

## Domini Forest Project – Justification for our Forest Work 2022 Confidential

### I. Consensus

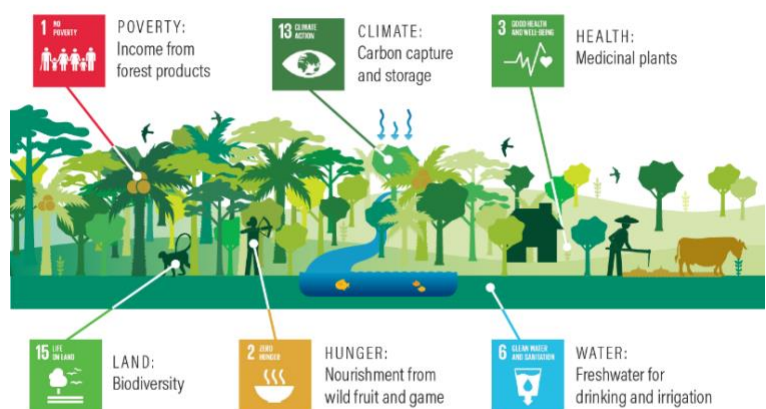
There is consensus, or extensive agreement, about forests’ systemic function and value. Investor, corporate, and public sector statements on forests express the need for effective action to halt deforestation. Concern over the failure to halt global deforestation has escalated because of the prospect of missed 2020 “no-deforestation” targets. Simultaneously, though forests have long been known to provide trillions of dollars of ecosystem services annually, awareness of forests’ crucial part in stabilizing climate systems has grown.

#### *Global Action on Forests*

As climate change progresses, investors, NGOs, corporations, and governments are seeking avenues of slowing or reversing deforestation. The four forest risk commodities, palm oil, cattle, soy, and wood & paper products, are chief targets for forest initiatives, given their linkage to forty percent of tropical deforestation.

- Numerous companies pledged to eliminate deforestation in their supply chains by 2020 as part of the 2014 New York Declaration on Forests. The declaration was signed by over 190 national and subnational governments, multinational companies, groups representing indigenous communities, and nongovernmental organizations who pledged to end forest loss by 2030.
- These no-deforestation goals were supported by language in the UN Sustainable Development Goals (UN SDGs), adopted in 2015 by all UN member countries, which stipulates in Goal 15, target 2 that “By 2020, [countries should] promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.” Beyond climate, forests affect development areas ranging from sustainable livelihoods to indigenous rights, governance to human health. As reflected in Table 1, these effects lead to many linkages between forests and the SDGs.

#### Familiar Forest Goods and Services Support SDGs



Source: *Why Forests? Why Now?* (Center for Global Development, 2016).

**Domini Forest Project - Justification for our Forest Work - 2022**

<i>Table 1 Forest UN Sustainable Development Goal Linkages</i>	
Forest Impact Area	Related SDG
<i>Forest Cover and management as relates to global biodiversity</i>	Goal 15, <i>Life on Land</i>
<i>Carbon sequestration</i>	Goal 13, <i>Climate Action</i>
<i>Protection of rural and indigenous livelihoods and traditional ways of life</i>	Goal 1, <i>Reducing Poverty</i> Goal 10, <i>Reducing Inequalities</i>
<i>Biodiversity as a source of disease control and medically-useful compounds</i>	Goal 3, <i>Good Health and Well-being</i>
<i>Impact on agricultural viability and food security and as safety net sources of food and nutrients</i>	Goal 2, <i>Hunger</i>
<i>Increased resource efficiency, agricultural intensification and use of recycled materials</i>	Goal 12, <i>Responsible Consumption and Production</i>

- The Paris Agreement on Climate Change, also signed in 2015 by 185 countries, strongly supported the UN REDD+ program, which provides financial incentives to halt deforestation. As increasingly dire predictions about the speed and effects of climate changes have come to the fore, forests have re-emerged as a potential asset and liability. The *Intergovernmental Panel on Climate Change (IPCC) 2018 Special Report on Global Warming of 1.5 °C*, compiled by a body of over 3000 international scientists, reports that we are on track to experience catastrophic effects including droughts and heatwaves, biodiversity loss, and famine even if warming is limited to 1.5°C. Forests are directly tied to global climate systems, serving as a carbon sink and regulating heat and moisture. Their loss is changing global rainfall and temperature patterns, with potentially dire consequences for agricultural productivity.
- Investor and industry-led initiatives focusing on core drivers of deforestation have also garnered widespread support. An industry-led moratorium on soy associated with Amazon deforestation had success in reducing forest loss in that biome. Efforts now focus on soy-linked deforestation in the Cerrado biome. In March 2019, a coalition of investors representing \$6.3 trillion in assets under management signed a statement of expectations on deforestation in soybean supply chains, urging companies to consider deforestation in non-Amazon biomes, including the Cerrado and Gran Chaco. Considerable investor and consumer attention has also been focused on the large-scale deforestation linked to palm oil plantations in Indonesia, continuing momentum behind certification for palm oil under the Roundtable for Sustainable Palm Oil (RSPO).

# **Domini Forest Project - Justification for our Forest Work - 2022**

## **II. Relevance**

Domini has a duty to our investors to monitor risk and create value for shareholders. Deforestation is occurring at a scale that is a macro-risk to our investments across asset classes and could threaten the global economy. We analyzed our portfolio exposure to deforestation and use of forest services. Our results, in *Table 2.1*, clarified the relevance of forests to our operations and informed our system interventions.

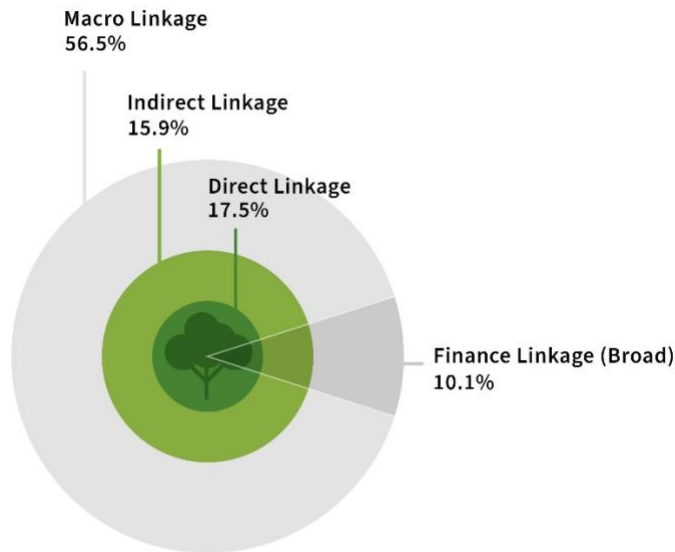
### **Risk and Opportunity across Asset Classes**

- A negative reinforcing dynamic in forest-related systems is generating progressively worse outcomes relating to fresh water, local and global climate, biospheric integrity, rural and indigenous livelihoods, and nutrient cycling systems. *See system diagrams, Figures 1a and 1b.*
- Deforestation is the third-largest source of carbon emissions after coal and oil, driving climate change. Loss of forests' cooling and water cycling services is also causing warming and drying both in the local area of deforestation and globally. For example, deforestation in the Amazon is predicted to decrease rainfall in the US Midwest, Northwest, and parts of the South during the agricultural season, according to Lawrence and Vandecar (2014).<sup>1</sup>
- Forest loss may be near a planetary boundary or tipping point. After passing the tipping point threshold, forests' losses may be irreversible and move Earth's climate to a "hothouse state" due to loss of carbon sequestration and climate regulation.
- Deforestation presents a clear case for action, but there is also an opportunity to create positive impact and value by addressing it:
  - Considering broader system dynamics of sustainability challenges helps us to identify forward-looking companies that are cognizant of risks and working to preempt them. We believe this to be a good indicator of strong management and therefore performance.
  - System analysis also could help us identify where in the system to invest in solutions to emerging trends and challenges. Further, by investing under the paradigm of value creation, we are sowing the seeds for own future investment returns. Internally, building that capacity to understand challenges from a systemic view enhances our ability to think strategically and long-term plan.

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<sup>1</sup> Lawrence, D., Vandecar, K., (2014) Effects of tropical deforestation on climate and agriculture, *Nature Climate Change*, vol. 5, pages 27–36.

## Domini Forest Project - Justification for our Forest Work - 2022



*Figure 1: The relationship between forests and linkage categories. Percentages are the proportion of Domini's portfolio companies that fall into each category. Directly linked companies have the closest relationship to forests, while macro category companies are linked to forests by their effects on the climate. The broad, finance linkage category spans all types of linkages.*

### *Forest Linkage Analysis*

Industries have different degrees and types of exposure to the systemic risks and impacts related to forests, largely based on how directly linked their business is to forests products, other ecosystem services provided by forests, and deforestation.

We have defined four categories of linkages and attendant risks to clarify the relevance of forests to each of our sub-industries. The categories are based on the degree to which forests are linked to the core business of the industry. This linkage may be a need for forest products or services, i.e. forest value, a negative, value destroying effect on forests, or both.

All four categories of industries broadly rely on the regulating and supporting services from forests, including for mitigation of climate change and attendant global disruptions, but in the first two, the linkage may also be local and immediate.

Based on this categorization, we analyzed which types of systems interventions would be most effective in addressing risks to the industries in each of the categories.

## **Domini Forest Project - Justification for our Forest Work - 2022**

### *Forest Linkage Categories*

#### **1) Direct linkage**

These industries either directly source forest products, meaning they rely on the provisioning service of the ecosystem, or directly contribute to deforestation. Provisioning services are the food, fresh water, raw materials, and genetic and medicinal resources that are sourced directly from nature. The direct connection between forest value and these industries is certain, and therefore risks to forests may be possible to translate into stock prices of companies in these industries.

#### **2) Indirect linkage**

The industries in this category have linkages to forests and forest products in some parts of their business but are at least one step removed from the sourcing of products or from deforestation.

#### **3) Macro linkage**

Industries with a macro linkage to forests will be meaningfully impacted by disruptions, especially to the climate and other biogeochemical processes, from loss of regulating and supporting forest ecosystem services. This includes all industries without the other types of linkages.

These industries need a stable global climate, including predictable rainfall and temperature patterns, and are affected by extreme weather events, lack of clean water, or by geopolitical instability caused by these other disruptions (which could also affect economic circumstances). Climate change could affect all geographies, industries, and asset classes. Climate effects present physical risk to assets and supply chains, both currently in the form of more frequent and severe weather and wider-ranging, fundamental changes in the long term. These physical effects and broader changes may in turn increase risk of default and financial liability. Additionally, transition risk, which includes policy risk, potential for legal damages, risk of stranded assets, and reputational risk, may contribute to volatility across all asset classes and lower economic growth.

Owing to the high uncertainty about the effects of forest loss, this risk is problematic to translate into price and should instead be conceptualized in terms of long-term economic or intrinsic value. Companies in this category range broadly and vary considerably in their degree of exposure to risk, time scale, certainty, and scope and type of risk.

## Domini Forest Project - Justification for our Forest Work - 2022

### 4) Finance linkage (Broad linkage)

Financial institutions are linked to forests in many ways, including those in the prior categories. Financial services firms may own forests directly, finance companies that either directly need forest products or cause deforestation, or rely on ecosystem services themselves, and all are affected by regulating and supporting services of forests, particularly as related to climate change. Financial institutions, with these multi-layered linkages, are a special case, and effective ways to address their linkage and impact on forests will also be distinct.

Category	% of holdings	# of holdings companies	% of approved universe	# of approved companies
Direct Link: need for and destruction of forest value	12.7	64	12.3	160
Direct Link: destruction of forest value	4.4	22	3.7	48
Direct Link: need for forest value	0.4	1	0.7	9
Total Direct Link	17.5	88	16.7	217
Indirect Link: need for and destruction of forest value	11.9	60	10.0	130
Indirect Link: destruction of forest value	4.0	20	4.2	55
Total Indirect Link	15.9	80	14.2	185
Macro Link to forest value	56.5	284	58.0	754
Finance Link (Broad) to forest value and destruction	10.1	51	11.2	145

*Table 2.1: Percentages of holdings (companies in Domini’s portfolios in our U.S. and international equity funds) and approved universe (companies that meet our social and environmental standards for investment) that fall into each forest linkage category. At the time of the analysis, the portfolio holdings consisted of 503 companies across both funds, and the approved universe consisted of 1301 companies.*

#### *Domini’s Linkage*

To cement our case for addressing forest risk and to determine what type of system intervention is appropriate, we applied the linkage categories to our proprietary sub-industries. We calculated the percentage of our holdings and approved universe had each of the four major types of linkages, direct, indirect, macro and broad, and then within those, whether they relied on forest products and/or contributed to deforestation. The results of this analysis, in *Table 2* shows we are exposed to industries that have a direct need for forests but simultaneously contribute to deforestation. Unsurprisingly, our largest exposure is to industries that have a macro linkage to forests. Our system interventions will focus on industries with these two type of forest linkages.

## **Domini Forest Project - Justification for our Forest Work - 2022**

### **III. Effectiveness**

Domini's past work demonstrates our ability to influence forest outcomes. We have used our position as investors to drive positive change, including better forest management, in the past. Now we are actively addressing forests outcomes because of the stakes of inaction are high relative to forests' impact across asset classes and the industries in our portfolio.

Furthermore, deforestation is largely driven by global commodity sourcing, which investors can influence. More than two thirds of deforestation is carried out to produce "forest risk" commodities like soy, beef, palm oil, pulp and paper, but the effects of deforestation threaten the sustainable supply of these products. Additionally, sixty of global biodiversity loss is attributed to food production, including of palm oil, found in 50% of packaged products.

#### *Investors and Systems Change*

Domini seeks to catalyze a reversal of system behavior to a self-reinforcing loop that preserves and creates value for our shareholders. *(See system diagrams)*

We, alongside other investors and partners, have been working on deforestation. This project attempts to use a new lens to evolve that work. To help us create change more effectively, we are developing an intentional plan to target our highest leverage system interventions. Our system analysis seeks previously unconsidered intersections, externalities, and techniques to better address deforestation.

Our investor system interventions target allocation of funds to actors that move the system towards value-creating behavior, and away from value-destruction. We have multiple practices for intervening, from direct action to indirect influence.

1. Direct allocation to value-creating companies and modelling investor behavior under a value-creating paradigm. This is operationalized via:
  - Implementation of industry specific Key Performance Indicators (KPIs) for forests that capture primary sustainability challenges. Examples include:
    - For the Packaging sub-industry: % of forestland certified: SFI, PEFC, CERTFOR (neutral), FSC (positive) (for forest product operations). Based on our KPIs, we approve thirteen companies in the packaging sub-industry.
    - For the Forest Products, Pulp & Paper sub-industry: controversies related to procurement, including illegal logging and land disputes. We approve six pulp and paper companies.
  - Published Impact Investment Standards applied to investments across all funds.
    - Companies can be excluded when they don't meet these standards, regardless of short-term financial performance. For example, a Japanese pulp and paper company was excluded for poor environmental performance, including not

## **Domini Forest Project - Justification for our Forest Work - 2022**

banning use of High Conservation Value Forests (HCVFs), leading to sourcing of primary forest wood from Tasmania, Australia for use in woodchips.

- We distribute our Standards at industry events and in sales meeting.
2. Supporting other investors with tools to identify and foster value creation.
- Conversations and other information-sharing through white papers, issue briefs, impact reporting.
    - We published an article, “Valuing Forests: why investors must wake up to deforestation” addressing investors and forest risk on CDP’s blog in February 2018.
    - We have also spoken on panels at major industry events about forest risk and our work and tools to create value. In 2016, Domini gave the keynote address for the launch of CDP’s 2016 Global Forest Report at the London Stock Exchange and spoke about forestry crime at INTERPOL headquarters.
3. Supporting corporations with guidance to focus on value creating activities.
- Corporate engagement through direct dialogue, public sign-ons, proxy voting, and shareholder proposals
    - We had an ongoing dialogue to encourage companies to source palm oil that was not linked to deforestation. We have filed shareholder proposals with companies that source palm oil and other forest risk commodities, prompting them to update their supply chain policies, increase public reporting, and join certification bodies, including the Roundtable on Sustainable Palm Oil (RSPO). Several of the companies now have time-bound commitments to source 100% certified oil, including PepsiCo and Mondelez International.
  - Voting our proxies in line with our proprietary proxy voting standards.
4. Engaging in public policy.
- Via comments and dialogue with policy-making bodies, including voluntary standards setters, like the Roundtable on Sustainable Palm Oil (RSPO).
    - We have actively worked with RSPO on strengthening their standards, submitting comments on their 2018 Principles and Criteria review, which set its standards for the next five years. Working with Rainforest Action Network (RAN) and Green Century Capital Management, we sent a letter on behalf of 101 institutional investors managing more than \$3.2 trillion to RSPO’s Complaints Panel, calling on RSPO to implement a more transparent and responsive complaints mechanism to properly uphold the credibility of its



## **Domini Forest Project - Justification for our Forest Work - 2022**

certification system. RSPO members voted overwhelming in favor of the strengthened standards.

5. Amplifying all the above work via collective action.
  - Working in coalitions of investors and civil society groups to advance industry-wide standards, facilitate knowledge-sharing, and increase impact.
    - For example, we partner with two leading NGOs working on forest issues, Rainforest Action Network (RAN) and Friends of the Earth (FOE). Working with RAN, we had several dialogues with PepsiCo related to its palm oil sourcing practices. Prompted by our questions, Pepsi amended its published list of suppliers to note that it had suspended purchases from one accused of human rights violations during 2017.
    - Domini also works in coalitions like those organized through the Interfaith Center on Corporate Responsibility (ICCR) and the UN Principles for Responsible Investment (UN PRI). We participated in investor coalitions working on soy= and beef-related deforestation in supply chains, including signing an investor statement of support for the Cerrado Manifesto related to deforestation in that biome, an investor expectations statement on deforestation in soybean supply chains as part of the PRI and Ceres Investor Initiative for Sustainable Forests, and a statement on sustainable protein sourcing with the Farm Animal Investor Risk and Return (FAIRR) group. These initiatives mobilized and publicized the voices of investors with combined assets under management of several trillion dollars.

These different intervention tactics all can create positive change, as they have in our prior work. Our project uses systems analysis to find more effective leverage points at which to deploy these tactics. While we and other investors have had successes in this work, deforestation, continues and is even accelerating.

### **IV. Uncertainty**

Consideration of system-level uncertainties is necessary for our investments because varying outcomes will have differing impacts on economic value. Loss of forests and land use changes raises questions about the planetary boundary for resilience, and we are concerned about the effect on our investments and the systems from which we derive value. The use of scenario analysis is one means to understand and plan for these possible outcomes.

#### *An Uncertain Future*

Passing planetary boundary thresholds has the potential to have dire, rapid, and unpredictable impacts on the Earth's environmental systems, including climate change, change in biosphere integrity (biodiversity loss), and biogeochemical flows. The result could be dramatic climate shifts, including those of rainfall and temperature patterns, and other changes that could

## **Domini Forest Project - Justification for our Forest Work - 2022**

threaten agricultural production, infrastructure, and human health. Regime changes—shifts from one type of ecosystem to another, for example from a kelp forest to a sea urchin barren—occur as a non-linear result of drivers like pollution and climate change.<sup>2</sup> These thresholds are hard to predict and may result in irreversible change.

The triggers, timing, scale, and implications of exceeding planetary thresholds are highly uncertain because of the number of variables involved and a lack of historical precedent. While regime shifts have occurred previously in Earth's history, human society, trade, and travel make the world more connected than ever before, leading to concerns that breaching a boundary locally could start a domino effect that precipitates global change. Over the past several decades, almost half of Earth's forests have been destroyed at the same time that atmospheric concentrations of greenhouse gases have risen at an unprecedented rate. The globalized economy and the internet have generated an unparalleled degree of globally connectivity and complexity, greatly increasing the uncertainty of macrorisks at system levels.

### *Finance and Uncertainty*

Traditional financial valuation is unable to account for the degree of uncertainty involved with rapid forest loss and its concurrence with other unprecedented biogeochemical and ecological changes. Deforestation is recognized as a global risk, but there are differences of opinion surrounding its importance, linkage to other risk, whom is responsible for mitigation, and the best means of addressing unsustainable system dynamics and outcomes, including biodiversity loss and climate change. Further, although forests are understood as stores of value, the actual worth and means of accounting for ecosystem services, especially in price and for decision making, are widely debated. As delineated in Constanza et al. (2014)<sup>3</sup> there are a variety of acceptable valuation methods which should be selected based on their intended use, though all seek to make implicit valuing of ecosystem services that occurs in any decision about tradeoffs more transparent.

### *Coping with Uncertainty*

Crossing planetary boundaries has the potential to create changes of unprecedented speed and scale, leaving the tools of security valuation and portfolio risk management at a disadvantage. In such circumstances, system-oriented tools and techniques can be designed to minimize and mitigate these risks. The first step in this process involves the acknowledgement that these risks are systemic in nature and their implications ineradicably uncertain. Scenario planning, particularly that of the “story-telling” variety, is useful in developing the flexibility in management styles necessary to find effective ways forward in these circumstances.<sup>4</sup> This tool has, for example, been endorsed for dealing with the uncertainty of climate risks as part Taskforce for Climate-related Financial Disclosures' recommendations and is similarly appropriate for envisioning forest loss or reforestation and its effects on business and investment conditions.

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<sup>2</sup> Hughes T.P. et al., (2013) Multiscale regime shifts and planetary boundaries, *Trends in Ecology and Evolution*, vol. 28, no.7.

<sup>3</sup> Costanza et al., (2014) Changes in the global value of ecosystem services, *The Journal of Ecosystem Services*.

<sup>4</sup> See Schwartz, P. (1996), *The Art of the Long View*, Crown Business.

**System Dynamics**

VALUE CREATING SYSTEM

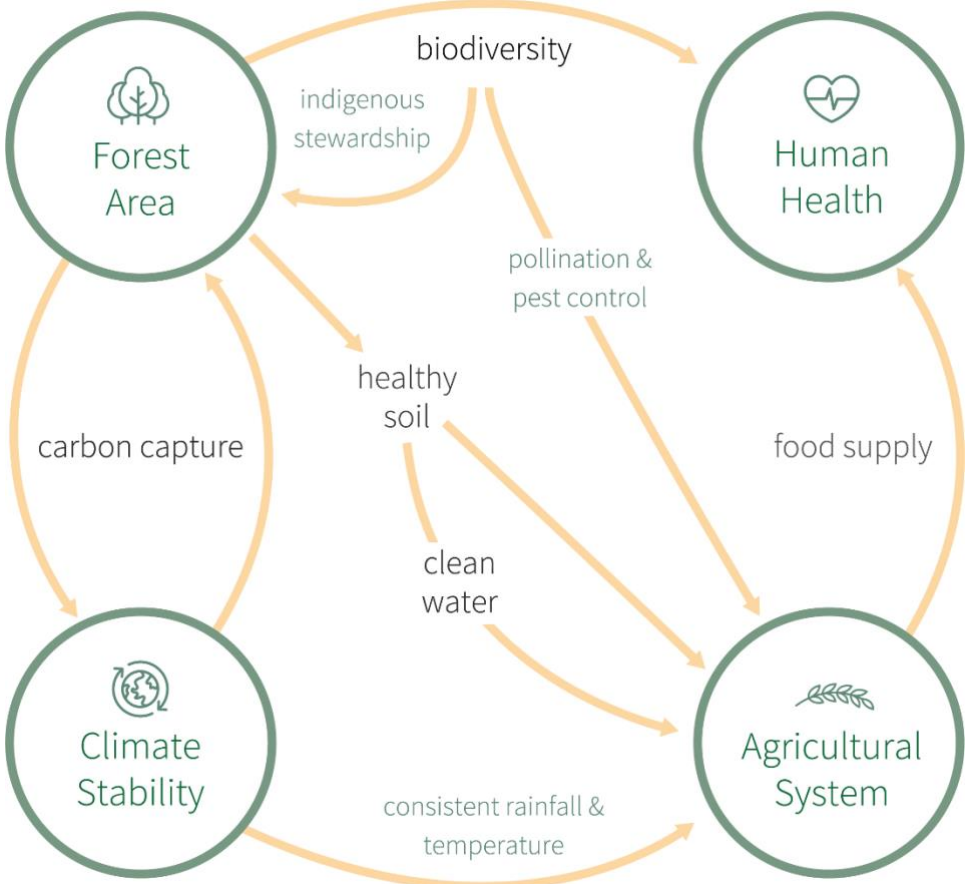


Figure 1. This system-dynamics map illustrates the positive interplays between forests and three other key foundational social and environmental systems upon which investors depend. Forest-positive dynamics can have positive influence on these other three spheres.

# VALUE DESTROYING SYSTEM

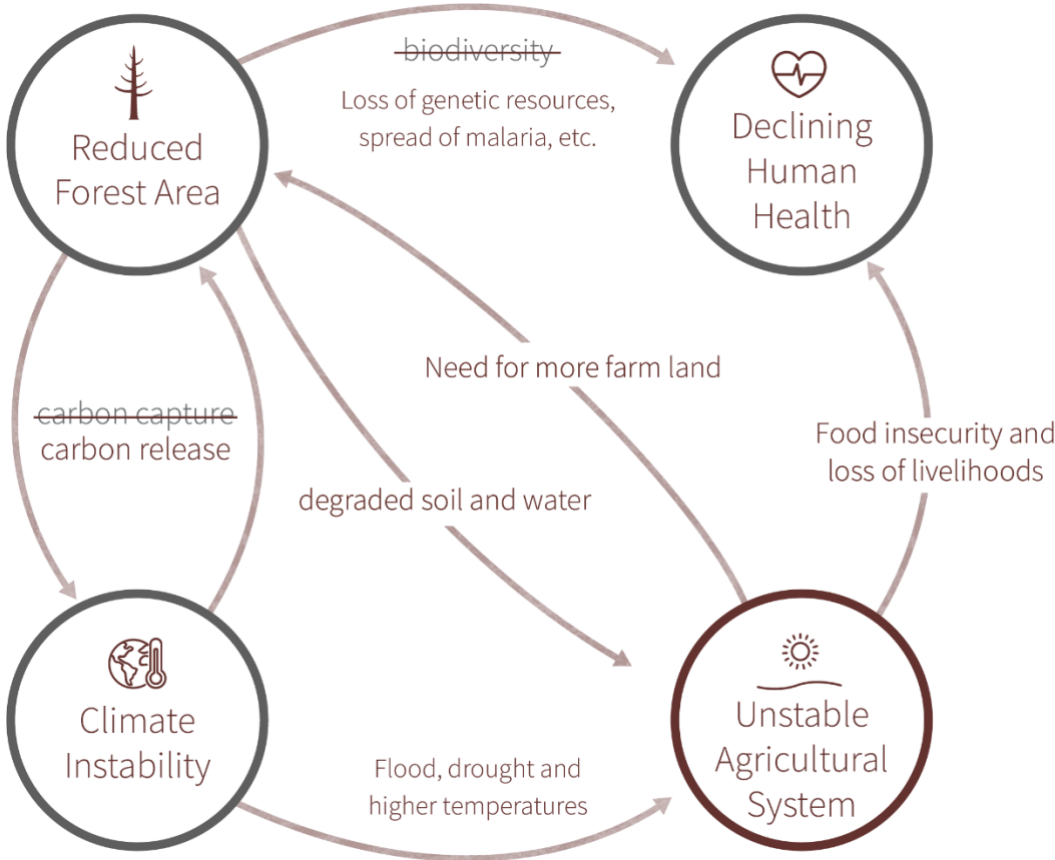


Figure 2. This system-dynamics map illustrates the negative interplays between forests and three other key foundational social and environmental systems upon which investors depend. Forest-positive dynamics can have negative influence on these other three spheres.

## Domini Forest Project - Justification for our Forest Work - 2022

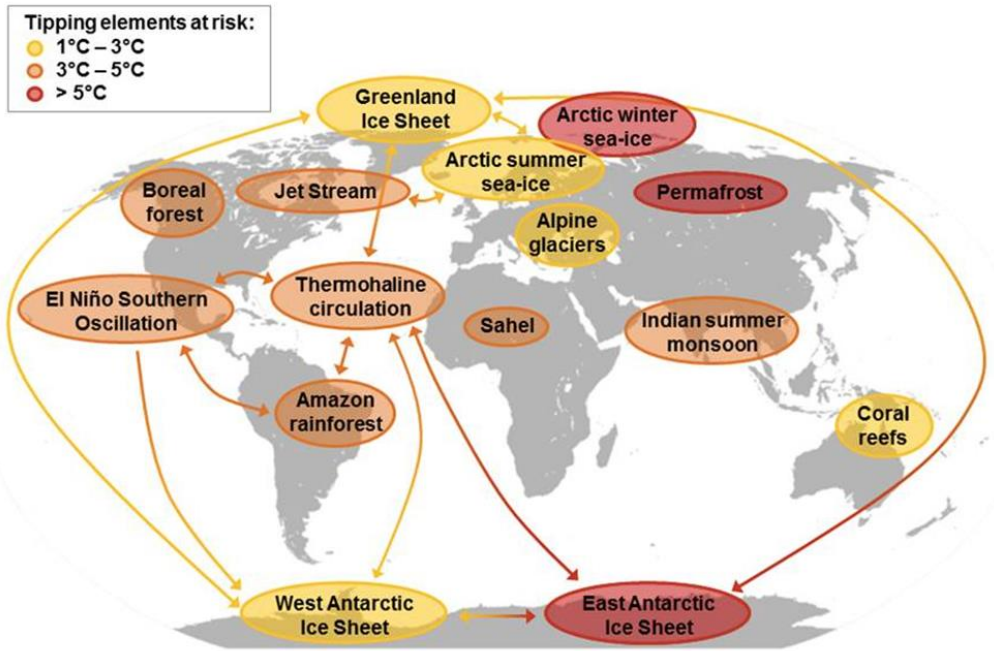


Figure 1: This system-dynamics map of potential tipping point cascades illustrates the key role of the Amazon rainforest to global ocean currents and therefore the integrity of the West Antarctic Ice Sheet.

The individual tipping elements are color-coded according to estimated thresholds in global average surface temperature. Arrows show the potential interactions among the tipping elements, based on expert elicitation, which could generate cascades. Note that although the risk for tipping (loss of) the East Antarctic Ice Sheet is proposed at >5 degrees Celsius, some marine-based sectors in East Antarctica may be vulnerable at lower temperatures. [Adapted from the Stockholm Resilience Center]