

**Editor's Note:** One tool among many that can both improve the environment and help desperately poor people economically flourish is a guarantee of private property rights. The article below is an update to a previous article, "Property Rights and One Indian Village: Reform, Enterprise, and Dignity" that appeared over five years ago in the winter 2015 issue (volume 20, no. 3). Readers who are particularly interested in the story of how property rights transformed the environment and the lives of some of the most desperately poor Indians are highly encouraged to first read the 2015 article at <https://tinyurl.com/43r24n9s>.

## Developments for Tribal Farmers in Rural India

By Ken Schoolland and Barun S. Mitra

**T**he great obstacle to economic development in rural India is a lack of property rights, according to Trupti Mehta, lawyer for the Action Research in Community Health and Development (ARCH) center. Optimistic and determined, Trupti and her husband, Ambrish Mehta, solved this problem for tribal farmers on their thirty-three-year journey in Gujarat Province, a few hours' drive from the city of Baroda. Joining Anil Patel, a physician who founded ARCH to help the rural poor, they initially pushed for redistributive justice in 1988. But soon, their mission was transformed into advocacy for property rights and a spectacular improvement in the lives of thousands.<sup>1</sup>

### The Problem

Gujarat "tribal" farmers, the Scheduled Tribes that are constitutionally recognized lower classes outside the formal Hindu caste system, were hardy, self-reliant, and highly creative but deprived of the benefits of their efforts. Relegated to the bottom of the social structure, tribal families gravitated to remote forest regions of the countryside, where they managed a livelihood by farming and utilizing forest resources. Under British rule, however, vast forest regions of the countryside were nationalized, and tribal villagers became dispossessed and destitute. When the British departed, the Indian government took control of the National Forests and treated tribals harshly, as if trespassers on the very lands their ancestors had tilled for ages. One crucial incident helped turn the tide. Forest officials were accustomed to destroying tribal crops and structures, confiscating livestock, and forcing farmers into roadwork as punishment. Trupti Mehta, bolstered by her newly acquired law degree, marched with 400 supporters to the Forest Department headquarters in 1995 and demanded the return of six head of cattle that had been taken from the farmers.

The next day, Trupti was arrested on a charge of theft of "government" property. Though she was released after a night in jail, widespread publicity and public outcry eventually led to clamor for a recognition of tribal farmers' rights. Since Trupti was charged with dacoity (an act of gang robbery in India), she came to be popularly known as the "Bandit Queen."<sup>2</sup> A change in public attitude was spurred on by a property rights case before the Supreme Court and subsequent orders by the Ministry of Environment and Forests to acknowledge rights to title. Eventually the Forest Rights Act (FRA) of 2006 permitted farmers to own and work their ancestral lands if they could prove they worked the land prior to December 2005.

Between 2008 and 2012, ARCH had helped hundreds of tribal families file their claims. Officials initially rejected more than 90 percent of the applications, however, saying the farmers offered insufficient proof of working the land. It was very difficult for poor farmers to prove to the satisfaction of a bureaucracy that was loathe to relinquish control over National Forest lands. For instance, in areas where ARCH was working, if title transferred to the farmers, then politicians and bureaucrats would be hampered in allocating lucrative bamboo harvesting contracts to favored papermill owners.

Then, ARCH brought a lawsuit before the Gujarat High Court in 2011 that resulted in a landmark decision in 2013. The court issued strict instructions to the authorities to follow both the letter and the spirit of the Forest Rights Act.

### The Solution

Coming to the rescue of tribal applicants was Ambrish Mehta. Ambrish devised a foolproof plan to use GPS together with Google satellite imagery from 2005, a year prior to passage of the Forest Rights Act of 2006. These maps clearly identified lands that had been cleared and surrounded by bunds (embankments often used in India to control the flow of water), interlaced with irrigation, housing, and sheds.

Next, he outfitted and trained farmers in the use of GPS devices that could be carried by hand around the perimeter of croplands, livestock pens, and houses to pinpoint coordinates that would be transferred to his computerized mapping system. The cost of equipment and training was minimal, about US \$1 per farm. ARCH organized *gram sabhas*, or forest committees of ten to fifteen people from each community, as required under the FRA, to evaluate all claims and resolve disputes before certifying the package of applications from the village.

The state government accepted these maps as evidence, and since the agency didn't have proper in-house expertise, the government made arrangements for independent, third-party verification from the research branch of the Forest Department in Gandhinagar. Subsequently, the number of land title approvals soared. (See Table 1 for the impact of the court decision on the 3,461 forest villages of Gujarat State.)<sup>3</sup>

Recent verification has been achieved for 3,000 claims in thirty villages of Narmada District, recommending approval of 98 percent of the claims, all with the proper land area that was requested.<sup>4</sup> Previously, a farmer who applied for certification of two acres of land might receive arbitrary approval for one acre or less with no regard for the actual configuration of the coordinates submitted. Now, the average approval was for the full amount requested, doubling the land under title for development and cultivation.

Declared Ambrish, "We have already mapped more than 30,000 land plots of nearly 25,000 claimants from eight districts in this manner. This is a great victory and culmination of the sustained and peaceful efforts of our



Ambrish Mehta plotting GPS coordinates with Community Forest Resource Management Committee members of all organization villages. Source: Photo by Trupti Mehta.

organization. We celebrated this victory in December 2019, in which more than 7,000 women and men participated.”

The work of ARCH in Gujarat has proven to be a truly remarkable exception in gaining land title for tribal villagers under the Forest Rights Act of 2006. The vast majority of applicants in other regions are still being denied titles.

Shweta Tripathi reports, “FRA has the potential to secure the forest rights of at least 200 million tribals and other traditional forest dwellers over forty million hectares (50 percent of India’s forest land), covering 177,000 villages. It has been a decade and a half since the law was passed. However, only 13 percent of the forty million hectares [98.8 million acres] has been demarcated under the FRA by the environment ministry.”<sup>5</sup>

### The Consequence

Once title was secure, even pending title was enough to make a difference and land development began. Land leveling and surveys make sense with secure ownership because of the immediate incentive for long-term planning.

Trupti explained, “There is much improvement in the economic status of these families. To give you an idea, these families were taking [harvesting] only one crop of maize previously, but after getting titles, they have been doing land leveling with 20,000 to 100,000 rupees (US \$273 to US \$1,368) of their own money. That enables them to take two or three crops, which increases their income manifold. When you visited in 2016, Ramabhai and other families of Sagai Village were constructing a well for themselves. They have constructed water containment walls and installed solar engines for irrigation!”<sup>6</sup>

Barun Mitra commented, “One of the first signs of change that I saw was an initiative in one of the villages where, following the titles, some of the villagers came together, shared their labor, and built a bigger well so that they all could better irrigate their fields.”

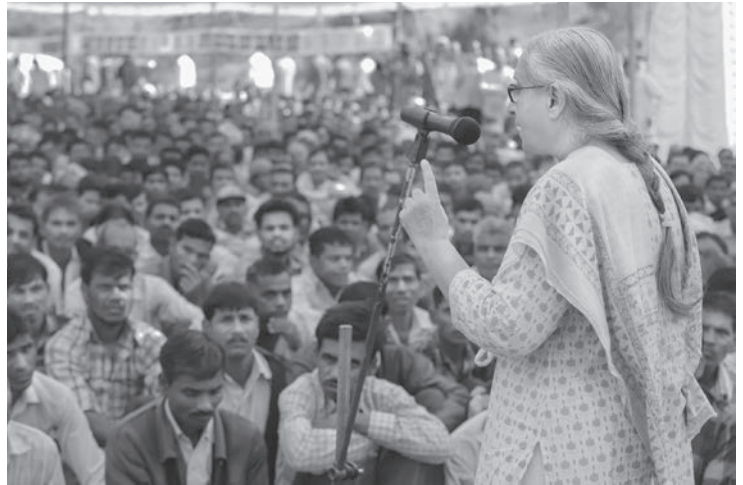
Small dams and earthworks were erected to control water resources in streambeds for a multitude of purposes. Water runoff was a serious problem because the topsoil was too thin and dry for many crops. With the runoff came soil erosion and depletion of nutrients. Expensive fertilizer was not an option.

Retaining water in neighborhood reservoirs made possible irrigation to arid lands and at all seasons, thus more and varied crops could be planted throughout the year. Flood control preserved the work on bunds and trenches. “With more trenches on the hillsides, water soaks in and there is less soil erosion,” said Ambrish. “An abundance of water helped recharge the groundwater moisture, filling wells more rapidly and helping to restock nearby forest vegetation and wildlife.”<sup>7</sup>

Greater investment in bunds around fields and terracing trenches on



Villager standing in front of solar irrigation panels in Dabka Village. Source: Photo by Trupti Mehta.



Trupti Mehta addressing Narmada District victory celebration, December 2019. Source: Photo by Sidhesh Pawar.

slopes opened land to the cultivation of mangoes and bamboo that wasn’t feasible before. With help from the National Bank for Agriculture and Rural Development (NABARD) in 2018, they implemented the WADI (orchard) Program for the planting of mango orchards. In two years, a total of 500 farmers each set aside an acre of their own land to develop orchards of mango and various vegetables. ARCH arranged for each farmer in the area to be allocated forty-five mango saplings.

The expectation of future income from crops reduced the severe uncertainty of seasonal droughts or floods. “With titles in hand,” said Ambrish, “the tribal families now have long-term security of tenure on these lands and can invest in measures to improve land productivity. Most of them are very enthusiastic and look forward to it. All of them want to dig wells or lift water from rivers by installing diesel or solar pumps to irrigate part of their lands and to undertake other land improvement measures. We have demanded connections to electrical power lines, but that is still a problem. Electricity would be so helpful in boring wells for increased irrigation.”

“Watershed management should have been done years ago,” charged Trupti, “but the Forest Department didn’t allow it. It was part of the forest management plans, but they had no money for it until the new private landowners were able to provide their own money and the labor that made it possible.”

### Farm Producer Organizations

With increases of income, farmers became more sophisticated and were able to buy cellphones, travel into towns, and make marketing decisions that were previously unimaginable. They could scout among willing



Stone gully plugging in Sagai Village as part of watershed development. Source: Photo by Trupti Mehta.



**Table 1**  
**Farm Title Claims Filed and Approved in 2011, 2013, and 2020 by District in Gujarat Province**

Sr. No.	Name of District	Number of Villages with Forest Area	Claims Received	Claims Approv. by Feb. 2011	Percent Approv.	Claims Approv. by June 2013	Percent Approv.	Claims under Reconsideration in June 2013	Claims Approv. by June 2020	Percent Approv.	Total Approv.	Percent of Claims Approv. by 2020 of Original Claims
1	Banaskantha	206	9,488	3,665	38.63	4,416	46.54	5072	6,611	69.68		
2	Sabarkantha	292	19,625	3,151	16.06	5,904	30.08	13,721	6,753	34.41		
3	Panchmahal	711	23,666	880	3.72	3,539	14.95	20,127	7,182	30.35		
4	Dahod	453	2,0150	284	1.41	3,162	15.69	16,988	3,483	7.29		
5	Vadodara	402	1,7557	1,780	10.1	46,413	36.53	11,144	6,667	37.97		
6	Narmada	273	1,7783	3,287	18.48	5,894	33.14	11,889	10,166	57.17		
7	Bharuch	84	4,076	804	19.73	1,871	45.90	2,205	2,034	49.90		
8	Surat	126	7,747	3,447	44.49	3,975	51.31	3,772	4,072	52.56		
9	Tapi	214	1,1947	731	6.12	3,034	25.40	8,913	8,104	67.83		
10	Dang	311	7,341	115	1.57	1,392	18.96	5,949	3,207	43.69		
11	Navsari	96	9,322	1,633	17.52	2,066	22.16	7,256	3,950	42.37		
12	Valsad	293	3,4167	8,054	23.57	14,017	41.02	20,150	29,237	85.57 -		
<b>Total</b>		<b>3,461</b>	<b>182,869</b>	<b>27,831</b>	<b>15.22</b>	<b>55,683</b>	<b>30.45</b>	<b>127,186</b>	<b>91,466</b>	<b>50.02</b>	<b>174,980</b>	<b>96</b>

In August 2011, ARCH filed a PIL in Gujarat High Court. HC gave judgment in May 2013.

buyers and determine the best time of year to make sales when prices were best.

ARCH helped the tribal farmers of these villages form five farmer producer organizations (FPOs), each incorporating roughly 1,000 families. The plan was to sell their crops in large quantities in the market, obtaining better prices and purchasing farm equipment at lower costs. From 2016 to 2017, these FPOs procured about 450 metric tons of tur (pigeon peas that are part of the daily diet) worth approximately 23,000,000 rupees (US \$314,243) from 700 farmers and sold them to government agencies at the official price floor (minimum support price, MSP). In 2017–2018, the FPOs sold an additional 350 metric tons of maize and 300 metric tons of tur.

Trupti sighed, “That was the only time the farmers benefited by the minimum support price. And what a waste. We saw the stocks pile up for three or four years in a government warehouse, where it just sat there rotting. All of it was ruined.”

The FPOs also tried to bypass the intermediaries in their state, going directly to the regional monopoly buyer. “When we tried going over the heads of middlemen,” said Ambrish, “we got a lower price. We don’t understand why. There is such a big gap between what the farmers get and what the consumers pay that there is a very large opportunity for profit. For some reason, the middlemen have a lock on the system and we can’t get around it.”

The MSP is much debated in India since Prime Minister Narendra Modi’s Parliament passed laws in September 2020. These laws were expected to remove the government-guaranteed price floors for twenty-four select crops in India. Despite assurances from the government that farm income would improve, as Modi promised in the last election, farmers have lost confidence in provisions of the law. As a result, mass protests have been staged all around the capitol.

“The deregulation of farming is supposed to help raise incomes for farmers and lower prices for consumers by reducing the number of government-sanctioned middlemen,” according to Eric Bellman of *The Wall Street Journal*. “That may be the eventual outcome, defenders of the policy say, but it is still a difficult change for many traders, who are exposed to more competition, and farmers, who fear they will lose buyers who are required to purchase their grain and produce at state-set prices.”<sup>8</sup>

Long before the current lockdown over coronavirus, economists had reason to be skeptical of Prime Minister Modi’s sincerity in freeing the market. Based on 2018 data, Modi’s economic policies were disastrous for entrepreneurs and small businesses. *The Indian Express* reported a record one-year drop in economic freedom: “India slipped twenty-six places to 105 among 162 countries and territories on the index of global economic freedom, according to the Economic Freedom of the World: 2020 report released by the Fraser Institute in Canada.” The Fraser Institute and their Indian affiliate, The Centre for Civil Society, found the worst performance in size of government, trade protectionism, and crippling regulation.<sup>9</sup>

### Community Forest Reserve Management

The same Forest Rights Act that granted individual farmers title to their lands also granted to community gram sabhas ownership and control over common forest resources. Within certain limits, this empowered community forest management committees in each region to protect, regenerate, conserve, manage, and otherwise utilize much of the forest resources, the most important of which was bamboo. Mature, dead, and dry bamboo is widely harvested to make paper or to be used for construction.

The same GPS devices that were used for mapping titles to their land are now being used to map forest resources and design watershed management plans from ridges to valleys. The ten to fifteen gram sabhas have already undertaken measures to prevent forest fires and illegal felling.

From 2014 to 2019, ten village gram sabhas harvested bamboo for sale to the local papermill, earning 15,000,000 rupees (US \$204,941), in addition to wages that paid 16,200,000 rupees (US \$221,336) for the work. Importantly, they accomplished this without causing harm to standing green bamboo and took care that cut bamboo regenerated quickly. All such decisions were conducted in open meetings of the gram sabhas, including both men and women, to insure transparency.

Reports Barun Mitra, “After two decades of conflict between local communities and the local papermill, both sides happily signed mutually beneficial agreements. The community got ownership over the bamboo on the common property of the village, and they negotiated a good price and terms for selling the bamboo, including the cost of harvesting and transportation. The company also offered to provide good-quality saplings of new bamboo for future plantations.”



Farmers with a stand of green bamboo in Sagai Village. Source: Photo by Nirmal Biorot.



Trucks loaded for distribution of the dry bamboo harvest in Sagai Village. Source: Photo by Barun S. Mitra.

The company was happy with the deal because in previous years, even with a special arrangement with the government, the company had not been able to harvest the bamboo in the face of opposition from local communities. “Unfortunately,” said Trupti, “the papermill discontinued the use of bamboo as raw material last year and has shifted to *subaval* [wild tamarind] and eucalyptus for pulp instead, so there is no agreement with the mill now. But the gram sabhas are exploring other options.”

### Banking

Once tribal farmers had secure titles to their land, their access to credit improved dramatically. Collateral was important, of course, but equally so was the solid, esteemed reputation of a settled owner of proven, productive property.

“Without title to the land, banks were not willing to give any loans to these tribal farmers,” said Amrish, “not even crop loans. But after they got titles to the land and after our sustained efforts, banks have come to give Kisan credit cards (KCC) to these farmers. Two banks, Bank of Baroda and Baroda Gujarat Gramin Bank, have appointed eleven bank correspondents [Bank Mitra, or “Friends” Bank] for doing all bank transactions at their villages so the people would need not go to the main branch in the city.”

With land title, 1,000 farmers have been issued credit cards, and each farmer can get a crop loan of 40,000 to 50,000 rupees (US \$540–US \$684). “Four thousand farmers qualify for these credit cards, but so far the government has been slow to issue them,” said Amrish. “All loans have been repaid, 100 percent, so their credit

reputation is excellent. Everybody wants to repay or they won’t get a loan the next time.”

Banks have been able to issue loans for small amounts and minor transactions through the use of these “bank correspondents” agents working on commission who travel between town and country to make “micro” loan arrangements. “Sometimes the internet connection was so bad in the villages that the farmers have to deal with the correspondents just outside the door of the bank office, using the bank’s internet connection,” laughed Amrish. “Still, they prefer dealing with the correspondents rather than with bank officers. At first, the correspondents were hired by the bank, but the farmers lacked trust in them. Now the villages select their own correspondents to work with the bank on commission. Everyone knows each other, and they are more responsive.”

Correspondents are hoping to earn a cash income of up to 8,000 or 10,000 rupees (US \$109–US \$136) per month. But for now, during these tough times, correspondents have only been averaging 5,000 rupees (US \$68) a month.

There are very few private banks licensed in Gujarat, and public-sector banks dominate finance across India, with 60 percent of all loans in 2020. This is down from 74 percent of the loan market just five years before because of heavy nonperforming asset losses suffered during the 2008–2009 recession and a very high staff expense-to-total income ratio.<sup>10</sup> Nevertheless, public banks are able to offer loans to ARCH farmers as low as 4 percent annual interest, compared to 2 percent per month at private banks.

### Sanitation and Education

“The thing that personally impressed me the most,” opined Barun, “was one of the earliest developments. A few thousand families who received the title initially, even truncated titles, began investing in building toilets inside or close to their homes. In contrast, for over a decade, there were various government programs to improve sanitation by making people aware of the need for hygiene. But here were some of the poorest people deciding to invest their own money and labor to build their own toilets the moment they felt secure about the title over their own homes. From baking bricks to designing their toilets, they did almost everything on their own.” The pressure for improved toilet facilities was coming especially from women and girls. The motivation for well-designed facilities close to the living quarters was as much for improved security as for convenience and sanitation.

When traveling to the countryside to meet with community groups, Barun would frequently break to photograph and document the so-called “outhouses” that were thrown together by government contractors. Locals



Personal (left) and government (right) toilet facilities in Sagai Village. Source: Photos by Amarsing Vasava (left) and Barun S. Mitra (right).



would tell him that no one would use these as toilet facilities, since most were crudely constructed and inconveniently located.

Rising incomes also meant that families could send their children to better schools for more years of higher education. It was always a driving factor to have kids get more training so they could earn more cash income and bring more professional skills back to the village—as good nurses or honest police. “As families become richer and children have a better chance of survival, they have fewer children and plan long term,” concluded Ambrish.

### COVID Impact

“We have not had a single case of COVID in our area, but we’ve been hit very hard by the lost wages resulting from the three-month lockdown in the cities,” lamented Ambrish.<sup>11</sup> The economic lockdown announced by Prime Minister Modi in April of 2020 forced forty million workers to return to their villages. Because the shutdown included all public bus and rail transport, this led to massive turmoil and congestion on public thoroughfares, desperate poverty, and increased exposure. This severely impacted tribals, who were stranded in cities without work, shelter, food, or suitable water. “They had to walk so many hundreds of kilometers with terrible consequences. But no one can protest,” shrugged Ambrish. “No use.”

They lost cash income from work in the cities that supplemented farm income between growing seasons. “In addition, during the lockdown,” said Ambrish, “farmers couldn’t sell their crops, and they lost 40 percent of their farm income as well.”

Also lost were other sources of forest income. For instance, forest leaves can be sold for cigar wrappers, food service utensils, or roofing supplies. “The collection, use, and sale of minor forest produce (MFP) by forest dwellers also got severely affected due to the pandemic,” wrote Shweta Tripathi. “An estimated 100 million forest dwellers depend on MFP for food, shelter, medicines, and cash income. The season for collecting nontimber

forest produce this year coincided with the lockdown. This adversely impacted those whose livelihoods depend on MFP.”<sup>12</sup>

The bright side of forest life, in contrast to that of life for city dwellers, is that farmers with titles to their land are likely to be self-sufficient in food production. Prosperity brought enough abundance that they managed to build stores of food and water in reserve as protection against droughts. Vasava Aarsibhai “Aarsi” Bhangdabhai once explained to this author, “My loft above my home has a two-year supply of food in case of drought or bad harvest. That’s my bank, and I don’t have to borrow from outsiders. I have my own security and don’t have to sell when the price isn’t good.”<sup>13</sup>

### Prospects

The World Bank and other international governmental organizations are not involved with property rights projects such as those undertaken by ARCH. “NGOs in the area appreciate what we are doing, and the use of GPS equipment is spreading,” said Trupti.

Trupti and Ambrish Mehta have just written a book about their positive and exciting experience in the Dediapada region. It will be published soon in Gujarati, and we hope it will draw enough attention to become an international bestselling book on the value of property rights that generally incentivize environmental conservation and reward the miracle of constructive, passionate ideas. ■

### NOTES

1. Zoom interview with Trupti and Ambrish Mehta, December 16, 2020.
2. Email correspondence with Barun Mitra, December 11, 2020.
3. Email correspondence with Trupti Mehta, January 1, 2021.
4. Email correspondence with Trupti Mehta, December 11, 2020.
5. Shweta Tripathi, “How FRA Helped India’s Forest Communities during COVID-19,” *Down to Earth*, November 27, 2020, <https://tinyurl.com/at8fv6ck>.
6. Email correspondence with Trupti Mehta, January 1, 2021.
7. Zoom interview with Trupti and Ambrish Mehta, December 16, 2020.
8. Eric Bellman, “Indian Farmers Defy Modi’s Plans for Revamping Economy,” *The Wall Street Journal*, December 4, 2020, <https://tinyurl.com/y969pmpp>.
9. ENS Economic Bureau, “India Slips 26 Places to 105 in Global Economic Freedom Index; Lags in Rules & Freedom to Trade Internationally,” *The Indian Express*, September 12, 2020, <https://tinyurl.com/htxwnhsz>.
10. Manojit Saha, “In Just 5 Years, Private Banks Have Narrowed Public Sector’s Huge Lead in Loans and Deposits,” *The Print*, November 24, 2020, <https://tinyurl.com/b6xy38bd>.
11. As of the date of publication, Ambrish Mehta reported, “Some people were later affected in Sagai village, but not very seriously. ARCH supplied medical treatments in each village where they are working. This provided relief where little health care was available in the interior regions. But in some other tribal areas the coronavirus extracted a high price.”
12. Tripathi, “How FRA Helped India’s Forest Communities during COVID-19”
13. Discussion with farmer Vasava Aarsibhai “Aarsi” Bhangdabhai, January 17, 2015.

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