

April 24, 2019

To: Participants in April Conservation Investment Round Table
From: Tim Male, facilitator, Environmental Policy Innovation Center
RE: Background: Private Capital Investment in Restoration and Land Conservation in the Chesapeake Bay

Limitations to public and philanthropic funding, coupled with a range of threats to our environment, compounded by climate change, have led to much excitement and speculation about the potential for private sources of financing to engage in environmental conservation and restoration. The concept of private, profit-seeking investment in conservation is not new, but it is also not a particularly mature space.

One of the key questions that remains unanswered is whether environmental outcomes can be achieved alongside market-rate or below market-rate financial returns for investors? If so, it needs to happen on a large scale – at the scale of billions of dollars in a place like the Chesapeake Bay watershed.

In advance of the meeting on Monday in Baltimore, I am providing this partial and concise review of the state of private investment in conservation in the U.S. to help make our meeting more productive and to get you thinking about some of the questions we will discuss.

How much private conservation finance is happening now?

Cumulative US investments totaled [\\$1.7 billion through 2015](#). According to the [State of Private Investment in Conservation 2016](#), *global* private investment in conservation totaled \$2 billion in 2015 alone. By comparison, public sector commitments were \$31.7 billion *globally* during the same time period. However, these estimates are imprecise – another estimate puts the scale of annual investment in just mitigation banking at more than \$1.7 billion. What we know is that the field is rapidly growing and there are investors with funds ready to be committed to new projects each year. Several examples of real and proposed projects are included in the [Coalition for Private Investment in Conservation \(CPIC\) blueprints](#).

What does private investment in conservation look like?

There are a number of tools used to attract private return-seeking investments to conservation projects. At a basic level, investors can generally choose to engage in **debt** (lending money that is repaid to the investor, with or without interest) or **equity** (putting up money in exchange for an ownership stake in a company) investments. Debt investments generally return a lower interest rate over the life of the investment than equity. Venture capital is a form of equity investment that can generate high rates of return in rapid-growth sectors like tech, but which is not very common in conservation due to long time horizons for achieving outcomes.

It's helpful to think about how environmental goods and services are monetized in order to repay conservation investments. Three broad categories are outcome-based markets, avoided cost markets and environmental credit trading:

Table 1: Different Ways to Monetize Environmental Goods and Services
Outcome-based markets attempt to get people to pay for an ecosystem service based on its proven performance or the quantified value of the benefit once received. These approaches are a response to traditional public or philanthropic funding, which supports project actions rather than outcomes. These “pay-for-success” approaches use a contracting process to enable payment from project outcomes, and the project developer only gets paid if and when the desired outcome is achieved. Such an approach shifts the risk of a project’s success or failure from the funder to the project implementer.
Avoided cost markets are investments into projects that mitigate expected future costs. For example, if a water utility knows that they face significant threats from wildfire in their operating area, they may be willing to invest in forest restoration measures that would reduce damages to water infrastructure for which they would otherwise have to pay.
Environmental credit trading (ECT) refers to different types of market-like transactions that enable payment for environmental assets, externalities and attributes. The specific amount of environmental benefit being created and traded is defined as a credit. ¹⁸ ECT programs currently in existence include wetlands, streams, carbon, and habitats—as well as water quality and quantity. All of these programs attempt to place monetary values on particular environmental benefits, and the credits themselves represent quantified outcomes.

Source: [Private Capital for Working Lands Conservation: A Market Development Framework](#)

These approaches to monetizing environmental goods/services can enable a range of financial investments that pay for environmental outcomes. As mentioned above, debt and equity are two primary approaches to doing investments. Most other forms of investment are a variation on debt or equity, or sometimes a hybrid of the two.

Debt

Homes mortgages and municipal bonds are common examples of debt in America. Debt refers to any financing approach that involves lending money that must be repaid in full, usually with interest. Impact investors and foundations that value non-financial returns might also make zero-interest or low-interest loans. Debt investments are structured with a pre-determined timeframe (i.e. a maturity date), and either a fixed or variable interest rate. So, the investor knows when to expect repayment, and at what rate of return. Things like maturity, interest rate and payment sizes can all be negotiated by the investor and borrower in order to find mutually beneficial terms that suit the particular needs of the parties and

of the project being financed. For example, student loan debt payments might be deferred during a period when a recent graduate is not yet earning much money.

Equity

Equity investments come with an ownership stake—either public or private—in a project or company. Stock in publicly-traded companies like Apple, AT&T or Microsoft are one example of equity investments. On the other hand, private equity refers to buying an ownership stake in a company that is not publicly traded on a stock exchange, and the investment is typically accompanied by active involvement in directing or managing the business.

There exists a range of conservation finance tools and approaches, with debt and equity investments throughout. Many approaches are hybrids of two or more tools, and they represent a range of opportunities for investment with low to high financial returns, small and large scale.

Pay for Success

The ‘pay-for-success’ approach to conservation finance—as mentioned in the outcome-based market row in the above table—is about paying investors upon successful attainment of particular outcomes, such as a certain amount of stormwater managed or acres converted to habitat.

Environmental Impact Bonds (EIBs)

Environmental Impact Bonds are a debt-based pay-for-success structure. EIBs allow municipalities or other jurisdictions to raise funds from investors in order to finance green public sector projects. The bond’s repayment rates are based upon achieving particular benchmarks—a project that exceeds the benchmark will repay investors at a higher rate than if the benchmark is not reached. These approaches allow a city or other jurisdiction to innovate without the direct financial risk of a failed project because the investment dollars come from external private sources. The jurisdiction repays investors—more for successful projects and less for failed ones. [Quantified Ventures](#) has designed a few EIBs recently, including two green infrastructure bonds for stormwater management—one in [Washington DC](#) and one in [Atlanta, GA](#).

Green bonds

[Green bonds](#) are bonds that finance projects that purport to deliver positive environmental or climate outcomes. Funding things like wind and solar energy, electric vehicles, efficient public transport and water investments, they may be issued by cities, governments, and corporations. Unlike Environmental Impact Bonds, green bonds are not performance-based. They are simply about financing projects that are considered “green.” Green bonds are sold throughout the world in a range of currencies via the bond markets. Per the [Climate Bonds Initiative](#) there were \$250 billion in green bonds issued by US cities in 2018.

Mission-based investments in sustainable products

Direct lending to, or ownership stake in, companies that invest in environmental outcomes is another form of conservation finance. This approach works if the borrower/investee can repay the financing through income earned from activities like tourism, forest product sales, agriculture or fishing. Some examples of funds doing this sort of investing include [RSF Social Finance](#), [Catch Invest](#), [Zoma Capital](#), and [Encourage Capital](#). An example of this type of investment would be to invest in sustainable forest

management, where wood products earn a premium from Forest Stewardship Council certification, and that premium is invested in environmental protection or restoration.

Public-Private Partnerships

[Public-private partnerships](#) are not really debt or equity. They are contracts that engage private companies to undertake projects for public good (e.g. parks, bridges, public transit) in exchange for a cut of the fees or profits earned from the project. They make sense in cases where a private company can complete the work in a more cost-effective and efficient manner than government. Public-Private Partnership contracts tend to last 25-30 years or more.

Why do investors choose conservation investments?

According to the 2016 State of Private Investment in Conservation survey, only 27% of for-profit investors invested in conservation primarily because of financial returns. They had several other motivations for their investments, including fulfilling their own organization's conservation objectives, achieving other outcomes like economic prosperity, aligning with their corporate social responsibility plans, as well as diversification of their investments.

What are the risks of conservation investing?

Private investment in conservation is still far behind where we need it to be to combat climate change and reverse decades of environmental degradation. There are several reasons investors shy away from such investments:

- Perceived risk due to lack of track record and 'proof' of success in conservation finance space
- Misalignment of risk and reward, i.e. high risk, low financial return
- Lack of understanding of the approaches that might be good investment recipients; related to this, no common language for measuring outcomes
- Long time horizons before seeing financial return or evidence of conservation outcomes
- Lack of "investable" projects or entities (i.e. too few companies with strong track record, lack of cash flow for repayment, etc.)

Are there features of policies that succeed in driving investment? Ones that fail?

In the US, the Clean Water Act, the No Net Loss of wetlands policy from the 1990s, and key regulations (especially in 2008) are responsible for driving wetland and stream mitigation banking markets. On the other hand, water quality trading (i.e. nutrient trading) is not as successful because of the lack of clear rules and consistent, government-accepted tools to predict and quantify expected nutrient values. EPA and the states could do more to overcome fear of uncertainty in water quality markets which would significantly improve the horizon for private investment.

On a general level, there is the challenge that with several overlapping jurisdictions and shifting policies, projects will get tied up in regulatory quagmires ([Taking conservation finance to scale](#)).

What benefits are realized when private investment and investment backed companies help deliver public goals?

The public benefits when public goals are delivered faster and cheaper due to private investment. Private investment in conservation can speed things up due to a higher risk tolerance, streamlined contracting and the presence of specialized knowledge and flexible project teams. Pay for success contracts allow government to save money on testing new things because private investors foot the upfront costs; government only pays for successful outcomes. Public private partnerships streamline the contracting and project management processes and deliver solutions at more affordable rates than government acting alone. Credit trading allows private companies to manage their own waste more affordably and creatively than through government-mandated limits alone.

Some Active Environmental Markets

- Carbon markets like the East Coast's [Regional Greenhouse Gas Initiative](#) and California's [cap and trade program](#) have been successful in places with mandatory emissions reductions. Generally speaking, these markets rely on policy to incentivize emissions reductions by private parties who can either sell credits for avoided emissions, or purchase credits to offset exceeding their emissions targets.
- [Wetland mitigation banking](#) is a seasoned environmental market that continues to grow. Wetland mitigations allows offsets for construction projects that cause wetland loss.
- [Transferable fishing quotas](#) are a market-based tool that help fisheries comply with total allowable catch limits. Fishing quotas correspond to a particular level of fish harvest, and if transferable, they can be bought and sold or leased.
- [Water quality markets](#) allow parties to sell credits for avoided nutrient runoff (usually nitrogen and phosphorus). These markets are still developing and in some cases their development is stalled due to lack of clarity in their rules.
- Maryland's [forest mitigation banking](#) has taken shape since passage of the Forest Conservation Act in 1991. Banking programs are administered by county governments. New legislation was recently passed in the state assembly that may increase demand for forest credits.

Putting conservation finance into practice in the Chesapeake

Let's think about how these concepts might help us design a financing solution to support land protection goals for the Chesapeake Bay. We will consider:

- How can the land conservation community plan acquisitions in ways that are conducive to attracting private investment and restoration?
- Where are the opportunities for partnerships among the land conservation community and the private investment and restoration sectors?
- What are the desired outcomes? Acres or species protected or restored? For how long and by what means?
- How much will it cost to achieve those outcomes in the most efficient manner?
- What kind of financial return can be earned from this investment in protection? Can the project generate credits for sale to developers? What about water quality credits for sale to utilities? Tourism income? Fees or taxes?

- When could we reasonably expect that changes conservationists might make in priorities or strategy - or that Chesapeake governments might make in their policies – would lead to increases in investment?
- Who are the players that can help ensure these outcomes are achieved through active management and monitoring? Cities? Counties? NGOs? Utilities? Private landowners?
- Who will benefit and who will pay for these outcomes? Are there impact investors that care about protecting the Chesapeake? Can one of the players managing the land protection (e.g. a city or county) issue a bond to raise money? If so, what kind of return could they offer based on sale of credits or income from the protected land? Are there other beneficiaries that would get value out of the protection?