



CULTIVATED SHELLFISH BASED CARBON OFFSETS

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MITIGATING CLIMATE CHANGE,
IMPROVING THE ENVIRONMENT AND
PROVIDING ECONOMIC INCENTIVES FOR
GROWERS



How we started getting involved in Offsets



“More than two dozen of the nation’s biggest corporations, including the five major oil companies, are planning their future growth on the expectation that the government will force them to pay a price for carbon pollution as a way to control global warming”



“Laboratory analysis of shells showed that cleaned, dried clam or oyster shell is about 96% calcium carbonate (the remainder is a protein matrix), and calcium carbonate is 12% carbon by weight”.



The numbers Biochar & Shellfish

- Biochar is 80% Carbon
- Multiply total weight of Biochar by 0.8 and then 3.67
- Clam and Oyster shells are 96% calcium carbonate
- calcium carbonate is 12% carbon by weight
- Multiply total weight of shell by 0.96 and then 0.12 then 3.67

But variation needs to be measured by careful spot audits



Biochar Programs

- Rwanda
- Senegal
- Burkina Faso
- Ghana
- Sierra Leone
- Afghanistan
- Haiti
- Mexico
- U.S.A.



Shellfish Pilots

- Italy
- UK
- 2 U.S.A.



advantages

- Better accounting
- Small revenue increase
- Green certificate
- Documented CO₂ sequestrations
- Offsets belong 100% to local growers



Requirements

- Certification by Bios
- Testing of % of shell weight
- Two independent observers
- Wild caught shellfish may not be included



921 clams per bag (average) in these samples; 22.5 kg (50 pounds) of shell (CaCO₃ only) per bag; 24.4 grams (0.86 ounces) of CaCO₃ (including associated shell) fixed per clam; 2.93 grams (0.1 ounce) of carbon fixed in total shell material for each clam sold; and 536 metric tons, or 1.2 million pounds, of carbon fixed in 2007 by Florida clam farms.