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Introduction to Environmental Impact Bonds

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Quantified Ventures is working to bring impact capital to address challenging issues.

- We source deals for impact investors using a Pay for Success financing model
- We’re working with a range of partners on projects in these areas and others:
  - Green infrastructure & resilience
  - Agriculture & water
  - Sustainable land use & conservation
  - Waste recovery
  - Energy and energy efficiency
How is an Environmental Impact Bond (EIB) structured and who is involved?

1. Structures deal, aligns and coordinates stakeholders
   - Investors
   - Payor
   - Evaluator
   - Service Provider or Project Implementation Partner

2. Provide up-front capital to launch or scale program
   - Investors

3. Assesses project outcomes to determine repayment level
   - Evaluator

4. Repays investors based on achievement of outcomes
   - Payor

- Investors provide up-front capital to launch or scale a program.
- An Evaluator assesses project outcomes to determine the repayment level.
- A Service Provider or Project Implementation Partner implements the solution or services benefiting target population(s) or meeting regulatory requirements.
- The Payor repays investors based on the achievement of project outcomes.
- Structures deal, aligns and coordinates stakeholders.
What are the benefits of an Environmental Impact Bond?

- EIBs allow communities to:
  - **Pilot or scale** new environmental programs or solutions
  - **Transfer performance risks** to private investors to protect budget or taxpayer dollars
  - **Align incentives** of varied stakeholders across sectors
  - **Bring in additional payors** for a program
Case Study: DC Water’s Green Infrastructure Program

- Consent decree required addressing combined sewer overflows
- Green infrastructure approved to replace planned tunnel
- Concern remained about performance risk
DC Water issued outcomes-based bond to fund a portion of planned GI

Rock Creek Sewershed (Project RC-A)

Consent decree requirement (365 acres of GI)

Pilot (20 acres)

Payments to investors based on GI performance tiers:

- **Outperform** (2.5% likely)
  - Run-off reduction > 41.3%

- **Perform as expected** (95% likely)
  - 18.6% <= Run-off reduction <= 41.3%

- **Underperform** (2.5% likely)
  - Run-off reduction <= 18.6%
“Through the use of the EIB, DC Water was able manage or hedge a portion of the risk associated with large-scale implementation of GI in the District.

By structuring a contingent payment based upon the effectiveness of green infrastructure, DC Water focused on outcomes (in that case reducing stormwater runoff) that aligned with the regulatory driver of the Consent Decree that DC Water was already structured to achieve.”

Bethany Bezak, Green Infrastructure Program Manager, DC Water and Sewer Authority
Scaling a Proven Intervention: Urban Wood Reclamation

- **EIB Goal**: Scale operations of Humanim, social enterprise addressing urban blight in Baltimore through deconstruction, wood salvage, and resale
- **Outcomes**: job creation, blight elimination, landfill diversion

Urban tree trimming and demolition generate wood waste and local air quality issues

Collected wood diverted from landfill

Local facility sorts and processes salvaged wood and other materials for best use

Wood repurposed and resold locally for sustainable buildings, furniture, energy, and other uses
Scaling a Proven Intervention: Urban Wood Reclamation

**Proposed EIB Structure:**

1. **Payor** (City or other org.)
   - Repays investors based on outcomes (e.g., wood diverted, jobs created)

2. **Investors**
   - Provide up-front capital

3. **Service Provider: Humanim**
   - Delivers wood processing services to City of Baltimore

4. **Quantified Ventures**
   - Structures deal, aligns and coordinates stakeholders
Aligning Stakeholder Incentives: Agricultural Best Management Practices

- **EIB Goal**: Deploy agricultural Best Management Practices to reduce nutrient run-off that impacts downstream municipalities and water users
- **Outcomes**: reduced regulatory burden, reduced cost of treatment, ecosystem improvements

Upstream farmers implement Agricultural BMPs to reduce run-off into water systems, while raising their crops and animals more sustainably.

Downstream water bodies require less treatment, reducing regulatory requirements on municipalities.
Aligning Stakeholder Incentives: Agricultural Best Management Practices

**PROPOSED EIB STRUCTURE:**

1. **Quantified Ventures**
   - Structures deal, aligns and coordinates stakeholders

2. **Investors**
   - Provide up-front capital for deployment of Ag BMP interventions

3. **Service Provider**
   - Works with farmers to plan and implement AG BMPs

4. **Payor (City or other org.)**
   - Repays investors based on achievement of outcomes

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Multiple farmers & co-ops (corn, soybean, dairy, etc.)
Getting started

Feasibility Assessment (4-6 months)
- Select intervention
- Define target population and geography
- Define outcomes
- Confirm interest from potential payors, investors and other stakeholders
- Conduct cost-benefit analysis
- Determine feasibility of PFS approach

Transaction Structuring (4-6 months)
- Select and engage payor
- Negotiate deal with investors
- Finalize and agree on evaluation design
- Set contracts with service provider(s) and evaluator
- Begin ramp-up

PFS Project launch
- Capital provided to service provider
- Service provider serves target population
- Evaluator tracks outcomes
- Success payments made at agreed-upon schedule