



Timberland and physical risks 2016-2020 actual impact

Executive summary



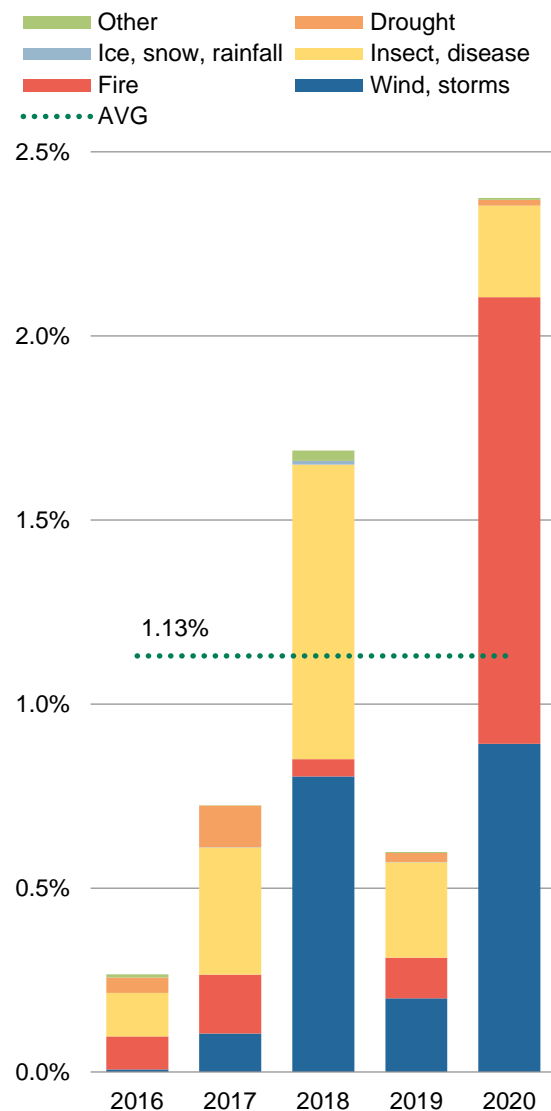
- Although forests are inherently exposed to physical risks, actual damages on timberlands owned by institutional investors have on average been small, with 1.13% of area being impacted p.a. over the past 5 years, registering an average annual loss of 0.21% of fair market value during 2016-2020.
- Active forest management, portfolio diversification, insurance, and climate change integration are the main mitigation tools.
- Active forest management which controls undergrowth and pests' outbreak, reduces forest fuel, and maintains hazards' surveillance, prevention and suppression systems, contains the risks from spreading and minimizes financial impacts, especially when able to salvage damaged wood.
- Insurance, when financially viable, is also an important tool for professional timberland managers, as is climate change scenarios integration in the investment lifecycle, especially when valuing assets, modeling future performance, and adapting investment strategies to materializing changes.
- Finally, geographical diversification and preference for non-contiguous assets limits the catastrophic losses for one specific investor.



Physical risks are real, but are the news headlines properly representing how significant they are for timberland owned by institutional investors?



Percent of impacted area per year



- Several larger natural events directly affecting forestland took place over the past few years, some of which were widely reported by news media, including:
 - Historic wildfires in Oregon, a series of hurricanes in the US South, and devastating bushfires in Australia in 2020
 - Hurricane Michael in the US South in 2018
 - The worst wildfires in Chile's history in 2017
 - An increase damage of a beetle infestation in Europe over the past few years.
- However, how much have physical risks impacted private timberland investors? IWC gathered data from underlying timberland managers with regards to all timberland properties IWC's clients had exposure to during the past five years (2016-2020). The combined data resulted in **a total sample of 3.1 million hectares of institutionally owned timberland with a fair market value of USD 14.5 billion.**
- In value term, around 35% of the portfolio was located in Oceania, 31% in the US South, 15% in the US Pacific Northwest, 11% in Latin America, and the remaining 8% was invested across Europe, the US Northeast, Asia, and Africa. We believe such portfolio to be a fair representation of the institutional timberland universe.
- IWC categorized physical risks, defined as both biotic and abiotic risks, into six groups:
 - Wind and storms
 - Fire
 - Drought
 - Insect and disease
 - Ice, snow, and rainfall
 - Other.
- Looking at the past five years, **0.27% to 2.37% of the portfolio's acreage has been affected by physical hazards in a single year, averaging 1.13% of the area annually.**
- The largest areas were impacted by wind / storms with on average 0.40% of acreage impacted, followed by insect / disease (0.35%), and fire (0.32%).

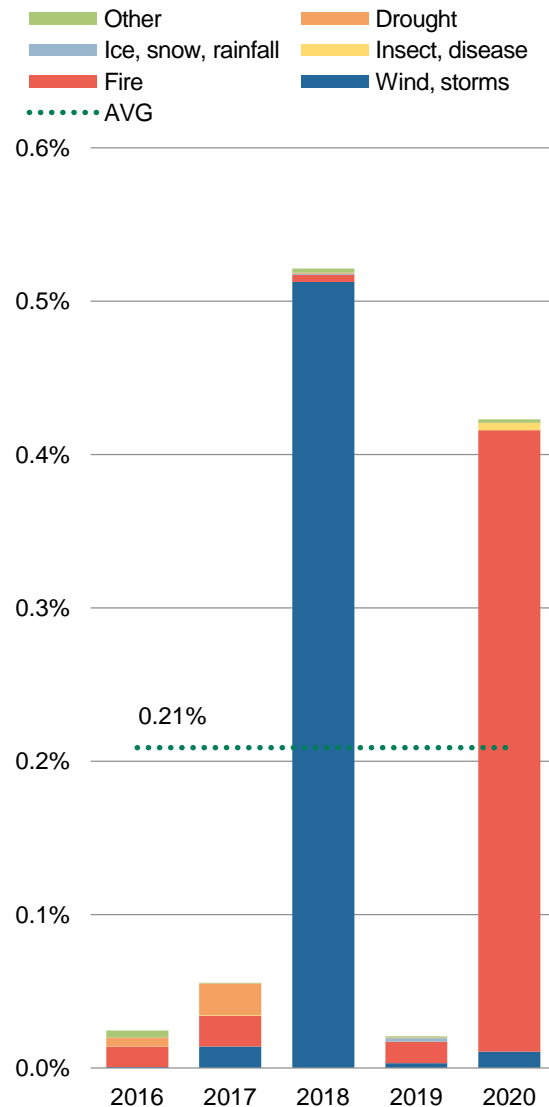
Although forests are inherently exposed to physical risks, actual damages on timberlands owned by institutional investors have on average been small, with 1.13% of area being impacted p.a. over the past 5 years

**International
Woodland
Company A/S**

How have physical risks recently affected institutionally held timberlands' performance?



Percent of impacted area per year



- In terms of financial cost, timberland properties in IWC's clients' portfolios registered an **average annual loss of 0.21% of fair market value** during the 2016-2020 period, ranging from 0.02% to 0.52% on a single year basis.
- **Wind and storms events had the most impact with an annual average loss of 0.11% of asset value, closely followed by damages from fires resulting in 0.09% annual value loss.** All of the other risk categories saw insignificant value losses over the period.
- Losses are calculated net of post-event expenses (e.g. debris removal and reforestation, fire brigade charges, control of damaged property, harvested timber on decks and landings, etc.) and post income from salvage or insurance payables.
- The scale of financial loss is a function of:
 - The intensity of an event (e.g. ground fire vs. intense inferno, a category 3 vs. a category 5 hurricane)
 - The ability to salvage wood (access to the wood and contractors, spot price achievable)
 - Potential loss recuperation, should an asset be insured against such hazard.
- The discrepancy between actual impacts for institutional investors owning timberland and the public perception is mainly due to the news headlines often not distinguishing between public and private land, the latter benefiting from **active forest management** which:
 - Controls undergrowth, reducing the level of fuel in the forest
 - Structures forestland with fire breaks, in addition to having fire surveillance and prevention systems, as well as fire fighting capabilities (often organized cooperatively amongst private owners within a certain region)
 - Often includes the use of thinnings, reducing insect and disease outbreaks
 - Poses for quick action when physical events occur, including salvage operations to minimize financial impacts.
- **Insurance**, when financially viable, is also an important tool for professional timberland managers, as is **climate change scenarios integration** to one's due diligence and monitoring, including when valuing assets and modeling future performance, and possibly adapting investment strategies to materializing changes.
- Finally, **geographical diversification and preference for non-contiguous assets** is also key to limit catastrophic losses for one specific investor.

Actual losses pertaining to physical risks have on average been minor for institutional investors, with 0.21% of asset value p.a. over the past 5 years

Active forest management, portfolio diversification, insurance, and climate change integration are the main mitigation tools

International Woodland Company A/S

Legal disclaimer



This presentation is being furnished on an information basis only. No authority has confirmed the accuracy or adequacy of this presentation.

Prospective investors must make their own investment decisions. In making an investment decision, investors must rely on their own examination of an opportunity, the person or entity creating the interests, and the terms of the offering, including the merits and risks involved.

This presentation does not constitute an offer or solicitation in any state or other jurisdiction to any person or entity, to which it is unlawful to make such offer or solicitation in such state or jurisdiction. The terms of any offering will be subject to the terms and conditions set out in the relevant information memorandums, partnership agreements, subscription agreements related thereto, and certain other documents as the case may be (copies of which will be available to prospective investors upon request).

For regulatory reasons, the IWC group ("IWC") carries out its main activities through the two following companies (both wholly owned subsidiaries of the parent company, International Woodland Company Holding A/S); International Woodland Company A/S providing investment management and forestry advisory services regarding its clients' timberland investment strategies and the implementation thereof, and IWC Investment Partners A/S ("IWC IP") providing investment management, investment advice, and discretionary portfolio management regarding financial instruments to IWC Timberland Partners I K/S, IWC Timberland Partners II K/S, and other professional investors. IWC IP, a Danish limited liability company established in 2012, is under the supervision of and authorized by the Danish Financial Supervisory Authority as an alternative investment fund manager ("AIFM") and is a Registered Investment Advisor with the SEC in the United States.

