

Assessing Methodologies in Carbon Accounting and Environmental Impact Framework Assessments for Maine Agricultural Practices

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There has been a lot written in environmental literature about the relationship between climate change and agriculture. Agriculture exists at a critical intersection of the climate crisis. It will be one of the first sectors to be devastated by the effects of climate change as a result of increased drought, extreme weather events and changing growing seasons. Conversely, the agricultural sector is one of the top three emitters of greenhouse gases globally, driven by industrial agricultural practices and land use intensification. The impacts on, and of climate change on agriculture will only compound existing threats to our global food system including food security, famine, and the impending challenge of feeding a rising population.

I spent my summer exploring the relationship between agricultural practices in Maine and climate change. Specifically, I explored the relationship between different agricultural methods and practices and their potential to achieve a more resilient agricultural system capable of climate change mitigation among other ecological benefits. The genesis of my research was born out of the emerging movement of carbon accounting and the lack of functional methodologies to apply this practice to the agricultural sector. I worked in collaboration with Professor Starobin and Keith Bisson, president of Coastal Enterprises Inc.(CEI) with the goal of determining an effective and practical way to help institutions like CEI develop a method for assessing the environmental impacts of their agricultural investments I intend to continue my research on sustainability accounting in Maine agriculture as an honors project in the upcoming 2020-2021 academic year.

While the challenges facing our global agricultural system are well documented and theories abound as to how to combat these challenges, I am trying to apply theory to practice. My hope is to harmonize the theoretical discourse around sustainability accounting in agriculture with practical and applicable methods that can be utilized by Maine farmers who's farming practices and ideologies are guided by existing sustainable methods and philosophies. Over the course of the summer I studied the movements of agroecology, permaculture, agroforestry, organics and regenerative agriculture. My goal was to understand the philosophies that guide the broad scope of sustainable practices in order to understand the practices that can be most helpful in creating an agricultural system that is resilient in the face of climate change while helping to mitigate emissions from the sector. I had many productive conversations with key stakeholders in Maine agriculture and I look forward to continuing my research this coming academic year.

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