Why Monitor Forests?

Forests are critical for the environment: storing carbon, filtering water, contributing to soil production, harboring biodiversity. They are also critical for the billion-plus people who either live in them or depend on them for their livelihoods. Despite this, their role continues to be under-appreciated in international development. Thus we welcome the World Bank’s efforts under the Forest Action Plan to increase support for forests, through forest conservation and sustainable forest management on the one hand, and through mainstreaming forests across other sectors on the other.

For this work to succeed, and for projects in other sectors (agriculture, mining, infrastructure) to be sustainable, forest monitoring is a critical first step. That’s not only because “what gets measured gets done,” and “if you don’t measure it, you can’t manage it.” Forest monitoring is key to sustainable natural resource management in multiple ways:

- a risk management tool for those engaged in development that impacts forests, whether directly or indirectly, e.g. through induced impacts;
- a counter-balance to the growing threats to forests from fires and land use change;
- a means for raising awareness of forest impacts outside of the forest sector; and
- a way to engage indigenous peoples and local communities in forest conservation and new means of forest management.

The importance of forest monitoring applies particularly to the World Bank, given its role as the host of multiple trust funds that seek to promote sustainable forests and landscapes: the Forest Investment Program, the Forest Carbon Partnership Facility, the BioCarbon Fund, and now PROGREEN.

That is the why of forest monitoring. And BIC’s prior work has shown that there are multiple forest monitoring tools that are increasingly available and affordable. So both the need and the opportunity are both clear. Yet forest monitoring still isn’t being applied in many projects where it is needed. Why is that? And what can be done about it? We explored these questions with experts at a recent session at the World Bank. Here’s what we found.

Challenges to Forest Monitoring

Capacity issues: Forest monitoring tools may be relatively cheap and accessible, but that does not make them free and easy for everyone. For starters, most forest monitoring systems require access to a computer with internet. Second, one has to know which tool to use—since different ones are better for different settings. Third, even easy tools require some training. Fourth, while data may be free, people’s time is not, nor is the equipment that may be needed.

Technical issues: Assuming the basic time and resources are available, monitoring still requires many choices to be made. What tools are to be used? Issues to address include cost, training required, accuracy/resolution, latency (time lag), spatial scale, metrics, internet connectivity, and community engagement. Tradeoffs are often required, e.g. between accuracy and latency, spatial scale and cost, training required and community engagement. Even after these choices,
users will face issues such as definitions to be applied (what is a forest? what counts as degradation?), types of data to be collected, and how to interpret data and maps.

**Political issues:** Not all governments want to share information about their forests’ condition. And not all communities feel the need for such information, want outsiders measuring their local resources, or agree on what needs to be measured. If these are agreed, issues can still arise regarding who is responsible for what, how (and how much) it is funded, when it should be done, who controls the results, and how they will be shared.

In face of these hurdles, it’s easier to understand why project managers may avoid the issue of forest monitoring altogether, and focus on other outcomes.

**What Is to Be Done?**

Facing multiple challenges, it’s not surprising that there are multiple answers.

**Define objectives and scope.** Be clear on what is needed, e.g. stopping forest fires in near-real time, enforcement of logging or access restrictions, or spatial/land use planning? Is the focus on protected areas or multiple use landscapes?

**Provide guidance on tools to use.** This will reflect not only the objectives and scope, but constraints such as budget, training required, and technical tradeoffs. Guidance on fitting the tool to the application is also key for choosing or designing the right forest monitoring tool. The answer may be to use more than one: rapid response (satellite) applications can be integrated with bottom-up approaches to increase community engagement. Beyond projects, at the global level, it would almost certainly be cost-effective for an institution or consortium (UN/FAO and the World Bank?) to develop a forest monitoring guidebook.

**Budget accordingly.** Even with free tools, project managers will need to include time for training, use, and aggregating and interpreting data. For tools that aren’t free, the type and length of subscription need to be considered. At the national level, tools may need to be developed and hardware acquired and deployed.

**Integrate forest monitoring with other types** of monitoring to achieve impact. If the goal is to stop illegal deforestation, it is not enough to catch the guys with the chainsaws; monitoring financial flows, to see who is paying for the work, is also needed. **TRACE,** the Trade Reporting and Compliance Engine, is such a tool. If the goal is to improve land use, then landscape monitoring, such as provided by **TRENDS.Earth,** should be applied; or to tie forests and water impacts, one might consider the **Freshwater Health Index.**

**Collaborate:** Many different institutions (multilateral, academic, non-profit) and governments/agencies share an interest in better forest monitoring. While different goals require different tools, there is enough overlap that collaboration can increase both efficiency and effectiveness. At a minimum, agreement on definitions and types of basic data that should be collected would help, allowing for data from different sources to be aggregated.

These suggestions may not answer all the issues in forest monitoring, but if seriously applied, could bring serious improvement in the rate and results of forest monitoring.