

5. The Texas Coastal Exchange

Almost a decade ago, Elizabeth Winston Jones and I came up with a concept to buy and sell ecological services along the Texas coast as a way of conserving important ecological areas and to help landowners stay on their land. Ecological services are the “goods” provided by nature that are incredibly important but often undervalued or not valued. Some of these goods such as timber, cattle grazing and hunting are well understood and represented in the marketplace. However, many important functions such as taking carbon dioxide out of the atmosphere, helping us reduce flooding, augmenting surface and groundwater supplies, removing pollutants and providing essential habitat that support fish and wildlife are neither well known nor compensated.

The initial concept developed at Houston Wilderness and then at the SSPEED Center at Rice University was called the Lone Star Coastal Exchange and proposed a system to pay landowners for the ecological services that their land produces. This concept has proven elusive to implement, but plans are unfolding to start buying and selling ecosystem services in the spring, 2019. There are also two companion systems that are under development, the Soil Value Exchange (SVX) and the Louisiana Coastal Exchange (LCX). Each have roles distinct from TCX, yet they are interrelated.

Evolution of the Texas Coastal Exchange

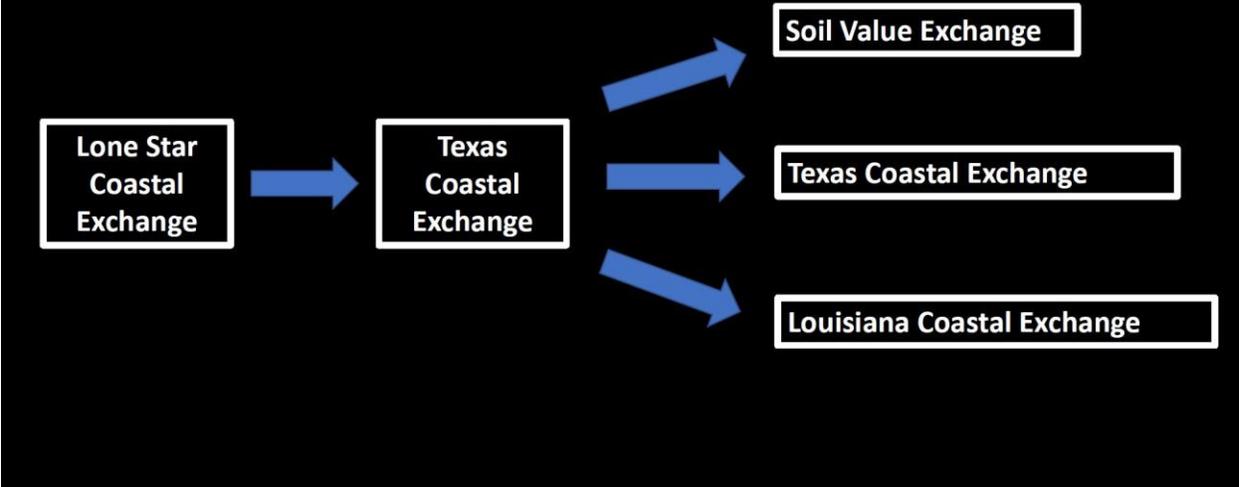


Figure 5. The early concept of an ecological transaction system has morphed into three systems currently being developed – two in Houston and one in Louisiana.

The TCX system proposed to be implemented in 2019 is very simple. First, this concept protects property rights. If you produce an ecological value for society, you may sell it if you own the land or have an interest in the land. The system is not based on regulation but is voluntary. A landowner may sell as many services as can be documented as occurring on the property. All transactions are transparent and are based on reported literature values. No measuring or restrictions are required. If the buyer is willing to accept these conditions, a transaction may occur. All prices will be established by TCX, and the transactions will be registered with TCX.

TCX intends to sell several types of ecological services. There is an emerging market for the service of removing carbon dioxide from the atmosphere, and nature performs this service extremely well.

Marshes, forests and prairies all remove carbon dioxide, but the owners are not compensated for such public service at this time. We hope to change this situation. Further, oyster reefs provide wonderful fishing and shore protection, marshes provide thousands of shrimp and crab per acre and help buffer storm surge, and native prairies soak up rains and reduce downstream flooding while making water supplies go further and last longer. Similarly, land owners are not paid for these services either.

TCX is being set up as an entry-level transaction system intended to meet regional demand. There are well established but difficult to meet international standards for sequestering carbon that have many requirements that seem punitive and not intended to be helpful to landowners or ecological enhancement and conservation. The Soil Value Exchange (SVX) is attempting to develop a carbon transaction system that will either meet these international standards or establish a broadly-acceptable trading system for corporations and others who need to offer a higher level of certification than is offered by TCX.

On the other hand, TCX is intended to sell carbon to local non-governmental organizations, churches and faith-based organizations, individual families and local corporations that wish to be carbon neutral and purchase their carbon offsets locally but are not concerned about meeting international protocols. TCX will also be offering flooding abatement services and fish and wildlife benefits from oyster reefs and marshes around Galveston and Matagorda Bays. On an as-needed basis, TCX will also provide habitat credits associated with whooping crane, ocelot, golden-cheeked warbler and other endangered species.

At the same time, the Soil Value Exchange (SVX) will be developing a more sophisticated concept for buying and selling carbon storage credits. SVX also is landowner-friendly and voluntary; however, the carbon it sells will be measured and documented rather than based upon literature values. SVX will focus on grazing lands (e.g., prairies) employing soil-health-targeted, high-yield cattle management practices that generate more tons per acre of sequestered carbon than does land involved with conventional cattle grazing. The goal of SVX is to supply the market of corporate customers who need a more robust carbon-accounting methodology. SVX plans to develop a core of corporations that will supply capital to help offset the cost of carbon measurement and develop of a long-term, large-scale carbon dioxide storage to which they will have preferential access. Such funding will also allow SVX to provide experts to assist landowners wishing to adopt rotational grazing practices that sequester more carbon and help restore native prairie grasses. SVX plans to sequester at least 100 million tons of carbon dioxide by the 2025-2027, an ambitious goal.

A third variation of the ecological services valuation process is provided by the Louisiana Coastal Exchange (LCX) being developed by Val Marmillion of America's Wetland Foundation. LCX is not initially focused on sales but rather upon voluntary efforts by corporations and foundations that create ecologically-significant projects. LCX will start with registration and recognition of such projects, and then will begin to certify the ecological values associated with these projects. This certification could be used by companies in corporate reports and other similar materials. Finally, as a third step, sales of these values

may occur, but that is not the primary purpose, differentiating LCX from both TCX and SVX.

The Texas Coastal Exchange is new and exciting. It could be a major new conservation tool, perhaps the first breakthrough conservation concept since the advent of non-governmental organizations to manage fee simple and easement lands. However, its success depends upon buyers emerging – buyers who want to be carbon neutral - buyers who want to support fishery habitat around our bay systems – buyers who are willing to try new flood management concepts.

I am often asked – what can an individual do about something as overwhelming as climate change? Well, this is one situation where each of us can and should act. Each of us have a carbon footprint (to calculate yours, go to <https://www3.epa.gov/carbon-footprint-calculator/>). Each of us can act to offset our carbon emissions by storing them in the soil or in trees. For years, I have paid Galveston Bay Foundation for sixty tons of carbon dioxide storage capacity in their marsh restoration and protection projects, enough to allow me to make my law office as well as my wife Garland and me carbon neutral. TCX will be offering local carbon credits. If you want to buy carbon storage rights to offset your footprint, send me an email at blackburn@rice.edu. I will take your order and place it with one or another of our carbon storage suppliers through TCX.