

# SURVIVAL

A Plan for Saving Forests and Climate  
A Pulp Thriller

# 2020

canopy





*The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.*

*Through 'transformative change,' nature can still be conserved, restored and used sustainably – this is also key to meeting most other global goals. By transformative change, we mean a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values."*

– **Sir Robert Watson**, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

# Next Generation Action Plan Executive Summary

THE WORLD'S SCIENTISTS HAVE DELIVERED A SOBERING CHALLENGE TO HUMANITY. IF WE ARE TO PREVENT RUNAWAY CLIMATE CHANGE, WE HAVE ONLY 10 YEARS LEFT TO TRANSFORM OUR METHODS OF PRODUCTION AND THE WAY WE CONSUME RESOURCES IN ORDER TO KEEP GLOBAL TEMPERATURES BELOW AN INCREASE OF 1.5°C.

A large part of the solution is to move more rapidly away from our reliance on fossil fuels. However, according to a landmark United Nations report released in May 2019, in order to support a reduction in greenhouse gas emissions, it is equally important to maintain and restore the world's forests. Healthy forests are projected to be one-third of the solution to the emerging climate and biodiversity crisis, and yet today forests continue to be cleared at a rate that far exceeds their ability to regenerate and maintain their life-support functions.

In 2018 Canopy mapped a large subset of the world's forests, referred to as Ancient and Endangered Forests<sup>1</sup>, that are priorities for conservation because of their high carbon values and value for species habitat. Some of these forests are original (i.e. Ancient), that have never been industrially logged. Others are forests that have been logged and replanted for industrial fibre in areas with high carbon soils and/or in endangered species habitat. Recognizing their critical importance for climate stability and biodiversity, and our focus for over twenty years, has been to maintain the ecological integrity of Ancient forests and restore priority areas of Endangered forests that have been degraded.

**DURING THE COURSE OF RESEARCHING THIS REPORT, WE HAVE CONCLUDED THAT SHIFTS TOWARD CIRCULAR ECONOMY PRODUCTION ARE NOT ONLY ABSOLUTELY NECESSARY, BUT ALSO ACHIEVABLE.**

Supply-side shifts to the responsible production of pulp will require the utilization of existing agricultural and textile waste streams as the raw resource inputs – and the growing of new forests for wood on truly sustainable sites (i.e., not on high-carbon peat soils or in prime species habitat). Clean technology to utilize these materials is already starting to emerge into the market via alternative fibre pulp mills that use far less water, chemicals and energy than conventional wood pulp production. Given the uncertainty about future wood supply, diversifying the fibre basket for pulp is a salient business proposition as well as an environmental strategy.

Making changes to the consumption patterns on the demand side of the supply chain is equally achievable. Measures to reduce the use of primary raw materials have high-quality ecological outcomes. Brands and retailers have the capability to influence and choose the materials that go into their goods. They also have the ability to innovate systems to reuse, reduce use and extend the lifespan of materials and products they use and

sell. These purchasing and design decisions are critical to taking pressure off forests. Cost savings also flow from reduction initiatives. Reusing shipping boxes, shipping lighter-weight packaging and capturing an additional round of value from second-hand or rental clothing are choices that are gaining traction as business decisions that also serve environmental objectives.

Canopy is dedicated to finding solutions at the scale at which the problems occur and in the timeframe that the best available science directs us to act. Our Next Generation Action Plan outlines a combination of common-sense approaches, groundbreaking endeavours and technological innovation. We recognize that a sector-wide transformation to responsible production is a climate and biodiversity imperative that both sides of the supply chain must embrace, and Canopy is eager to catalyze support for this shift.

By working together strategically, investors, innovative technology ventures, pulp producers, paper/packaging/viscose manufacturers, governments and corporate buyers of wood pulp-derived products can make this vision a reality by 2030. Policies and investments that drive this forward are consequential to both a stable planet and a stable economy.

Forests, including their soils, are the largest and most effective terrestrial carbon storehouses. Original forests (primary, old-growth or ancient forests), in particular, are 40 times more effective at sequestering CO<sub>2</sub>e/hectare than plantation forests<sup>2</sup>.



## Next Generation Action Plan...

CONTRIBUTES TO ACHIEVING THE GOAL OF PRESERVING NATURE AT THE SCALE NEEDED TO SUPPORT LIFE ON EARTH. IT PRESENTS AN AMBITIOUS BUT ACHIEVABLE SCENARIO TO REDUCE, BY 50%, THE AMOUNT OF FOREST FIBRE GOING INTO THE MANUFACTURING OF PULP FOR PAPER AND PACKAGING AND TO PRODUCE VISCOSE FABRICS, SUCH AS RAYON, FOR CLOTHING.

It proposes to transform the global wood pulp commodity sector and its supply chain at precisely the scope and scale of its current impact on forests. The gravity of the challenges we face today warrant nothing less than bold ambition; there is no point in embarking on cosmetic changes at this time in history. It will require ingenuity, determination and good will – and new infrastructure and investment. The investment needed is not inconsiderable, but it pales in comparison to the cost of inaction.

A forest is much more than the sum of its trees. Forests, including the soils they create and are anchored in, are massive carbon sinks. They provide homes to thousands of species, regulate the climate and act as rainfall generators, to name just a few ecological benefits of forests. Less than 20% of the world's original forests remain in tracts large enough to sustain their full range of ecosystem services<sup>3</sup>.

## The Next Generation Action Plan

THE CONCLUSIONS IN THIS REPORT ARE BASED ON RESEARCH EVALUATING THE PROPORTION OF PULP THAT IS CURRENTLY MADE FROM WOOD FROM HIGH CONSERVATION AND HIGH CARBON VALUE FORESTS AND THEN ESTABLISHING:

- The number of tonnes of forest fibre that can be reduced by replacing wood fibre with alternative fibres and recycled fibres
- The number of tonnes of forest fibre that can be reduced by simply extending a forest product's lifespan
- The number of tonnes of forest fibre that can be reduced through better design and logistics systems that reduce the use of wood-based products overall
- The number of tonnes of new, sustainably planted forest pulp that need to replace pulp that currently comes from plantations established in prime species habitat and/or critically important carbon-rich soils
- The investment required, globally, to build new mills and/or retrofit existing mills to utilize alternative fibres

Of the 413 million tonnes of pulp for paper produced globally, nearly half (184 million tonnes) comes from virgin wood fibre. Approximately half of that (92 million tonnes) comes from Ancient and Endangered Forests.

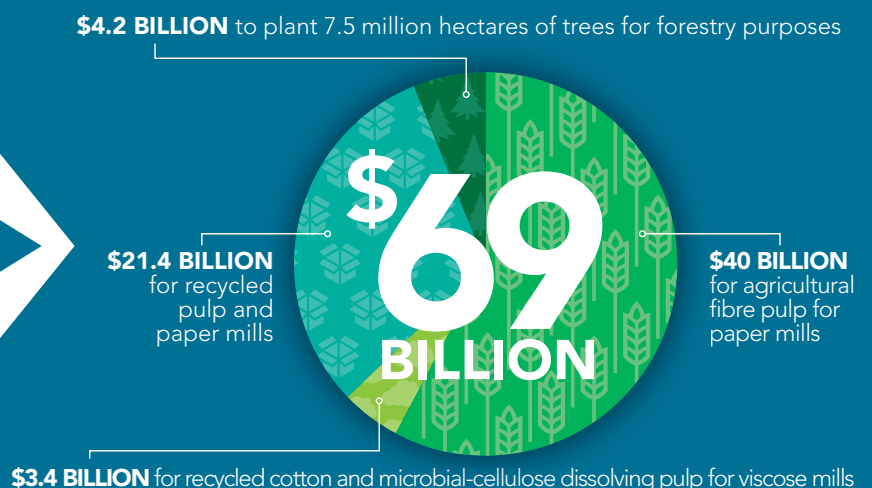
Of the 6.5 million tonnes of viscose pulp produced annually, approximately half (3.3 million tonnes) comes from Ancient and Endangered Forests, such as the carbon-rich peatlands of Indonesia and old-growth boreal forests of Canada.

# The Next Generation Action Plan...

SCENARIO PROPOSES TO ELIMINATE 70% OF THE PULP FIBRES COMING FROM ORIGINAL FORESTS (I.E., NEVER-BEFORE LOGGED) AND 30% OF THE PULP FIBRES FROM PLANTATIONS THAT ENDANGER RICH CARBON STORES AND PRIME HABITAT. TO DO SO WILL REQUIRE:



**THE INVESTMENT REQUIRED OVER A 10-YEAR PERIOD** will be \$64.8 billion<sup>8</sup> to build the mills and approximately \$4.2 billion<sup>9</sup> to plant new plantations, for a total of \$69 billion.



**TO PUT THIS 10-YEAR, \$69 BILLION PRICE TAG INTO PERSPECTIVE,** the maker of Botox sold for \$63 billion in 2018. More pertinently, in 2018, \$140 billion in investment from private, public and development finance institution (DFI) sources was committed to infrastructure development in 41 low- and middle-income countries<sup>10</sup>.

## Investment in Non-wood Mills by Region 2020 - 2030 Potential

## WORLD TOTAL INVESTMENT NEEDED

200

\$40.00

30

17

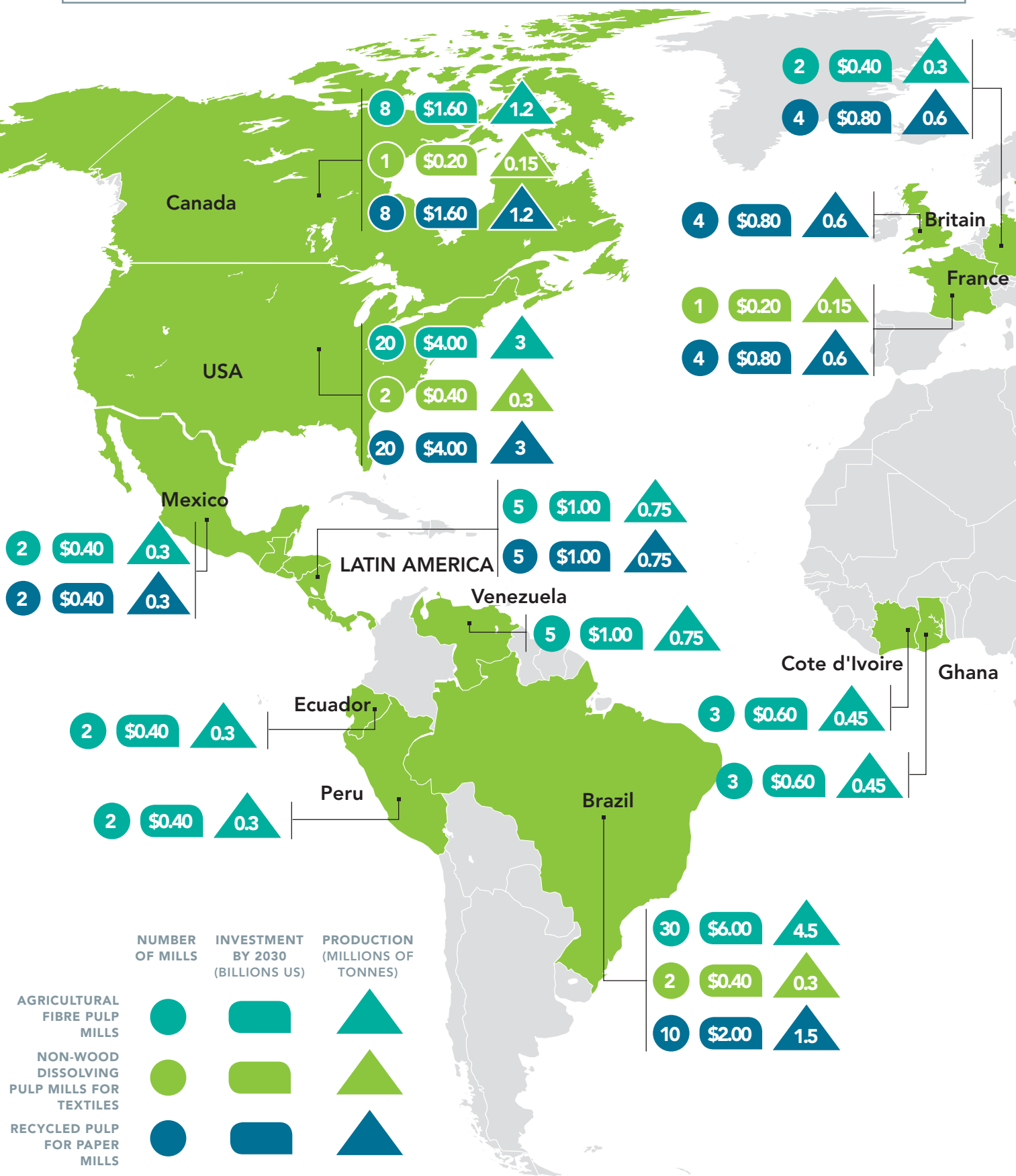
\$3.40

2.55

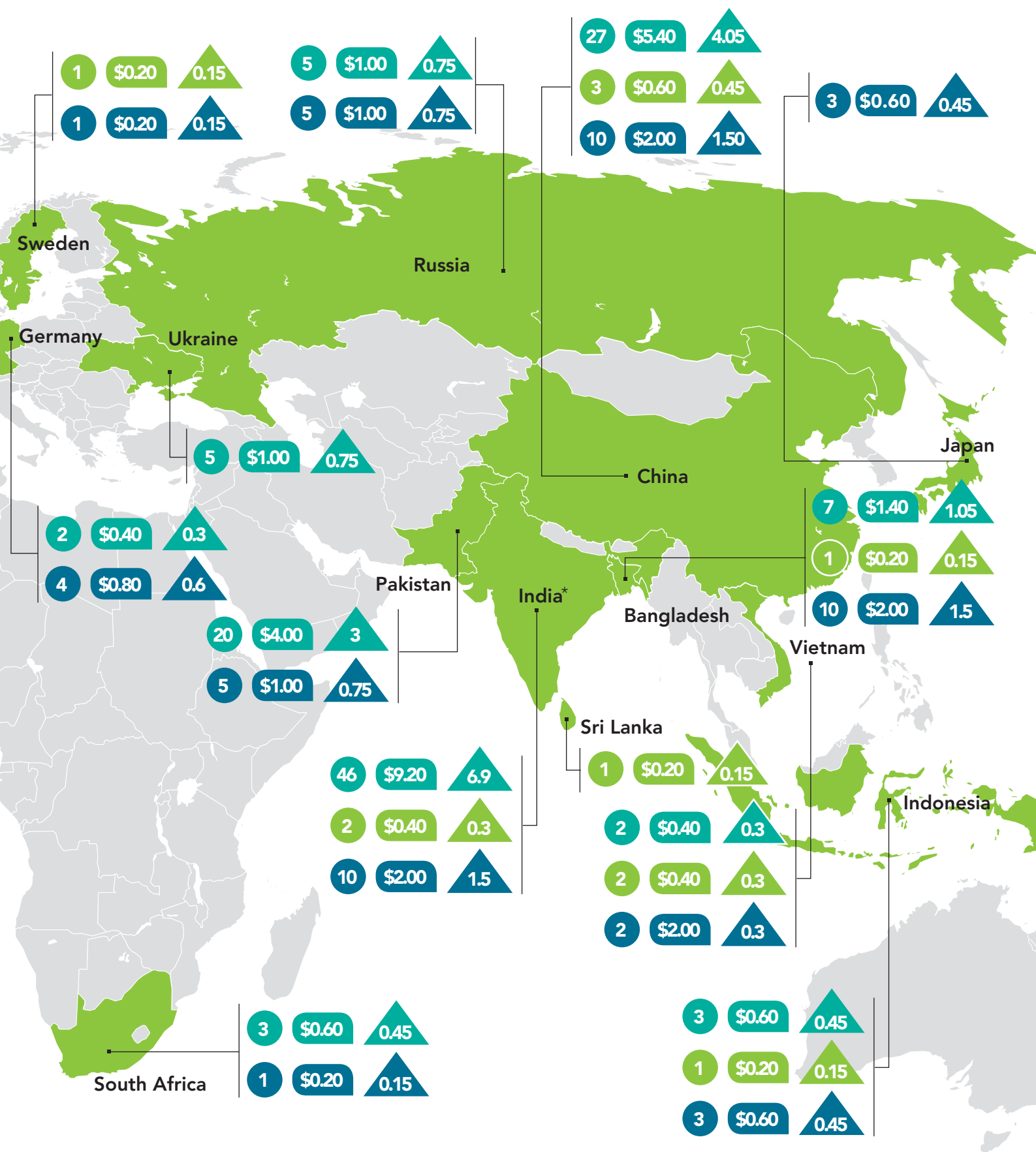
107

\$21.40

16.05

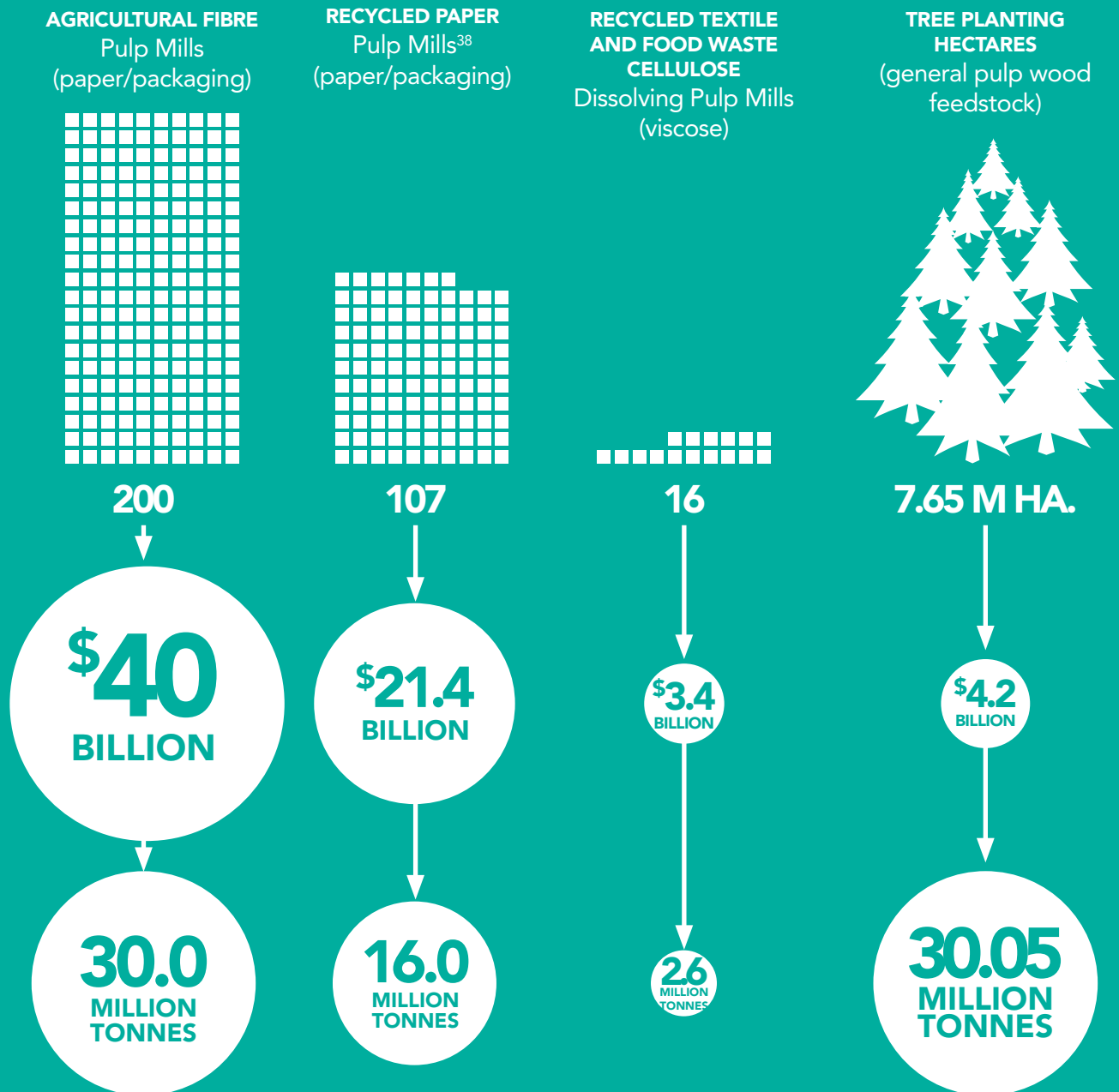






\*Assuming 13.8 million tons of straw are available (15% of burned rice/wheat straw) and 300,000 tons of feedstock per 150,000 ton/yr pulp mill

# TARGET INVESTMENT BETWEEN 2020 AND 2030: \$69 BILLION





## About Canopy

Canopy is a not-for-profit environmental organization dedicated to protecting forests, species and climate. Canopy has collaborated with more than 750 companies to develop innovative solutions and make their supply chains more sustainable to help protect our world's remaining Ancient and Endangered Forests. Canopy's brand partners include H&M, Penguin Random House, Scholastic, Stella McCartney, Target, TC Transcontinental, *The Globe and Mail*, The Guardian Media Group, UNIQLO/Fast Retailing, Zara/Inditex and many other well-known brands and giants in their sectors.

Canopy's forest conservation work focuses on the influential relationship between large corporate purchasers and the mills that supply them with pulp, print grade paper, paper packaging and Man Made Cellulosic Fibres (MMCF). In helping major purchasers develop and implement forest conservation policies we leverage forest protection in key regions, improve forestry practices and develop the market that draws Next Generation alternatives into production.

Canopy is funded by philanthropic foundations and individual donors who share our passion for the planet.

**[www.canopyplanet.org](http://www.canopyplanet.org)**



# Statements of Support for Canopy's Action Plan

*"This is an ambitious strategy: one that is welcomed by UBS given the task before us of addressing the climate and biodiversity emergencies."*

— **Michael Baldinger, Global Head of Sustainable and Impact Investing at UBS Asset Management**

*"Collaboration across supply chains, at scales beyond what has been considered before, is needed in order to address the climate and biodiversity challenges we face. We welcome Canopy's approach that breaks the action plan into components for producers, investors and corporate purchasers of pulp products."*

— **Madelene Ericsson, Environmental Sustainability Business Expert at H&M**

*"Canopy's call to action points to the essential role of the world's forests in mitigating the climate crisis and the growing sense of urgency to prevent further loss of biodiversity. In alignment with Canopy's ambitions, we are continuing the challenging work to diversify the fiber used in Kimberly-Clark's products, including progress toward our goal to replace 50% of the fiber we use from natural forests with alternative sources."*

— **Lisa Morden, Vice President of Safety & Sustainability, Kimberly Clark**

*"DWS believes that protecting global biodiversity and increasing carbon sinks from forests will play an instrumental role in sequestering carbon as a climate change mitigant on a global level. Approaches like Canopy's, targeting supply chain sustainability across the paper products and textiles industries, represent a critical component of this effort. DWS Group, with over 20 years of experience in impact investing, believes this represents another opportunity to deliver on circular economy-based investment solutions for corporate clients focused on minimizing their environmental footprint."*

— **Andrew Pidden, Global Head of Sustainable Investing at DWS (DWS formerly known as Deutsche Asset Management).**