Tribals finally get land rights, using GPS technology

SWAMINOMIC
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Last week I visited tribal areas in Gujarat to see how technology and an active NGO could empower once-powerless tribals to get their full land rights under the Forest Rights Act, 2006.

The Act provided for land titles to be given to tribal plots in cultivation in December 2005. Earlier, government takeovers of forests had converted forest dwellers into encroachers on land they had occupied for centuries. Their villages and farms were always at risk of demolition by forest departments. The Act was supposed to end this injustice. Many state governments soon claimed, falsely, that they had implemented the Act, empowering locals. In fact, implementation was terrible. No proper maps or land records existed in most areas. Semi-literate villagers were supposed to fill long forms and file claims. Forest departments contemptuously vetoed most claims.

Under the Act, gram sabhas certified which plots were cultivated by individual families in 2005, and forwarded the documents to the state government. But 120,000 of the 192,000 claims filed in Gujarat were fully or partly rejected. Even in the accepted cases, only part of the claimed area was approved. ARCH (Action Research in Community Health and Development) and other NGOs appealed to the High Court. The Court upheld the state government and decreed a review of claims, allowing many of the evidence-including panchayat records, official receipts and satellite images from Google Earth as well as the National Remote Sensing Agency — to establish ownership.

This opened the path for redress. Yet the traditional survey method of triangulation to establish the boundaries and area of each farm plot was onerous. Then ARCH came up with the idea of using GPS (global positioning system) hand-held devices costing Rs. 12,000 apiece. Holding a GPS device, a tribal simply walked around the perimeter of his plot and pressed some buttons. The device automatically sketched a map of his farm, with the right latitude and longitude and exact area.

This enabled every family to produce a map of the holding, and get it verified by the gram sabha. All individual maps were then superimposed on a satellite image of the village dating from 2005 (the deadline under the Act). This produced a detailed map showing the exact size and ownership of every plot. Land disputes arose if two villagers walked over the same area, and disputes were settled by the gram sabha before certification. Any encroachment on forest land after 2005 showed up clearly after superimposing today’s maps on the 2005 satellite image. This assured the Forest Department’s faith.

Thus a simple technology promoted by an active NGO provided a quick, elegant solution. The overall village map was then uploaded onto the Internet, empowering any villager to go to an internet café in a nearby town and print out a copy. This ended tribal dependence on land documentation on government departments or NGOs. Tribals are willing to pay Rs. 60 to ARCH for this service, roughly enough to cover all costs. So, the project can be expanded without limit with no subsidy or donations.

The new approach yielded far better outcomes. When tribals refiled claims using these maps and additional evidence (including panchayat records, official receipts and satellite images from Google Earth) the process has been average 90% success. Early project villages are training their neighbors in using GPS, speeding up tribal capacity. The project has so far covered 160 tribal villages, just one-tenth of the total. It may take 18 months to cover all villages.

The Gujarat tribals say formal ownership makes a huge difference. They are no longer treated as outsiders, and are entitled to all government schemes for tea and tobacco, including land leveling and well digging on their lands under MNREGA. Earlier, the forest department banned the entry of tractors into forest land. But after getting ownership recognition, tribals say they use tractors on 90% of plots, because these are faster and cheaper than bullock ploughing. They want to modernize fast.

There is an urgent need to spread this approach to all forested states. The Liberty Institute and ARCH are trying to do so (see www.arch.org) by contacting NGOs everywhere. Some Marxist and “romantic pastoralist” NGOs oppose the very notion of individual plots, or of modernizing tribals. But less ideological NGOs are cooperating. A massive country-wide effort is needed to empower millions of tribals, making them masters of their own plots and community land.

The same GPS technology could be used to help update land records across India. This may require prior work on dispute settlement, since disputes are furious and widespread. Still, the methodology has much potential.

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