

Engaging Ranchers in Market-Based Approaches to Climate Change Mitigation: Opportunities, Challenges, and Policy Implications

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Unsustainable rangeland management and land conversion are significant sources of greenhouse gas emissions and global warming; however, rangelands also can be managed to mitigate climate change by enhancing carbon uptake through increased plant production and biological sequestration. Given that rangelands comprise approximately 312 million ha (770 million acres) in the United States alone,¹ and that, according to a 2000 USFS General Technical Report, there are opportunities to make distinct categorical rangeland condition improvements on approximately 90% of privately managed acres in the United States,² management of these lands is a critical factor to be considered as policies regarding climate change mitigation are crafted.

One way to engage ranchers in climate change mitigation is to develop a carbon market that compensates them for managing their lands in ways that sequester carbon to offset the emission of greenhouse gases by others. Between 2008 and 2010, approximately 1,000 US ranchers participated in the US voluntary carbon market through the Chicago Climate Exchange (CCX). Drawing on results from interviews conducted in 2009 with 28 ranchers in Montana, Wyoming, Colorado, and New Mexico enrolled in the CCX program, we describe some of their experiences. Additional interviews with key informants, including aggregators, brokers, range scientists, and agency personnel, inform our discussion of challenges associated with including ranchers in carbon markets and issues that will need to be addressed to develop relevant policy.

Ranchers and the US Voluntary Carbon Market
Currently within the United States, the mechanisms for buying and selling carbon offsets are strictly through the

voluntary market. Until late 2010, the CCX was the only legally binding system for trading emission sources and offset projects. (The CCX announced in November 2010 that it would stop trading carbon credits due to inactivity in US carbon markets.) In addition to CCX transactions, many carbon credits (each representing the reduction of 1 metric ton of carbon dioxide emissions or equivalent) have been bought and sold directly as “over-the-counter” (OTC) transactions through private brokers.

Carbon credits sold on the CCX were “generic,” because they could come from forestry, methane capture, renewable energy, or agriculture and rangeland soil carbon projects. Over the past few years, prices for these generic credits ranged from over \$7.00/ton in May 2008 down to \$0.10/ton in mid-2010. Prices for CCX rangeland credits sold OTC were generally higher, because they were traceable to a specific agricultural offset project.

Regardless of the mechanism for exchange, carbon credits generally are associated with some type of standard or protocol that verifies the amount of carbon sequestered by a given project. The CCX was the only emissions trading platform with a protocol for carbon offsets from rangelands in the United States. Led by a technical review team of soil scientists, the CCX developed their Rangeland Soil Carbon Offset protocol in 2007. Landowner participation in the program required a minimum 5-year “legally binding commitment to defined management practices which increase soil carbon stocks on rangelands.”³ CCX required that credits registered on the exchange be from projects generating more than 10,000 mtCO₂e¹ in emission reductions per year. As

¹mtCO₂e stands for Metric Tons of Carbon Dioxide Equivalent. This is the standard measurement of the amount of CO₂ emissions that are reduced or sequestered from the environment.