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Curtis L. VanderSchaaf

Southwest Regional Forestry Extension Specialist

clv127@msstate.edu
601-857-2284

What Happened to NCX – Natural Capital Exchange Forest Carbon Market

Carbon credit and offset markets have been available to forest landowners for more than 20 years. Thus, conceptually at least, forest landowners can help to reduce the impacts of Greenhouse Gas (GHG) emissions through the sequestration and storage of carbon resulting from the growth of their forest. But most of these markets have had relatively long contractual commitments and many of them have required some amount of capital investment to participate. Beyond that, due to the costs associated with the trade of carbon credits and offsets, many carbon projects have required large minimum acreages helping to defray costs through economies of scale. Thus, carbon markets have often been reserved for larger landbases, and particularly for large public landbases.

NCX, or the Natural Capital Exchange, was a different type of forest carbon project developer, directly catering to smaller scale private forest landowners such as family forest landowners (FFL) by allowing them to sell carbon offsets based on one-year harvest deferrals, or Harvest Deferral Credits (HDC), and with no fees to participate. Beyond that, NCX was highly advantageous to FFL because of annual contract commitments. If a landowner only wanted to participate in the market for one year, they simply didn't sign up for the next year. NCX operated under the voluntary market, neither the buyers nor the sellers had to participate. Although NCX stated there was no minimum acreage to enroll (or "sign up"), in order to submit bids and participate, a landowner had to produce at least 5 HDCs on their property. Thus, usually, minimum acreages to participate in the market were around 10 to 20 acres depending on forest type and site productivity levels; these required minimum acreages were low compared to many other project developers. Thus, NCX was applicable and attractive to many FFLs in the southeastern United States.

Unfortunately, like the defunct Chicago Climate Exchange (CCX), NCX was not able to maintain the existence of its program, in this case its one-year HDC carbon project. Before we address NCX's situation specifically, it is important to understand the concept of additionality. Additionality is the foundation of any carbon credit program. In order for purchasers of carbon offsets to justify their expense, a purchased carbon offset should be the result of something that is making a real and actual difference on the landscape. Stated differently, that the purchased carbon offset is the

result of an action that is reducing the amount of GHG in the atmosphere beyond what would have occurred if that offset was never purchased. If forest landowners are getting paid for carbon sequestered and ultimately stored in their forests that is not resulting in any GHG reductions beyond what would have occurred anyway, then the carbon offset project is not helping to reduce GHG and thus, does not affect the atmosphere and does not produce any real change. Therefore, there is no additionality resulting from the production, sale, and purchase of carbon offsets. Thus, the purchaser is spending money for no reason. Therein lies the rub, how do you determine definitively that any carbon being sequestered is truly resulting in additional GHG reductions.

Essentially throughout the entire existence of NCX's HDC program where landowners could enroll (Spring 2021 to Fall 2022), there was talk about whether the one-year HDC program, based on the tonne-year accounting concept, was truly additional and whether it would be registered and verified as such. A metric ton of carbon dioxide equivalent ($MtCO_2e$) can be defined as the global warming impact of 1 ton of emitted CO_2 over 100 years. Traditionally, a carbon credit/offset was defined to be equal to one $MtCO_2e$, and thus one carbon offset credit is equal to one $MtCO_2e$. Thus, essentially a carbon offset credit produced by a forest landowner would need to offset one tonne of emitted CO_2 for 100 years. The question with NCX, and their associated tonne-year accounting by assigning carbon offsets to landowners based on a one-year harvest deferral, was essentially if a landowner (or group of landowners) offset 100 metric tons of emitted CO_2 for one year does that produce an equivalent change in the atmosphere as compared to the traditional definition of a carbon offset. Does 100 metric tons for one year equal one metric ton for 100 years?

The registry Verra was essentially tasked with determining NCX's one-year HDC program's validity. In carbon credit terminology, Verra is a registry. The role of registries is to provide a set of standards for carbon projects including carbon measurement and methodology and the review and regulation of the project to ensure it is certified. Unfortunately, on June 22, 2022 Verra stated:

> "TONNE-YEAR ACCOUNTING
>
> Verra will not move forward with incorporating tonne-year accounting into the VCS Program at this time. Verra reserves the right to revisit this decision in the future, after another consultation on this subject that considers feedback received during the most recent consultation (February – April 2022)."

As a result in late October of 2022, NCX announced to landowners that they were postponing the NCX Winter 2023 enrollment cycle, but that they anticipated running their Fall 2023 enrollment cycle. However, in November 2022 NCX announced that they had reduced their workforce by 40% and that they were not offering any one-year HDC program cycles in the near future.

Operating in the voluntary market, there were no governmental regulations mandating landowner or purchaser/buyer involvement. Thus, the ruling by Verra really has no regulatory impact on NCX. However, the ruling by Verra impacts NCX's public image and its relations by not being certifiable in the eyes of the registry, and one could argue the confidence in the legitimacy of the program by landowners, but more importantly by the purchasers of carbon offsets. Thus, the ruling, although not legally binding in anyway, essentially forced NCX to halt its one-year HDC carbon offset credit program.

Enrollment periods were planned to be offered every 3 months, what they referred to as Spring, Summer, Winter, and Fall program cycles. Initial offerings were limited to southeastern states (Spring 2021 program cycle), but across the cycles eventually the program was offered in all 48 contiguous states. For any cycle that a landowner enrolled in, the landowner's harvest deferral contract was for one year. The one-year contract of course precluded the landowner from enrolling the same acreage into any other cycle until that one-year contract was completed. However, due to various reasons, in actuality, enrollment periods were only in Spring 2021, Summer 2021, Winter 2022, Spring 2022, and Fall 2022. The Summer 2022 cycle was not offered. On December 29, 2022, NCX announced that since Spring 2021, 4,200 landowners had participated, representing more than 5.4 million acres across the US. Most landowners reported receiving from $5 to $10 per acre, with some landowners reporting revenues as large as $15 per acre, or slightly more. NCX reported a clearing price for HDCs of $17 during the Spring 2021 cycle which eventually fell to $8 per HDC during the later program cycles.

The future of NCX and their particular tonne-year accounting methodology is not entirely closed for discussion, but for the foreseeable future this one-year HDC carbon program will no longer be offered. Based on information from their website, NCX does plan to honor all outstanding HDC contracts.