

Rural Solutions to GHG Mitigation: 2nd Annual *Future of Carbon Policy Forum*

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5 minute Agenda

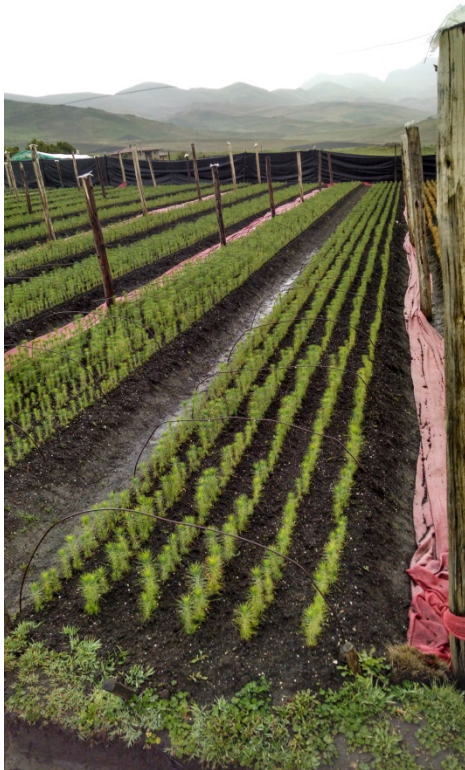


- Carbon offset projects relevant to Rural WA
 - Forest Projects (AFOLU)
 - Grasslands
 - Sustainable Ag
 - Digester Projects
- Co-benefits
- CapEx – Capital Expenditures and ROI
 - Funding mechanisms

Types of Carbon Projects - 3

Land Use and Forestry

(AFOLU) Afforestation, Forestation & Other Land Use



Confederated Tribes of the Colville Reservation

Project type : Improved Forest Management (IMP)

Size: 450,000 acres

Registry: American Carbon Registry

Estimate Project Costs: \$500,000

Initial Earnings: \$100 million (over five year purchase)

Forest Production: 75 mbf/year (million board feet)



Okanogan and Ferry Counties

- 13.4 million ROCs (registry offset credits) – largest single project for the California compliance market
- Carbon pools include above and below ground biomass, standing and lying dead wood (optional), and harvested wood products.
- Credits purchased by BP to meet the company's compliance commitment in CA.
- Educated guess for carbon price approx. \$7.00



Grasslands

- Improves forage for cattle ranchers
- Relatively minimal development costs
 - Financial challenges remain
- Requires 50 year easement (Land Trusts)
- Requires rotational grazing
- Avoided conversion and soil carbon sequestration
- Projects are already being implemented in the PNW



Courtesy of Native Energy

Grassland Projects in PNW

- **Native Energy – Montana Improved Grazing Project**
 - VCS (VM0032-Sustainable Grasslands)
 - 33,000 acres
- **Climate Trust (2 projects)**
 - CAR listed (Grassland Protocol v2.0)
 - 1,327 acres and 4,098 acres
- **Voluntary – not yet accepted by CARB**

Sustainable Agriculture



- No listed projects yet in the U.S.
 - 2 VCS projects in Africa
- Activities can include
 - Cover cropping
 - No-till
 - Introduction of trees and hedgerows
 - Nutrient management
- Barriers
 - Financial (expensive to implement)
 - Reluctant Farmers
 - Soil Science
 - Permanence

Types of Carbon Projects - 5

Livestock - methane collection and destruction



Dairy Digesters

- Six Active Climate Action Reserve (CAR) Projects in WA
 - 3 Voluntary, and 3 ARB Eligible, 3 completed*
 - Approx. 1.5 to 2.5 million USD startup costs
 - 3 to 5 years ROI (dependent on carbon price)
 - Typical 10 year crediting period (w/1 renewal)
- Other registries also support digesters (ACR and VCS)
- Co-benefits
 - Renewable energy generation
 - Cow bedding
 - Nutrient recycle (nitrogen and phosphorus)
 - Odor control, eliminates pathogens and weed seeds
 - Jobs (operations and related services)
 - Reduces fecal coliform reaching streams
 - Food waste can be added (tipping fees from grocery stores)

*Some project owners are taking advantage of the CA LCFS

Co-Benefits

Carbon projects may meet one or more Sustainable Development Goals

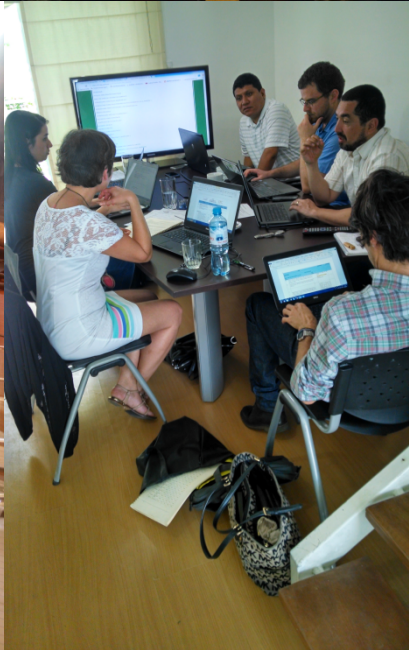


<https://sustainabledevelopment.un.org/?menu=1300>

Grouped Reforestation Project – Northern Andes, Peru



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Project Funding

- United States Department of Agriculture, Natural Resource Conservation Service, Conservation Innovation Grants (USDA – NRCS – CIGs)
- Project Developer/Funder pays farmers/ranchers at project start (investment funds)
- Forward Contracts with Carbon credit purchasers
- Other equity guarantee from Emission Reduction Purchase Agreements (ERPA) can support other funding

Thank You!



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