ECOTONE ANALYTICS

Impact Analysis
and **Social Return on Investment**

Frequently Asked Questions for

Green Lands Blue Waters

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Will Nielsen, MPA | Tim Roman, MBA | Stephanie Shekels, BA

Ecotone Analytics Impact Analysis

FREQUENTLY ASKED QUESTIONS FOR GREEN LANDS BLUE WATERS

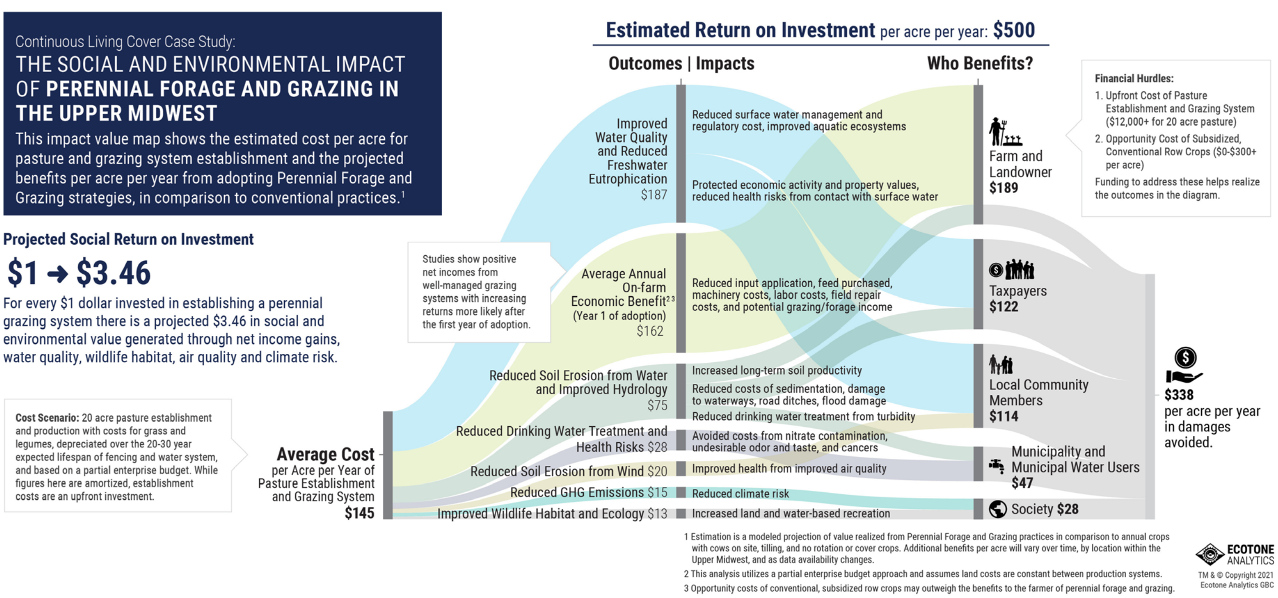
ECOTONE
ANALYTICS

PROJECT SUMMARY

KEY MESSAGE

For every $1 spent on pasture establishment and a well-managed grazing system, there is a **projected $3.46 social return on investment** (SROI) to farms, taxpayers, community members, and global society.

- The estimated Return on Investment per Acre per Year is $500 (not including land costs or opportunity costs to the farmer)
- Average Annualized Cost per Acre per Year of perennial forage and grazing (PFG) system is estimated at $145 - assuming a 20 acre pasture, annualizing upfront investment costs over the expected lifespan of the fencing and water system.
- **Upfront investment costs and opportunity costs for the farmer are two financial hurdles that investors can help overcome** and in return foster larger environmental services as well as potentially support financial well-being on the farm.
- Beyond the large partial enterprise budget benefits attributed to the farm, taxpayers are the second largest beneficiary of the PFG system as a result of the avoided water quality damages from conventional row crops. The water quality benefits accrue through several channels including both direct and indirect cost savings - drinking water treatment costs, surface water management cost, regulatory costs, road and ditch repair, and improved aquatic ecosystems otherwise actively protected (such as through DNR efforts).
- Net GHG emission reductions are realized as a result of the full grazing system, but driven in large part by the carbon sequestration of perennial forage.



Green Lands Blue Waters IN PARTNERSHIP WITH ECOTONE ANALYTICS

PROJECTED SROI SUMMARY FIGURES

Table 1. Projected SROI

Projected SROI *20 acre pasture establishment and production with costs depreciated over the 20-30 year expected lifespan of fencing and water system*		
Total (per acre per year)	**$3.46**	**Explanation**
Farmer and Landowner	$1.30	Reduced input application, feed purchased, machinery costs, labor costs, field repair costs, increased long-term productivity of soil and potential grazing forage income
Municipal Water Treatment / Municipal Taxpayers and Water Users	$0.33	Reduced drinking water treatment from turbidity, Avoided costs from undesirable odor and taste, nitrate contamination, and cancer risk
Local Community Members	$0.79	Reduced health risks from contact with surface water, Protected economic activity and property values, reduced health risks from contact with surface water Improved aquatic ecosystems, Improved health from improved air quality, Increased sustainability of local agricultural economy,
State Taxpayers	$0.79	Reduced surface water management and regulatory cost, improved aquatic ecosystems; Reduced costs of sedimentation, damage to waterways, road ditches, flood damage
Federal Taxpayers	$0.06	Reduced costs of sedimentation, damage to waterways, road ditches, flood damage
Society	$0.20	Reduced GHG emissions and Climate Risk; Increased land and water-based recreation

MONETIZED OUTCOMES

Outcome	Monetization
Avoided soil erosion from water	Reduced surface water treatment costs and cleanup costs
Avoided soil erosion from water	Reduced value of soil due to being lost off-farm
Economic benefits (adding partial enterprise budget net income gains on top of the estimated costs)	Year 1 of practice adoption (economic benefits are expected to increase in future years although there is uncertainty in this outcome)
Reduced GHG emissions	Social cost of carbon
Reduced nutrient runoff/ leached in surface and groundwater	Reduced water treatment costs and avoided costs from undesirable odor and taste, nitrate contamination, increased colorectal, bladder, thyroid cancer risks (from nitrates)
	Reduced costs from eutrophication
Reduced wind erosion	Reduced health care expenditures from air quality
Increased biodiversity and wildlife habitat	Tourism and recreation revenues - Birds, aesthetic value, and human health

CORE ASSUMPTIONS

This analysis takes a prospective valuation approach, comparing the estimated outcomes achieved by Perennial Forage and Grazing against the environmental impacts of annual row crops in the Upper Midwest.

- PFG system is implemented at a farm that has livestock on site and is establishing a pasture in a portion of their field that would otherwise be annual row crops such as corn and soybeans, using conventional farming practices.
- The management of the livestock previous to the PFG system is assumed to be a feeding operation, noting that poorly managed grazing is likely.
- Benefits are estimated over a 1 year time horizon and on a per acre basis.
- Costs are based on the establishment of a 20 acre pasture and grazing system, assuming that livestock (in this case cows) are already on site but the farm has not utilized a well-managed rotational grazing system on perennial forage to date.
- Costs are estimated based on the combined establishment cost and production costs. Because establishment costs are a significant upfront investment ($12,000+), to compare against the annual projected benefits, we annualized the costs based on the 20-30 year lifespans expected for the fencing and water systems.
- On-farm net income benefits are estimated for the first year of system implementation to be more conservative (estimates of net income gains show livestock integration with cover crops increasing over time and are further increased with drought or flood conditions that will support faster realization of benefits in comparison to conventional practices). Net income in the visualization does not include opportunity cost of annual row crops which are considered a likely alternative to the PFG system.
- Environmental and social benefits are assumed to begin to accrue in year 1 of practice adoption.
- Environmental benefits of PFG system adoption are assumed to only occur for the duration the PFG system is in place. If land is converted back to annual row crops with conventional practices, we assume the environmental benefits are lost at that time as well.
- We do not specify where in the Upper Midwest the PFG system is being implemented, but utilize research from around the Upper Midwest to guide valuation of the ecosystem services included in the analysis.

GENERAL PROJECT FAQS

What is the purpose of this analysis?

- To accurately account for the social value generated from Perennial Forage and Grazing and to communicate that value with target stakeholders
- To provide an evidence-based valuation of the impact and identify the people to whom the benefits accrue

What is social return on investment?

Social Return on Investment (SROI) is an adaptation of the financial ROI metric. It is used to measure social, environmental and economic gains (also referred to as returns) as a result of an investment. It accomplishes this by placing financial value on the social, environmental and economic gains identified such as increased educational attainment and improved health. It does not include non-monetizable impacts i.e. those impacts that we may be unable to attach a robust estimate of monetary value to, such as the value of increased self-esteem.

There are two primary definitions of SROI used in the field of impact accounting. See the two definitions to the right:

1. **A benefit-cost ratio**: This is the value generated for every dollar invested. It is calculated as:

$$\frac{\text{Social + Environmental + Economic Benefits}}{\text{Investment}}$$

This is the definition used by Ecotone to communicate value creation. For example, the SROI number shown on the Impact Value Map is the "Estimated Return on Investment per acre per year" divided by the figure for "Average Cost per Acre per Year of Pasture Establishment and Grazing System".

2. **A percent return**: SROI can also be communicated as a percentage, similar to a typical financial return. The calculation of the SROI in this case is:

$$\frac{\text{(Social + Environmental + Economic Benefits) - Investment}}{\text{Investment}} \times 100\%$$

When calculating the return as a percentage, the size of the investment is subtracted from the benefits generated so as to isolate the net benefit from the investment. For PFG, this definition results in an SROI of 246% .

Future development of the field will likely isolate a single definition. We note them both here to clarify our own calculation as well as enable increased understanding of SROI metrics a client may see elsewhere.

How does SROI compare to ROI?

ROI is a purely financial calculation, often communicated as a percent return:

$$\left(\frac{\text{Financial Gain from Investment - Investment}}{\text{Investment}}\right) *100\%$$

ROI alone does not measure the full impact of a program.

How does this valuation differ from an economic impact study?

This analysis is focused on monetizing social and environmental impacts. This is distinct from an economic impact study given that we are not including estimations of economic growth, business activity, indirect employment changes, etc. While social impacts certainly can influence economic conditions, that is beyond the scope of this analysis.

What is a non-monetized impact?

In addition to impacts monetized in the SROI estimation, there are impacts that are not monetized due to their intangible nature and/or the lack of quality data to support monetization presently. As future studies are conducted however, certain impacts may become monetizable.

What is Ecotone Analytics GBC?

Ecotone is a Minneapolis-based impact accounting and stakeholder communication firm. Its mission is to help clients scale their social and environmental impact by communicating impact value to stakeholders and investors.

How did Ecotone calculate SROI?

Ecotone's process analyzes and combines external literature of the highest level of evidence of causality with internal organization data to quantify and project the potential value of an organization's impact while identifying the people and entities to whom the benefits accrue. Where possible, outcomes were monetized. When monetization was not possible, non-monetizable outcomes were noted. This analysis is conservative and transparent in all calculations to ensure nothing is overstated, there is credible evidence, and there is no double counting of value.

What is a 'good' SROI?

While there is no standard definition of what a 'good' SROI consists of, the first step in noting the cost effectiveness of the investment is simply having a return greater than the costs, i.e. an SROI greater than $1. In some investor communities, an SROI of $2.50 is used as a benchmark for screening potential investments. This benchmark however is not based on evidence that a return below $2.50 is 'bad', but simply that it has served as a tool to limit those investments under consideration. This inherently places greater importance on those interventions that are able to more readily monetize their outcomes, as well as those interventions that have more near-term impacts, being less burdened by discount rates tied to long-term outcomes.

Further, using a single SROI benchmark across all sectors is risky, as different sectors are associated with greater SROIs. Comparing a workforce development SROI to an early childhood program's SROI becomes a comparison of apples and oranges. We recommend comparisons between programs that are as similar as possible - and even then there may be nuance that is important to recognize. This nuance however is that aspect unique to organizations from which they can better manage and maximize their impact, using the SROI as both an external facing communication piece, but also, and equally important, the SROI becomes that internal accounting tool to understand organizational impact, recognize value pathways, improve KPIs, understand key assumptions and seek new learnings.

PROJECT SPECIFIC FAQS

What resources were used for this analysis?

Many external resources were used, ranging from rigorous experimental evaluations to descriptive studies. A full bibliography is included at the end of the technical documentation and is ranked by level of evidence of causality. Whenever possible, resources with higher levels of evidence are utilized over lower levels of evidence.

Who is the audience of this analysis?

This analysis is intended to communicate with an investor/funder audience. The subject of this analysis could readily become a multi-year endeavor and indeed pursuit of that may be appropriate as funder interest is piqued. Under current limitations, this analysis should serve to represent the types of value that PFG can achieve and serve to draw attention to CLC strategies more broadly as sustainable agriculture funders look for investment opportunities.

Where are the greatest uncertainties in this analysis?

Uncertainties include:

- By combining literature on the individual components of the PFG system into a single holistic system, the outcomes are likely positive but not necessarily duplicative. We do not always have a full understanding of the scale of benefits attributed to the full PFG system in comparison to our counterfactual used of a farm with annual row crops and confinement livestock.
- The location of where the PFG is implemented is uncertain at this time, but would impact the scale of outcomes achieved.
- The causal argument for whether increases in net income experienced by the farmer are due to the PFG system is an area deserving of additional research.
- For effects on net income, we must assume that a well-managed system is in place, and practices are selected and adapted to farm context in the most suitable form. There continues to be uncertainty about when benefits would be realized, how long they would take to be realized, how long the benefits would last, and what factors would lead to future loss of benefits.
- The effect of weather conditions on the scale of impact from PFG practices is unclear. For example, a period of significant rainfall would lead to increased nutrient runoff avoided, increased erosion avoided, increased streamflows avoided, increased flooding of fields avoided, but we do not have a strong causal study of what the additional monetized savings would amount to.
- We do not model climate changes which may occur over the next decade and beyond (IPCC, 2014). These may result in more variation in weather conditions, larger extremes in drought severity, flood severity, temperature extremes, etc. which would all increase the value of perennial forage and pasture establishments.

- The change in outcomes from transitioning from confinement livestock to year round grazing is unclear at this time.
- The attribution of outcome values to specific stakeholders are potentially highly variable depending on who bears the responsibility for damages incurred. For example, poor drinking water quality may be a cost born by the household to supplement with bottled water or require investment by the municipality, or both.
- The size of the pasture established will influence the estimated cost per acre. While we assume a 20 acre pasture averaging costs across multiple pasture shapes and forage types, it is unclear what size pasture may be most suitable on each farm adopting PFG.

How is this analysis different from other Ecotone analyses?

This analysis is prospective in nature, framed by the available research. This is a common approach for Ecotone analyses, but it means we do not know the true value generated as a result of perennial forage and grazing (which would be the result of a retrospective valuation) but we are able to forecast value creation given the alignment of PFG systems with external studies.

Why is it a 'per year' estimate?

Our use of a 'per year' estimation is due to both uncertainties and our conservative approach to these uncertainties. These include:

- Uncertainty in the continuation of PFG practices and how long they will be implemented
- Uncertainty in the timeline of ecosystem service benefits - water quality benefits may not be realized in year 1, but we have conservatively estimated the scale of their benefits from one year of practice adoption with the assumption that they will be realized soon, particularly as heavy rainfall events occur in spring.
- Uncertainty in carbon sequestration through both its measurement and risk of future release of carbon stored in addition to the likely diminishing amount of carbon sequestered in future years of a perennial forage system.
- Uncertainty in how on-farm net-income changes over time and uncertainty in future forage, beef and dairy prices.

Why is it a 'per acre' estimate?

It is important to note that it is not clear what the total value of PFG would be in the Upper Midwest if all acres which could potentially adopt it did so. The main limitation is that we do not know at what point the additional water quality benefits per acre would start to diminish. After a certain point getting more acres to adopt CLC practices may not influence water quality. We do not know exactly what that threshold is, but we can estimate it is likely much higher than the current number of acres utilizing perennial forage practices. It was due to this limitation we utilized the per acre estimate, so we can estimate in the near term a conservative value to be gained per acre - particularly in high priority acres. This will be an area of continued future research.

Would it matter if this PFG strategy were targeted to a particular geographic area?

The environmental benefits of PFG will vary from location to location. Whenever possible the implementation of PFG should be in high priority areas to maximize the environmental services that result.

Is the alternative use of livestock incorporated into the analysis - e.g. confinement livestock?

The implications of confinement livestock are partially incorporated into this analysis although with future research it may be much more so. While we have evidence to suggest the potential water quality issues from a concentrated animal feeding operation, it is difficult to say the extent the farms that would be adopting a pasture system such as the one outlined in this analysis would reflect the severity of the negative environmental impacts of the CAFO systems, for example. Still, the net GHG emissions estimation includes confinement livestock as the alternative scenario. A part of the initial difficulty in fully accounting for this comparison is the limited evidence reviewed that made the comparison needed to be reflected in this analysis. Given that we are comparing a farm with livestock on site and growing annual row crops, we need PFG research to reflect that alternative and in many cases the literature only partially captures this scenario. Notably there was much more research to reference the potential benefits of perennial forage and conversely the benefits of livestock integration into cover crops. Future analyses of this subject however would do well to consider the whole systems view and recognize the substantial amount of annual corn and soybean production that goes into feeding confined livestock and accounting for the environmental, social and health implications of those operations.

What is included in the cost per acre estimation? How were costs estimated?

Costs were derived through a combination of literature reviews, interviews with the Midwest Perennial Forage and Grazing Working Group, and use of the Grazescape calculator tool to establish cost line items and estimates of equipment costs and lifespans. While a full review of costs incorporated are noted in the technical documentation of this analysis, the costs are set up as part of a partial enterprise budget (e.g. no land costs included) and assume a full transition to pasture establishment and grazing system. The total up-front investment for a 20 acre pasture is estimated at approximately $12,000. However when we amortize the up-front investment over the lifespan of the equipment it results in an annual expenditures of $145 per acre per year including production costs. It is assumed the 20 acres of pasture established were previously farmed as annual row crops such as corn and soybeans.

What does the Farmer economic benefits represent in the visualization?

While the benefits accruing to the farm are projected to be approximately $189 per acre per year, this is not representative of their net benefits. The cost and benefits of the pasture establishment and grazing system are based on a partial enterprise budget method which only accounts for those expenses and revenues that change due to a change in practices. Using this approach we recognize that the $189 figure does not include land costs, debt service, etc. Comparing the $189 benefit to the projected $145 cost per acre, the net benefit would be approximately $44. However, the farm may also receive support in covering that $145 figure given that the $145 figure is annualized based on depreciation of an upfront investment in the equipment required to manage the grazing system. As a result, much of the pasture establishment costs are an upfront cost that a farmer may not be willing to pay. With private or government support however, this may reduce the perceived risk of adopting PFG and support realization of the economic and environmental benefits that can accrue.

Who are the stakeholders identified?

- Farm (farmers and landowners): This consists of the farmer and landowner on site implementing the PFG strategy. This consists largely of the internalized financial value captured on-farm as well as some protected value given the likely increased longevity of the soil due to PFG strategies.
- Taxpayers (State and Federal): Taxpayers will fund many of the protective measures put in place to mitigate water and climate damages as well as cover the costs of those damages actually incurred such as road and ditch repair or flood damage.
- Local Community Members: These stakeholders, while likely overlapping with municipal water users, taxpayers and global society are given unique distinctions for their proximity to the PFG strategy. For example, water quality in the region can impact businesses and residents through their property values, their livelihoods, and their health.
- Municipality and Municipal Water Users: Drinking water treatment costs and potential health or taste issues can accrue to a municipality who partially funds the treatment costs as well as the water users who may risk health issues and/or may bear the cost of further in home/business treatment costs.
- Global Society: This represents society in its entirety. A benefit of reduced GHG emissions is a benefit for the global society. Improved habitat and recreation value are of potential benefit to people around the region who may visit or enjoy knowing those places exist.

What is this analysis in comparison to? What counterfactual scenarios were considered?

There is an underlying assumption that the average cost is compared to row crops--the land cost is equivalent either way.

Selection of Scenarios				Livestock Location		
				Cows on site	**Cows coming on site**	**Forage being brought to the cows**
Field Use - selection of scenarios	Annuals - no rotation, no cover crops, and tilling	No grazing	Buying Feed	**Counterfactual**		
		Grazing	Rotational or Adaptive			
			Continuous			
	Annuals with cover crops	No grazing	Buying feed			
		Grazing	Rotational or Adaptive			
			Continuous			
	Perennials	No grazing	Buying feed			
		Grazing	Rotational or Adaptive	**Practice Adopted**		
			Continuous			
	Natural Pasture	Grazing	Rotational or Adaptive			
			Continuous			
	CRP	Grazing	Rotational or Adaptive			
	Woodlands	No grazing	Buying feed			
		Grazing	Rotational or Adaptive			
			Continuous			

Is the goal of this analysis to push for complete agricultural landscape transformation in favor of perennial forage and grazing?

No. Perennial forage and grazing is one of several continuous living cover strategies which are one of many agricultural systems. Near term implementation of CLC strategies is best suited to highly targeted areas so as to maximize the environmental services gained without sacrificing as much financially. Targeting of high priority areas is considered a first step of delivering PFG and other CLC strategies.

Are opportunity costs accounted for in the visualization?

No - the financial returns in the visualization represent direct return over investment for farmers utilizing a partial enterprise budget methodology. The sensitivity analysis in Appendix A of the technical documentation does include opportunity cost to show how that may alter the SROI. The opportunity cost considered is that of annual row crops - corn and soybeans. To see how the partial enterprise budget returns on corn and soybeans compare to our estimate of PFG, we pull FINBIN and USDA reports over the past several years to track how net returns vary. We see that the opportunity cost can range from $0 - $300+ per acre per year depending on the year. This leads to a wide range of potential on-farm economic net benefits to the farmer adopting PFG, but even when the largest opportunity cost of corn and soybeans is included the SROI remains greater than $1, suggesting a still promising investment opportunity.

How is equity accounted for in this analysis? Why is it not a part of the PFG visual?

Black, Indigenous and people of color (BIPOC) represent nearly one-quarter of the U.S. population, yet they operate less than 5% of the nation's farms and cultivate less than 1% of its farmland (Monast, 2020). It is noted both in the literature as well as within GLBW and the network partners that a prosperous agricultural economy depends on racial equity along with expanded and equitable access to agricultural capital, land and technical information. However, this outcome is not represented within the SROI and its associated visualization. This is due to the current limited data to measure the benefits of PFG systems in regard to the amount it will better support BIPOC than other agricultural systems. Future study of this and incorporation into the scenarios analyzed may allow for monetizing this value.

Along a different vein but tied to equity is the extent environmental damages with rural populations are more likely to impact the underserved communities, such as increased likelihood of experiencing nitrate contamination. While these individuals would be a part of the stakeholder group 'local community members' we do not assume a race/ethnicity of these individuals but would note that in specific contexts this may include BIPOC.

What is the ‘shelf life’ of this analysis?

Generally, if elements in the cost structure change such as a reduction in fencing or if there’s a new randomized longitudinal study conducted in the Upper Midwest that provides new insights into the benefits of PFG, then the SROI would likely need updating as well. As underlying evidence changes, so too will the SROI.

IMPACT COMMUNICATION

Why identify the United Nations Sustainable Development Goals?

These are the blueprint, established by the United Nations, to achieve a better and more sustainable future for all and include 17 distinct goals. They serve as an easily recognizable marker of agreed upon impact areas for stakeholders. See pages 16 - 17 for the SDGs that GLBW and CLC strategies align with.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Indicator 2.4.1 Proportion of agricultural area under productive and sustainable agriculture

Target 2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

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Goal 3: Good Health and Wellbeing

Target 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

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Goal 6: Ensure availability and sustainable management of water and sanitation for all

Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

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Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

Goal 10. Reduce inequality within and among countries

Target 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

Goal 13: Take urgent action to combat climate change and its impacts*

Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Target 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

Target 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

Target 15.A Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Target 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

For more information on UN SDGs: un.org/sustainabledevelopment

Why use the Impact Management Project Five Dimensions of Impact?

The Impact Management Project (IMP) is a community of 2,000+ organizations building consensus on how to measure, compare and report impact on environmental and social issues. The IMP community has developed a set of 5 dimensions of impact in order to help build consensus and a common language when organizations and investors discuss their impact. This has been a rapidly growing field, and future alignment of GLBW's and CLC's impact with the 5 dimensions could help attract additional investment as CLC strategies and GLBW network partner initiatives are developed.

Table 1. Details for the Five Dimensions of Impact

Impact Dimension	Impact Questions Each Dimension Seeks to Answer
WHAT	• What outcome occurs in period? • How important is the outcome to the people (or planet) experiencing it?
WHO	• Who experiences the outcome? • How under served are the affected stakeholders in relation to the outcome?
HOW MUCH	• How much of the outcome occurs--across scale, depth and duration?
CONTRIBUTIONS	• What is the enterprise's contribution to the outcome accounting for what would have happened anyway?
IMPACT RISK MITIGATION	• What is the risk to the people and planet that impact does not occur as expected?

IMPACT MANAGEMENT PROJECT

Table 2. Continuous Living Cover (CLC) Five Dimensions of Impact

Continuous Living Cover FIVE DIMENSIONS OF IMPACT

IMPACT MANAGEMENT PROJECT

WHAT: CLC cropping strategies and the perennialization of the agricultural landscape produce food, feed, fuel and fiber and deliver environmental and socioeconomic benefits, including soil health, biodiversity, climate change resilience, quality of life, and equitable access/support for all farmers.

WHO: Midwest farmers; local, downstream, and regional communities and ecosystems; global climate.

HOW MUCH: Environmental and ecological improvements are provided while perennial practices are implemented. Farmer incomes stream are diversified and stabilized, mitgitating weather and market crises. Ecological and socioeconomic benefits accrue on individual farms, across communities, and at a landscape level.

CONTRIBUTION: CLC and perennial cropping strategies offer longer growing seasons, deeper roots, improved soil health and water quality, more resilient ecosystems, and varied market opportunities over annual monocropping production systems.

IMPACT RISK MITIGATION: Farmers can adopt CLC cropping strategies in a variety of ways; various on-ramps offer flexibility and expanded accessibility; a network approach informed by multiple sectors de-risks investment in adoption and supportive infrastructure.

PRESS KIT

We have compiled some sample posts for social media / newsletter / website for you to use, edit and share if you would like to help your team easily communicate the results of our analysis.

About Ecotone

Ecotone Analytics is a leading impact analysis and social value communication consultancy. Ecotone leverages evidence-informed data and key performance indicators to support organizations in achieving their goals and in advancing policy, management, and investment decision-making.

Best practices for talking about the work

When talking about the findings of the impact analysis it's important to be careful so as not to misconstrue or mislead. When referencing the SROI and other specific numerical outcomes, be sure to include "projected" or "estimated" as they are evidence based projected future outcomes, and not outcomes that have already happened that can be measured exactly.

Sample social media posts

Green Lands Blue Waters (GLBW) supports a network working to advance Continuous Living Cover strategies, and GLBW partnered with Ecotone Analytics to identify the impact of one of these cropping strategies, Perennial Forage and Grazing. For every $1 spent on establishing a perennial forage and grazing system, there is a projected social return on investment of $3.46.

Social Return on Investment (SROI) is a metric adapted from the traditional financial Return on Investment (ROI) and is used to measure social, environmental and economic returns. The projected SROI of the Continuous Living Cover cropping strategy Perennial Forage and Grazing is $3.46 for every $1 invested.

The Sustainable Development Goals (SDGs) are a set of 17 agreed upon goals created by the United nations to create a better and more sustainable future, and are being increasingly used as a way to align and measure goals of purpose driven organizations. Below you can see the SDGs that Green Lands Blue Waters most closely aligns with. (attach SDG icons to post)

What (and how much) impact does Perennial Forage and Grazing have? Check out this Impact Overview prepared by Ecotone Analytics to see! (link to IO in post)

Longer Form Text

for email newsletter/website

Green Lands Blue Waters (GLBW) is a network of organizations working together to advance the adoption of Continuous Living Cover (CLC) cropping strategies and the perennialization of the agricultural landscape to support environmental and socio-economic benefits including improved biodiversity, soil health, climate change resilience, quality of life, and equitable access/support for all farmers. Ecotone Analytics conducted an Impact Analysis for GLBW to accurately account for the social value generated from one CLC cropping strategy, Perennial Forage and Grazing, and to communicate that value with target stakeholders.

When conducting the impact analysis Ecotone Analytics identified a projected Social Return on Investment (SROI), which is a metric adapted from the traditional financial Return on Investment (ROI) and is used to measure social, environmental and economic returns of an investment to create a more holistic picture of the value that is being generated. The projected SROI Ecotone identified is $3.46 with the benefits being seen by farms, taxpayers, community members, and global society. The social and environmental value is generated through various monetized outcomes, including: avoided soil erosion from water, economic benefits (adding partial enterprise budget net income gains on top of the estimated costs), reduced GHG emissions, reduced nutrient runoff/leached in surface and groundwater, reduced wind erosion and increased biodiversity and wildlife habitat. The Average Annualized Cost per Acre per Year of PFG system is estimated at $145 (assuming a 20 acre pasture, annualizing upfront investment costs over the expected lifespan of the fencing and water system), and it creates an estimated return of $500 per acre per year (not including land costs or opportunity costs to the farmer). While Ecotone's analysis focused on one CLC cropping strategy, it can serve as a case study to demonstrate the value and potential of CLC.

The Impact Overview identifies Continuous Living Cover's Five Dimensions of Impact, which identifies the who, what, how much, contribution and impact risk mitigation for Continuous Living Cover. Also included is a logic model showing the inputs, activities, outputs and outcomes (short, medium and long) of CLC and some key indicators that signal agricultural transformation.

ecotone-partners.com
info@ecotone-partners.com

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