Ecological and Economic Sustainability through Cooperative Agriculture:
Scaling up agroecology through payments for ecosystem services in the Intag Region of Ecuador

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Thesis Abstract
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Conventional agriculture poses one of the gravest threats to the environment. In Latin America, some ninety percent of cloud forests are threatened by agricultural production. In such locations it is a necessity to implement sustainable agricultural systems that maintain food production and preserve farmer livelihoods while not degrading ecosystems that provide local, regional and global benefits. Agroecology is a mode of production designed to reduce the environmental impact of agriculture by mirroring the processes of natural systems. Dr. Joshua Farley has studied how payments for ecosystem services can be used to fund the transition to agroecological production in the highly biodiverse Atlantic Forest of Brazil.

This paper examines how Farley's concept could be adapted to the Intag Region of Ecuador, which spans two of the world's thirty-four most biologically important zones. Because of expansion of small-scale agriculture in the Intag Region, only 10% of its remarkably biodiverse cloud forest remains. Intag farmers are dependent on chemical inputs, slash and burn, and other unsustainable practices. This dissertation examines how beneficiaries of the Intag Region's ecosystem services could compensate local organizations for helping farmers adopt agroecology and avoid deforestation.

I conducted research in the Intag Region interviewing agroecological leaders and surveying farmers about their practices and interest in sustainability. The research revealed that an agroecology movement is burgeoning in the Intag Region, but that many farmers are still resistant to switching to sustainable modes of production. I argue that the most efficient way to scale-up agroecology through payments for ecosystem services is to financially support cooperative agricultural organizations that require members to employ agroecological modes of production. Cooperatives have the ability to demonstrate permanence and conditionality, while offering higher market prices to cooperative members. This can motivate smallholders to produce more sustainably, while improving livelihoods for farmer families.