Sustainability-Linked Agricultural Finance

Use Case: Saginaw Bay (MI) Watershed

Why Sustainability-linked Agriculture Finance?

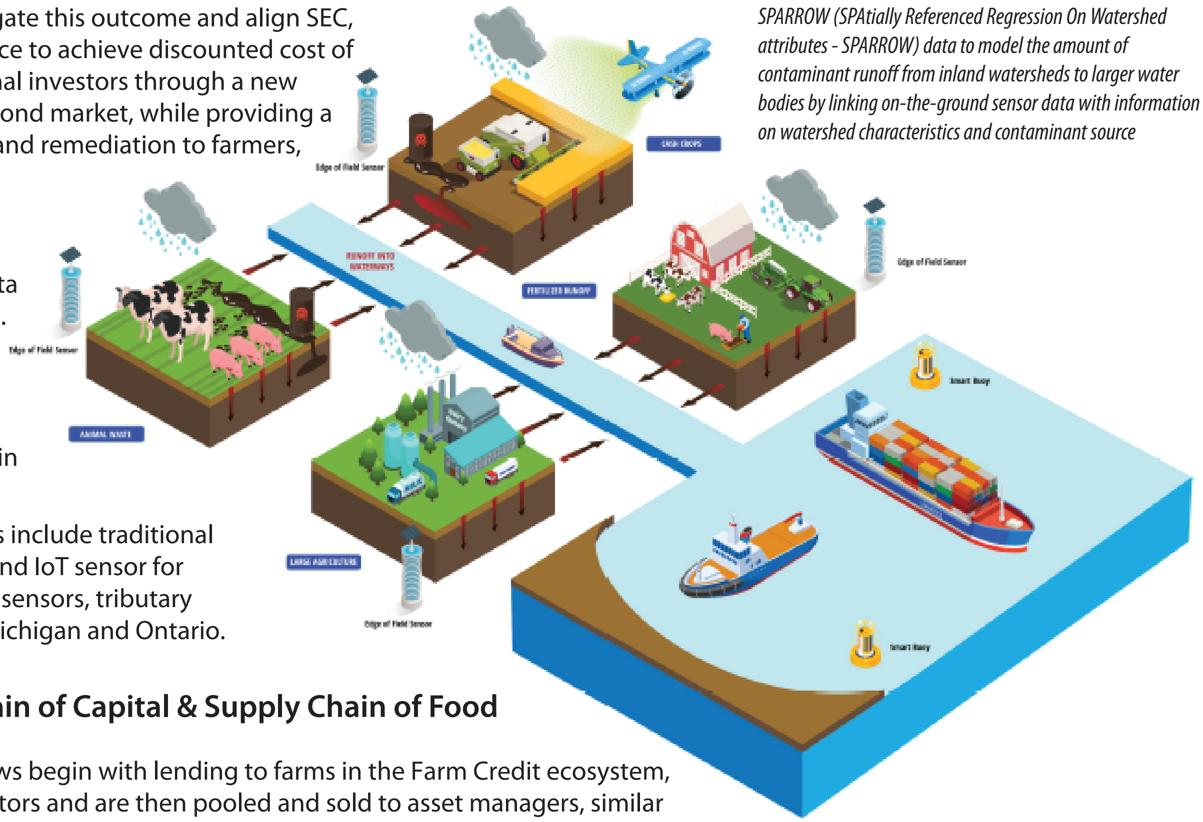
Each year, >2B tons of carbon flow into the Great Lakes in the form of chemical fertilizer and manure from farm operations. Non-point source emissions from cash crops (corn, wheat and soybeans) and dairy result in algae blooms impacting biodiversity, recreation, and public health.

BCT, and its partners, seek to mitigate this outcome and align SEC, TCFD and SFDR climate compliance to achieve discounted cost of capital for farmers from institutional investors through a new sustainability-linked agricultural bond market, while providing a warrant on carbon sequestration and remediation to farmers, investors and intermediaries.

Partners:

University of Michigan · Great Lakes Protection Fund · LimnoTech · Blockchain Triangle · Croatan Institute

SPARROW (SPAtially Referenced Regression On Watershed attributes - SPARROW) data to model the amount of contaminant runoff from inland watersheds to larger water bodies by linking on-the-ground sensor data with information on watershed characteristics and contaminant source



Our Process

BCT links IoT sensor and analog data to Sustainability-linked Loans (SSL).

The loans can be aggregated, bundled as securitizations and sold while retaining the reporting characteristics to maintain regulatory compliance.

The dataset referenced in the loans include traditional loan terms, admin and reporting, and IoT sensor for on-farm fertilizer use, edge of field sensors, tributary sensors and water buoys in Lake Michigan and Ontario.

TCFD Value Chain - Foodchain of Capital & Supply Chain of Food

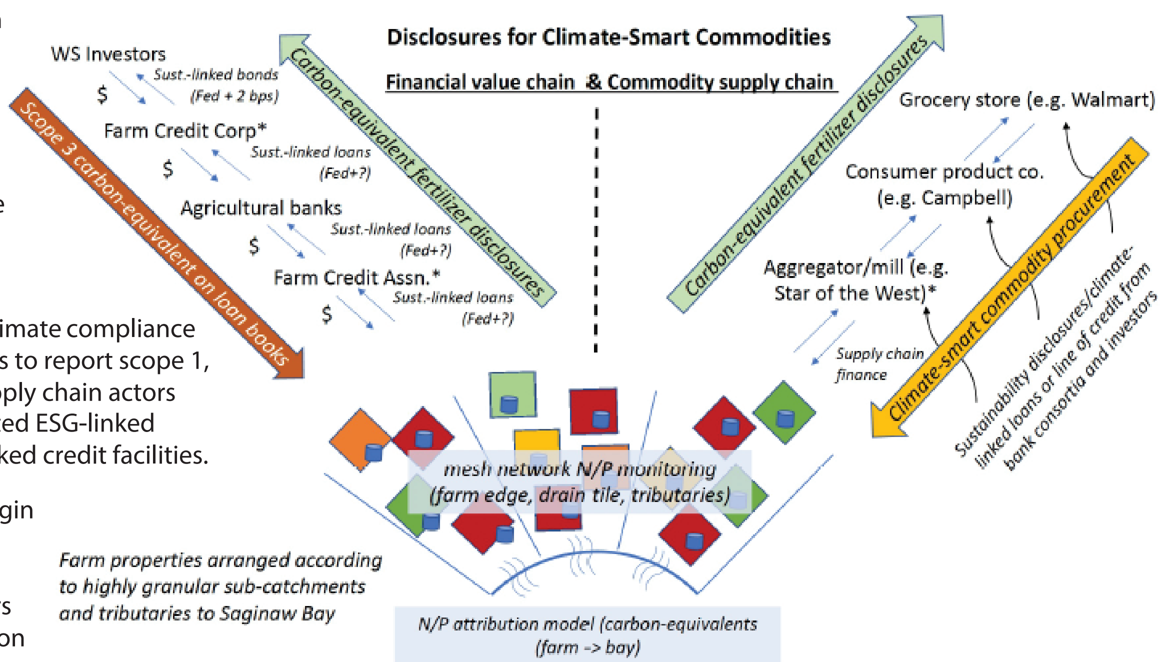
Foodchain of Capital: Capital flows begin with lending to farms in the Farm Credit ecosystem, that then flow up to bank aggregators and are then pooled and sold to asset managers, similar to how mortgage-backed securities operate.

Asset managers seek ESG-linked assets for their portfolios

This pilot links bonds & loans to farm fertilizer use and productivity data.

Farmers incentives include carbon credits and reduced cost of capital for improved profitability.

Additional financial products include credit enhancers and commodity offtake premiums.



Supply Chain of Food: New TCFD climate compliance will compel commodity supply chains to report scope 1, 2 and 3 carbon to their investors. Supply chain actors can leverage disclosure into discounted ESG-linked bonds, or negotiate sustainability-linked credit facilities.

Starting at the farm level, farmers begin the reporting of information downstream to the financial and commodity supply chain stakeholders that will ultimately make up the carbon footprint for the product that is on the shelf.