The impact is because of the method of growing that meat so that it uses large land; destroys rainforests to create vast grazing lands; ingests and excretes chemicals and much more. This is what should be on the table. This must be what is questioned and changed.

Meat eating also needs to be differentiated. It is a fact that meat is an important source of protein for a large number of people, hence critical for their nutritional security. But it is also a fact that today meat—particularly red meat—is the cause of major health imbalances in the world. But this is because of how much is eaten and what this meat contains in terms of antibiotic or other residues. For instance, a global assessment found that Americans on an average eat 122 kg per year per person and that this consumption is 1.5 times the average protein requirement. This is what should be on the debate table.

We do not know how much meat Indians eat—data is ridiculously shoddy and frankly non-existent. One government census study suggests that 70 per cent are non-vegetarian, but its sample size is miniscule, and more importantly, the definition of non-vegetarian includes eggs. It is clear that as middle-class India expands, it will take on the food culture of the rich and fancy. It is about class, they will say. This will push for industrialised growing as well. It will be bad for environment and for health. So, it is important to discuss vegetarianism and the method and amount of meat that is eaten. It is important that we do not first eat badly, and then learn the advantages of organic and wholesome food.

Here, we need to realise the diversity of food cultures in India—how they are built on the biological diversity that exists in the country and how they are mindful of nutrition. This is what should be on the table in 2018 and beyond. Not militant vegetarianism. Not vandalism and violence.

Urban-rural divide?

This is not to say that urban India is not similarly affected by either weather changes or pollution. There is no urban and rural divide in this matter. But what is clear is that the urban crisis—of everything from housing, water, sewage, garbage and, of course, pollution—will only increase the rural crisis. As the agrarian crisis exacerbates—because of weather and all the other things that we do not do to fix it—people will move to cities in search of employment. It is said that India's urban population has grown enormously in the past decades, but as yet because of definitions and counts, we do not know this. The rural and urban is conjoined. There is no divide.

Urban is also similarly impacted by weather changes. Chandigarh, a city of open parks, was submerged in water. It had deficient rainfall till August 21, 2017 and then it got 115 mm of rain in just 12 hours. It drowned. In other words, it got roughly 15 per cent of its annual monsoon rain in just a few hours. Bengaluru hardly had any rain and then it poured. It got 150 mm of rain in just about a day, which is close to 30 per cent of its annual monsoon rain. It is no wonder that the city drowned. Mount Abu got over half its annual monsoon rain in two days. Hyderabad to Chennai, the story has been the same in 2017. It does not rain and then when it does, it does not stop. Cities go under.

There is the double-triple whammy here too. One, we are getting our water management

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wrong—we are building in floodplains, destroying our waterbodies and filling up our water channels. This combined with weird weather makes the going tough. We know what to do. And we have no time to lose—climate change will only increase with time as weather and rainfall will get more variable, more extreme and more catastrophic. The 2018 challenge is to move beyond the small answers.

This is evident in the air pollution crisis that is suffocating us in cities. Let us also be clear that air pollution is not a Delhi-only problem. Most cities, at least those that are away from coastal areas where winds clear the pollution, are in a similar toxic state. Delhi and the cities of northern India are more polluted because of the cold—inversion and moisture traps the pollutants. Delhi is also polluted because there are monitoring devices that tell us how bad the air is. Other cities do not yet monitor pollution, except in one or two locations. But just because they do not monitor, does not mean they are not polluted.

But what is also clear is that air pollution cannot be combatted anymore with small, hesitant steps. It requires drastic measures—actions that are of scale and speed—to mitigate the pollution. It requires India to move much faster to cleaner fuels for combustionveverything must run on cleanly-produced electricity or natural gas. It requires Indian cities to transform mobility so that we can move people, not cars. It does not need a few buses here or there. This is about transformation, and not about a mere transition.

This is the challenge of 2018. Here we come. ■

Earlier essays of Sunita Narain in State of India's Environment:

- 2015: India's environment: a review of four decades
- 2016: Why shouldn't I be intolerant?
- 2017: Leverage the trajectory

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