

## A Global Decline in Nature

# 47%

decline in natural ecosystem condition/extent

- Nature degradation via anthropogenic factors reduces ecosystem functioning and productivity, impairing its ability to provide ecosystem services (pollination, carbon sequestration) that benefit society and the economy.<sup>1</sup>
- Consequently, over half of the world's GDP, **US\$44 trillion**, is moderately or highly dependent on biodiversity and ecosystem services (BES)."<sup>2</sup>

## **Dependencies and Impacts on Biodiversity** and Ecosystem Services

- While businesses depend on BES as critical inputs for their products and services, businesses further exacerbate drivers of BES loss.<sup>3</sup>
- These negative impacts pose risks for short-term viability and longterm business survival.<sup>3</sup>
- Despite the risks, BES engagement and action is lacking across the private sector.
- This prompts the **research question**: what approaches are firms taking to include BES in accounting, valuation and decision-making?

## Methodology

• Conducted a thematic analysis across 73 policies, industry, and scientific texts to identify 14 themes relevant to the research question. Following the themes, a literature review was performed.

## The State of Biodiversity & Ecosystem Services in the Private Sector Elyse Muir, Dr. Brett Caraway Master of Science in Sustainability Management - SSM1100 Research Paper

# 25%

of species are globally threatened or driven to extinction















ecosystem service loss by an organization





Literature Cited [1] IPBES. (2019). Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Retrieved from https://ipbes.net/global-assessment [2] World Economic Forum. (2020, January). Nature risk rising: why the crisis engulfing nature matters for business and the economy. Retrieved from https://www3.weforum.org/docs/WEF\_New\_Nature\_Economy\_Report\_2020.pdf [3] Manulife. (2023). Nature positive ecosystem. Retrieved from https://www.manulifeim.com/institutional/global/en/nature-positive-ecosystem#how-companies-can-act [4] Bhattacharya, T. and Managi, S. (2012). Contributions of the private sector to global biodiversity protection: case study of the Fortune 500 companies. Biodiversity Science, Ecosystem Services & Management, 9: 65-86. 5] Greenbelt Foundation. (2016, October). Ontario's good fortune: appreciating the Greenbelt's natural capital. Retrieved from https://www.greenbelt.ca/ontarios\_good\_fortune\_greenbelt\_natural\_capital

# How Companies Can Evaluate BES Loss



# How Companies Can Take Action

• By 2050, total BES investment needs will exceed US\$536 annually, 4x the amount **invested today.** Four avenues to achieve this financial target:<sup>4</sup>

### Natural Capital Investments

• Financing sustainable cropland/timberland generates portfolio diversification benefits and long-term returns.

### **Direct Payment for Ecosystem Services**

• Regulating and cultural services in the Ontario Greenbelt are valued at **\$3.2 billion** annually.<sup>5</sup>





## Disclose

and report on your nature-related financial risks and opportunities in a standardized manner







SCIENCE BASED TARGETS NETWORK GLOBAL COMMONS ALLIANCE





to quantify where and how direct business operations affect biodiversity and ecosystem services

### **Biodiversity Credits**

- VERRA Nature Credits
- Environment Bank Offsets

### **Financial Products**

- Barbados debt-for-nature swap
- Conservation Impact Bond
- Wildlife Conservation Bond