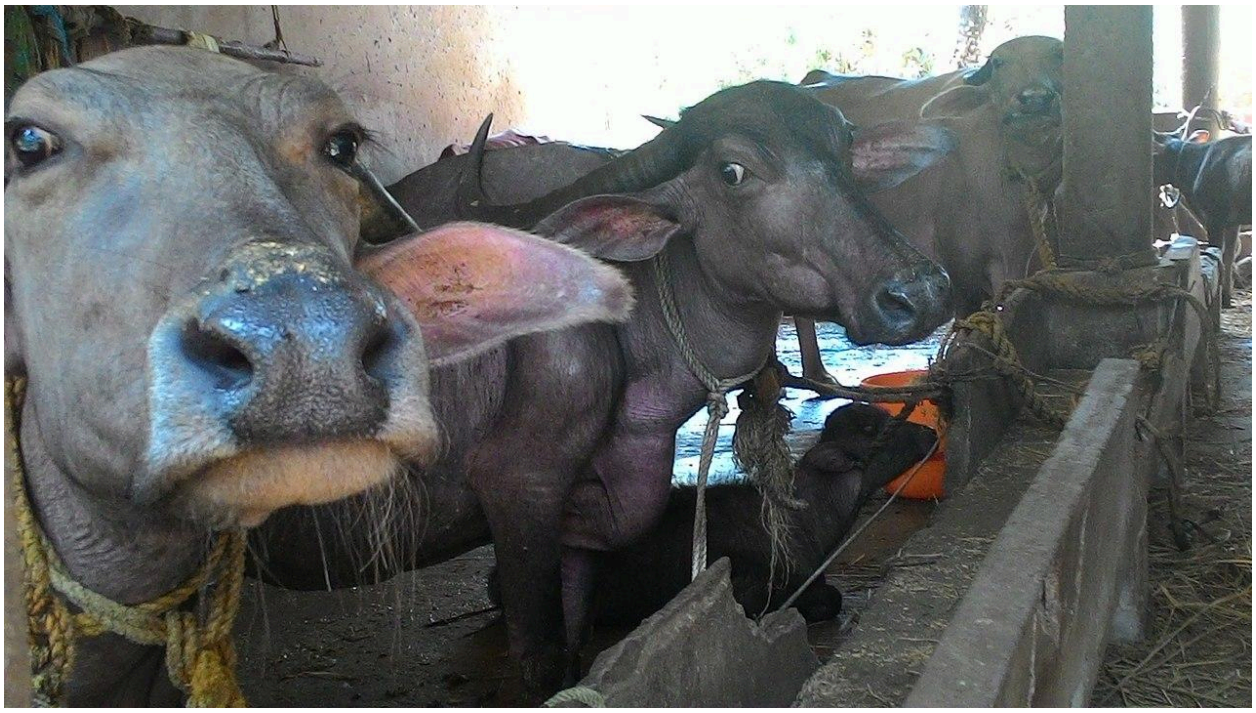
Milking Money: Why the Dairy Industry Is Proving To Be Expensive for India's Farmers and Environment



Featured image: a buffalo dairy farm in India, used for representative purposes only; courtesy of Sanketh Malsekar (CC BY-SA 4.0).

By Shweta Sood

Abstract: At a fundamental level, India's ₹11,35,700 crore dairy industry impacts livelihoods, climate change, caste, religion, and animals in unique, intersectional ways. In the first instalment of this two-part series, we explore the industry's foundations, and how they shape Indian incomes and the environment.



'Doodh [milk] is wonderful': a still from an Amul milk campaign released in the 1990s; accessed via YouTube.

"Amul doodh peeta hain India. India drinks Amul milk."

India's dairy industry is a force to reckon with. Once a dairy deficient country, today, India ranks as the largest milk producer in the world, accounting for up to 22% of global dairy production. It is also the single largest agricultural commodity produced within the country, contributing close to 5% of the national economy. Unsurprisingly, India is also home to the largest livestock herd globally—which amounts to close to 30.2 crore cattle heads. To put that in perspective: the omnipresent 'street dogs' in India stand at about 6.2 crores, meaning that for every single dog on the street, there are five cows and buffaloes.

However, there's more than meets the eye with this 'white gold'—deeply tied to dairy are questions of economics, employment, cultural chauvinism, and food systems. The dairy industry intersects with and therefore affects a multitude of issues that lie invisible in our understandings of this mammoth industry.

At a fundamental level, India's ₹11,35,700 crore dairy industry impacts livelihoods, climate change, caste, religion and animals in unique, intersectional ways. In the first instalment of this two-part series, we explore the industry's foundations, and how they shape Indian incomes and the environment.

Is Dairy Farming Still An Economically Sustainable Livelihood in India?

With 70 million farmers tied to the dairy industry in India, there is no doubt that dairy is intrinsically tied to the country's livelihoods.



A dairy farmer milks his cows; accessed via Hippopx (CC0).

To boost food sovereignty, food security, and incomes, the government has doled out its fair share of schemes to create a robust, profitable environment for dairy production. As a result, schemes such as the Pradhan Mantri Kisan Sampada Yojana, Dairy Processing and Infrastructure Development Fund, National Programme for Dairy Development, Production Linked Incentive scheme and many more abound.

However, a quick look at this (non-exhaustive) list shows that while the schemes are a boon to supply chain management and infrastructure development within the sector, their ability to help smallholder farmers increase their profitability is limited.

“Despite various schemes, smallholder farmers still do not benefit from the dairy industry,” shares Julie Wayne, Co-founder and Co-Director of Jeeva Bhavana, a pan-Indian NGO that seeks to empower farmers with ethical and sustainable agricultural practices. “If dairy is such a flourishing industry, why do we not see more smallholder dairy farmers progressing [economically], solely on the basis of their dairy earnings?” she asks.

“Most schemes fail to provide the necessary support to the farmer to run a profitable business. But, since the schemes talk about the advantages and services the farmers will receive, they are lured into hoping that these are beneficial,” shares Sanjeev Naik, Co-Founder and Co-Director of Jeeva Bhavana.

Since most smallholder farmers do not maintain accounts of their businesses, they are not even aware of these losses. “For example, the National Programme for Bovine Breeding and Dairy Development (NPBBDD) focuses on extending Field Artificial Insemination (AI) and provides subsidies for the same [in order to boost the populations of livestock and thus dairy products],” adds Naik.

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However, the success rate of artificial insemination is very low in India—just about 25% according to IVRI, Bareilly. This usually happens due to unhygienic farming conditions—which cause diseased semen often leading to the abortion of cows—and a poor understanding among dairy farmers about heat detection.

So, even though farmers receive subsidies for each AI, they have to make multiple attempts to impregnate the cow. “These multiple attempts involve costs [at the outset] which are often not accounted for by the farmers when they think about the viability of dairy farming. The main focus is only on the returns after the impregnation [of the cow],” added Naik.

To increase the chances of producing female calves, the Government of India also recently introduced sexed semen, which costs between ₹700 to ₹1,200 per dose. Farmers require at least three doses to successfully impregnate a cow—the higher costs prove to be a barrier, especially for small and marginal farmers.

Another expense that pinches the pockets of a smallholder dairy farmer is that of fodder. “There is little to no subsidy when it comes to fodder. It is an expense that farmers tend to lose a lot on,” adds Madhavi Kolte, the third Co-Founder and Co-Director of Jeeva Bhavana. The prices of cattle feed and fodder has been skyrocketing, adding to the woes of the farmers. Dry Fodder which was available at ₹50 per quintal ten years ago, now costs anywhere between ₹800 to ₹1,000 per quintal. With no subsidies provided for fodder, the farmers end up making losses, sometimes to the tune of ₹38,500 per year!

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Ramhari Kadam, an ex-dairy farmer from Pandharpur in Maharashtra’s Solapur district, has now switched to growing chemical-free plant foods. When explaining his reasons for the transition, Kadam says, “dairy farming is not economically viable for us farmers. The government keeps roping farmers in [to the industry] by giving out subsidies and introducing schemes for dairy and animal husbandry [without making us fully aware of the initial costs of dairy farming]. Us farmers don’t always see this because we keep hoping to gain something out of dairy farming in the future.”

Kadam adds that rural India’s recurring food crises, which are often linked to climatic changes, can become a burden for dairy farmers. “A cow requires 25 kilograms of fodder on average per day, depending on its age. The issue is that we have to provide for everyone [regardless of what

the economic situation is]. So, even during droughts, when people can't get enough to eat [including our own families], we still have to find [expensive] fodder for animals that we breed for milk. It is highly unsustainable, but no one correlates these factors or talks about it—which [is what] keeps the 'slaughter industry' alive." As part two of this series will show, India's dairy and slaughter industries are deeply connected.

Alongside draining farmers of their resources, India's widely-promoted dairy industry also has a role to play in another critical social issue: climate change.

Does Dairy Really Impact the Fight Against Climate Change in India?

"As a general perception, only the energy sector is considered a contributor to climate change. India's dairy policies indicate a focus on [rearing] more 'milk-producing breeds', but not on reducing the flock size of the cattle. This poses a considerable problem [to mitigating climate change] in the long run," shares Archit Batra, Senior Carbon Business Developer at the Fair Climate Fund. So, why do we rarely hear mention of animal agriculture being a critical contributor to climate change in India?

To begin with, there simply isn't any emissions inventory maintained by the Indian government. "Livestock emissions calculations are completely client-driven, which means we only end up calculating emissions in areas defined by projects, as opposed to holistic emissions [or calculations that take into account less obvious sectors]," shares Batra. "As there is no standard governmental measure—or need for industries to comply with standards while calculating emissions—there is no way to accurately measure the extent of emissions from the livestock sector [in India]."

Carbon Brief conservatively estimates that the Agriculture, Forest and Land Use Sector (AFOLU) contributes to about 16% of India's Greenhouse Gas emissions as of 2019, standing only second to the energy sector. However, "more than 90% of these emissions can be attributed to livestock alone, and in most cases, this excludes counting Scope 3 emissions altogether," adds Batra.

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Scope 3 emissions include any and all indirect emissions that do not get counted as direct and electrical emissions by the Greenhouse Gas Protocol, the leading standard to measure and manage emissions. In terms of dairy production, this implies that while emissions from ruminants and waste management are calculated, many others are not. "Emissions from fodder production, supply chains, transport or post-production don't get calculated within the dairy sector," says Batra.

Here's an example of the emissions we're missing out on. A cross-bred cow consumes about 1,100 litres of water a day. Of this, only 60 litres is consumed by cattle (which is counted), while close to 1,000 litres of water is subsumed under fodder production and consumption (which is

not counted). This drastic under-reporting within the dairy sector results in a lack of solutions to bring in the much-needed policy shifts towards the accurate measurement of emissions. Such pushes can be followed by allocating enough funds to reduce emissions, which can be achieved by reducing the overall figures of cattle herds in the country.

Yet, in India, the contributions of India's dairy industry to income fluctuations, climate change, and pollution are often overshadowed by the elephant in the room: religion. This is hardly surprising, given the ruling dispensation's widespread (and publicised) interest in implementing 'cow-friendly' policies—a product of its Hindutva agenda, where the cow is sacred and violence against it is sacrilege. But, as part of two of this series will show, when political parties rally around protecting the 'cow', they not only dismiss climate change concerns and demonise communities, but allow for the unchecked exploitation of the species as well.

Milking Money?: Tracing How Religion Shapes India's Dairy Industry



Religious offerings being made to a cow; courtesy of Monthaye on Unsplash.

By Shweta Sood

Abstract: Cow-slaughter prevention laws fail to take into account the various cultural and socio-economic factors that govern cow slaughter in India. In the second part of this series on India's dairy industry, Shweta and Pavitra show how they have proven to be harmful to the animals in question and the people of the country, and provide some solutions to overcome status quo perceptions of dairy products.

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A closer look at India's dairy industry throws up some interesting insights. As discussed in the first part of this series, undercounting production expenses, and under-reporting on emissions from the dairy industry has far-reaching consequences on climate change, economies, and livelihoods. What's more, the 'invisibility' of these deep issues has resulted in lacklustre policy and industry protocols—current standards fail to take into account the huge mitigation potential that lies within the dairy industry.

In the second and last part of this series, we unravel yet another interesting intersectionality, one that isn't as overlooked as climate change or incomes, but certainly has been viewed through a skewed lens in India's majoritarian political and religious arenas. The legal rights afforded to cattle in India, the phenomenon of 'Gau Rakshaks', and caste within India's dairy sector impact Indian lives, animal welfare, and ultimately, the country's ability to devise robust policies for a sustainable future.

Do Cow Slaughter Bans Improve Animal Welfare?

Contrary to the popular belief that a complete ban on cow slaughter is in place across the country, Kerala, along with many North-Eastern states do have provisions for cow slaughter in place. Many other states, such as Uttar Pradesh and Rajasthan, have passed laws to the contrary. The bottom line: the independence-era religious and political issue of cow slaughter in India has resulted in cow protection laws becoming harsher in recent years.

Yet, the reality is that these laws haven't done much to significantly improve the welfare of the cattle themselves, nor do they address climate change.

For example, the Prevention of Cruelty to Animals Act allows for only 6 large animals or 12 small calves to be transported in a lorry. But, in reality, one would often find close to 50 animals cramped, one on top of the other in lorries, often being transported from states banning cow slaughter to ones that have no such restrictions.

In some cases, cattle cover thousands of kilometres while being transported from one corner of the country to another, or to neighbouring countries. The animals are usually transported at night, and often have to go without food and water for days together. Instances have also been reported of late where traffickers have resorted to applying chilli paste in the eyes of the cattle to keep them from sprawling on the floor and dying while being transported.

Poor implementation of the existing laws have resulted in there being little to no difference in the treatment of cows from an animal welfare standpoint. The laws also fail to take into account the various cultural and socio-economic factors that govern cow slaughter in India. Owing to this, they have proven to be harmful to both the animals in question as well as the people of the country.

Are Fundamentalists Really 'Protecting' Cows?

Recent years have seen an uprising of Indians who have taken on the role of cow vigilantes—or self-styled 'Gau Rakshaks', the protectors of cows. They often attack those transporting cattle, regardless of whether the animals are safe or not. Stories and acts of violence by Gau Rakshaks—in the name of non-violence towards cows—are motivated by their concern for a single species.

This vigilante activism has translated into violence against communities whose livelihoods and consumption patterns are deeply tied to historical oppression. They target either people from Muslim communities, or other socially and economically oppressed groups 'associated' with cattle slaughter. States with the strictest cow slaughter prevention laws have also reported the highest number of lynchings.

Clearly, Gau Rakshaks operate from a narrow vision of animal welfare that is speciesist, sexist and motivated only by the Hindutva agenda. Most importantly, their view appears myopic at best—their criticism fails to take into account the conditions of animals in the dairy industry itself, which is replete with issues such as abandonment of male calves, separation of mothers from their calves, constant confinement, and a lack of any significant form of healthcare. Most rescued animals make it to shelters that are lacking in basic resources such as fodder or access to veterinary care.

There are larger ironies surrounding these laws and forms of vigilantism as well. Being the largest dairy producer in the world has one immediate implication on India's exports. Ultimately, as long as a cow-loving government aggressively promotes dairy, they promote the production of beef too.

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India routinely stands as one of the top five beef-producing countries in the world (in fact, in 2016, India tied with Brazil in 2016 as the largest beef exporters globally). India also slaughters four times as many buffaloes as cows and bullocks—although these animals are not offered legal protections. Given the present socio-political climate of the country, ruled as it is by a Hindu nationalist party, this usually comes as a surprise to many.

Yet, this is the case because the Indian beef industry is directly and inextricably tied to the highly-valued dairy industry. The uncomfortable truth is that neither industry can exist without the other, and both are detrimental to animal welfare in their current forms—but in India, the perils of the dairy industry hardly make front-page news the way 'cow slaughter' does, a state of affairs ultimately determined by notions of caste, religion, and purity.

For example, once animals in the dairy industry are rendered 'useless' after serving the purposes of consumption deemed right by dominant castes—that is, when they are unable to produce milk anymore—it is the Dalit caste that is expected to take up the 'impure' job of disposing of this cattle. This is reflected in the fact that most workers in cattle slaughterhouses and leather tanneries in India are from the Dalit or Muslim communities.

These Brahminical ideas of 'purity'—rather than welfare, whether for people or animals—have formed the base for the endless caste-based discrimination that presents itself within the dairy industry and extends into the slaughter industry too.

The misconception around India being a 'vegetarian country' adds to this self-assuredness of those 'protecting' cows—allowing for prejudices against the communities who slaughter cattle to prevail. In reality, 80% of Hindus are meat eaters and only a third of socially privileged, upper-caste Indians are vegetarian.

Motivated by the inherent value of life, many animal activists take up a plant-based lifestyle. But, the form of activism opted for by the *Gau Rakshaks* is quite contrary to this—one where there seems to be no intention of putting a stop to the consumption of milk and milk-based products produced by an industry that regularly exploits the very species they want to protect.

These muddy waters make it hard for organisations with genuine initiatives against animal cruelty to separate themselves from religious vigilantism in India.

Where Do We Go From Here?

Ultimately, at an individual level, we need to strike a balance between honouring food traditions yet also gradually reducing our consumption of products that directly accelerate climate change.

The key here is encouraging flexibility. As researchers recently noted, having environment-conscious nudges on the menu can help encourage more mindful consumption. As *The Guardian* reports, "diners who read "Each of us can make a positive difference for the planet. Swapping just one meat dish for a plant-based one saves greenhouse gas emissions that are equivalent to the energy used to charge your phone for two years. Your small change can make a big difference" on their menus chose a vegetarian dish 25% of the time, more than double the rate of diners who were shown no message at all."

Campaigns like Veganuary—that encourage people to try consuming vegan diets for just one month—are also a good place to start building climate-conscious alternatives to dairy consumption. "Veganuary creates a healthy ecosystem where people get to try plant-based eating, exchange recipes, try new vegan products from brands at discounted prices, and have access to a community of support groups to enable this healthy transition," shares Prashanth Vishwanath, Country Manager at Veganuary India.

At a systemic level, true cost accounting and catalysing the ease of business is another important peg to focus on. "India has many schemes and programmes to support the setting up and running of dairies. However, the same support is often unavailable to those who want to start alternative meat and dairy businesses," shares Vishwanath.

To make matters even more difficult, the Food Safety Standards Authority of India (FSSAI) recently passed a notification, upon request from dairy giants like Amul, to ban the use of the word 'milk' for alternative plant-based beverages. "Practises such as these make it harder for this alternative industry to thrive. FSSAI will do well to stand on the side of these [often] environmentally friendly businesses and augment the ease of business" adds Vishwanath. "A collective machinery of government support, comparable financial incentives, and support from

technical institutions to develop and fortify plant milks can go a long way in building resilient businesses that can compete with the behemoth that is the Indian dairy industry."

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However, awareness and enabling policy shifts are only a part of the solution. Dairy will continue to be consumed in India, and regulating the sector becomes an important method to keep in check some of its worst practises and also curb environmental degradation. The government will need to step in and play a stronger role in the effective implementation of animal welfare, as well as pollution control guidelines.

The intersectional flaws of India's dairy industry are difficult to miss. To begin with, our collective love for dairy needs some reconsideration—while milk products are clearly relevant in mid-day meal schemes and other nutritional services, their overuse in varied forms needs to be curbed. Much of the dairy industry's problems—and contributions to climate change—arise from the sheer number of animals involved in dairy, and any solution that doesn't take into account curbing those numbers will be a stop-gap solution.

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1. **50by40-** 50by40 is a coalition of organisations working towards bringing a 50% reduction in the global production and consumption of farmed animal products by 2040, with the remaining production systems being environmentally and socially sustainable, regenerative and humane.
   50by40LinkedIN | Instagram | Twitter

2. **Fair climate fund-** Fair Climate Fund is dedicated to reducing a million tonnes of CO_2 before 2025. They're a knowledge partner in CO2-reduction & carbon offsetting for individuals and companies and work together with individuals and companies on CO2 reduction and fair offsetting.

3. **Veganuary** - Veganuary is a non-profit organisation that encourages people worldwide to try vegan for January and beyond. Throughout the year, Veganuary encourages and supports people and businesses alike to move to a plant-based diet as a way of protecting the environment, preventing animal suffering, and improving the health of millions of people.

4. **Jeevabhana** - Jeeva Bhavana is a pan-Indian, solutions-based NGO whose mission is to study the deleterious effects (health, environmental, economic) of animal-based agriculture in India and to assist farmers in their transition to organic, plant-based

agriculture in order to create a sovereign and sustainable food system where all life is respected and thrives

5. **Shweta Sood -** A post Graduate in English Literature from LSR, Delhi University, Shweta is a passionate advocate for equal rights, and has over 10 years of collective experience in strategy, networking, campaigning management, and communications. Head of Programmes at 50by40, she has led and grown many initiatives in food systems transformation through the lens of Climate Change, Global South and animal advocacy, nationally and globally.

6. **Pavitra**- Pavitra holds Postgraduate degrees in Economics and in Development Management. She has the experience of working in both the animal and human rights space. Her past experience includes working in Government Advocacy and Policy Regulation aimed towards the welfare of farmed animals. Further, she has worked with TechnoServe on a livelihood enhancement project for small-holder farmers in India. Pavitra currently leads the Global South Programme at 50by40.