

## Carbon-Water Credit Calculator

### Generating Revenue from Regenerative Water Management

#### Overview

The Carbon-Water Credit Calculator enables communities to quantify and monetize the environmental benefits of regenerative water management projects. By combining carbon sequestration with water security outcomes, communities can access innovative financing streams while building climate resilience and ecosystem health.

**Core Innovation:** Integrates multiple environmental benefit streams into comprehensive credit systems that reward communities for regenerative practices while generating sustainable revenue for ongoing water infrastructure development.

#### Key Benefits:

- **Revenue Generation:** Monetize environmental benefits to fund water infrastructure
- **Climate Impact:** Measurable contributions to carbon sequestration and climate adaptation
- **Water Security:** Enhanced water availability and quality through ecosystem restoration
- **Community Ownership:** Communities control credit generation and revenue distribution
- **Ecosystem Health:** Restoration projects that heal damaged watersheds and habitats

#### Detailed Project Calculators

##### Wetland Restoration Calculator

#### Project Parameters Input:

Wetland Area: \_\_\_\_\_ acres  
 Wetland Type: ☐ Freshwater Marsh ☐ Coastal Wetland ☐ Riparian Buffer  
 Degradation Level: ☐ Severely Degraded ☐ Moderately Degraded ☐ Lightly Impacted  
 Restoration Approach: ☐ Complete Reconstruction ☐ Enhancement ☐ Protection  
 Community Labor: \_\_\_\_\_ hours available

#### Carbon Sequestration Calculation:

##### Base Sequestration Rate:

- Freshwater Marsh: 8 tCO<sub>2</sub>/acre/year
- Coastal Wetland: 12 tCO<sub>2</sub>/acre/year
- Riparian Buffer: 6 tCO<sub>2</sub>/acre/year

##### Degradation Multiplier:

- Severely Degraded: 1.5× (high restoration potential)
- Moderately Degraded: 1.2×
- Lightly Impacted: 1.0×

##### Annual Carbon Credits:

\_\_\_\_\_ acres × \_\_\_\_\_ tCO<sub>2</sub>/acre/year × \_\_\_\_\_ multiplier = \_\_\_\_\_ tCO<sub>2</sub>/year

Revenue: \_\_\_\_\_ tCO<sub>2</sub>/year × \$45/tCO<sub>2</sub> = \$\_\_\_\_\_ /year

#### Water Benefits Calculation:

**Water Storage:**

Wetland area × 2 acre-feet storage/acre = \_\_\_\_\_ acre-feet

Water Storage Credits: \_\_\_\_\_ acre-feet × \$75/acre-foot = \$\_\_\_\_\_

**Water Quality Improvement:**

Watershed area served × 0.1 acre-feet/acre = \_\_\_\_\_ acre-feet improved

Water Quality Credits: \_\_\_\_\_ acre-feet × \$125/acre-foot = \$\_\_\_\_\_

**Flood Control:**

Protected area × 0.5 = \_\_\_\_\_ acres flood protection

Flood Control Credits: \_\_\_\_\_ acres × \$1,200/acre = \$\_\_\_\_\_

Total Water Credits: \$\_\_\_\_\_ + \$\_\_\_\_\_ + \$\_\_\_\_\_ = \$\_\_\_\_\_

**Biodiversity and Cultural Benefits:**
**Habitat Creation:**

Wetland area × habitat value = \_\_\_\_\_ acres × \$250/acre = \$\_\_\_\_\_

**Species Protection (estimate 3-8 species per wetland):**

Number of species × \$150/species = \_\_\_\_\_ × \$150 = \$\_\_\_\_\_

**Cultural Site Protection:**

Sacred/traditional use areas × \$100/acre = \_\_\_\_\_ acres × \$100 = \$\_\_\_\_\_

Total Biodiversity Credits: \$\_\_\_\_\_ + \$\_\_\_\_\_ + \$\_\_\_\_\_ = \$\_\_\_\_\_

**Total Project Value:**
**Annual Credits:**

Carbon: \$\_\_\_\_\_

Water: \$\_\_\_\_\_

Biodiversity: \$\_\_\_\_\_

Total Annual: \$\_\_\_\_\_

**25-Year Project Value:**

Annual Revenue × 25 years = \$\_\_\_\_\_ × 25 = \$\_\_\_\_\_

**Project Costs:**

Initial Investment: \$\_\_\_\_\_ (typically \$3,000-6,000/acre)

Annual Maintenance: \$\_\_\_\_\_ (typically \$100-300/acre/year)

25-Year Maintenance: \$\_\_\_\_\_ × 25 = \$\_\_\_\_\_

Net 25-Year Revenue: \$\_\_\_\_\_ - \$\_\_\_\_\_ - \$\_\_\_\_\_ = \$\_\_\_\_\_

Community ROI: \_\_\_\_\_% annually

**Agroforestry System Calculator**
**System Design Input:**

Farm/Community Area: \_\_\_\_\_ acres

Tree Species: ☐ Fruit/Nut ☐ Timber ☐ Native Species ☐ Mixed

Tree Density: \_\_\_\_\_ trees per acre

Crop Integration: ☐ Annual Crops ☐ Pasture ☐ Vegetables ☐ None  
 Existing Land Use: ☐ Degraded Agriculture ☐ Pasture ☐ Marginal Land

### Carbon Sequestration Analysis:

Tree Carbon Sequestration:

Tree density × carbon per tree × acres = total sequestration

\_\_\_\_\_ trees/acre × 0.05 tCO<sub>2</sub>/tree/year × \_\_\_\_\_ acres = \_\_\_\_\_ tCO<sub>2</sub>/year

Soil Carbon Enhancement:

Agroforestry area × soil carbon rate = additional soil carbon

\_\_\_\_\_ acres × 1.5 tCO<sub>2</sub>/acre/year = \_\_\_\_\_ tCO<sub>2</sub>/year

Total Annual Carbon Sequestration:

Tree carbon + Soil carbon = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ tCO<sub>2</sub>/year

Carbon Credit Revenue:

\_\_\_\_\_ tCO<sub>2</sub>/year × \$35/tCO<sub>2</sub> × 1.3 (community premium) = \$\_\_\_\_\_ /year

### Water System Benefits:

Improved Water Infiltration:

Agroforestry area × enhanced infiltration = water benefit

\_\_\_\_\_ acres × 0.5 acre-feet/acre = \_\_\_\_\_ acre-feet/year

Water Infiltration Credits: \_\_\_\_\_ acre-feet × \$60/acre-foot = \$\_\_\_\_\_

Erosion Control:

Slope protection area × erosion prevention value

\_\_\_\_\_ acres × \$85/acre = \$\_\_\_\_\_

Microclimate Regulation:

Temperature/humidity benefits × area = climate value

\_\_\_\_\_ acres × \$40/acre = \$\_\_\_\_\_

Total Water Credits: \$\_\_\_\_\_ + \$\_\_\_\_\_ + \$\_\_\_\_\_ = \$\_\_\_\_\_

### Economic Co-Benefits:

Food/Timber Production:

Estimated annual harvest value: \$\_\_\_\_\_

(This is additional income beyond credits)

Reduced Input Costs:

Fertilizer reduction: \$\_\_\_\_\_ /year

Pesticide reduction: \$\_\_\_\_\_ /year

Irrigation savings: \$\_\_\_\_\_ /year

Total Input Savings: \$\_\_\_\_\_

Enhanced Property Value:

Improved land value: \$\_\_\_\_\_

### Urban Green Infrastructure Calculator

#### Infrastructure Type Selection:

- ☐ Green Roofs (\_\_\_\_\_ sq ft)
- ☐ Bioswales (\_\_\_\_\_ linear feet)
- ☐ Rain Gardens (\_\_\_\_\_ acres)
- ☐ Permeable Pavements (\_\_\_\_\_ sq ft)
- ☐ Urban Wetlands (\_\_\_\_\_ acres)
- ☐ Tree Canopy (\_\_\_\_\_ acres)

### Carbon and Air Quality Benefits:

Green Roof Carbon Sequestration:

Roof area  $\times$  0.0015 tCO<sub>2</sub>/sq ft/year = \_\_\_\_\_ tCO<sub>2</sub>/year

Revenue: \_\_\_\_\_ tCO<sub>2</sub>/year  $\times$  \$25/tCO<sub>2</sub> = \$\_\_\_\_\_

Urban Tree Carbon:

Tree canopy area  $\times$  4 tCO<sub>2</sub>/acre/year = \_\_\_\_\_ tCO<sub>2</sub>/year

Revenue: \_\_\_\_\_ tCO<sub>2</sub>/year  $\times$  \$25/tCO<sub>2</sub> = \$\_\_\_\_\_

Air Quality Improvement:

PM2.5 reduction  $\times$  health cost savings = air quality value

\_\_\_\_\_ kg PM2.5/year  $\times$  \$12/kg = \$\_\_\_\_\_

Total Carbon/Air Credits: \$\_\_\_\_\_ + \$\_\_\_\_\_ + \$\_\_\_\_\_ = \$\_\_\_\_\_

### Stormwater Management Benefits:

Stormwater Volume Reduction:

Infrastructure area  $\times$  runoff reduction = volume managed

\_\_\_\_\_ acres  $\times$  15 acre-feet/acre/year = \_\_\_\_\_ acre-feet/year

Stormwater Credits:

\_\_\_\_\_ acre-feet/year  $\times$  \$200/acre-foot = \$\_\_\_\_\_

Water Quality Improvement:

Pollutant removal  $\times$  treatment cost savings = quality value

Estimated annual value: \$\_\_\_\_\_

Flood Damage Prevention:

Protected area  $\times$  damage prevention value = flood value

\_\_\_\_\_ acres  $\times$  \$800/acre = \$\_\_\_\_\_

Total Stormwater Credits: \$\_\_\_\_\_ + \$\_\_\_\_\_ + \$\_\_\_\_\_ = \$\_\_\_\_\_

### Urban Heat and Energy Benefits:

Urban Heat Island Reduction:

Cooled area  $\times$  energy savings = heat island value

\_\_\_\_\_ acres  $\times$  \$150/acre = \$\_\_\_\_\_

Building Energy Savings (Green Roofs):

Energy cost reduction  $\times$  roof area = energy value

\$0.15/sq ft/year  $\times$  \_\_\_\_\_ sq ft = \$\_\_\_\_\_

Total Energy Credits: \$\_\_\_\_\_ + \$\_\_\_\_\_ = \$\_\_\_\_\_

## Market Access and Revenue Optimization

### Credit Market Options

#### Voluntary Carbon Markets:

- **Community Forest Carbon:** \$20-60/tCO<sub>2</sub>, emphasizes community ownership and co-benefits
- **Verified Carbon Standard (VCS):** \$15-45/tCO<sub>2</sub>, international standard with high credibility
- **Climate Action Reserve:** \$25-55/tCO<sub>2</sub>, North American standard with rigorous verification
- **Gold Standard:** \$30-80/tCO<sub>2</sub>, premium pricing for sustainable development co-benefits

#### Compliance Carbon Markets:

- **California Cap-and-Trade:** \$15-25/tCO<sub>2</sub>, regulatory market with steady demand
- **Regional Greenhouse Gas Initiative:** \$8-18/tCO<sub>2</sub>, northeastern US compliance market
- **International Markets:** Varies by jurisdiction, emerging opportunities in Article 6 mechanisms

#### Water Credit Markets:

- **Water Quality Trading:** Emerging markets in various watersheds, \$50-300/credit
- **Wetland Banking:** Established markets, \$3,000-20,000/acre for wetland credits
- **Ecosystem Service Payments:** Direct payments from beneficiaries, \$25-200/acre/year
- **Green Infrastructure Credits:** Municipal markets for stormwater management, varies by city

### Revenue Optimization Strategies

#### Credit Bundling and Stacking:

Single Project Revenue Streams:

Carbon Credits: \$\_\_\_\_\_

Water Quality Credits: \$\_\_\_\_\_

Biodiversity Credits: \$\_\_\_\_\_

Stormwater Management: \$\_\_\_\_\_

Recreation/Tourism: \$\_\_\_\_\_

Total Annual Revenue: \$\_\_\_\_\_

Bundled Premium:

Individual markets: \$\_\_\_\_\_

Bundled sale: \$\_\_\_\_\_ (typically 10-30% premium)

Additional Revenue: \$\_\_\_\_\_

#### Community Premium Factors:

- **Verified Community Ownership:** +15-25% market premium
- **Indigenous Leadership:** +20-40% for Indigenous-led projects
- **Measurable Co-Benefits:** +10-30% for documented social benefits
- **Transparent Governance:** +5-15% for open community processes
- **Youth Engagement:** +10-20% for intergenerational participation

#### Long-Term Contracting:

Revenue Stabilization Options:

- ☐ 5-year contracts at fixed prices

- ☐ 10-year contracts with annual escalation
- ☐ 25-year contracts with periodic price reviews
- ☐ Spot market sales with price optimization

Contract Terms Comparison:

Short-term (1-3 years): Higher prices, more flexibility, market risk

Medium-term (5-10 years): Moderate prices, some stability, balanced risk

Long-term (15-25 years): Lower prices, high stability, minimal risk

Recommended Strategy: \_\_\_\_\_ based on community priorities

## Buyer Identification and Marketing

### Corporate Buyers:

- **Technology Companies:** High-value buyers seeking quality offsets with co-benefits
- **Financial Institutions:** ESG compliance driving demand for verified credits
- **Consumer Brands:** Marketing value of community partnership stories
- **Local Businesses:** Regional buyers supporting local environmental initiatives

### Government Buyers:

- **Municipal Governments:** Climate goals and co-benefit interests
- **State Agencies:** Compliance obligations and sustainability mandates
- **Federal Programs:** Research partnerships and demonstration projects
- **International Development:** Climate finance and adaptation funding

### Individual and Community Buyers:

- **Climate-Conscious Individuals:** Premium prices for verified community projects
- **Community Groups:** Local institutions supporting regional environmental initiatives
- **Educational Institutions:** Sustainability commitments and educational partnerships
- **Religious Organizations:** Stewardship values and community development interests

## Implementation Tools and Templates

### Project Development Worksheet

#### Phase 1: Project Planning

Community Information:

Community Name: \_\_\_\_\_

Location: \_\_\_\_\_

Population: \_\_\_\_\_ Households: \_\_\_\_\_

Primary Language(s): \_\_\_\_\_

Project Vision:

Environmental Goals: \_\_\_\_\_

Community Benefits: \_\_\_\_\_

Economic Objectives: \_\_\_\_\_

Timeline: \_\_\_\_\_

Baseline Assessment:

Current Land Use: \_\_\_\_\_

Ecosystem Condition: \_\_\_\_\_

Water Resources: \_\_\_\_\_

Carbon Storage: \_\_\_\_\_ tCO<sub>2</sub> current

Project Design:

Proposed Activities: \_\_\_\_\_

Area/Scale: \_\_\_\_\_

Technology/Methods: \_\_\_\_\_

Community Roles: \_\_\_\_\_

## Phase 2: Technical Assessment

Carbon Sequestration Potential:

Methodology: \_\_\_\_\_

Annual Rate: \_\_\_\_\_ tCO<sub>2</sub>/year

25-Year Total: \_\_\_\_\_ tCO<sub>2</sub>

Verification Standard: \_\_\_\_\_

Water Benefits Assessment:

Quality Improvement: \_\_\_\_\_ acre-feet/year

Storage Enhancement: \_\_\_\_\_ acre-feet

Flood Control: \_\_\_\_\_ acres protected

Groundwater Recharge: \_\_\_\_\_ acre-feet/year

Biodiversity Impact:

Habitat Created: \_\_\_\_\_ acres

Species Benefited: \_\_\_\_\_ species

Connectivity: \_\_\_\_\_ corridor miles

Cultural Sites: \_\_\_\_\_ sites preserved

## Phase 3: Financial Projections

Revenue Projections (Annual):

Carbon Credits: \$\_\_\_\_\_

Water Credits: \$\_\_\_\_\_

Biodiversity Credits: \$\_\_\_\_\_

Other Benefits: \$\_\_\_\_\_

Total Annual: \$\_\_\_\_\_

Cost Projections:

Initial Investment: \$\_\_\_\_\_

Annual Maintenance: \$\_\_\_\_\_

Monitoring/Verification: \$\_\_\_\_\_

Marketing/Sales: \$\_\_\_\_\_

Community Capacity: \$\_\_\_\_\_

Financial Returns:

Gross Annual Revenue: \$\_\_\_\_\_

Net Annual Revenue: \$\_\_\_\_\_

Return on Investment: \_\_\_\_\_%

Payback Period: \_\_\_\_\_ years

## Community Benefit Distribution Template

### Revenue Allocation Framework:

#### Credit Revenue Distribution Plan:

1. Project Maintenance and Operations (\_\_\_\_%)
  - Annual maintenance: \$\_\_\_\_\_
  - Monitoring and verification: \$\_\_\_\_\_
  - Equipment replacement reserve: \$\_\_\_\_\_
2. Community Infrastructure Fund (\_\_\_\_%)
  - Water system improvements: \$\_\_\_\_\_
  - Community facility development: \$\_\_\_\_\_
  - Emergency response capacity: \$\_\_\_\_\_
3. Individual Household Benefits (\_\_\_\_%)
  - Equal distribution: \$\_\_\_\_\_ per household
  - Need-based allocation: \$\_\_\_\_\_ for vulnerable households
  - Participation bonuses: \$\_\_\_\_\_ for active members
4. Community Development Programs (\_\_\_\_%)
  - Education and training: \$\_\_\_\_\_
  - Health and wellness: \$\_\_\_\_\_
  - Economic development: \$\_\_\_\_\_
  - Cultural preservation: \$\_\_\_\_\_
5. Future Project Development (\_\_\_\_%)
  - Project expansion: \$\_\_\_\_\_
  - New project development: \$\_\_\_\_\_
  - Capacity building: \$\_\_\_\_\_
  - Technology upgrade: \$\_\_\_\_\_

#### Democratic Decision-Making Process:

##### Annual Revenue Planning:

- ☐ Community assembly reviews annual revenue
- ☐ Working groups develop allocation proposals
- ☐ Community discussion and input period
- ☐ Democratic vote on final allocation
- ☐ Implementation oversight committee

##### Benefit Distribution Methods:

- ☐ Direct cash payments to households
- ☐ Service improvements and infrastructure
- ☐ Community programs and services
- ☐ Individual development accounts
- ☐ Cooperative/business development

#### Monitoring and Verification Protocol

##### Community-Based Monitoring:

##### Training Requirements:

- ☐ Carbon measurement techniques
- ☐ Water quality testing methods
- ☐ Biodiversity monitoring protocols
- ☐ Data collection and reporting



- ☐ GPS and mapping technology

#### Equipment Needed:

- ☐ Soil augers and scales
- ☐ Water testing kits
- ☐ GPS units and cameras
- ☐ Data recording sheets
- ☐ Community meeting supplies

#### Monthly Monitoring Tasks:

- ☐ Tree/vegetation growth measurements
- ☐ Water quality testing at key points
- ☐ Wildlife and habitat observations
- ☐ Photo documentation of changes
- ☐ Community feedback collection

#### Annual Reporting:

- ☐ Professional verification visit
- ☐ Data compilation and analysis
- ☐ Community impact assessment
- ☐ Revenue distribution report
- ☐ Planning for following year

### Third-Party Verification Requirements:

#### Verification Schedule:

Year 1: Baseline establishment and project start  
 Year 3: First major verification and credit issuance  
 Year 5: Mid-project assessment and course correction  
 Year 10: Major review and credit renewal  
 Annual: Ongoing monitoring and small credit batches

#### Verification Costs:

Professional verification: \$2,000-5,000 annually  
 Remote sensing: \$500-1,500 annually  
 Laboratory testing: \$300-800 annually  
 Travel and logistics: \$500-1,200 annually  
 Total annual verification: \$3,300-8,500

## Success Stories and Case Studies

### Case Study 1: Costa Rica Payment for Ecosystem Services

#### Program Overview:

- **Scale:** 500,000+ hectares enrolled since 1997
- **Payment Rates:** \$200-600/hectare/year for forest conservation
- **Funding Sources:** Fuel tax, water fees, international climate finance
- **Community Participation:** 15,000+ landowners, including Indigenous communities

#### Carbon-Water Integration:

- **Carbon Sequestration:** 10+ million tCO<sub>2</sub> sequestered
- **Watershed Protection:** 1 million people receive improved water services

- **Biodiversity Conservation:** 25% of country under protection
- **Economic Impact:** \$100+ million in payments to rural communities

#### Lessons for Community Projects:

- **Diversified Funding:** Multiple revenue streams provide stability
- **Long-term Contracts:** 5-10 year agreements enable planning and investment
- **Technical Support:** Government and NGO assistance crucial for success
- **Monitoring Systems:** Simple, cost-effective monitoring enables verification

#### Community Revenue Model:

Typical 100-hectare community project:  
 Forest conservation payment: \$30,000-60,000/year  
 Carbon credit revenue: \$15,000-40,000/year  
 Water service payments: \$5,000-15,000/year  
 Biodiversity payments: \$2,000-8,000/year  
 Total annual revenue: \$52,000-123,000/year  
 Community of 50 households: \$1,040-2,460 per household annually

### Case Study 2: Kenyan Smallholder Agroforestry

#### Project Description:

- **Participants:** 60,000+ smallholder farmers across western Kenya
- **Area:** 45,000 hectares of agroforestry systems
- **Trees Planted:** 15+ million trees since 2009
- **Community Organizations:** 1,500+ farmer groups participating

#### Carbon and Water Outcomes:

- **Carbon Sequestration:** 1.8 million tCO<sub>2</sub> over 10 years
- **Water Benefits:** 30% increase in dry season water availability
- **Soil Conservation:** 60% reduction in erosion on participating farms
- **Crop Yields:** 20-40% increase in food production

#### Revenue Generation:

Per-hectare annual returns:  
 Carbon credits: \$180-350/hectare/year  
 Improved crop yields: \$200-500/hectare/year  
 Reduced input costs: \$50-150/hectare/year  
 Timber/fruit revenue: \$100-300/hectare/year  
 Total additional income: \$530-1,300/hectare/year

Typical 2-hectare farm:  
 Additional annual income: \$1,060-2,600  
 Investment payback: 2-4 years  
 Long-term sustainability: 25+ years

#### Community Benefits:

- **Food Security:** More reliable harvests and diversified production
- **Income Stability:** Multiple revenue streams reducing economic risk
- **Environmental Health:** Cleaner water, reduced erosion, better air quality
- **Social Capital:** Strengthened farmer organizations and cooperative networks

## Case Study 3: Urban Wetland Restoration, Portland

### Project Overview:

- **Location:** Columbia Slough wetland complex, Portland, Oregon
- **Scale:** 150 acres of restored urban wetlands
- **Investment:** \$2.8 million community and public investment
- **Timeline:** 5-year restoration with 25-year monitoring

### Credit Revenue Streams:

#### Carbon Credits:

Annual sequestration: 450 tCO<sub>2</sub>/year

25-year total: 11,250 tCO<sub>2</sub>

Revenue: \$506,250 over 25 years (at \$45/tCO<sub>2</sub>)

#### Stormwater Management:

Annual runoff treated: 500 acre-feet

Municipal cost savings: \$85,000/year

25-year value: \$2,125,000

#### Habitat Credits:

Wetland banking credits: 75 acres × \$15,000/acre = \$1,125,000

Recreation value: \$25,000/year

25-year recreation: \$625,000

Total 25-year value: \$4,381,250

Annual average: \$175,250

Return on investment: 6.3% annually

### Community and Environmental Outcomes:

- **Water Quality:** 75% reduction in pollutant loading to river
- **Flood Control:** Protection for 2,500 homes from 100-year flood
- **Biodiversity:** 40+ bird species, 15+ fish species habitat
- **Community Benefits:** 85,000 annual visitors, environmental education programs

### Replication Lessons:

- **Partnership Model:** Community groups, city government, and businesses collaborated
- **Blended Financing:** Grants, credits, and municipal investment combined
- **Long-term Commitment:** 25-year management agreement ensures sustainability
- **Community Ownership:** Neighborhood organizations lead ongoing stewardship

## Getting Started: Implementation Roadmap

### Phase 1: Assessment and Planning (Months 1-6)

#### Community Readiness Assessment:

- ☐ Community interest and leadership capacity evaluation
- ☐ Traditional knowledge and cultural protocols assessment
- ☐ Technical feasibility and site evaluation
- ☐ Financial capacity and investment potential analysis
- ☐ Market research and buyer identification

**Project Design Development:**

- ☐ Community visioning and goal setting process
- ☐ Technical design with community input and traditional knowledge
- ☐ Financial modeling and revenue projections
- ☐ Risk assessment and mitigation planning
- ☐ Timeline development with community capacity considerations

**Partnership and Resource Development:**

- ☐ Technical assistance provider identification and agreements
- ☐ Funding source identification and application development
- ☐ Market access and buyer relationship development
- ☐ Legal and regulatory compliance assessment
- ☐ Community capacity building and training planning

**Phase 2: Project Implementation (Months 7-24)****Community Capacity Building:**

- ☐ Leadership development and governance training
- ☐ Technical training in monitoring and maintenance
- ☐ Financial management and business development
- ☐ Marketing and sales capacity development
- ☐ Conflict resolution and decision-making skills

**Project Construction and Establishment:**

- ☐ Site preparation with community labor and leadership
- ☐ Implementation of restoration or infrastructure activities
- ☐ Installation of monitoring equipment and systems
- ☐ Baseline data collection and documentation
- ☐ Community celebration and commitment ceremonies

**Revenue Generation Initiation:**

- ☐ Verification and certification processes
- ☐ Marketing materials and buyer outreach
- ☐ Contract negotiation and agreement finalization
- ☐ First credit sales and revenue distribution
- ☐ Financial tracking and reporting system establishment

**Phase 3: Operations and Optimization (Years 3-10)****Ongoing Operations Management:**

- ☐ Regular monitoring and maintenance activities
- ☐ Annual verification and credit generation
- ☐ Revenue distribution and community benefit programs
- ☐ Adaptive management and project improvement
- ☐ Conflict resolution and governance development

**Revenue Optimization and Market Development:**

- ☐ Market diversification and price optimization

- ☐ Bundled credit development and premium pricing
- ☐ Long-term contract negotiation and revenue stabilization
- ☐ New project development and expansion planning
- ☐ Technical innovation and efficiency improvements

#### Knowledge Sharing and Replication:

- ☐ Documentation of lessons learned and best practices
- ☐ Peer learning and technical assistance to other communities
- ☐ Policy advocacy and market development support
- ☐ Research collaboration and innovation development
- ☐ Global network participation and solidarity building

### Phase 4: Scaling and Transformation (Years 10+)

#### Regional Network Development:

- ☐ Multi-community cooperation and resource sharing
- ☐ Regional marketing and collective bargaining
- ☐ Technology sharing and collaborative innovation
- ☐ Policy advocacy and market transformation
- ☐ Institutional development and capacity building

#### Long-term Sustainability and Innovation:

- ☐ Permanent revenue streams and endowment development
- ☐ Next-generation leadership development and succession planning
- ☐ Technology innovation and intellectual property development
- ☐ Global market development and international cooperation
- ☐ Movement building and systemic change advocacy

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## Contact and Support Resources

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### Technical Assistance Providers

#### Carbon Market Development:

- **Gold Standard Foundation:** Community-focused carbon standard development
- **Climate Action Reserve:** North American carbon protocol development
- **Verra (VCS):** International voluntary carbon standard guidance
- **Community Forest Carbon:** Specialized support for community forest projects

#### Water Credit and Ecosystem Services:

- **Ecosystem Marketplace:** Market intelligence and transaction support
- **Environmental Incentives:** Water quality trading and ecosystem service payments
- **The Nature Conservancy:** Watershed protection and payment system development
- **World Resources Institute:** Ecosystem service valuation and payment mechanisms

#### Community Development Support:

- **National Rural Water Association:** Community water system technical assistance
- **Cooperative Development Foundation:** Cooperative business development and governance
- **Indigenous Environmental Network:** Indigenous-led environmental project support

- **Grassroots International:** Community-controlled development and solidarity

## Financing and Investment Resources

### Patient Capital Providers:

- **Oikocredit:** Community development finance and technical assistance
- **Cooperative Fund of New England:** Cooperative business lending and development
- **RSF Social Finance:** Social and environmental impact investing
- **Community Development Financial Institutions:** Local community investment and support

### Grant and Subsidy Sources:

- **Environmental Protection Agency:** Environmental justice and community grants
- **Department of Agriculture:** Rural development and conservation programs
- **Private Foundations:** Community environment and development funding
- **Climate Finance Facilities:** International climate adaptation and mitigation funding

## Market Access and Sales Support

### Carbon Credit Brokers and Platforms:

- **APX Registry:** Carbon credit registration and transaction platform
- **Markit Environmental Registry:** Credit tracking and transaction services
- **Carbon Trade Exchange:** Trading platform and market intelligence
- **Community-focused Buyers:** Direct relationships with mission-aligned purchasers

### Water Credit Markets:

- **Water Environment Federation:** Water quality trading information and networking
- **Ecosystem Services Market Consortium:** Market development and best practices
- **Regional Water Quality Trading:** Watershed-specific trading program participation
- **Municipal Partnership:** Direct agreements with water utility customers

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**Start Your Carbon-Water Credit Project Today:** The Carbon-Water Credit Calculator provides all the tools needed to assess, develop, and implement community-controlled environmental credit projects that generate revenue while building water security and climate resilience.

### Next Steps:

1. **Download the Calculator:** Use the worksheets and tools to assess your community's project potential
2. **Build Community Support:** Share information and build consensus around project development
3. **Connect with Technical Assistance:** Identify and engage appropriate technical support providers
4. **Develop Partnerships:** Build relationships with buyers, funders, and implementation partners
5. **Launch Your Project:** Begin implementation with community leadership and ownership

### Contact for Implementation Support:

- Email: [globalgovernanceframework@gmail.com](mailto:globalgovernanceframework@gmail.com)
- Subject: "Carbon-Water Credit Implementation"
- Include: Community location, project type, scale, timeline, and support needs

**Join the Regenerative Revolution:** Carbon-water credits represent a powerful tool for communities to generate revenue while healing ecosystems and building climate resilience. Through community ownership and democratic control, these projects demonstrate that

environmental protection and community economic development can advance together toward a just and sustainable future.

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*The Carbon-Water Credit Calculator is part of the Global Framework for Water & Sanitation (WASH) Governance. For complete framework access and implementation tools, visit [globalgovernanceframework.org](http://globalgovernanceframework.org)*