



DATA IN DOUBT: WHY REMOTE SENSING NEEDS GROUND TRUTHING

The REDD+ debate is riddled with assumptions that are eventually discarded. One such assumption, that India's long experience of forest survey and inventory would be a significant advantage if the country were to participate in an international REDD+ mechanism, looks shaky in the light of a recent [article in Nature](#). According to Ranjit Gill of the Forest Survey of India (FSI), his country's figures on forest cover may not be so robust after all.

According to Gill, the problems relate to the over-reliance on satellite imagery in a few particular states. The FSI uses a dedicated Indian government satellite to produce their [State of the Forest Report](#) every two years. But these images sometimes fail to distinguish between dense forest cover and secondary regrowth of deforested areas. This has led to serious overestimates of forest cover in some states, notably Meghalaya in the north-east. Although the FSI and other key forest research institutions are managed at the national level, forest management and most data collection is the responsibility of the individual states. FSI's reports are only as good as the inventory data that the states provide, against which the satellite data must be calibrated.

Gill and others visited areas in Meghalaya which, according to the State of the Forest Report, are dense forest. Instead they found areas that have been logged over for valuable teak and *Shorea* timber, but have swiftly regained a dense cover of bamboo and pioneer species.

In several ways, this is an important illustration of how countries must develop their capacity in forest monitoring. First, they must take advantage of continuous improvements in technology and link satellite imagery with ground surveys in order to make credible interpretations. India's satellite imagery has a resolution of 23.5 metres; too coarse to pick up on the details necessary to distinguish genuine forest cover from dense regrowth without such ground truthing. Even the most advanced satellite monitoring system must be complemented by a reliable national system of field data collection. This relies simply on basic, forest inventory skills at the local level.

Second, the experience shows how a good monitoring system can shine a light on graft and inefficiency. Though there is no guarantee that REDD+ can deliver finance necessary to offset the benefits of illegal logging, a good monitoring system may still be able to address it by 'naming and shaming'.

Third, although casting doubt on India's forest cover data, it demonstrates why the country still has Asia's best forest information system. These issues were uncovered internally, by FSI staff, through a system of checks and balances between the federal level and the states. A country hoping to benefit from REDD+ must be able, like India, to identify problems with data internally, before they are uncovered by third party verification.

Go-REDD+ is an e-mail listserv managed by the UN-REDD Programme team in Asia-Pacific, based in Bangkok. The main objective of Go-REDD+ is to distribute information, synopses of research results and activities related to REDD+ in Asia-Pacific, to assist countries in their REDD+ readiness efforts. Old messages will be archived on the [Regional Activities pages](#) of the UN-REDD Programme website. Discussion forum on Go-REDD+ is available through UN-REDD Programme's online knowledge sharing platform, www.unredd.net. Please note that you must be a member to join the Discussion Forum. To request membership, please contact admin@unredd.net with your name and affiliation. The Go-REDD+ team welcomes feedback, suggestions or inquiries to goredd.th@undp.org.