

BLOG: RESISTANCE AND RECONSTRUCTION

Hope in Bihar

The state of Bihar is well-known for lagging behind in all economic and human development indicators. Recently, Ashish Kothari visited some areas in Bihar where interesting things are happening. Under progressive governance and grassroots action by its citizens when these are implemented state-wise, Bihar would be well on the path of progress.



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I grew up hearing of the dire state of Bihar, the first of the so-called BIMARU states, at the bottom of the Indian developmental ladder. Visions and stories of extreme poverty, feudal oppression, casteism, corruption, governmental apathy and inefficiency, were common.

At the same time one heard of peoples' movements that gave hope: iconic ones like Ganga Mukti Andolan to rescue the fisheries of the mighty river from the clutches of 'waterlords', the inspirational Chhatra Yuva Sangharsh Vahini initiated by Jaiprakash Narayan in 1975, and the long-drawn out resistance against the displacement and deforestation entailed in the Koel Karo hydro project. With such movements, and more recently with an electorate that managed to keep the saffron political tide at bay, surely the situation could not be so dire?

Till a month back I never did manage to go there to find out for myself, barring one all-too-short trip two decades back. So I eagerly grabbed the opportunity of a meeting in Bodh Gaya, to spend some time in March this year, visiting a few sites where I'd heard of interesting things going on.

By no stretch of imagination could I have got a representative picture in a short time, but the tiny glimpse was enough to convince me that indeed, the state has potential to not only overcome its problems, but even provide inspiring examples to the rest of the country.

The Bodh Gaya meeting was a [Vikalp Sangam](#) on Energy (or more specifically, electricity), a confluence of organisations and individuals from across India working on alternative, clean, renewable energy.

The Sangam was organised here by Centre for Environment and Energy Development (CEED), Greenpeace India, Kalpavriksh, SELCO, and Oxfam India, for two reasons: Bihar has one of the worst records in providing electrical energy to its population (over 50% population still without access) and so needs attention from civil society; secondly, Bodh Gaya was close to Dharnai village, which had got electrified in less than a year using solar energy.

Could this example be used to explore whether a state like Bihar could actually provide energy security using clean sources, rather than dirty ones like coal, nuclear, and large hydro?

Lighting up a Village

As part of the Sangam, the participants visited Dharnai, seeing the energy installation and seeking the impressions of the residents. Their story is interesting. About 30 years back, Dharnai got electricity from the grid, but then due to some political issues this was cut off and never restored.



Solar panels and the fields of Dharnai. Pic: Ashish Kothari

Greenpeace India, in its search for an appropriate location to try out its experiment on setting up a solar microgrid, decided to try it at Dharnai (with consent of the residents). It completed the installation within a few months and initiated generation in July 2014; over time it has provided 70 kw for homes (lights, fans, TV, radio) and about 30 kw for agricultural pumpsets. Ironically, very soon after the lights were switched on, Chief Minister Nitish Kumar (then in his 2nd term) came to visit, and almost immediately also got the grid power reconnected!

Did the fact that the grid had now come, mean that Dharnai would abandon the solar experiment? Not at all, we were told. “The solar power is much more reliable than that of the government, which can cut off our supply at any time”, said Deepak Kumar of the Village Electricity Committee; Ajay Singh Yadav, the village mukhiya, added, “we don’t get a shock from the solar power”, and another smilingly said “the sarkari bijali goes off in the middle of a cricket match”!

In the early phase there were challenges of metering and recovering the running costs from households; this has now been streamlined and the Committee has collected nearly Rs. 6 lakhs as the monthly fees. The fund is being maintained in case there is a need to repair or replace the equipment (including batteries), or for further expansion should it be necessary.

Training has been given to some villagers for essential maintenance, though BASIX, which manages the microgrid, also has one person on standby for technical problems. While initially there was a drop from 250 to 160 households having a connection to the microgrid (hesitation to provide monthly fees), now 90 more households want the connection after seeing the efficient functioning and benefits.

Amongst the benefits villagers mentioned: ability of children to study longer at home, greater security for women walking around at night (the village is right next to the highway and darkness provided scope for strangers to enter), greater possibility of livelihoods in the evening (including 6 local shops), no expense on lighting for weddings and other expenses, and revenue of about Rs. 50,000 from fisheries at a pond

filled by using pumps powered by the microgrid.

By no means is this a story with no complications. The economics of a solar microgrid are complex, with a significant upfront cost (this one cost Rs. 4 crores) that no village or even most urban communities could afford on their own; there is a need for substantial state support (which may be very possible if the enormous funds going into coal and nuclear were diverted to such initiatives). The village unity and mobilisation needed to ensure collective responsibility, equitable distribution, timely collection of fees, and concessions to the very poor, need strong leadership and facilitation.

Greenpeace India has learnt the hard way (but quite fast) that it cannot simply set up a microgrid and leave; more long-term handholding is often necessary. The entry of the main grid has meant that experiments like solar-based agricultural pumpsets have not caught on, farmers simply find them too expensive (though this is a function of policy measures that heavily subsidise the centralised grid, ignoring the environmental and social losses incurred in coal/nuclear/hydro generation and long-distance transmission).

Fortunately, the Bihar government appears to have taken the lessons of Dharnai and some other similar initiatives more seriously, and in Nitish Kumar's third term now, appears to be considering significant increase in support for decentralised renewable energy (DRE). If this happens, "the experiment at Dharnai would have been well worth it", said Ramapati Kumar of CEED, which is promoting DRE in Bihar.

The Dharnai visit was a major input to the deliberations of the Bijali Vikalp Sangam, which issued a strong statement on Energy Democracy (on which I will write separately; the statement is available at [here](#)).

Towards Organic

From Bodh Gaya I went to Kedia, a village adjoining the town of Jamui. I'd heard this village had switched from chemical-based farming to almost completely organic, within 2-3 years, and I was keen to see if this was mere hyperbole on the part of Greenpeace India, which was involved here too.



Villagers at their fields of organic crops in Kedia. Pic: Ashish Kothari

The first sight that greeted me on arriving at the village outskirts was lush green fields of maize, wheat, and pulses. Looked like any village with lots of irrigation and fertilisers and other inputs that will make even barren land look green, albeit for a short time and with disastrous long-term consequences. There was however one difference: in between all the fields there was a little placard on a stick, and on closer inspection, found to have ‘jeevit maati khet’ or ‘amritpani’ scrawled on it. On reaching the settlement we found a dozen villagers along with Greenpeacers Ishteyaque Ahmed and Santosh Kumar waiting for us. Immediately we plunged into a discussion.

“In 2013 we undertook a long ‘Living Soils’ yatra through parts of Bihar, trying to generate discussions on the negative impacts of pesticides and fertilisers and asking if villages wanted to try something different ... and Kedia residents (several hundred of whom came for one of our events) immediately jumped on the idea” explained Ishteyaque.

“Yes” butted in Muhammad Mukhtar, an elder of the village (one of the local Sarvodayis who have been instrumental in guiding the village), “we told them that our village has lots of cattle (all local breeds), and anyway we were used to experiment; later we’ll take you to see the kilometres-long canal we dug that goes up a gradient yet carries water to our fields!”

But, I asked, trying to provoke, why did it take an external organisation to come and tell you about the benefits of organic manure ... surely you were yourself doing it before fertilisers came into your lives? “Yes”, said Manoj Kr. Tanti, secretary of the Jeevit Maati Kisan Samiti, , “but over a generation of being brainwashed into the harti kranti kind of farming, we had lost the knowledge or the confidence in ourselves; we are grateful to Santosh and Ishteyaque bhai for bringing these truths back to us”.

Since 2013, there has been a remarkably quick transformation. After the initial few plots of experimental organic production using vermicompost and various local brews for increasing fertility or keeping pests at

bay (amritpani, neemastra, agniastra, the last one so-called because it is laced with chillies!), the demonstration effect was so strong that virtually all pesticides have been given up, and over 70% of fertilisers too (from about 100 kg/acre on average to about 30-35 kg).

Has this reduced yield? “Only marginally”, say the villagers, adding that with one or two more years of organic inputs, it will equalise or even increase over the previous yields. To cite some examples: Rajkumar Yadav used to get 20 quintals of paddy per acre before, now he gets 17; Anandi Yadav was getting 17, now gets 16.5. The wheat yields of both have remained the same at about 8 quintals for Rajkumar, 6.9 for Anandi. Manoj Tanti was getting 6.9 quintals of onions per acre earlier, and gets the same now.

For all these people potato yields too have remained the same. Interestingly many farmers have switched from monocropping to mixed cropping, which has reduced yields in some cases of previously monocropped species, but provided a larger variety of produce, and helped revitalise soil health.

With all this, demand for vermicompost beds has gone up so much the local government office has exhausted its quota of subsidies for the purpose. When we met Mhd Haroon Rashid, the Block Agricultural Officer, he lightheartedly complained that Kedia has upped the demand on the relevant subsidies to levels they can't cope with!

Over 150 applications are on hold; “everyone wants to do a Kedia!” He was all praise for the village, and revealed that urea fertiliser sales in Jamui district had dropped by 24% in the last two years. Pesticide use too was declining. I was also heartened to hear from him that the Bihar government was serious about promoting organic farming; the Jamui district collector too was enthusiastic about supporting it, given Kedia's performance and a recent visit there by the state Labour Minister.

One big problem Kedia continues to face is poor prices for agricultural produce in the nearby markets, especially since they have to sell perishable items like vegetables very soon after harvest. Greenpeace is now hoping to provide a solar-powered cold storage facility so immediate sales are not necessary, and farmers could wait for better prices.

Also on the anvil is a farmers' cooperative or company, perhaps also including consumers including low income people in Jamui town, that could help to collectively negotiate terms with the market better (I suggested they visit some already running examples of these, such as Timbaktu's Dharani in Andhra Pradesh). Solar energy for pumps are also being discussed, and it was encouraging to hear that the village is keen not to go in for borewells, well aware that this could cause a water shortage in the long run. The farming initiative has also had an unintended positive impact: other government departments are much more responsive than earlier, the village school is being rebuilt, and power has been provided.

Two-storied villages

With these two positive stories already buoying me up, I headed to Bhagalpur to meet an old acquaintance, Arvind Mishra of the Mandar Nature Club. Arvind was involved with the National Biodiversity Strategy and Action Plan process which I had the good fortune to coordinate in the early 2000s.



Greater adjutant storks with farmers at Bhagalpur. Pic: Ashish Kothari

Since then he had been mentioning his work amongst communities to promote the conservation of the Greater adjutant stork. This rather huge and ungainly looking bird is the world's rarest stork, considered threatened, and found nesting in only a couple of locations in India (the other being Assam).

Realising that I was dying to see the stork and the communities protecting it, Arvind immediately bundled me into a vehicle and off we went, crossing first the Ganga (which incidentally is still a river here, unlike in the upper stretches where it has been turned into a canal or rendered more or less dry) and then the Kosi, into what is called the diara or floodplains (and former floodplains) of the river.

Somehow my image of the stork's nesting area was that of marshy, inhospitable (to us!) stretches where one would have to wade through knee-deep water. I was therefore very surprised when we reached Bagri tola of Kadwa panchayat, for there, bang in the middle of the settlements, were trees crowned with, guess what, stork nests!

It was a like a two-storey village, the ground level occupied by humans, the 1st floor by birds. Chicks had been fledged, so there was a cacophony all around, with hungry young ones clamouring for food, and adults constantly flying back and forth. Greater adjutants were sharing space with Painted storks which, Arvind told me, were recent entrants.

Here and at Kasimpur, Ashramtola and other villages of Kadwa and Khairpur panchayats, I spoke to the residents. Why did they not only tolerate these noisy creatures in their midst, but also zealously protect them?

Parmanand Kesir, an elder of Bagri, explained: "We have been seeing these birds off and on for a long time, in much smaller numbers, and were always curious about it, knew about it as being Vishnu's vahana (vehicle); then Mishraji came and told us about how rare they are, how they are found only in one or two sites in India, how they are a national and global heritage, and we felt we should do something more for

them. They are after all our guests.” He pointed to a tree on which I could see a large basket; “see, we are so concerned that the house owner to which that tree belongs even climbed up and put that basket as a replacement when the storks’ nest fell down in a storm.”

The care shown by the villagers has shown visible results; from 16 nests recorded in 2006-07 (possibly some more, scattered in a wider area), there are now 106. Arvind estimates the population now to be at least 400, and perhaps upto 500. Assam reportedly has a population just a bit larger. The Forest Department has also encouraged the villagers, and provides them saplings of semal, kadam, pipal, bargad trees, which the storks prefer for nesting.

The storks have returned the favour. Till a decade back, the diara area was badly serviced by government departments, and connectivity was very poor (it is in this connection that my impression of having to wade through knee-deep marsh was formed, for when Arvind began his work this is precisely what he had to do).

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With increasing attention to the area from ornithologists and conservationists, the government was encouraged to pay it more attention, providing a bridge, roads, and other facilities. I wonder though whether there may be too much attention now; one of the trees with a huge number of stork nests, adjacent to the Khairnar Middle School, has now a major highway being constructed just along it. Conservationists did manage to get the road alignment slightly adjusted so the tree would not be cut, but with the heavy traffic that will inevitably invade, I wonder if the storks will remain.

A Brighter Future?

Three examples do not a state make. Some successes do not necessarily mean that Bihar as a whole is assured a bright future. Many of the old ills continue to plague it, though most people talk of improvements in governance in recent times, and we could see that on conventional parameters like road connectivity and quality, there seems indeed to have been progress. But absolute and relative poverty (deprivation from basic needs), casteism, gender disparities, lack of employment opportunities, and other such problems are huge (as they are in many other parts of India).

At least a few policy moves, such as those on energy and agriculture pointed out above, indicate that there is hope on a macro-level also. This combination of grassroots action and progressive policy could slowly pull Bihar out of its BIMARU stigma, but it will require continued mobilisation by its people and enlightened governance to make this happen. If this happens it could well provide an example for other states to learn from, showing how human well-being can be achieved in harmony with the environment and empowerment of the poor. Jaiprakash Narayan would be proud.

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<http://indiatogether.org/hope-in-bihar-op-ed>

