Ecosystem Marketplace

A FOREST TRENDS INITIATIVE

Forest Carbon 101 – A PRIMER

NOTE: This is a rudimentary primer cobbled together from pre-existing Ecosystem Marketplace documents. This version was created on October 22, 2013. It should be viewed as a work-in-progress, and will be updated over the next three weeks. Please contact us at info@ecosystemmarketplace.com for the latest version.

Emissions Trading – What Is It?

There are two ways to regulate pollution: one is command-and-control, which dictates specific actions to be implemented; and the other is cap-and-trade, which sets an overall limit on emissions and then lets companies find the best way of getting there. Under cap-and-trade, companies receive "credits" based on the overall cap. They must buy more credits if they fail to meet the overall cap, but they can sell credits if they reduce more than they have to.

In simple terms, command-and-control is simple but rigid, while cap-and-trade is complex but flexible.

The United States introduced the first formal cap-and-trade program as part of the Clean Air Act of 1990. That law put a cap on the amount of sulphur and nitrogen oxides (SOx and NOx) that industry can pump into the air, but it let the private sector identify the most efficient way of meeting that cap.

The program had opposition from both ends of the political spectrum. Those on the right predicting everything from rolling blackouts and soaring energy costs to the end of the coal sector and a nationwide recession. Those on the left warned that industry would just "buy its way out" of its clean air obligations, and likened the permits to indulgences.

Both sides were wrong. The program has helped cut acid rain in half since its inception, and at a cost of just $3 billion per year, which is more than 85 percent lower than industry projections. More importantly, it saved local communities more than $122 billion per year in reduced health costs and cleaner lakes and rivers, according to a study by the Journal of Environmental Management. That's $40 in savings for every $1 spent – although the Environmental Protection Agency prefers the more conservative claim of $30 for every dollar spent.

Either way, the program worked, and it worked in part because it let government do what government does best, and it let the private sector do what the private sector does best. Specifically, it let government draw a clear and inviolable line above which emissions dare not rise, and it let the private sector find new and innovative ways of staying below that line, with a financial incentive for those who did the best job.

But it also worked because acid rain is a local issue. The pollutants that cause it don't travel too far, while carbon dioxide (CO_2) – the primary greenhouse gas (GHG) that causes climate change – travels around the world.

Still, the United Nations Framework Convention on Climate Change (UNFCCC) aims to implement a global cap-and-trade mechanism, and several regional initiatives have already begun doing so. Almost all forest carbon offsets, however, are being traded in the voluntary carbon market.

This means they are not really part of a cap-and-trade program, because voluntary markets are not necessarily responding to a government-mandated cap. Instead, demand for voluntary carbon offsets is driven mostly by companies and individuals that take responsibility for offsetting their own emissions. Still, some entities that purchase voluntary offsets see them as "pre-compliance" offsets before emissions reductions are required by regulation.

Beyond pre-compliance, purely voluntary offset buyers are driven by a variety of considerations related to corporate social responsibility (CSR), ethics, and reputational or supply chain risk. Pre-compliance buyers speculatively procure offsets before a compliance carbon market start date, hoping to obtain a lower price than what the same offset may eventually fetch in the compliance program.

Forest Carbon Projects

Forestry projects jump-started the global carbon offset market in the early 1990s, when environmental non-profits and industrial companies initiated partnerships to conserve and plant forests with the aim of balancing greenhouse gas emissions (GHG) by capturing carbon in trees.

Although forestry transactions were the first-ever carbon offsets, they were soon sidelined in emerging global GHG regulations and a narrow band of forestry offsets were recognized under the Kyoto Protocol. This left the voluntary markets to pick up the slack.

Some buyers have been drawn to this tangible, land-based offset category and others have veered away from the complexities and risks of forest carbon offset projects. Over time, however, the role of forests in mitigating climate change has increasingly gained credence – thanks largely to the resolution of scientific disputes over how to measure and monitor the amount of carbon captured in trees, as well as growing political consensus on the need to reduce emissions as quickly and cost-effectively as possible. This acceptance has begun to impact global climate policy. In 2007, at international climate change negotiations, the Bali Action Plan laid out a strategy for developing consensus on how to recognize reducing emissions from deforestation and degradation (REDD).