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The Soil Value Exchange: Unlocking nature's value via the market

Jim Blackburn, Henk Mooiweer, Megan Parks and Annie Hutson

ABSTRACT
As the reality of a carbon-neutral market and future takes form, all available resources will need to be focused upon removing carbon dioxide from the atmosphere. In this regard, no alternative is more promising today than nature-based solutions. Restoration of native ecosystems and the use of management concepts such as adaptive multi-paddock (AMP) grazing for ranchland have the potential to reliably store vast amounts of carbon in near-surface soil at very low cost. If only half of the existing US grazing lands is managed differently than now, these healthy soils could store from 10 to 23 percent of US carbon dioxide emissions every year. Moreover, healthy soils will significantly enhance the economic profitability and drought and flood resilience of ranches. To date, no trading system meets the needs and requirements of the private landowners that control the land that has the ability to sequester these immense amounts of carbon dioxide. The Soil Value Exchange (SVX) is designed to support landowners as they manage their property to promote healthy soils and soil carbon storage by (1) implementing a soil-carbon trading system based on robust soil carbon measurements that works for land owners and carbon credit buyers, (2) providing grants for land management consultant support, and (3) providing grants to support soil carbon measurements. SVX has established collaborations with expert land consultancy organizations and has a goal of enabling the storage of 10 million metric tons of carbon dioxide each year in 2024 and 100 million metric tons of carbon dioxide credits each year in 2028.

KEYWORDS
Carbon sequestration; Soil Value Exchange; carbon market; carbon standards; coastal flooding; ranch management; healthy soil; land management; climate change; soil carbon; carbon capture; carbon storage

Imagine a future in which about two billion tons of carbon dioxide, representing more than 25 percent of the US carbon dioxide footprint, is stored each year in restored prairies. This same future would change the mid-section of the country – from the Texas coast to North Dakota and beyond – into an ecologically vibrant system that provides greater income for farmers and ranchers at less cost than they face today. And imagine one step more: Such a system will be brought about by the workings of the market.

We have developed just such a system to buy and sell ecological services. It is called the Soil Value Exchange, or SVX, and is focused on creating value and wealth for landowners. Developed at the Severe Storm Prevention, Education and Evacuation From Disaster (SSPEED) Center at Rice University, SVX is designed to provide a voluntary ecological services trading mechanism that, because of its market orientation, could work for landowners in both red and blue states in the United States.

The SVX (initially called the Texas Coastal Exchange, or TCX, and then expanded to apply to other appropriate ecosystems) was developed as a mechanism to reduce hurricane-surge flood damage along the Texas Coast. After Hurricane Ike, which made landfall near Galveston in 2008, researchers at the SSPEED Center observed that natural systems such as coastal wetlands and prairies recovered quickly after coastal surge flooding, essentially defining the resilience that coastal planners seek to achieve. But Texas does not grant counties zoning authority, and in conservative Texas, land use regulatory programs to prevent new development are simply not feasible. Instead, we focused on creating an economic approach that paid landowners for maintaining and restoring their lands in a natural state, thereby offering a market-based alternative to selling land for real estate development to generate cash flow.

The ability of the natural system to provide "services" has long been recognized, as has the need to value those services. Almost two decades ago, Australia National University professor Robert Costanza and his colleagues developed estimates of the dollar value that ecosystems such as marshes, estuaries, and forests provide to humans. The problem has been that often there are no "buyers" willing to pay for many of these services, and trading systems either do not exist or are unsuccessful in allowing private landowners to capture this value.

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Texas coastal ranchers already capture the value of some of the ecological services provided by the marshes and prairies. Cattle graze on native and "improved" grasslands. Landowners lease their land for quail or deer hunting. Forest owners sell timber. But for many landowners, the income from these activities is not enough to offset the bite of taxation and the difficulties of meeting the needs and demands of the next generation.

Fortunately, there are additional services that landowners could develop and capitalize. These include the sequestration of atmospheric carbon dioxide in soil, the reduction of flooding by storage of rainfall in the soil and wetland depressions and by absorbing hurricane surge flooding, the enhancement of water supply by restoring and maintaining seeps and springs that flow during times of drought, and the enhancement of fish and wildlife stocks. And a landowner-friendly ecosystem services marketplace could allow market mechanisms to promote carbon storage and hazard resilience at the landscape scale.

What is the Soil Value Exchange?

From our perspective, the landowner is the key to flood protection. If a system could provide landowners with income for making "correct" decisions, then the undeveloped, private lands of the Texas coast (and right now, roughly 80 percent are undeveloped) could remain natural rather than becoming candidates for real estate development. As much as 45 percent of this undeveloped land should simply never be developed because of flooding potential from hurricane surge. Our research shows that the proper kinds of market systems could offer landowners in these areas multiple income streams that would incentivize them to make decisions to preserve their property so it also serves the public interest by storing carbon, protecting against-storm surges and other flooding, and storing water that provides a variety of environmental benefits, both to the landowner and to society at large. (A map showing our initial target area for an ecosystem service exchange is shown in Figure 1.)

The Soil Value Exchange (SVX) is working today with buyers and sellers to create an organization that supports landowners in their efforts to manage their land for healthy soils and soil carbon storage, while at the same time providing buyers – most likely corporations with high carbon emissions – with large-scale, reliable, and affordable storage in restored ecosystems. The sellers exist but do not have a system that works for them. The buyers are beginning to materialize and are willing to invest in the development of a nature-based system that does what technology is struggling to do – provide a scalable carbon storage system at a reasonable cost per ton. That is what SVX intends to deliver.

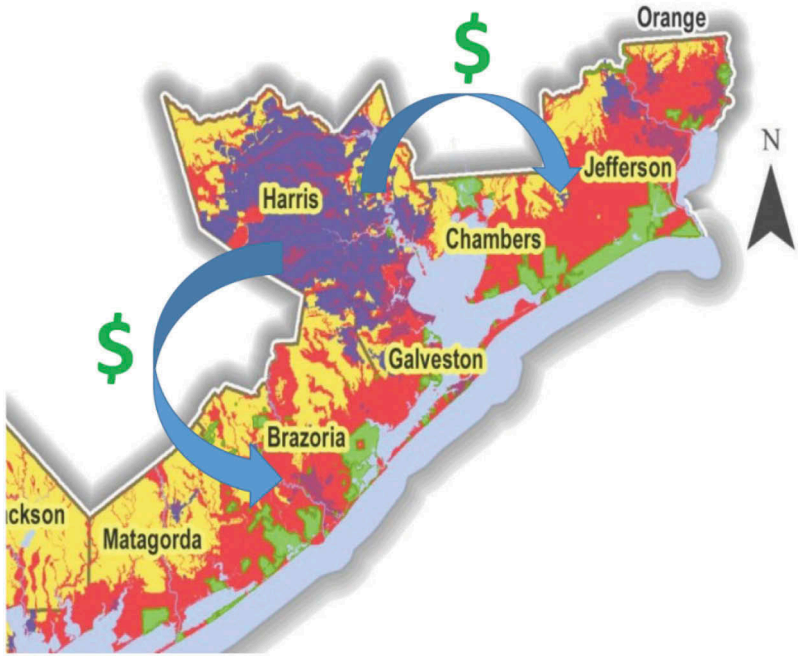

Figure 1. SSPEED Center non-structural flood damage reduction concept of transferring capital from the urban area to landowners in the high-risk hurricane surge zone and flood plain of the upper Texas coast (shown in red – approximately 3 million acres). The areas shown in green are lands protected by either federal or state governments or non-governmental organizations and the areas shown in purple are developed. Credit: Graphic modified from A Texan Plan for the Texas Coast by Jim Blackburn.

In the Soil Value Exchange system – which will be launched as a stand-alone Texas nonprofit corporation in the summer of 2018 – companies and governments will invest to become a member of a "buyers club" for specific types of ecosystem services the buyers are seeking. For example, government agencies – flood control districts, for example – might place money into a buyers club, with the aim of paying landowners to provide flood retention and prevention services. Landowners, meanwhile, would join "sellers clubs" in order to offer such floodwater storage. The SVX will manage the buyers and sellers clubs and the trading system through which buyers and sellers exchange money for improved land management that reduces flooding.

The SVX could also match buyers and sellers of other environment-improving services, notably the increased storage of carbon in the soil through improved land management.

We have seen indications of buyer interest in such voluntary markets. The Guadalupe Blanco River Authority, a Texas regional water supply entity, and The Aransas Project, a nonprofit environmental group, have partnered on research into SVX water-supply concepts. Two well-known oil companies have indicated that they wish to become members of the SVX buyer's club for soil carbon storage purposes. And the US Army Corps of Engineers, the Federal Emergency Management Agency (FEMA), and/or state and local drainage entities might be inclined to develop non-structural flood abatement plans that would include landowner flood storage payments.

Farmers and ranchers have obvious reasons for exploring the increased revenue opportunities the SVX could provide. Research into farmer and rancher needs has discovered an existential crisis in the farming industry, which exhibits a higher suicide rate in the United States than is found among returning war veterans. This finding was a surprise to us; it indicates a need for and an opportunity to create a new landowner-focused economy that would offer social as well as ecological benefits.

Our team researched existing carbon trading systems active in the United States, all of which derive from and are consistent with the Clean Development Mechanism of the Kyoto Protocol. Many Kyoto-derived carbon standards allow for emission-reductions credits to be granted when land is used to sequester carbon dioxide by, for example, planting trees. Those credits can then be sold in trading systems to entities that need to store some or all of their carbon dioxide emissions. Such carbon storage offsets are included in European carbon markets and in some voluntary and regulatory-driven trading systems in the United States. We see a clear trend that governmental and societal pressure to address climate change will inevitably and increasingly create demand for carbon storage.

But the existing trading systems are not well suited to the situation facing most landowners and ranchers in coastal Texas and many other regions of the United States. Many of these existing systems, surprisingly, do not allow multiple sources of income from land dedicated to carbon sequestration; that's to say, a rancher could not claim emission reduction credits while using the same land to generate income from cattle grazing. By contrast, the SVX system would allow multiple income streams to be "stacked" in order to enable ranchers and farmers to benefit from carbon sequestration on their land and create an excellent business proposition.

Additionally, the existing carbon trading systems require that landowners demonstrate a change in their land use practices in order to sell credits, thereby disallowing the participation of landowners already using good management practices. We see soil carbon sequestration as quite similar to growing potatoes; if it is there, you can also sell it. Thus, if you can measure an increase of carbon in the soil, then you are allowed to sell this carbon storage service under a commodity contract that agrees to keep that carbon storage system intact for a period of at least 10 years.

Most of the existing voluntary carbon standards generally require commitment to a project term of between 20 and 100 years for land-based carbon sequestration, and they set forth management practices that must be followed in order to secure credits. The Climate Action Reserve, for example, requires that grassland projects occur on land bound by an enforceable conservation easement, thereby dedicating the land to carbon storage for a period of 100 years. This length of time will not be acceptable to private landowners who do not wish to tie the hands of future generations. Most voluntary systems make representations regarding the maintenance of carbon reserves for 100 years as well. Similarly, many of these systems require that specific land-management principles be followed to guarantee that the yield that has been projected will in fact be delivered.

The SVX system addresses these two problems as follows: For each carbon sale, the seller contracts to maintain the carbon in storage for a period of at least 10 years. As additional sales take place, the obligation is extended for an additional 10 year period, offering a rolling obligation that will follow the market. As to management techniques, SVX will only allow the sale

of carbon that has been measured as increasing from the last test date. In this way, the landowner can follow any practice he or she wishes. If that practice yields no carbon increase or a small carbon increase, then they will simply not have any or much carbon storage to sell. SVX will ensure that buyers will obtain the carbon storage that they purchase by maintaining a carbon storage "buffer." A fraction of the available carbon storage will not be sold but kept in a bank as back-up for unforeseen loss of purchased carbon storage.

As previously stated, the SVX system was designed with landowners in mind. These landowners own the storage vessel for ecosystem services, including carbon sequestration; without their participation, there is no storage. The SVX system is, therefore, first and foremost voluntary; it is not a regulation-based system and does not depend upon regulations to generate its market. Second, it must generate revenue for the landowner. Third, it must be reliable, and fourth, it must be hassle free and easy to understand and implement.

The voluntary market

One big question: When will voluntary buyers of carbon emission credits and other ecological services emerge? To date, a small voluntary carbon market exists, using trading systems such as the Verified Carbon Standard (now Verra) and the American Carbon Registry. To date, prices and volume have been relatively low. In our view, however, that will likely change. Beyond governmental regulatory efforts that involve carbon credits – such as carbon markets in the European Union and in California – market pressure is mounting upon oil- and gas-based economies to address their carbon emissions. The movement to curtail carbon dioxide and other greenhouse gas emissions is, in its current state, reminiscent of earlier large-scale social movements, including anti-apartheid, anti-tobacco, and anti-colonization efforts, to name a few. For example, Pope Francis's encyclical on climate change, *Laudatu Si'* – perhaps the most revolutionary environmental or faith-based document of the early 21st century – exerted enormous moral pressure. Financial pressure is coming from divestment action by major investment funds and other efforts from investors who question the long-term economics of hydrocarbon reserves and oil and gas development projects. Legal pressure stems from valuation issues related to stock offerings, and the difference between public information releases that corporations make and the analyses of climate change within corporations. Concepts of fiduciary duty relating to knowledge about climate change and greenhouse gas emissions are evolving. Change is afoot.

The road to carbon neutral

An emitter can reduce carbon dioxide emissions in three basic ways: avoid, minimize, or capture emissions by removing them from the atmosphere. To avoid emissions, users can pursue sources of energy that involve no hydrocarbon combustion, such as solar or wind. To minimize emissions, users can become more efficient via better insulation and design of buildings, low-emission vehicles, energy efficient appliances, or changes in consumption demands. But for those carbon emissions that remain, the only path toward carbon neutrality involves removing carbon dioxide from the air and storing it. Several technology-based engineering solutions have been developed, but implementation has been virtually nil because of the prohibitively high costs of such carbon sequestration at meaningful scale.

There is a proven technology that is scalable and inexpensive: nature-based carbon capture and storage based on photosynthesis, which cycles carbon dioxide into carbohydrates that then are stored in plants or in the soil. Although carbon is sequestered into prairie soils by a restored, native prairie, carbon sequestration and other ecological benefits can be increased on ranchland by management practices that emulate the action of buffalo grazing on the prairie, including what is known as adaptive multi-paddock (AMP) grazing. When these more intensive grazing practices are used, plants, insects and soil microbes thrive, initiating natural processes by which impressive amounts of carbon dioxide captured by photosynthesis are pumped into the soil. For hydrocarbon fuel suppliers, refiners, and some fuel users, soil carbon storage is likely the only affordable and scalable "technology" to neutralize the impact of emissions from their facilities and from use of the hydrocarbon fuels they produce.

Clearly, the carbon-neutral movement is taking form. Volvo announced in 2017 it would manufacture only electric and hybrid vehicles in the future.[1] Monsanto, Google, Microsoft, Nike and many other firms have announced plans to become carbon neutral, as have several cities participating in the carbon neutral alliance, along with the Canadian province of British Columbia and the country of Norway. Royal Dutch Shell announced that "there is no other issue with the potential to disrupt our industry, as climate change" and has committed to nature-based carbon removal strategies, stating its intent to also sequester an amount of carbon equal to the carbon-emissions footprint of its customers.[2] The maritime industry

similarly has said that it would become 50 percent carbon neutral by 2050, representing 1.5 percent of global carbon emissions.[3]

Most major corporations have calculated and keep records of the change in their carbon footprints, even if they have not decided what, if anything, to do about them. But the market will force them to act. It is, we believe, only a question of time.

SSPEED Center research estimates that the carbon footprint from the operation of a 150,000-barrel-per-day oil refinery and the customer carbon footprint from use of that refinery's products totals 25–30 million tons of carbon dioxide per year. If four to five tons of carbon could be stored, per acre, per year (an ambitious, but realistic goal), five million to six million acres of grazing land could capture and store the entire carbon footprint of the refinery and its customers, every year. And soil carbon storage might offer other novel business opportunities. For example, a car manufacturer might purchase in advance the carbon footprint of an internal combustion engine vehicle, allowing their customer to drive a carbon neutral car at a relatively low cost. In the future, customers may well demand these options, increasing demand for voluntary market mechanisms.

Building markets for other ecosystem services

The SVX team also believes that voluntary markets for ecological services beyond carbon storage can be developed. When landowners manage their lands in an appropriate manner, they not only store vast amounts of carbon in their soils, they also create a wide range of other ecological benefits. One of those benefits is soil water storage.

According to recent field testing conducted by the SSPEED center in the Katy Prairie west of Houston, Texas, grasslands with healthy root systems and soils can exhibit infiltration rates an order of magnitude (that is, 10 times) higher than occurs in degraded grasslands with unhealthy soils. During heavy rainfall events, soil health can mean the difference between severe flooding downstream and no serious flooding. Ecologically healthy soils with high water retention are also more drought resistant and hence provide economic resilience to landowners. Proper land management in a watershed provides a low-cost way to prevent flooding and can supplement or even replace costly traditional engineering solutions.

A case study in land and water management is being developed in a partnership between the Guadalupe Blanco River Authority, a Texas regional water supply entity, and The Aransas Project, a nonprofit environmental group that sued the state of Texas over the deaths of 23 whooping cranes in 2008. This lawsuit led to the creation of a partnership that seeks to provide fresh water for estuarine inflow for the cranes, and a water supply for municipal and industrial needs. The case study seeks to quantify and implement SVX trading concepts within the Guadalupe River watershed, in hopes that coastal prairie restoration will enhance spring flows and bank seeps. This agreement will also explore ways for landowners to be paid for maintaining and enhancing private lands to encourage the establishment of wintering territories for the now-expanding whooping crane population.

There is no guarantee that these markets will emerge in a timely manner. But many of these land-management techniques will also improve cattle yields and reduce operating costs in the long term, thereby providing operational benefits immediately. In short, the movement toward soil health implicit in this concept is also movement toward economic resilience.

Revenue generation

The SVX approach is specifically designed to allow the landowner to make as much money as possible from as many ecosystem markets as possible. Some carbon standards prohibit "stacking" of benefits, meaning that they do not allow the landowner to pursue cash flow from any product other than stored carbon. This is simply contrary to the goal of landowner participation and seems strangely punitive. The carbon market is not and may never be robust enough to support a farmer or rancher who decides to become solely a carbon farmer or rancher. But by combining a cattle operation, carbon farming, and leasing his land for hunting purposes, a rancher could tap several income sources that allow his ranch to remain healthy and profitable.

Those income streams could include payments for flood storage and water supply services. The Corps of Engineers, FEMA and state or local drainage entities might be inclined to develop non-structural flood abatement plans that would include landowner flood storage payments. State water agencies may be willing to support landowners to store water in the soil to enhance springs and seeps and increase base flow during droughts. And if a landowner has an endangered species on his property and different management techniques could benefit that species, then he could receive payments for such actions from governments or private groups interested in conservation.

Under the SVX system, markets and money create the impetus for change. This landowner-focused

system hopes to get the significant participation across the United States as quickly as possible – a goal that cannot be achieved by placing artificial limits on the income potential of landowners. Indeed, artificial limitations on landowner income work against the social good.

Reliability

A voluntary market system must be reliable, and the SVX establishes reliability through testing. All participants enter the SVX protocol by undertaking initial testing to establish a starting point for carbon and water. No such value is created until a second test is conducted, several years later. If the landowner has used good management practices, an increase in the carbon and water capacity of the soil should be measured. It is this measured and validated increase that can then be traded through the exchange. The testing concept is illustrated in Figure 2.

Carbon testing protocols are well established. Soil density and soil carbon content can be sampled and measured using accepted analytical techniques and protocols. The number of samples required to establish a dependable carbon measurement will vary depending upon factors such as variations in soil type, topography, and existing use. Flood abatement and water-supply enhancement methodologies are under development.

To create ecological service value, a landowner must maintain his property in a way that protects the storage over time. Other carbon offset systems use easements to ensure long-term stability; that is, the landowner enters a legal agreement to dedicate his land over the very long term – often 100 years – to carbon storage. SVX will accept these kinds of long-term easement-protected credits, but most farmers and ranchers want to maintain independence, and they disfavor easement devices. For this reason, credits developed by the SVX system will be sold under a commodity contract that includes a recordable commitment to maintain the commodity in the soil for a set period of time – either 10 or 20 years. The SVX system will have the ability to incentivize longer-term storage and seek damages and repayment of monies in the case that a landowner defaults on his commitment.

There are several voluntary and regulatory systems in existence today, but they collectively have very few registered grassland carbon sequestration projects. The SVX system has been designed with a focus upon grassland and marshland storage. Four aspects of SVX represent changes from other systems – the SVX standards, the buyers club, the sellers club, and landowner support mechanisms.

Standards

SVX registers property by initiating carbon testing across the tract in a scientifically and statistically sound manner, taking into account soil type and topography. No sale may occur until a second set of tests are taken after several years, and that sale may only include the increment of carbon dioxide that has been stored in the soil as organic carbon. Landowners are allowed to manage their lands however they wish and to undertake other income-

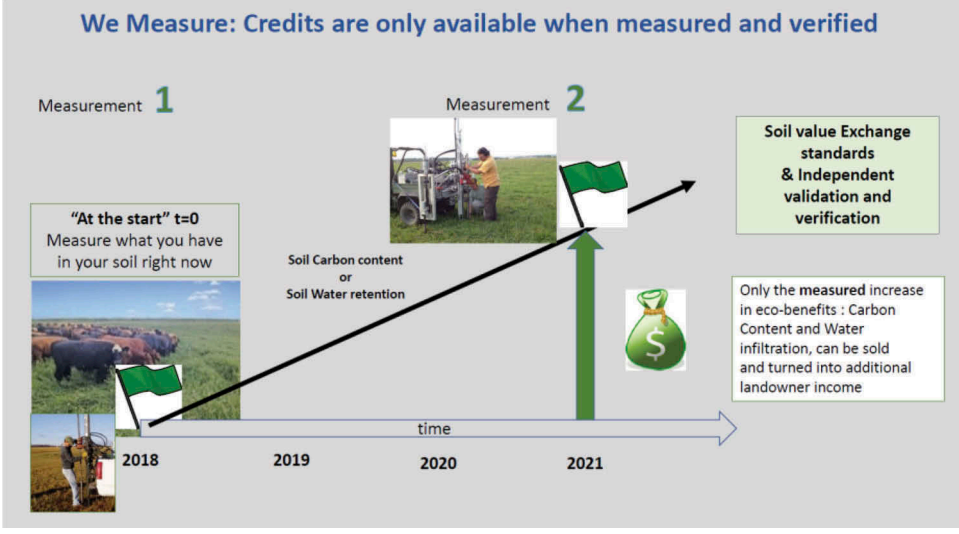

Figure 2. SVX concept of "planting a flag" by initial testing to establish a base point and then conducting subsequent testing to verify saleable product. Credit: Diagram by Henk Mooiweer.

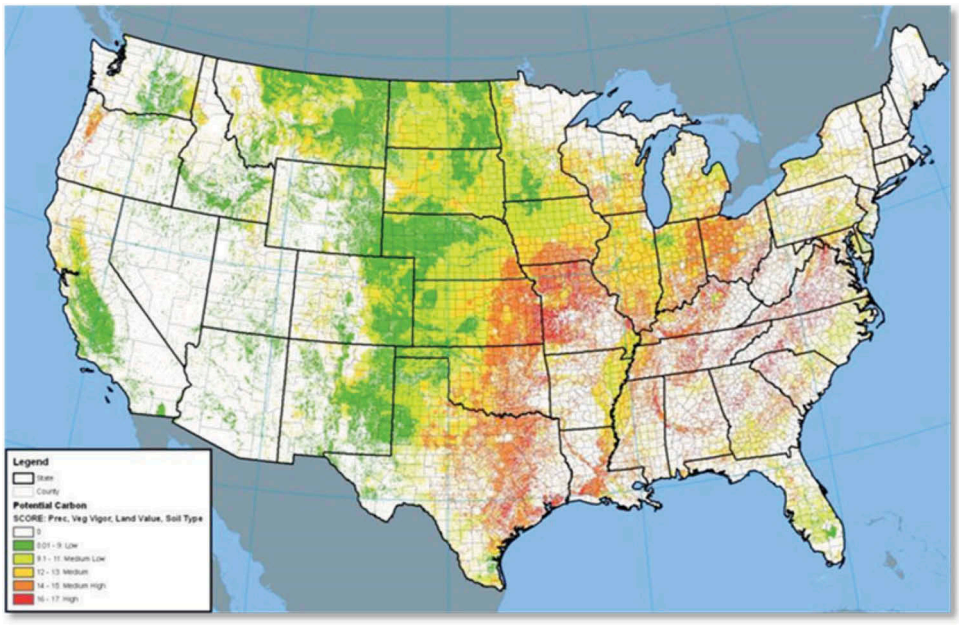

Figure 3. Carbon storage potential based upon soil type and rainfall among factors. Areas shown in red have the highest potential, followed by yellow and then green. Credit: Map prepared by Steve Apfelbaum, AES consulting.

generating activities. If there is no increase in measured carbon storage, however, there can be no sale. At the time of sale, the landowner must commit through a commodity contract to maintain the carbon in the soil for a specific length of time (currently set at a minimum of 10 years). Each subsequent sale will be based upon further measured increases in carbon storage, and each subsequent transaction will include an additional commodity contract commitment for 10 or more years of sequestration. We do not prescribe specific management concepts. We allow stacking of income streams. Our standard does require that the methane emissions from cattle be deducted from saleable carbon dioxide storage if the rancher is raising cattle. We stimulate every landowner in the region to copy best practices and emulates them, therefore increasing total carbon sequestered – and their personal income. We want the rancher to succeed, and carbon to be sequestered, and ecological integrity to be restored.

Buyers and sellers clubs

These clubs are mechanisms by which buyers help create the resource they need – carbon storage – and sellers receive grants and advice that they in turn need to be more successful and encourage healthy soils. Essentially, the buyers and sellers become partners in creating a successful sequestration system, under the management of the SVX.

Landowner support

To the extent that the sellers are inexperienced in some of the better sequestration and restoration management skills, the SVX will arrange grants to access expert advisors, through partnering arrangements with existing organizations with land management expertise.

In sum, the buyers help the sellers create the capital that the buyers wish to buy, and the SVX transaction rules allow the exchange to take place. In this way, stored carbon can be acquired, just as if it were potatoes growing underground.

Impact

Current data indicate that the United States emits over 6.5 billion tons of carbon dioxide equivalents.[4] Some of those emissions can be avoided and/or minimized. But given the current economic model for the United States, even then billions of tons of carbon will still be released into the atmosphere each year. Nature-based solutions have the potential to store massive amounts of carbon. But to impact climate change in a meaningful way, this potential must be reached relatively quickly.

SVX has therefore set ambitious but realistic goals. In the first year of operation, set to begin in July 2018, SVX hopes to enroll about 100 landowners representing some 200,000 acres of land. The next year's goal is 450 ranchers representing about 900,000 acres. By 2021, the first sales of carbon credits will take place, even as SVX enrolls 1,000 ranches representing two million acres.

Several key measures are important, if the SVX approach is to make a dent in the current carbon emissions of the United States; one is price and the other is carbon yield per acre. Expectations are that rates of storage in the range of 4 tons of carbon dioxide per acre per year are possible, depending mainly upon soil type and climate, as well as management technique. Only the future will tell the market price for carbon emissions, but we anticipate that carbon farming can be an interesting addition to the income that ranchers receive from cattle operations. Ranchers have been clear in indicating that such a supplemental cash flow would catch their attention.

Although the concept for the system was developed by studying Texas coastal prairies, the area shown in red, yellow and green on Figure 3 represents the initial target for the SVX. These areas have significant carbon storage potential and encompass some 655 million acres. If 50 percent of this acreage is converted to adaptive multi-paddock (AMP) grazing techniques, in which livestock are grazed intensively for short periods of time and then moved to allow plants to recover, those landowners could collectively store 600 million to 1.5 billion tons of carbon dioxide each year, in addition to potentially increasing cattle production and reducing the cost of cattle operations.

There is ample evidence that nature-based solutions provide the opportunity to store atmospheric carbon dioxide quickly, reliably and affordably, and at a scale that matters. To unlock this potential, landowners must be supported and incentivized to manage their land in a way that improves ecology and soil heath and in doing so also stores large amounts of carbon in the soil, for which robust carbon credits are issued.

Potential carbon credit buyers will help to unlock nature's capital by the initial funding of this system of landowner support, robust measurement, and transparent and reliable trading. Healthy soils and ecology, water resilience, thriving farms and ranches, and significant reduction of atmospheric carbon dioxide emissions will be the result.

At least, that is our aim – and our genuine expectation. Stay tuned. The future is about to get very interesting.

Notes

1. See https://www.nytimes.com/2017/07/05/business/energy-environment/volvo-hybrid-electric-car.html.
2. See https://www.shell.com/media/speeches-and-articles/2018/changing-in-a-time-of-change.html.
3. See https://worldmaritimenews.com/archives/172244/ics-shipping-set-to-cut-co2-emissions-by-50-pct-by-2050/.
4. See https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf.

Disclosure statement

All work supporting the development of the Soil Value Exchange was funded by private foundations, including Houston Endowment of Houston, TX, the Hershey Foundation of Houston, TX, and the Trull Foundation of Palacios, TX. Dr. Mooiweer used to be employed by Royal Dutch Shell Oil Co. and still owns stock in that company. Ms. Parks used to be employed by British Petroleum and still owns stock in that company. Mr. Blackburn's private investments are primarily in various companies and bonds over which he has no day-to-day control. Mr. Blackburn's legal practice is in the process of being closed and he has no active representation of any major hydrocarbon producer or user. Ms. Hutson is recently graduated from law school and has no conflicts of which she is aware.

Notes on contributors

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Henk Mooiweer, executive director of SVX, holds a doctorate in organic chemistry. In his 25-year career at Shell, he managed multiple complex business and innovation opportunities. At Shell GameChanger, he took disruptive, high-impact innovations to implementation. Henk is an adjunct professor at Rice University, teaching invention and innovation.

Megan Parks is an entrepreneur focused on soil health, regenerative agriculture, and climate change. She currently serves as vice president, Eco-Benefits at Soil Value Exchange. Previously, she worked for nearly two decades on environmental issues in the energy industry. She holds undergraduate and graduate degrees in engineering.

Annie Hutson is general counsel of Soil Value Exchange, overseeing legal affairs, including corporate governance, business, and regulatory compliance in various states. Hutson earned a bachelor's degree from Tulane University and received her J.D. with a Diploma in Comparative Law from Louisiana State University's Law Center.