



May 11, 2009

California Climate Registry

Comments on the Revised Forestry Protocols – April 2009 Version

Dear Registry,

The following are my comments on the revised protocols for forestry projects of April, 2009. I believe the protocols are now much more attractive to large landowners as the conservation easement requirement has been removed as a condition of permanence. The revised protocols seem well thought out and workable in their narrow context. In order for these protocols to be used world wide and achieve a significant reduction in atmospheric CO2 I believe they need to be much more flexible and inclusive, as they are quite rigid and may not be very effective in meeting the goal of significant reductions in Green House Gases (GHG).

My primary concern is that these protocols have a secondary agenda that severely limits their use and effectiveness. They appear to be based on political concerns rather than based on science and a primary goal to reduce GHG's. This is apparent in the requirements for co-benefits, the requirement for mixed ages of trees, the restriction on using only native species, and the requirement that reforestation projects have no economic return without carbon sales.

There appears to be an intent to reduce timber harvesting in developed countries, and to dis-incentivize plantation forestry in developing countries. Plantations actually are very environmentally beneficial if managed sustainably, as they can take pressure off natural forests. The New Zealand Forestry Accord recognizes the benefits of plantation forestry in taking pressure off of harvesting of natural forests. Sustainable plantations can very efficiently store carbon, produce wood products with less emissions due to fewer entries with harvesting equipment, and lower management costs keeping the cost of wood products down and making wood more affordable than steel and concrete which are much more energy intensive to produce. I believe these protocols are so limiting that they will not be adopted in many areas of the world that could benefit from the added incentives of carbon storage sales, and may actually be self defeating.

For example, if a landowner in California decides they are going to reduce their harvest levels to store more carbon they are reducing available timber going to the market, causing leakage. The outcome of these protocols is the leakage caused by reduced domestic production in regulated countries that have effective environmental rules will intensify the pressure on non-sustainable regions of the world producing cheap wood

from native forests (i.e. Borneo). What is wrong with offsetting that leakage from sustainably managed plantations in areas of the world reliant primarily on agricultural production? If these rules were adopted worldwide, and less timber is harvested with no offsets from plantations being allowed, then less wood will be produced for building, and more energy intensive building materials such as steel and concrete will be used causing increased GHG emissions. There has to be a source to offset leakage that is sustainable – why not certified sustainable plantations? The requirement for co-benefits and natural forest species with a mixture of age classes is not well rationalized. Section 3.5 requires “Forest projects should create both long-term climate benefits and provide other environmental benefits”. Why? This requirement throws out many very good projects on marginal grazing or crop lands, and supposes unevenage management is environmentally superior (see comment 3 below challenging this belief).

Limiting the use of non-native species that can potentially sequester much more carbon than a native species on lands that were formerly marginal grazing lands makes no sense, and is highly imperialistic. It may make sense in California, but it makes no sense in third world countries that could benefit greatly from forest plantations for social, economic, and environmental reasons. Plantations of high quality non-native trees are shut out of this protocol. There are a number of reforestation projects occurring in other parts of the world on lands that were marginal grazing lands, and the species being planted are not native species, as native species may be not only be slow growing, they may also not have a commercial market, or may not store much carbon. A simple means of ensuring that these projects are sustainable, as has been the argument against non-native plantations by environmental groups involved in creating these protocols, is to require third party certification for sustainability using FSC or other comparable certification systems that take into account social, economic, and environmental sustainability. The co-benefits agenda seems to be usurping the goal to store more carbon in forests as the natural, mixed age restriction appears to be of greater importance than the goal of reducing GHG’s.

A solution to this problem is to have a two tiered system similar to organic and sustainable foods. Organic forest carbon could come from the mixed age, natural forests and could command a market from those who support these more expensive restrictions, and those willing to pay a higher cost for their organic forest carbon. The alternative would be sustainable forest carbon which comes from any forest that is third party certified sustainable including non-native, evenage, fast growing plantations on former marginal grazing or marginal crop lands. I believe more carbon will be stored with this more flexible two tiered approach.

Other comments I have on these protocols are the following.

1. The term of the projects should be variable. 100 years is a theoretical life. Some countries or cap and trade systems may allow a shorter contract period. There should be an allowance for projects that have shorter lives. 100 years is a very long time to honor a contract/agreement with the Registry, and a number of landowners could hold a property over this time and be subject to an agreement based on conditions in the distance past. Without a clause for a buyout of an

agreement, the financial gain achieved by selling carbon credits early in the term and the burden of the long term costs for monitoring and certification for 100 years will make properties unsellable due to these high costs, and is a disincentive to create a project.

2. There should be a clause that the protocols can be quickly adapted to new carbon measurement technology. Lidar is showing promise, and is much less expensive for monitoring and certification, and may actually be much more reliable than field measurements which rely on numerous assumptions. Lidar would certainly be more consistent and less biased by sampling methodologies. I suggest the Registry keep Lidar on their screen to include as measurement tool. If Lidar proves effective, a cooperative effort between landowners to have their properties flown on a periodic basis would keep costs down, and organizing and managing such flights should be the responsibility of the Reserve.
3. The requirement for unevenage management for small landowners does not take into consideration that natural forest development may not have historically been unevenage. For example the Pacific Northwest forests dominated by Douglas-fir were affected by large scale fire disturbances that would burn large areas with new forests regenerating that were of the same age. Forcing landowners to manage species that do not regenerate well in unevenage silvicultural systems is not beneficial to those landowners, and will result in lower growth rates, and less carbon sequestered, and more costs for timber harvesting. The unevenage requirement is an arbitrary condition, and assumes such forest management is superior for wildlife, and fisheries than an even age forest. This may not be the case as unevenage management does not work well on steep slopes with species such as Douglas-fir which is not shade tolerant, and which does not release well from thinnings after it reaches the age of 60. Unevenage management works well in slower growing forests that can be selectively harvested with ground equipment, or with species that release well to thinnings. Logging costs for cable yarding steep slopes using unevenage management is much higher than with evenage management, and the repeated entries cause more emissions from harvesting equipment. The effect on wildlife of repeated entries, additional road disturbance and ground disturbance, and additional energy use of equipment needed for short period re-entries vs. the much longer re-entries required by evenage management should be factored into the total carbon emissions of the unevenage management requirement. Also the 40 acre maximum evenage unit is very limiting in areas where average unit size is larger, and again reduces efficiencies of scale thereby increasing costs of management, and increasing emissions for additional vehicle trips to these smaller units.
4. Section 6.11 does not allow fertilizer to be used for reforestation projects. What if the soil has been altered by grazing, crop use, increased salinization of water tables, etc.? An example is boron deficiencies. This is a short sighted restriction that also rings of some type of co-benefit agenda. There should be an allowance for correcting imbalances in soil conditions.
5. How will the extensive southern pine plantations be handled? These protocols seem to create a serious bias against those forests, many of which have been planted on degraded farmlands. If loblolly pine is not native to an area, and it is

being planted on marginal or eroded farmlands as a plantation, why would this not be allowed in these protocols. The co-benefits assume unevenage management and native species are the best solution for a forest, but what if they do not make economic or ecological sense. Also, with evenage plantations it would be easy to standardized carbon measurements based on regional averages using species, age, site class and stocking, and thereby greatly reduce the verification costs.

In conclusion, I think for the limited conditions these protocols apply to they are workable. But, I also believe they will result in serious increases in leakage to unregulated areas of the world. The bias against non-native evenage plantations is extremely short sighted, and does not take into account those plantations are the most effective way to offset leakage and store carbon. The protocols must also be allowed to be quickly adaptable to changing technology for measuring forest carbon, and should be reviewed on a periodic basis to ensure they are effectively meeting the reduction of GHG goals, and that they are integrating the latest forest and atmospheric science.

Respectfully submitted,



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