SFI CONFERENCE





PEFC WEEK

FOREST + PEOPLE + NATURE



May 14-18, 2023 | Westin Bayshore | Vancouver, Canada



THURSDAY

MAY 18





CONSERVATION IMPACT SOUNDING BOARD WORKSHOP



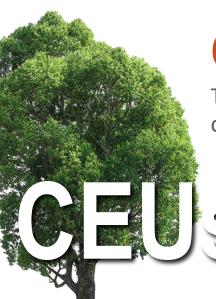
SFI TERRITORIAL ACKNOWLEDGEMENT

The Sustainable Forestry Initiative's diverse team of staff and consultants live and work on the ancestral territories of many Indigenous nations. As we all actively participate in this conference in the beautiful location of Vancouver British Columbia, it is worthwhile to reflect on this region's rich history and legacy.

We respectfully acknowledge that we are on the unceded and traditional territory of the the x^wməθk^wəyəm (Musqueam), Skwxwú7mesh (Squamish), and səlilwəta+ (Tsleil-Waututh) Nations.







CONTINUING EDUCATION CREDITS

This program was reviewed and approved for professional continuing education credits







Stop by the registration desk for any forms and assistance.



WILDLIFE SOCIETY





GROUND RULES

- Informal
- Interactive
- Respectful
- Please come and go as needed...





SFI CONSERVATION PILLAR











LAUREN COOPER Chief Conservation Officer



DR. HEALY HAMILTON **Chief Scientist**



LEO VIANA VP, Conservation Collaboration Lead Scientist



DR. DARREN SLEEP



RACHEL HAMILTON Sr Coordinator, Conservation **Partnerships**



CARLEY ARCHIBALD Coordinator, GIS and **Conservation Research**



STEPHANIE SCANE **Conservation Data and** Research Intern





SOUNDING BOARD WORKSHOP

MAY 18



PEFC WEEK



WELCOME & INTRODUCTION TO SFI'S CONSERVATION IMPACT PROJECT AND OVERVIEW OF THE WORKSHOP



LAUREN COOPER

Chief Conservation Officer
Sustainable Forestry Initiative





DR. HEALY HAMILTON

Chief Scientist Sustainable Forestry Initiative



AGENDA AT A GLANCE...

MAY 18

WELCOME

The Nature-Positive Challenge

- The ESG landscape and the role of certification
- Tools to meet future biodiversity assessment needs

Meeting the Challenge

- Application of eDNA on aquatic biodiversity pre-and post-fire
- Effectiveness of Indigenous riparian standards in managed forests

BREAK – 3:15 PM

Striving for Metrics and Impact

- Communicating Conservation Impact through an ESG lens
- Discuss future of Conservation Impact

CONCLUSION





Agenda QR Code



WORKSHOP OBJECTIVES

MAY 18





- Help address ESG requirements through nature-positive solutions.
- Interact with SFI conservation grant recipients about key research topics.
- Leverage communication about environmental benefits of forest management.
- Discuss future direction of Conservation Impact in relation to reporting frameworks.



Agenda QR Code





I. THE NATURE-POSITIVE CHALLANGE

MAY 18





THE ESG LANDSCAPE



DANIEL O'BRIEN

Partner, Sustainable Business Solutions, PwC Canada; Member of the Taskforce on Nature-related Financial Disclosures (TNFD)







Understanding Nature Impacts & Dependencies -Case study of 2021 Floods in British Columbia, Canada





Photo credits: CBC News

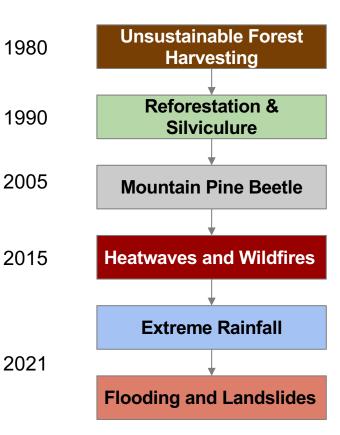
Canadian Centre for Policy Alternatives estimated costs to economy upwards of \$17 billion

PwC 13

Understanding Nature Impacts & Dependencies -Case study of 2021 Floods in British Columbia, Canada







Impact drivers

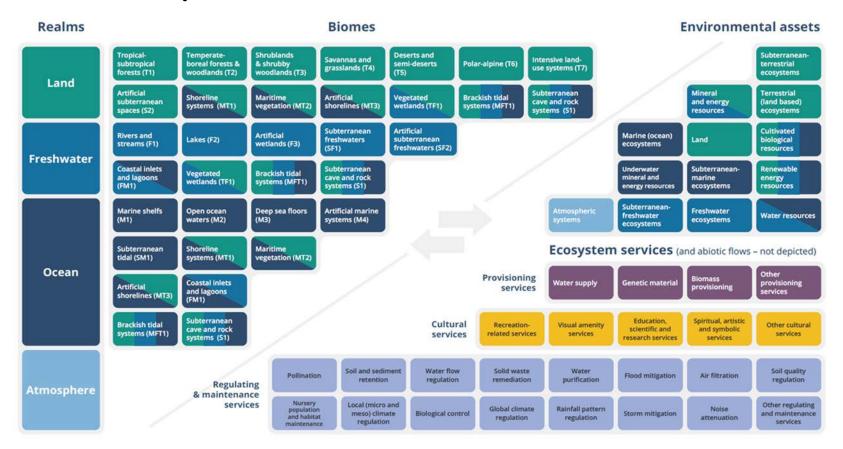
- Land use change
- Resource exploitation
- Climate change
- Invasive species

Ecosystem services

- Water regulation
- Soil and sediment retention
- Flood mitigation

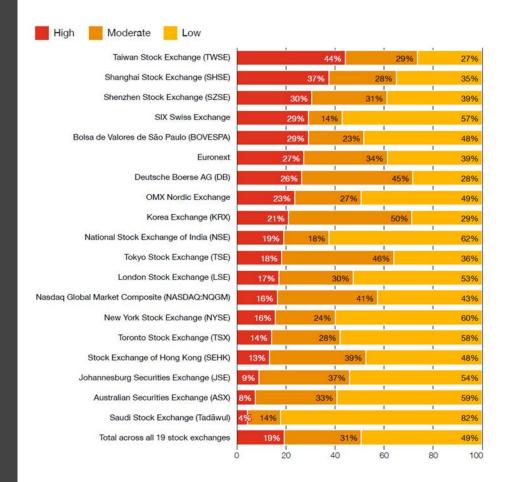


What do we mean by Nature?



PwC 16

More than half of global GDP or \$58 trillion – is materially dependent on nature

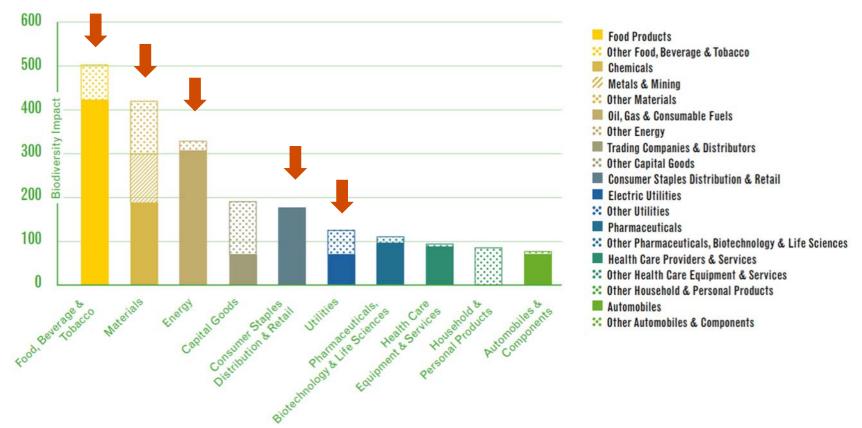


7 sectors **all economic value** in direct operations is highly dependent on nature

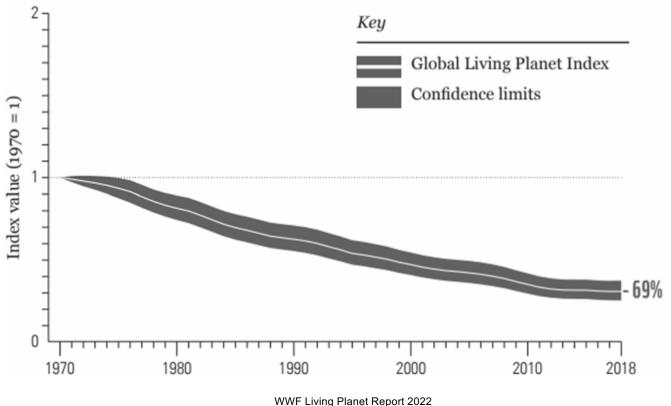
All sectors have some portion of their value chain that is highly dependent on nature

Over half of equity listed on 19 major exchanges are exposed to material nature risks

Sectors with the largest dependencies on nature also have the greatest impacts



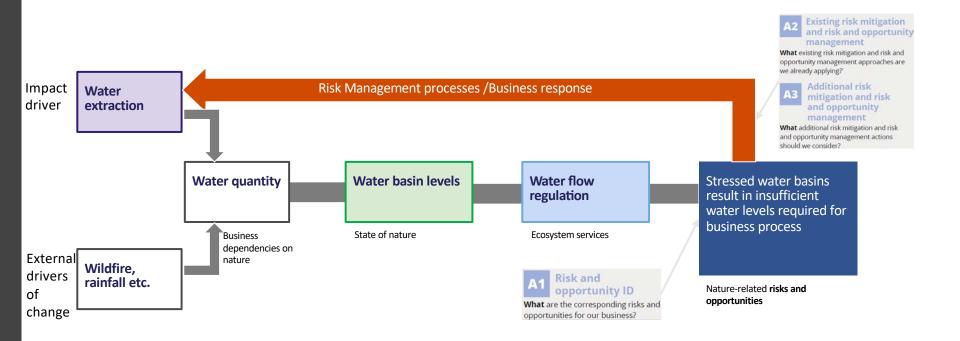
1 million species are at risk of extinction because of human activity (IPBES)



This presents businesses with new physical and transition risks, but also significant opportunities

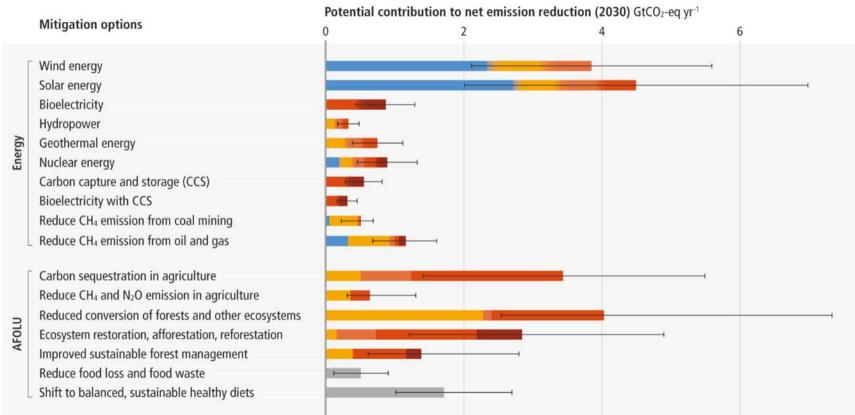
opportunities				
TNFD definitions of nature-related risks and opportunities				
Physical risks	Transition risks	Business performance opportunities	Sustainability performance opportunities	
Acute risks	Policy & legal	Markets	Ecosystem protection,	
Chronic risks	Market risk	Products & services	restoration and regeneration	
	Technology risk	Reputational capital	Sustainable use of natural resources	
	Reputation risk	Capital flows & financing		
Systemic risks		Resource efficiency		
Ecosystem collapse risk Contagion risk	Aggregated risk			

Understanding risks - example of Risk and Opportunity identification pathway

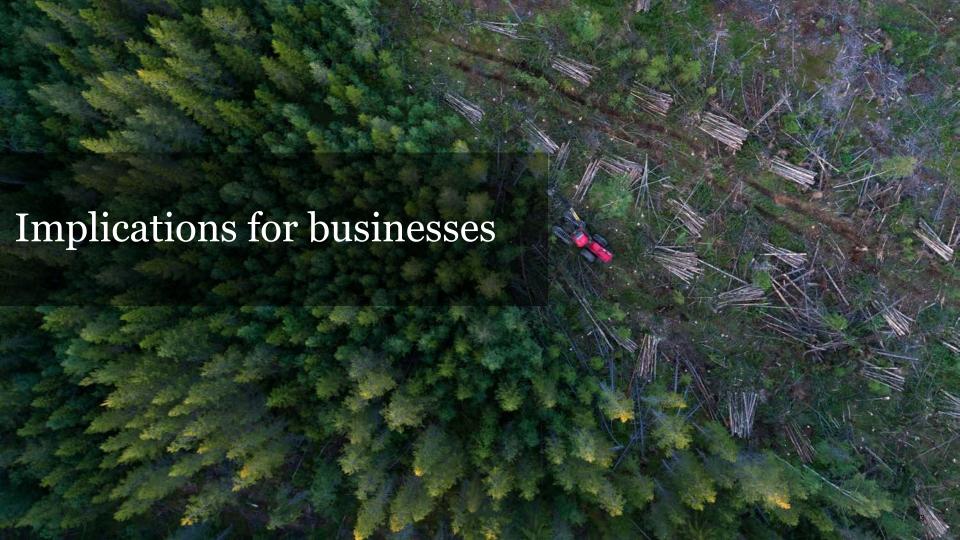


PwC 21

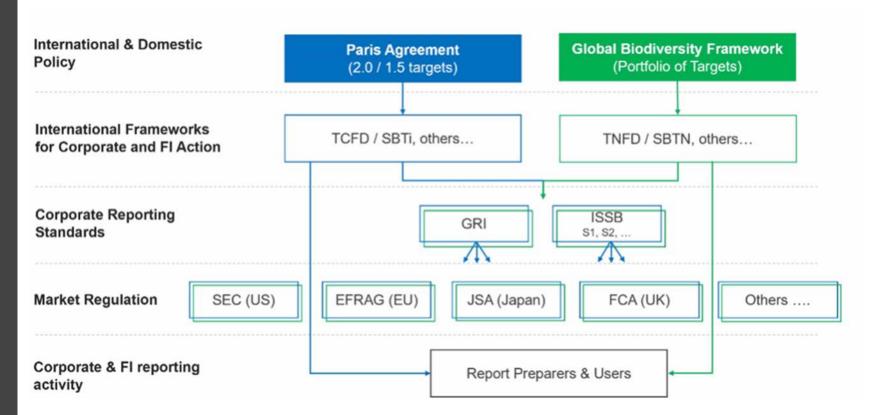
Understanding opportunities - eg Nature Based Solutions



Source IPCC AR6 Report



The importance of nature is driving the development of disclosure frameworks and standards which focus on or incorporate nature



PwC

To develop and deliver a risk management and disclosure framework for organisations to report and act on evolving nature-related risks, with the aim of supporting a shift in global financial flows away from nature-negative outcomes and toward naturepositive outcomes.

> The mission of the Taskforce on Naturerelated Financial Disclosures (TNFD)



The TNFD framework (vo.4) includes draft disclosure recommendations, aligned to TCFD recommendations

TNFD Nature-related Disclosure Recommendations (v0.4)				
Governance	Strategy	Risk & Impact Management	Metrics & Targets	
Disclose the organisation's governance around nature-related dependencies, impacts, risks and opportunities	Disclose the actual and potential impacts of nature-related risks and opportunities on the organisation's business, strategy and financial planning, where such information is material.	Disclose how the organisation identifies, assesses and manages nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage relevant nature-related dependencies, impacts, risks and opportunities where such information is material.	
A Describe the board's oversight of nature- related dependencies, impacts, risks and opportunities.	A Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium, and long term.	A (i) Describe the organisation's processes for identifying and assessing nature-related dependencies, impacts, risks and opportunities in its direct operations.	A. Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process.	
B Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities.	B Describe the effect of nature-related risks and opportunities have had and may have on the organisation's businesses, strategy and financial planning.	A (ii) Describe the organisation's processes for identifying and assessing nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s) and financed activities and assets.	B. Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature.	
	C Describe the resilience of the organisation's strategy, taking into consideration different scenarios.	B. Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities.	C. Describe the targets used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and performance against targets.	
	D. Disclose the locations where there are assets and/or activities in the organisation's direct operations, and upstream and/or downstream and/or financed where relevant, that are in priority areas.	C Describe how processes for identifying, assessing, and managing nature-related risks are integrated into the organisation's overall risk management.		
		D. Describe how affected stakeholders are engaged by the organisation in its assessment of	-	

and responses to, nature-related dependencies,

impacts, risks and opportunities.

The TNFD framework proposes a 17-step 'how to' process (LEAP) to support organisations in preparing for disclosures, with 2 additional scoping questions for corporates

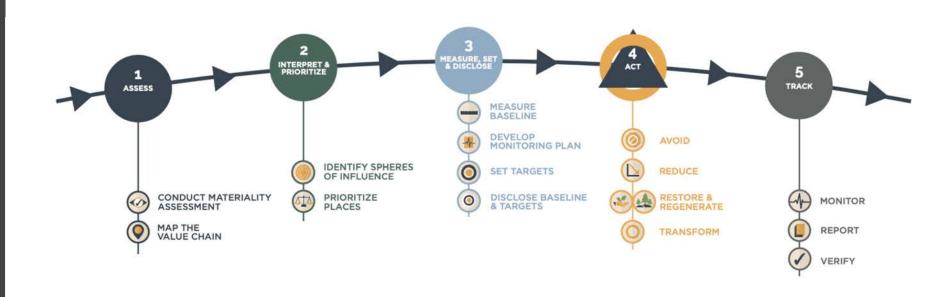




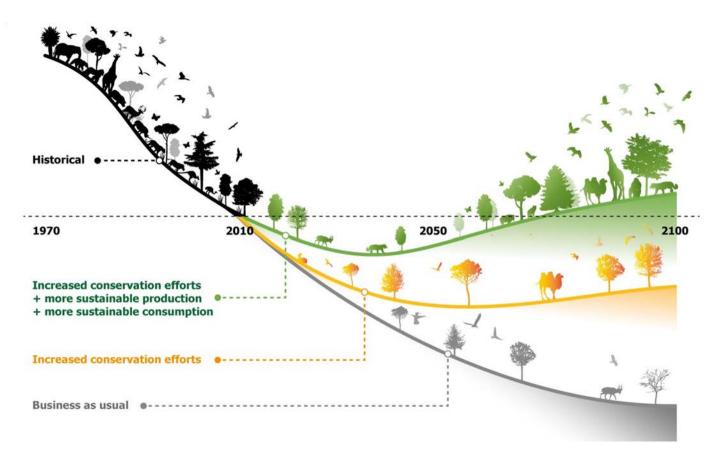
Stakeholder, including rights-holder, engagement (in line with the TNFD Disclosure Recommendations)

Review and repeat





What is Nature Positive?

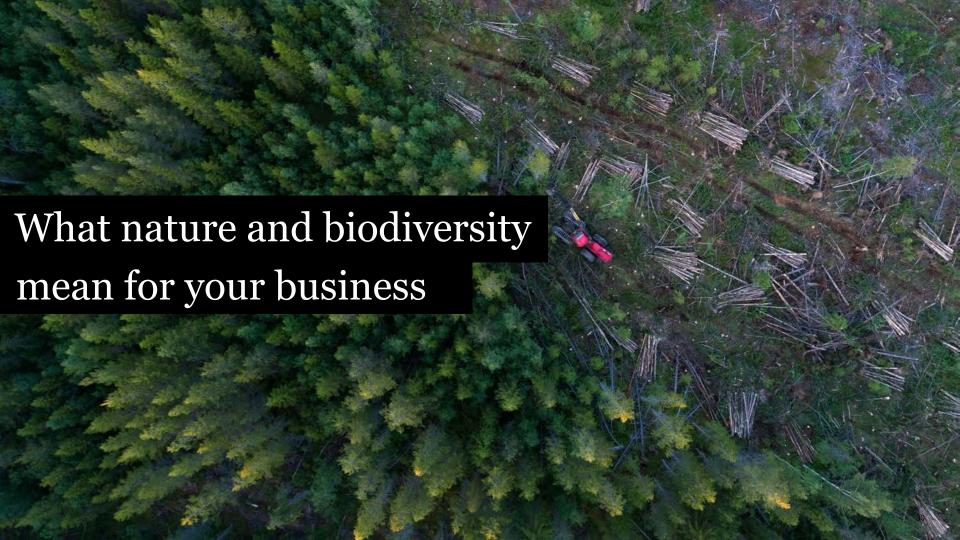


Environmental

- Reduce/ reverse impact drivers
- Restore and regenerate

Socio-economic

- Remove perverse incentives
- Reduce consumption
- Achieve circularity
- Raise wellbeing and respect rights of IPLCs



Practical steps to take now

- SFI is engaging with TNFD and WBCSD to develop forest sector guidance on disclosures that leverage certification
- Forest certification will be an important enabler for companies in addressing Nature-related disclosures
- The requirements of the standards align closely with the assessment approaches and disclosure metrics.



PwC 31

How SFI standards align with SBTN and TNFD

Mitigation Hierarchy	Business Action	How SFI Addresses Business Action
Avoid	Avoid deforestation in direct operations and value chain	SFI Forest Management Standard does not allow lands converted to non-forest to be within the scope of a SFI forest management certificate, nor does it allow for the inclusion of fiber harvested from forests that are not maintained as forests through reforestation.
Reduce	Protect areas of significant biodiversity and carbon value	SFI requires companies to maintain or advance biological diversity at the stand and landscape level across a diversity of forest types and successional stages. This includes the conservation of Forests with Exceptional Conservation Value, old-growth forests, and ecologically important sites.
Restore and Restore native or endangered tree species adapted to climatic conditions		SFI requires that tree species used in reforestation or reestablishment be native (or naturalized) species that are ecologically adapted to the site.

How SFI standards align with SBTN and TNFD

TNFD LEAP Approach	Guiding Question	How SFI Addresses Guiding Question	
Locate interface with nature	Which biomes and ecosystems do activities interface with?	SFI-certified companies are required to identify and manage Forests of Exceptional Conservation Value (FECV's).	
Evaluate dependencies and impacts	What impacts and dependencies on relevant environmental assets and ecosystem services by priority location?	Maintain water quantity by implementing measures to protect and enhance forest ecosystems that contribute to the regulation of water flows. This includes protecting wetland and maintaining riparian zones	
Assess risks and opportunities	What risk mitigation and risk and opportunity management approaches are we already applying?	Protect water quality by avoiding or minimizing the use of pesticides and herbicides near waterways, wetlands, and other sensitive areas.	
Prepare to respond to nature-related risks and opportunities and report	How will we set targets and define and measure progress?	Certified organizations will be required to report annually to SFI on progress toward achieving climate change strategies and plans and measures to mitigate climate change associated with forest operations.	

Practical steps to take now

Understand your interface with nature:

Assess your dependencies and impacts to identify where you have disruption risk by activity and geography - using the LEAP methodology.

Nature positive strategy: Develop fastfollower advantage by integrating nature positivity into your business strategy; creating a potential source of differentiating value whilst mitigating potential risks.

Disclosures & regulatory readiness:

Integrate the nature positive strategy into your sustainability reporting strategy and define how performance can be measured to identify data needs and gaps.



PwC



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I. THE NATURE-POSITIVE CHALLANGE

MAY 18





TOOLS TO MEET THE FUTURE



DR. JJ APODACA

Lead Scientist and Founder, Tangled Bank Conservation; Executive Director, Amphibian and Reptile Conservation





II. MEETING THE CHALLENGE

MAY 18





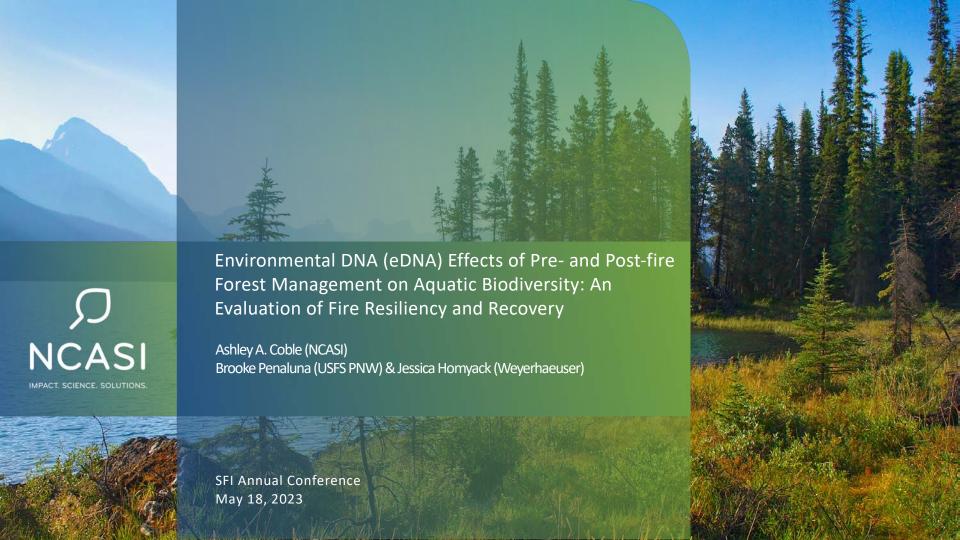
CONSERVATION IMPACT GRANT: EDNA EFFECTS OF PRE- AND POST-FIRE FOREST MANAGEMENT ON AQUATIC BIODIVERSITY: AN EVALUATION OF FIRE RESILIENCY AND RECOVERY



DR. ASHLEY COBLE

Forest Watershed Scientist NCASI







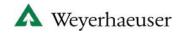
Acknowledgements

In partnership with:



























Field crew:

Tanner Harron, Mikaeli Dirling, BayLee Laufer, David Leer, Maija Weaver



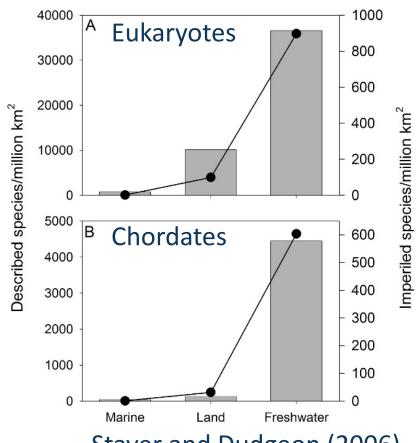






Freshwater ecosystems are among the most diverse

- 10% of all species
- Cover <1% of Earth



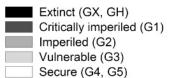
Stayer and Dudgeon (2006)

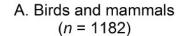


"Freshwater animals, especially those that disperse poorly, are more endangered than their terrestrial counterparts"

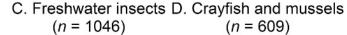
Even so...

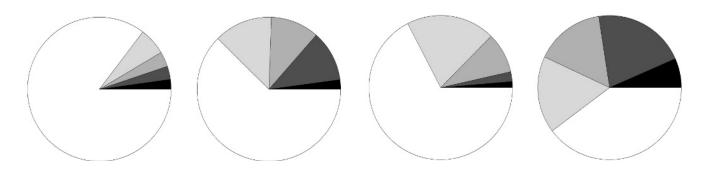
Less emphasis on aquatic biodiversity





B. Freshwater fish (n = 798)



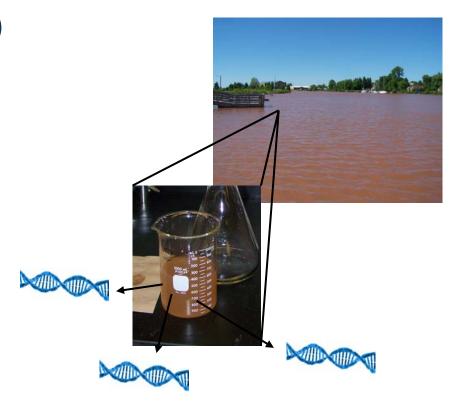


Stayer and Dudgeon (2006)



Environmental DNA (eDNA)

- Cutting edge technique
- Adept at determining presence of species in low abundance





Environmental DNA (eDNA)

- Cutting edge technique
- Adept at determining presence of species in low abundance
- Without handling or adversely affecting organisms





Environmental DNA (eDNA)

 Added benefit of characterizing species across taxonomic groups

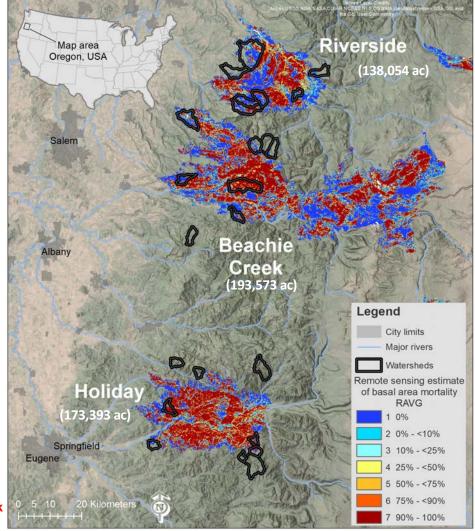
A comprehensive assessment
 of ecosystem biodiversity





2020 Labor Day fires

- 1.22 million acres in 2020
- 600,000+ acres in Riverside,
 Beachie Creek, Holiday Farm,
 and Archie Creek complexes
- >38% of SFI-certified lands

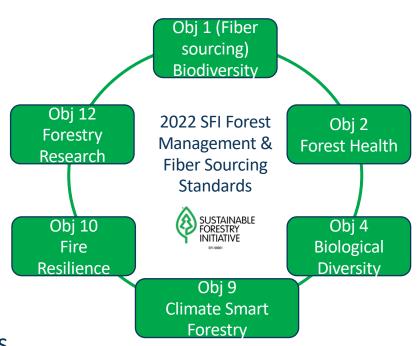


Coble et al. in press Fire Ecology
[not shown] Archie Creek
(131.542 ac)



Research objectives

- Does aquatic biological diversity vary with forest management or fire extent and severity?
- Which landscape or management factors are the most influential predictors of aquatic biological diversity in forested streams?
- Obtain spatially-extensive data on species with elevated conservation status





Methods: Multi-species eDNA approach

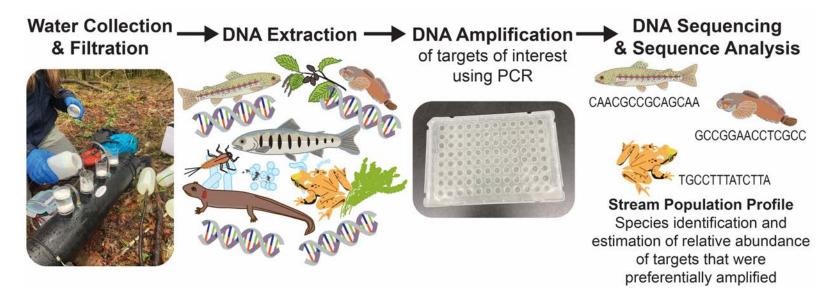


Figure provided by: Brooke Penaluna

Hauck et al. 2019 Environmental DNA: validation of multi-species targets



Study design

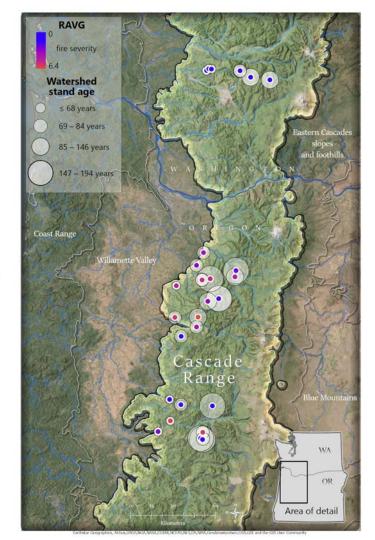
- 30 4th order watersheds (i.e., control for size)
- Established in 2021
- Biodiversity across 12 reference watersheds in Oregon & Washington

Strahler stream order



Tripp et al. 2017

2022 SFI Forest
Management Standards,
Objective 4 & Fiber
Sourcing Standard
Objective 1



NCASI

Canopy

Cover

macro.

RAVG

0% - <10% 3 10% - < 25%

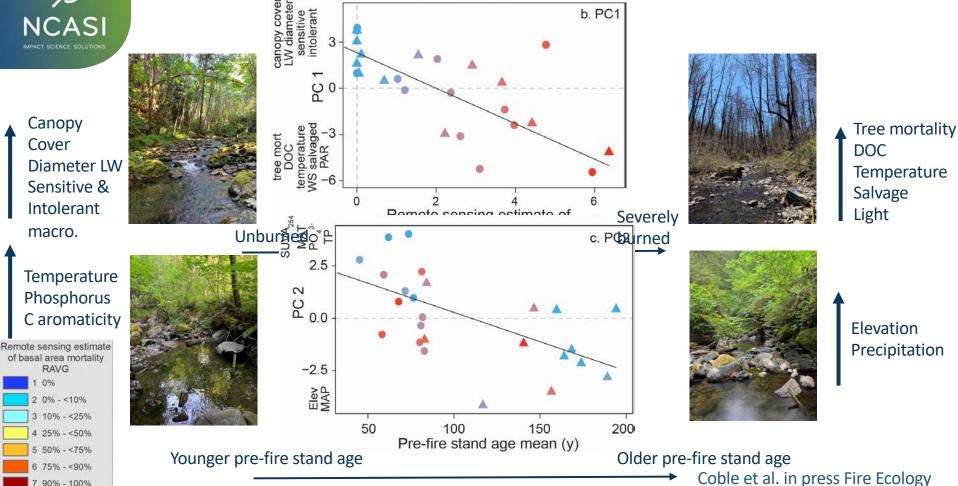
25% - < 50%

50% - < 75%

75% - < 90%

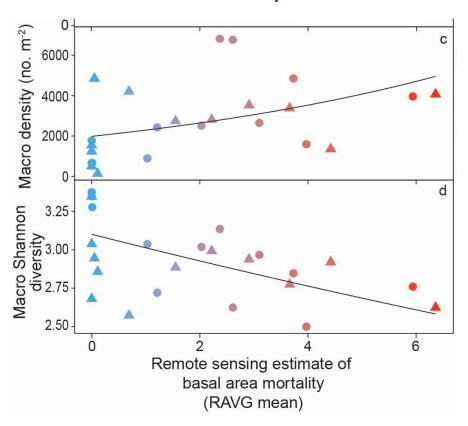
90% - 100%

Fire severity explains most variation in stream variables





Learning from traditional methods: Macroinvertebrate diversity lower in more severely burned watersheds





90

AB

bigleaf

maple

Mortality (%) ら ら

Pre-fire & Post-fire management

Objective 10 of the 2022 Forest Management Standard (Fire Resilience and Awareness)

PRE & POST-FIRE MANAGEMENT TO PROTECT WATER QUALITY

Management Strategies for Small Forest Landowners and Small Woodland Associations

Introduction

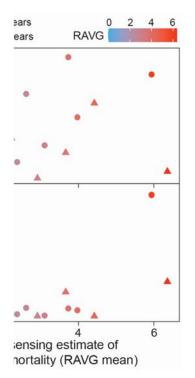
Climate change is contributing to increasing wildfire risks, including increases in frequency, size and severity of wildfires. Wildfire in managed forests can have negative effects on water quality and quantity. Managed forests provide water for downstream human water supplies and for aquatic biota. This informational handout outlines several forest management strategies that may aid in reducing wildfire risk or in limiting adverse effects on water quality and aquatic biota after wildfire, although which strategies are employed may vary based on local conditions.

Pre-fire management

- Riparian (area adjacent to surface water) management
- Maintain diverse overstory tree species in riparian areas, including deciduous trees to enhance potential for overstory survival and shade function post-fire
- Retain older, large-diameter trees in riparian areas that may have deeper rooting depths or lower
- evapotranspiration rates
 Limit mechanized equipment
- Reduce fuel loads in uplands (outside of riparian areas)
 - Use prescribed fire to help reduce hazardous fuels
 - Consider mechanical thinning with slash removal
 - Watershed restoration
 - Target natural tree stocking density (i.e., not overstocked) with native species to maintain natural water balance (storage, evapotranspiration, runoff)
 Restore wetlands to
 - maintain water table levels

 Follow regulatory or
 - voluntary best management practices to limit changes in hydrological routing (road-building, soil compaction near streams) to enhance water infiltration into soil, groundwater, and surface water





red

alder

Riparian burn status

Unburned

Burned

AB

Douglas-fir we

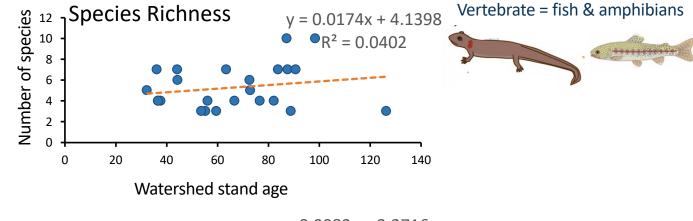
Species

rec

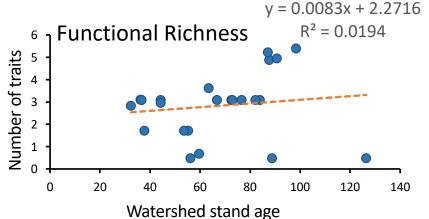


Learning from coastal Oregon: Vertebrate richness doesn't change with watershed stand age

Richness indicates number of species present



High functional richness indicates many functional roles in the community



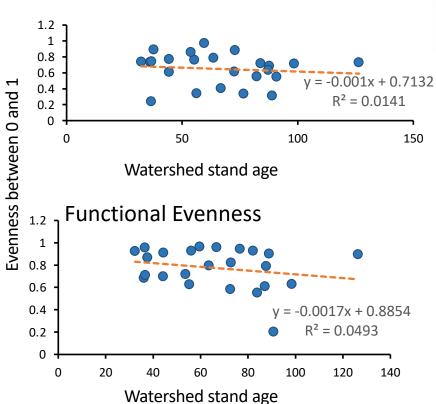
Penaluna and Coble, in prep



Learning from coastal Oregon: Vertebrate evenness doesn't change with watershed stand age

Species Evenness, using Pielou's J

Evenness indicates relative abundance of each species present



Vertebrate = fish & amphibians



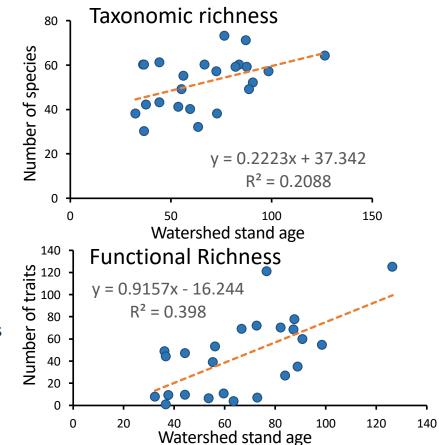
Penaluna and Coble, in prep



Learning from coastal Oregon: Macroinvertebrate richness is higher in older forests

Functional richness can either remain unchanged or increase as species richness increases

High functional richness indicates many functional roles in the community

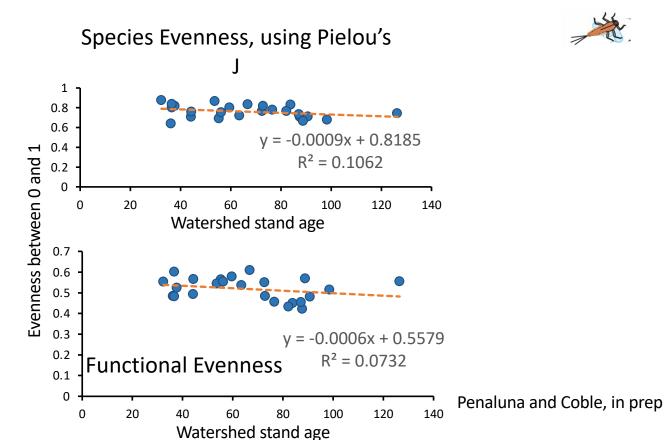


Penaluna and Coble, in prep



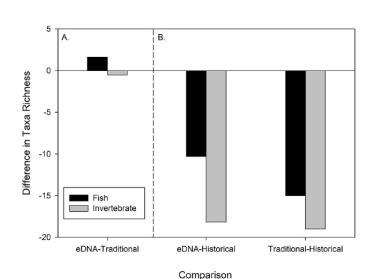
Learning from coastal Oregon: Macroinvertebrate evenness is slightly lower in older forests

Evenness indicates relative abundance of each species present

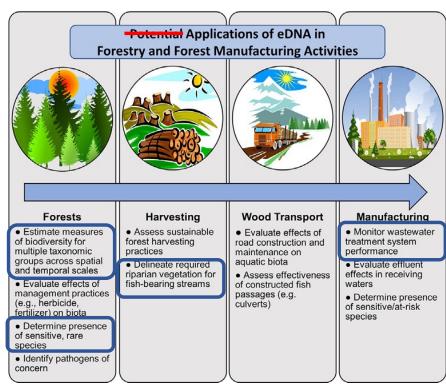




eDNA: potential applications now realized



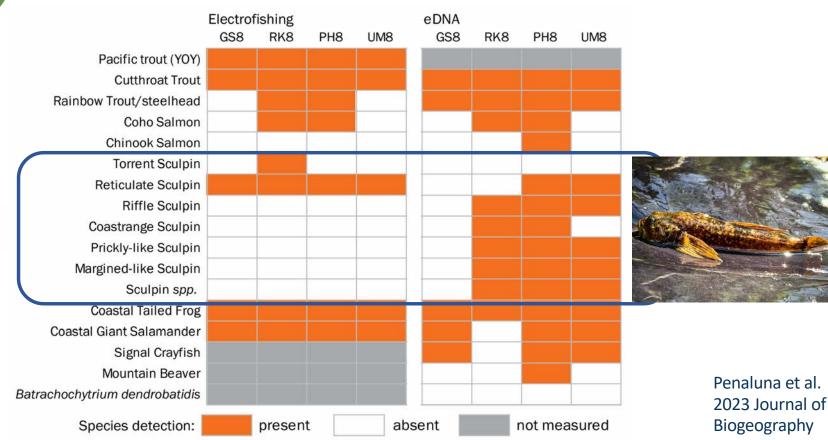
Hauck et al. 2019 eDNA
Penaluna et al. 2021 Ecosphere
Weitemeir et al. 2021
Penaluna et al. 2023 J. Biogeography
Hauck et al. 2023 Peer J.



Coble et al. 2019
Science of the Total Environment



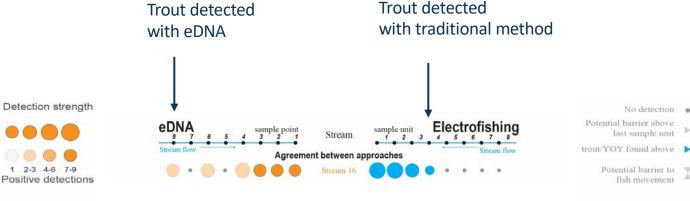
Will freshwater/forest relationships change with eDNA data because of improved species detections?







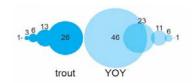
Example: eDNA forestry application





Swartz et al. (in prep)

- Fish presence defines retention buffer width/presence during forest harvest
- eDNA detected fish 50 to 250 m above traditional approach for most of 60 sites samples
- qPCR (single species) approach for coastal cutthroat trout



Penaluna et al. 2021 Ecosphere



Takeaways & Next Steps

- High survival rates of red alder may provide shade for aquatic ecosystems after high severity megafires
- Greater salvage in more severely burned watersheds
- eDNA species' detections can differ from traditional techniques potentially affecting biodiversity responses to fire severity or prefire stand age
- Awaiting DNA sequencing and sequence analysis to identify species







Ashley Coble, Senior Scientist







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II. MEETING THE CHALLENGE

MAY 18



CONSERVATION IMPACT GRANT: ASSESSING THE EFFECTIVENESS OF ENHANCED RIPARIAN MANAGEMENT IN PENTICTON INDIAN BAND AREA OF RESPONSIBILITY



JAMES PEPPER

Director
Penticton Indian Band (PIB) Natural Resources



PENTICTON INDIAN BAND









Penticton Indian Band interim syilx Forest Harvest Standards

Penticton Indian Band SFI Presentation May 18 2023





Penticton Indian Band Strategic Forestry Initiative Project

Assessing the Effectiveness of Enhanced Riparian Management in Penticton Indian Band Area of Responsibility

In Partnership with:









Penticton Indian Band, syilx Nation

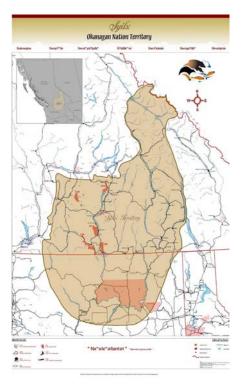


snpink'tn /Penticton Indian Band

- The syilx people hold Title and Rights to over 69,000 sq. km of unceded, unsurrendered Territory.
- All activities, including forestry, are subject to syilx Title, jurisdiction, Rights, interests, and Penticton Indian Band (PIB) decision making and responsibility.



snpink'tn /Penticton Indian Band



 No activities can occur within syilx Territory and the PIB Area of Responsibility without the Free, Prior and Informed Consent (FPIC) of the Penticton Indian Band.



Penticton Indian Band, syilx Forest Standards

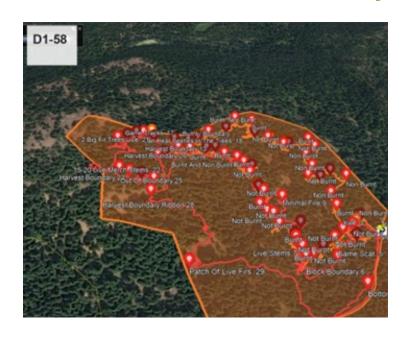


Penticton Indian Band, syilx forest standards



- •The syilx people have a Right and Responsibility to manage unceded syilx lands and resources.
- •Since 2019, the Penticton Indian Band has implemented PIB syilx forest harvest standards within the Penticton Indian Band Area of Responsibility (approximately 20,000 sq km).

Penticton Indian Band, syilx forest standards



•We work with 15 different Forestry proponents to complete in-field assessments that identify PIB interests (social, cultural, environmental and economic) on approximately 1,400 proposed harvest areas per year.

Penticton Indian Band, syilx forest standards



- •The PIB syilx forest harvest standards are designed to protected and mitigate impacts to PIB interests. Including protection measures for:
 - Riparian areas,
 - Wildlife corridors,
 - Edible and medicinal plants,
 - Cultural features and
 - Ecosystem function.
- •All proponents are 100% compliant with the PIB syilx forest harvest standards.



SFI Project Summary



PIB SFI Project Summary



•In the spirit of objective 8 of the SFI standard, the Penticton Indian Band (PIB) has worked collaboratively to adopt and implement the PIB Enhanced Riparian Standards on SFI-certified tenures within the PIB Area of Responsibility (AOR).

PIB SFI Project Summary



The Penticton Indian Band will monitor the implementation of the PIB Enhanced Riparian Standards and assess their value and effectiveness for improving forest management for water quality and syilx indigenous values vs. FRPA Standards.

PIB SFI Project Summary

•The Penticton Indian Band will test this by sampling and comparing outcomes of riparian management using PIB forest harvest standards vs noncertified lands managed under the Forest and Range Practices Act (FRPA) and the Forest Planning and Practices Regulation (FPPR).





Linking TEKK to WSK



Tech to TEKK

- •This project aims to link the Indigenous worldview via direct engagement with syilx Elders and Knowledge Keepers with scientific knowledge to prepare the forest industry for the adaptation of syilx Nation forestry standards and assist industry in meeting SFI standards.
- •This project will showcase how the SFI Standard can adapt to ensure for the recognition of Indigenous rights and drive improved management and outcomes for indigenous values including water quality.
- •This project will link the qualitative and quantitative elements of syilx Indigenous Knowledge with western scientific quantitative knowledge.



Environmental, Social and Governance Performance

- •The people of the syilx Nation have used, occupied and governed the lands and resources within syilx Nation Territory since time immemorial.
- •Forest companies and governments often seek to use these unceded lands and resources without meaningfully consulting with the syilx people.



Environmental, Social and Governance Performance

This approach is different, PIB is working directly with multiple proponents, SFI and the Provincial government to ensure that the PIB syilx forest standards are as robust as possible.











limlemt (thank you)





CONSERVATION IMPACT SOUNDING BOARD WORKSHOP

MAY 18



BREAK

RETURN AT 3:30 PM



III. STRIVING FOR METRICS AND IMPACT

MAY 18





COMMUNICATING CONSERVATION IMPACT FOR **NATURE-POSITIVE OUTCOMES**



DR. DARREN SLEEP

Lead Scientist Sustainable Forestry Initiative



COMMUNICATING CONSERVATION IMPACT FOR NATURE-POSITIVE OUTCOMES

DARREN SLEEP, PhD
LEAD SCIENTIST

SUSTAINABLE FORESTRY INITIATIVE





NVIRONMENTAL





SUSTAINABILITY PERFORMANCE REPORTING





"NATURE POSITIVE"

YET TO SEE A FIRM, MEASURABLE DEFINITION:

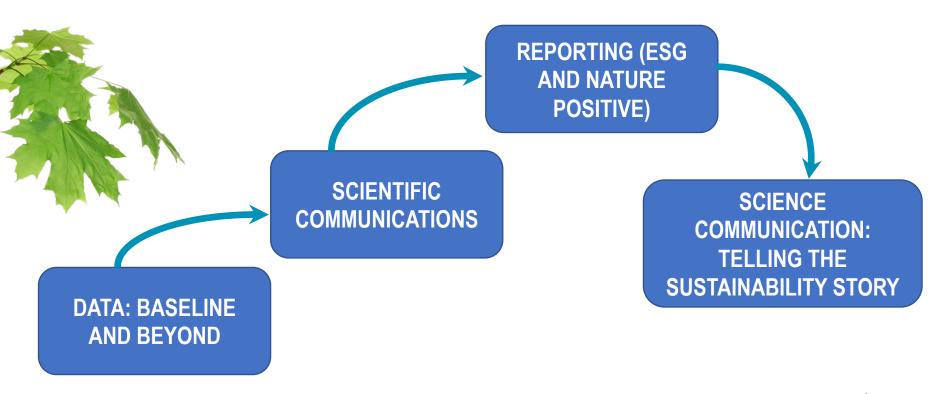


"A nature-positive future means that we, as a global society, halt and reverse the loss of nature measured from its current status, reducing future negative impacts alongside restoring and renewing nature, to put both living and non-living nature measurably on the path to recovery." (IUCN 2022)

"A high-level goal and concept describing a future state of nature (e.g. biodiversity, nature's contributions to people) which is greater than the current state." (SBTN 2020)



THE ARC OF ESG AND "NATURE POSITIVE" REPORTING





A VERY IMPORTANT DISTINCTION...

SCIENTIFIC COMMUNICATION

- Communicating new knowledge gained
- Audience: scientists and technical experts
- Allows feedback and advancement in what we know and how we know it
- Complexity is expected and welcomed; translation is not needed
- Peer-review journals and technical reports

VERSUS

SCIENCE COMMUNICATION

- Inform, educate and raise awareness of science-related topics
- Audience: General public and nonexpert audience (maybe decisionmakers)
- Generates an appreciation of science in decision-making and everyday lives
- Complexity must be translated and explained (NOT dumbed-down)
- Videos, blogs, tweets (etc.)



RESEARCH IS NEEDED TO

DATA: BASELINE AND BEYOND

- Test assumptions about sustainability and applied practices – do our methods work the way we think they do?
- Quantify baseline conditions are improved methods making a difference versus "Business as Usual"?
- Provide the data to tell our stories What good news can we share about what sustainable forestry is doing?
- Create new tools or new practices to help improve what we do.
- This science MUST be communicated: "Research without publication is recreation." (R.M. Brigham maybe...)



DOING THE SCIENCE

\$78 MILLION

IN FOREST RESEARCH IN 2021

\$1.9 BILLION

DIRECTLY INVESTED IN FOREST RESEARCH BY SFI-CERTIFIED ORGANIZATIONS SINCE 1995



NO OTHER FORESTRY STANDARD HAS A RESEARCH REQUIREMENT

DISTRIBUTION OF RESEARCH DOLLARS (IN MILLIONS)

\$24 | FOREST HEALTH AND PRODUCTIVITY

\$23 WILDLIFE AND FISH

\$4 WATER QUALITY

\$4 CLIMATE

\$3 INDIGENOUS RELATIONS

\$2 | COMMUNITY ENGAGEMENT

\$17 | ALL OTHER RESEARCH AREAS

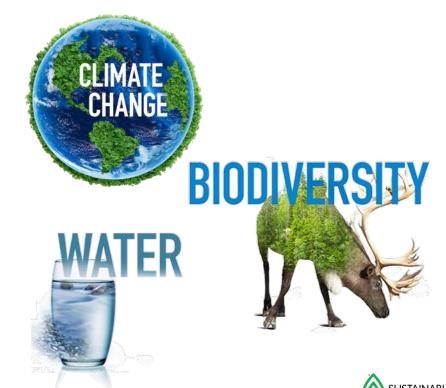


OF RESEARCH FUNDING IS LINKED TO CONSERVATION-RELATED OBJECTIVES



DOING THE SCIENCE SFI CONSERVATION IMPACT PROJECT

- Brand owners need to understand the impact of their sourcing
- Certified Organizations need information that validates their certification
- Conservation stakeholders need to better understand the value of certification
- Improved understanding facilitates continual improvement in SFI

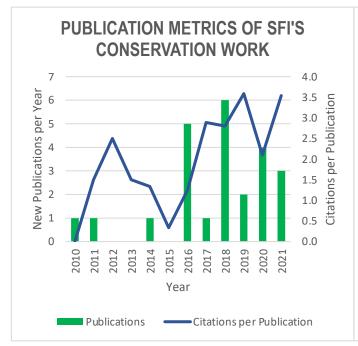


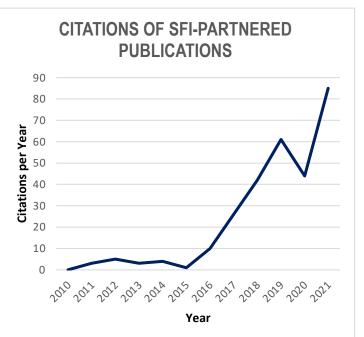


COMMUNICATING TO THE SCIENTISTS

THE CONSERVATION IMPACT PROJECT







SFI's h-index: 9*

(Measure of scientific productivity and impact)



Number of collaborating organizations	52(+)
Number of peer-reviewed publications	27





SFI LEADERSHIP IN SCIENCE AND CONSERVATION COLLABORATION



MEMBERSHIPS, COUNCILS AND CHAIRS



COSSARO

Committee on the Status of Species at Risk in Ontario













PEER-REVIEWED PUBLICATIONS

REVIEW ARTICLE

doi: 10.1093/forsci/fxaa054

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Forest Management

Potential Recolonization Benefits of Retention Forestry Practices

Craig Loehle*, Kevin A. Solarik*, Daniel U. Greene, Laura Six,* and Darren J.H. Sleep



VOLUME 15, ISSUE 1, ARTICLE 26

Westwood, A. R., N. K. Barker, S. Grant, A. Amos, A. F. Camfield, K. Cooper, F. V. Dénes, F. Jean-Gagnon, L. McBlane, F. K. A. Schmiegelow, J. I. Simpson, S. M. Slattery, D. J. H. Sleep, S. Sliwa, J. V. Wells, and D. M. Whitaker. 2020. Toward actionable, coproduced research on boreal birds focused on building respectful partnerships. Avian Conservation and Ecology 15(1):26. https://doi.org/10.5751/ACE-01589-150126 Copyright © 2020 by the author(s). Published here under license by the Resilience Alliance.

Essay, part of a Special Feature on Conservation of Boreal Birds

Toward actionable, coproduced research on boreal birds focused on building respectful partnerships

Alana R. Westwood¹, Nicole K. Barker², Sam Grant^{3,4}, Amy L. Amos⁵, Alaine F. Camfield⁶, Kaytlin L. Cooper⁵, Francisco V. Dénes ¹ Frankie Jean-Gagnon ⁷ Lindsay McBlane ⁸ Fiona K. A. Schmiegelow ^{2,9} Jamie I. Simpson ¹⁰ Stuart M. Slattery ¹¹ Darren J. H. Sleep 12, Sophie Sliwa 13, Jeffrey V. Wells 14 and Darroch M. Whitaker 15

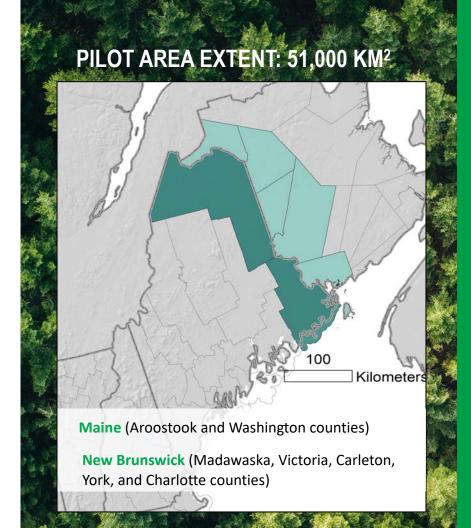




DEVISING NEW WAYS TO MEASURE BIODIVERSITY ACROSS MILLIONS OF ACRES

Measuring the Conservation Value of Forests Certified to SFI across the U.S. and Canada

Project Partners: NatureServe, Sustainable Forestry Initiative, Boreal Avian Modeling Project, American Bird Conservancy, National Council for Air and Stream Improvement (NCASI), Resource Management Service, Hancock Natural Resource Group, J.D. Irving



- Science and data to support sustainability claims are VITAL to ensuring reliable metrics and accountability.
- Supply chain projects can help develop metrics for reporting (e.g., carbon sequestered or water filtered through sourcing from SFI certified lands)
- "First measure the right things; then measure them right." – Pearl Zhu

REPORTING (ESG AND NATURE POSITIVE)



BREAKTHROUGH INNOVATION

CLIMATE SMART FORESTRY

WHY IT MATTERS

FORESTS PLAY A CRITICAL ROLE IN ADDRESSING CLIMATE CHANGE AND STORING CARBON

SFI STANDARD REQUIREMENTS - OBJECTIVE 9:

- Identify and address climate change risks to forest and forest operations and the develop adaptation objectives and strategies.
- Identify and address opportunities to mitigate the effects associated with its forest operations on climate change.





CLIMATE SMART FORESTRY



DOES IT MAKE A DIFFERENCE? YES...

"From what I see in the trenches of forest certification, the SFI standard 2022 is having a real, overdue, and positive impact. The certificate holders are more than being aware (as in the 2015 SFI standard) and now they are engaged in practical actions and proactive planning."

- LAIRD VAN DAMME, AUDITOR

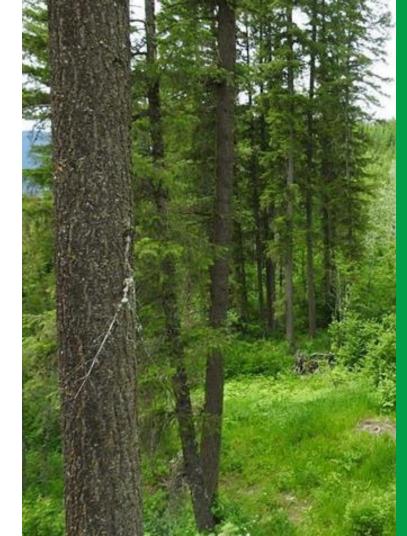


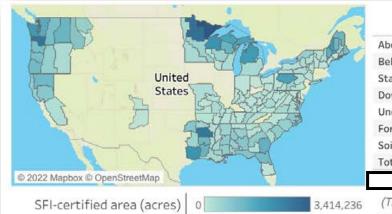




CARBON ASSESSMENT OF THE SFI U.S. FOOTPRINT

SFI collaborated with the National Council for Air and Stream Improvement, Inc. (NCASI) to develop a tool to estimate and display forest carbon stocks, and forest carbon stock changes, across the SFI footprint in the U.S.





SFI-certified area for All owners: 66,127,085 acres

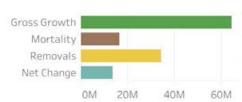
Forest Carbon Pools

Above Ground Trees	1,566,364,550
Below Ground Trees	333,354,052
Standing Dead Trees	57,792,850
Downed Dead Trees	222,511,510
Understory	78,889,105
Forest Floor	523,996,040
Soil	2,782,617,223
Total Forest Carbon	5,565,525,330

(The carbon stock measured most reliably in forest inventory is the aboveground live tree carbon; most other forest carbon pools are based on models or limited measurements).



Annual changes to aboveground live tree carbon stocks *

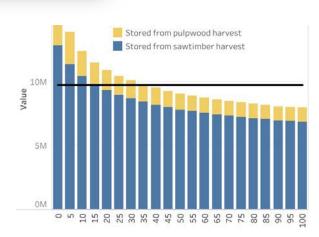


Growth: 64,193,867 (removed from atmosphere)

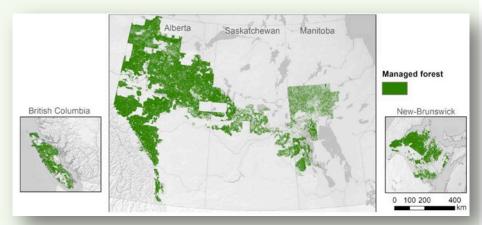
Mortality: 16,261,913 (transferred into dead carbon pools)

Removals: 34,282,752 (transferred to HWP and residues)

Net change: 13,649,202 (net stock increase or decrease)

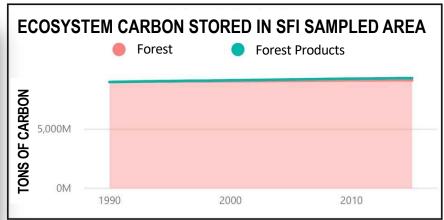


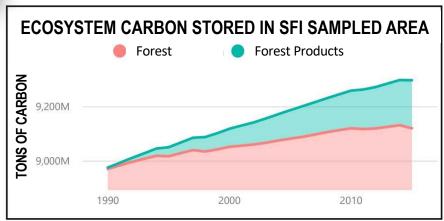
https://forests.org/carbon-tool/





- 18.3% of SFI certified forests in Canada modeled
- 4.5 million metric tons of CO₂e sequestered annually (above ground pools)
- ~24.4 million across Canada**







THERE IS MORE

CARBON STORED

WITHIN THE SFI FOOTPRINT



SEI-0000

THAN WOULD BE EMITTED BY

BILLION CARS IN A YEAR

MORE THAN

21 TIMES THE NUMBER OF CARS IN THE WORLD

HOW MUCH WATER FLOWS THROUGH SFI-CERTIFIED LAND?





FOR MORE THAN

THAT'S ENOUGH TO SUSTAIN NIAGARA FALLS

YEARS

FORESTS CERTIFIED TO SFI ENCOMPASS

6.8 MILLION HECTARES/

16.8 MILLION ACRES OF SURFACE WATER



9 MILLION SOCCER FIELDS







MAPPING SFI ESG LEADERSHIP THROUGH KEY THEMES

ENVIRONMENTAL	SOCIAL	GOVERNANCE
Climate Smart Forestry	Indigenous Peoples' Rights, Recognition, and Relationship Building	Diverse Board of Directors
Fire Resilience and Awareness	Diversity, Equity, Inclusion & Labor Rights	Standards and 3rd Party Audits
Biodiversity and Species Recovery	Healthy Communities and Urban Forestry	
Water Quality and Quantity, and Soil Health		
Reducing Risk (deforestation, illegal logging)		
		SUSTAINABLE

SCIENCE LEFT IN THE HANDS OF SCIENTISTS HELPS...

SCIENCE COMMUNICATIONS

BUT NOT ENOUGH

- The public needs to hear the stories in a way they can relate to
- NOT dumbed-down, but adequately explained (e.g., SFI Standard Guidance, Section 7)



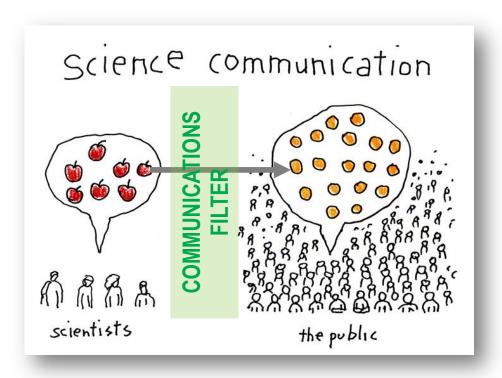




SCIENCE CAN BE COMPLICATED

- The public doesn't want the details (in most cases).
- ...but dumbing it down can often be perceived as misleading, or condescending.
- Science comms can help bridge the divide.

SFI CAN HELP...





THE FORESTRY SOURCE

NEWS FOR FOREST RESOURCE PROFESSIONALS PUBLISHED BY THE SOCIETY OF AMERICAN FORESTERS

MARCH 2023 | VOL. 28, NO. 3

This article was originally published in The Forestry Source March 2023 and is shared here with permission from the Society of American Foresters.

FEATURE

Managed Forests are Key to Gopher Tortoise Conservation US Fish and Wildlife Service: Tortoise No Longer Candidate for ESA Listing in Most of Its Range

By Steve Wilent

ost news articles involving the Endangered Species Act (ESA) describe proposals to list species as threatened or endangered, or the decline of those already listed. In October, a decision by the US Fish and Wildlife Service (F&WS) offered some positive news: The population of the gopher tortoise in the southeastern United States is robust in most of its range and is no longer a candidate for listing as threatened under the ESA.

The gopher tortoise lives primarily in forests throughout Florida, southern Georgia, and portions of South Carolina, Alabama, Mississippi, and eastern Louisiana. They excavate burrows up to 12-feet deep that provide shelter from wildfire, predators, winter cold, and summer heat. Gopher tortoises can live to be 50 to 80 years old and can grow to be up to 15 inches

long and weigh from eight to 15 pounds. They are primarily herbivores, but sometimes eat insects and carrion.

The F&WS listed the gopher tortoise in 1987 as threatened under the ESA in the western part of its range, in portions of Alabama, Mississippi, and Louisiana. In 2011, the agency determined that the gopher tortoise warranted listing as a threatened species in the eastern portion of its range, where the vast majority of tortoises live, but the agency opted not to list the species there because it had higher priorities for other species.

With the October F&WS decision, the species is no longer a candidate for listing in the eastern portion of its range; it remains listed as threatened in the smaller western portion of its range.

In a Federal Register notice of its decision, the F&WS noted that active forest management and efforts by a range of





STEVE WILENT

Director, Conservation
Communications
Sustainable Forestry Initiative





Today is #NationalBirdDay! Lea more about this #SFIgrant & partnership between #SFI,...

Conserving Birds on a...



Total Engagements	33
Reactions	20
Comments	2
Shares	3
Post Link Clicks	1
Other Post Clicks	7



DYK that there is more #carbon stored with the #SFI footprint than would be...



Total Engagements	31
Reactions	18
Comments	1
Shares	1
Post Link Clicks	-

Other Post



Sustainable Fo...

Thu 3/3/2022 11:37 am ...

It's a common misconception that an untouched #forest is all we can do for species at...



Total Engagements	23
Reactions	10
Comments	0
Shares	4
Post Link Clicks	_



9 @sfiprogram
Thu 11/17/2022 4:30 p...

"Trees are the Swiss army knife of ESG solutions," Rich Brown SVP and Environmental Progr...



Total Engagements	50
Likes	23
@Replies	0
Retweets	6
Post Link Clicks	-
Other Post Clicks	21
Other Engagements	0



y ⊚sfiprogram Mon 3/21/2022 3:05 pm ...

SFI is proud to announce the 2022 SFI Conservation Grant recipients on...



Total Engagements	38
Likes	12
@Replies	0
Retweets	4
Post Link Clicks	12
Other Post Clicks	10
Other Engagements	0



Today is
#NationalBirdDay!
Learn more about this
#SFIgrant &
partnership between
#SFI, @ABCbirds,

and the Boreal Avian Modeling Project

Total Engagements	38
Likes	12
@Replies	1
Retweets	3
Post Link Clicks	7
Other Post Clicks	15
Other Engagements	0

in Sustainable Fo... Thu 5/26/2022 12:27 p...

SFI's Sr. Director of Conservation Science and Strategies, Darren Sleep,...





THE RESERVE OF THE PERSON OF T	22500
Total Engagements	477
Reactions	104
Comments	1
Shares	3
Post Clicks (All)	369



Sustainable Fo...

#SFI is thrilled to announce Lauren Cooper as its new Chief Conservation Officer...



	formets an
Total Engagements	262
Reactions	130
Comments	16
Shares	5
Post Clicks (All)	111



In Sustainabl

Fri 5/20/2022 9:46

that an untouched #foresula

It's a common misconce

Total Engagements	105
Reactions	63
Comments	3
Shares	9
Post Clicks (All)	30



KEY TAKEAWAYS

- Science and data to support sustainability claims are VITAL to ensuring reliable metrics and accountability; measuring the right thing the right way is essential.
- Scientific Communication is not the same as Science Communication; it's important to know the difference!

- SFI is working to tell the story and communicate it to multiple audiences
 - The scientific community
 - The curious public
 - ESG and "Nature Positive" reporting needs
 - The general public

LET US HELP!







III. STRIVING FOR METRICS AND IMPACT

MAY 18





DIALOGUE SESSION: THE FUTURE OF CONSERVATION IMPACT



LEONARDO VIANA

VP Conservation Collaboration Sustainable Forestry Initiative





DIALOGUE SESSION: THE FUTURE OF CONSERVATION IMPACT

CONSERVATION IMPACT SOUNDING BOARD WORKSHOP

LEO VIANA

Vice President, Conservation Collaboration Sustainable Forestry Initiative



CONSERVATION RESEARCH AT SFI: Past and Present

1995 SFI Research Requirement



CONSERVATION **GRANTS**





Conservation Impact Project 2022

Decade of Success

Today

Since 1995, SFI-certified companies have directly invested nearly \$1.9 billion in forest research. In 2021. 80% of these investments were allocated to conservation-related objectives.



2010

Conservation and Community Partnership **Grants Program**



Gap Analysis Conducted Results in Grant (RFP)











CONSERVATION GRANT PROJECT





NATURESERVE

Quantifying Evidence of Imperiled Forest-Associated Species on SFI-Certified Lands



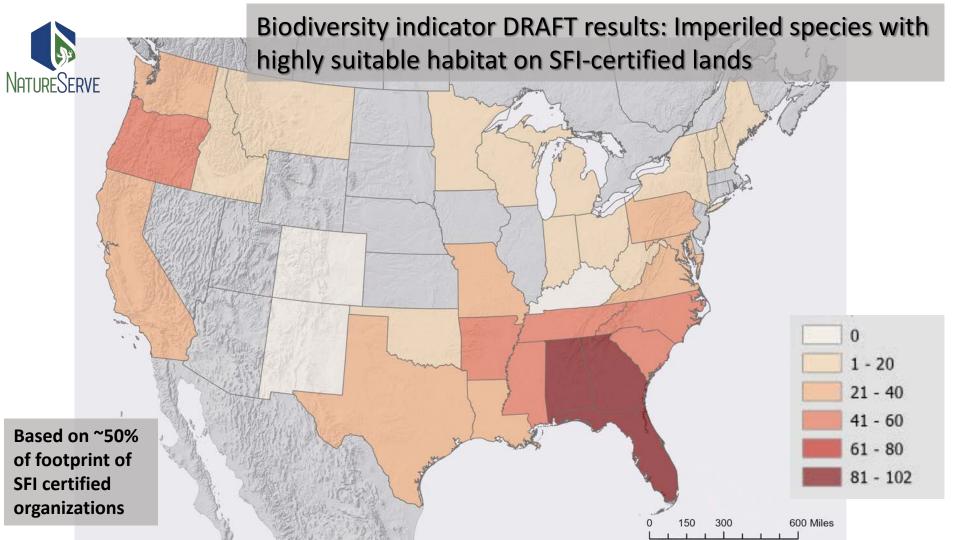
DR. HEALY HAMILTON

Chief Scientist, SFI
Previous: Chief Scientist, NatureServe









CONSERVATION GRANT PROJECT





PEFC WEEK

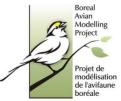
BOREAL AVIAN MODELLING PROJECT (BAM)

The Value and Resilience of SFI Forests for Eastern Forest Birds in a Changing Climate



DR. JUNIOR TREMBLAY

Invited Professor, Université Laval Research scientist, Boreal birds & Ecosystems, Environment and Climate Change Canada (ECCC)





BEACONs Project · Projet BEACONs Boreal Ecosystems Analysis for Conservation Networks

































CONSERVATION GRANT PROJECT



SFI CONFERENCE



MAINE TREE FOUNDATION

SFI 2022 Forest Management Standards and Climate-Smart Forestry in the Northeastern United States



DR. ERIC WALSH

Program Director, Climate Smart Land Network, Manomet















OTHER TOPICS: INFORMING THE FUTURE







THE TIME IS NOW



March 28, 2023: TNFD releases final beta framework for nature-related risk management and disclosure.



May 24, 2023: First release of science-based targets for nature publicly available

"creating an equitable, **nature positive**, net-zero future using science-based targets"

HOW CAN SFI HELP WITH TOPICS LIKE NATURE-POSITIVE AND ESG?







A CONVERSATION... What's happening out there?

What drivers are you seeing?

Any additional initiatives?

Insights on the topics covered by speakers today?







A CONVERSATION... How should the Conservation Pillar advance?

Provide guidance on benchmarking or assessing dependencies and impacts?

Fund a particular type of conservation science research?

Facilitate crosswalks of alignment between your metrics and global frameworks?







OTHER TOPICS: INFORMING THE FUTURE

ARE THERE OTHER
COLLABORATORS OR
PARTNERS THAT SFI
SHOULD CONSIDER
PARTNERING WITH?





SAVE THE DATE



2024 SFI ANNUAL CONFERENCE





JUNE 4-6, 2024 LOEWS ATLANTA HOTEL | ATLANTA, GEORGIA