

Background

1 Million Species facing extinction within the decade
75% Land altered by human drivers
\$711 Billion Biodiversity financing gap per year (USD)



Biodiversity is essential to the functioning of life on Earth as it provides key ecosystem services. However, it is in a steep decline and requires significant finance for solutions. This current lack of finance has been deemed the “biodiversity finance gap”. Past literature has focused more on individual finance mechanisms to close the gap, with few endeavors to discover overall trends in the field. This leads to the research question:

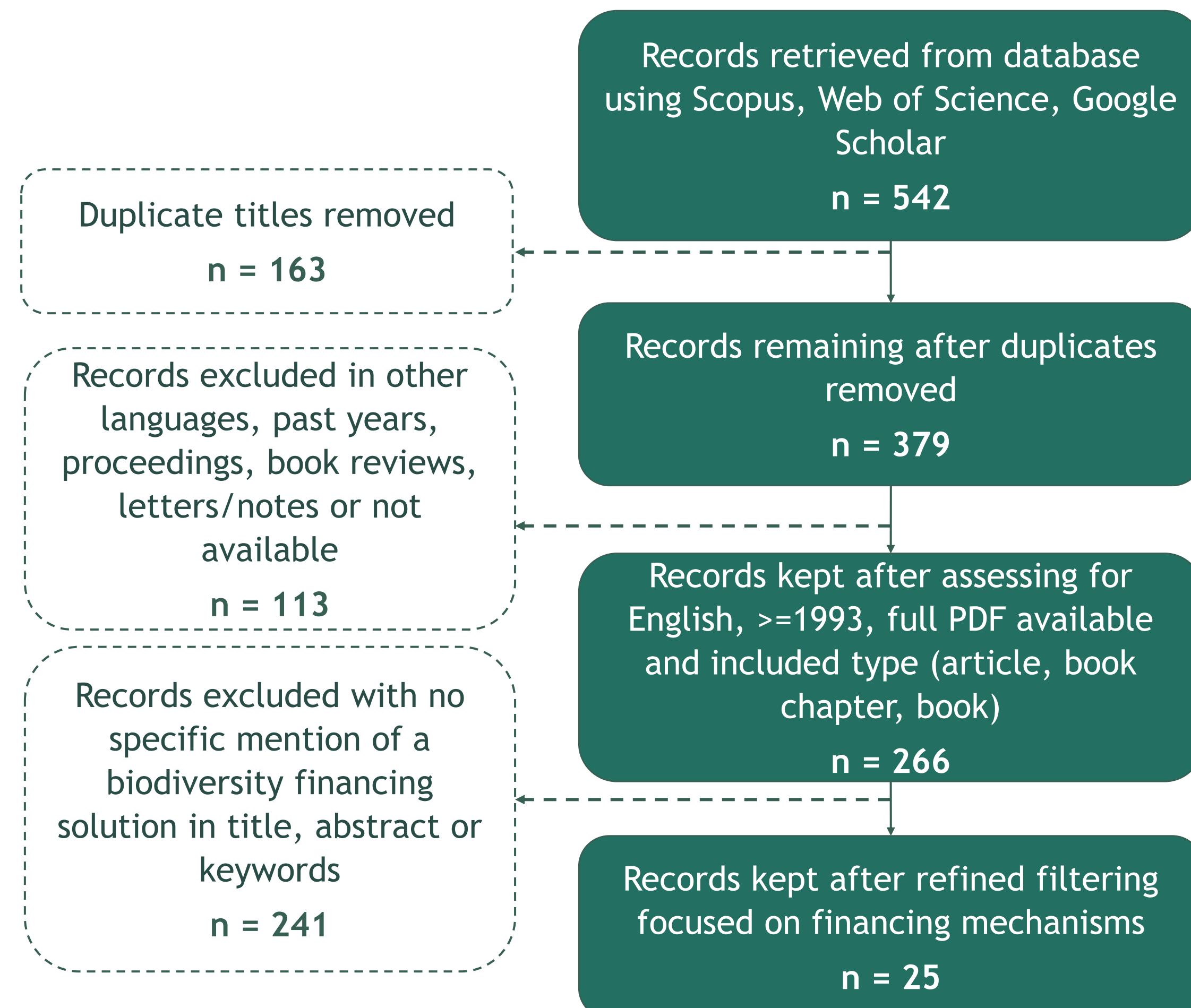
What financial mechanisms are currently being deployed to increase capital flows into biodiversity?

Objectives:

- To provide a comprehensive review of biodiversity finance mechanisms
- Contribute to the discourse and increase the knowledge base in this field

Methodology

A systematic literature review was conducted using the protocol visualized below to gather 25 papers for assessment of biodiversity financing solutions:

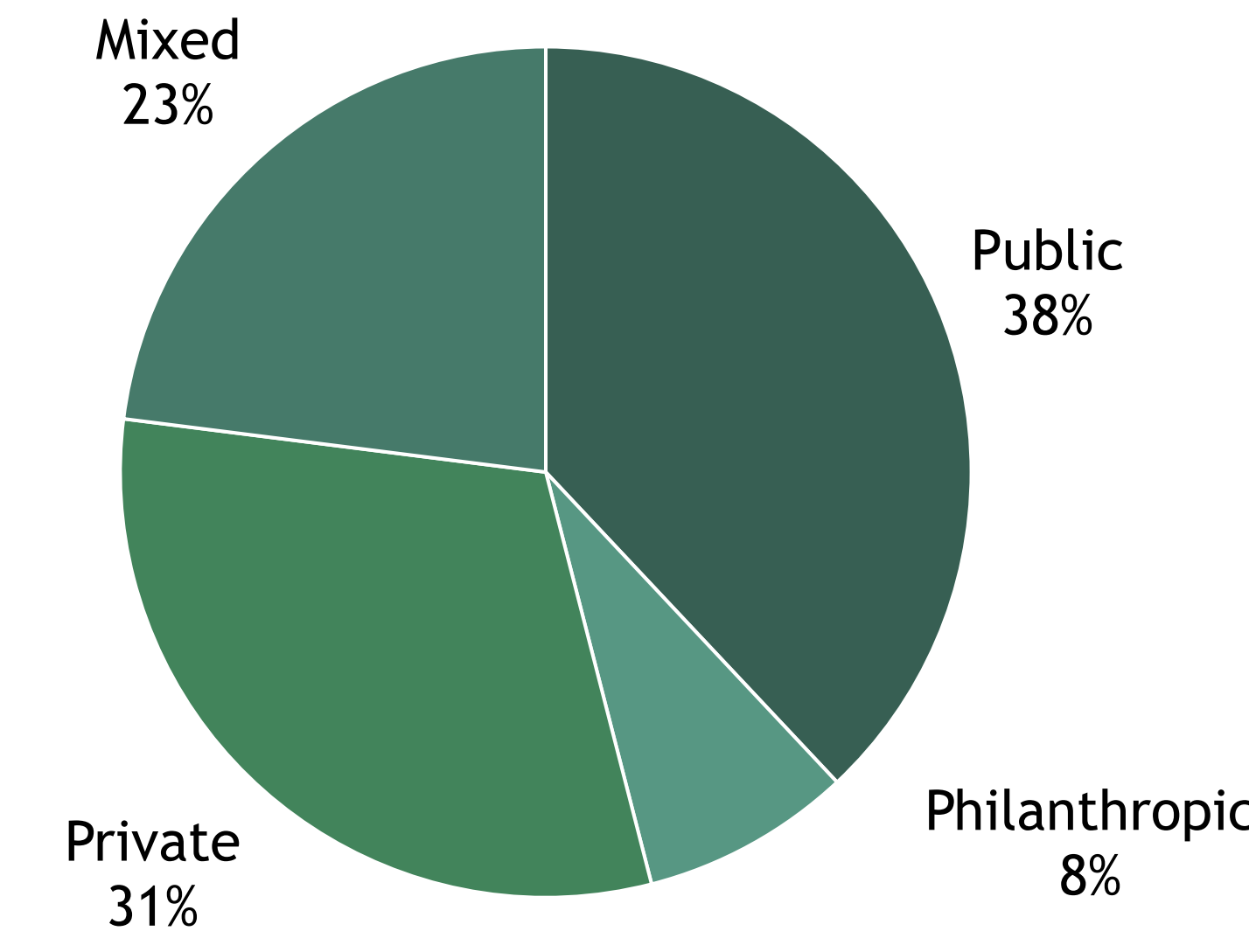


Key Findings

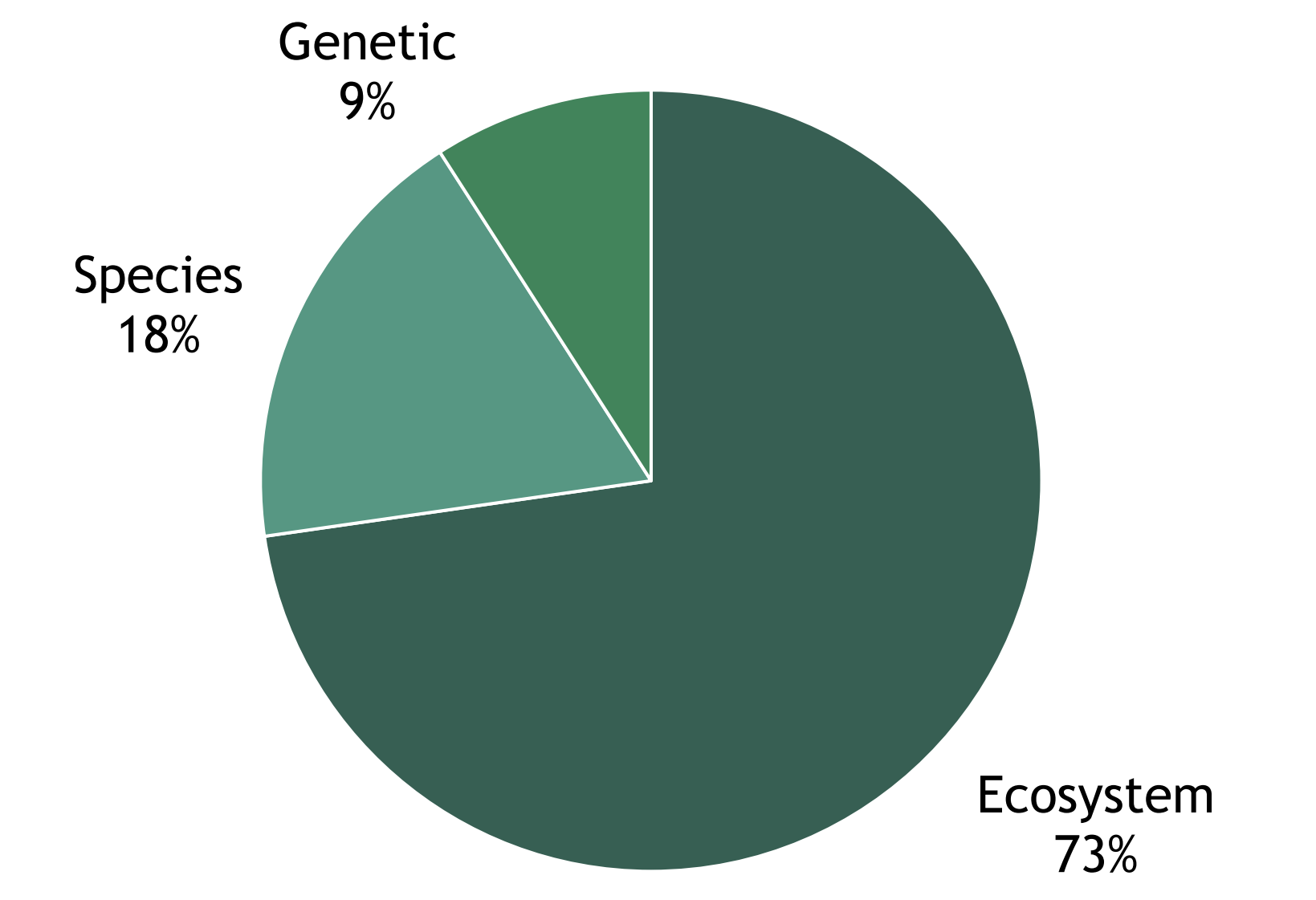
9 Mechanisms

- 1 Payments for Ecosystem Services
- 2 Debt-for-Nature Swaps
- 3 Ecological Fiscal Transfers
- 4 Biodiversity Offsets/Offset Markets
- 5 Impact Investing
- 6 Resilience Insurance
- 7 Environmental Tariffs
- 8 Philanthropic Funding
- 9 Access and Benefit Sharing

46% Of financing from *public & philanthropic* sources



73% Of mechanisms targeting *ecosystem level*



Implications

Addressing Limitations

Room for additional research on **innovative mechanisms** to address common **limitations**: short time frame, lack of regulations, unequal share of resources, high transaction costs, lack of community input

Catalyzing Private Finance

Can use **blended finance** structures to mobilize more private sector capital. This works by utilizing public and philanthropic finance during initial stages to attract private finance in the later stages when the risk is lower

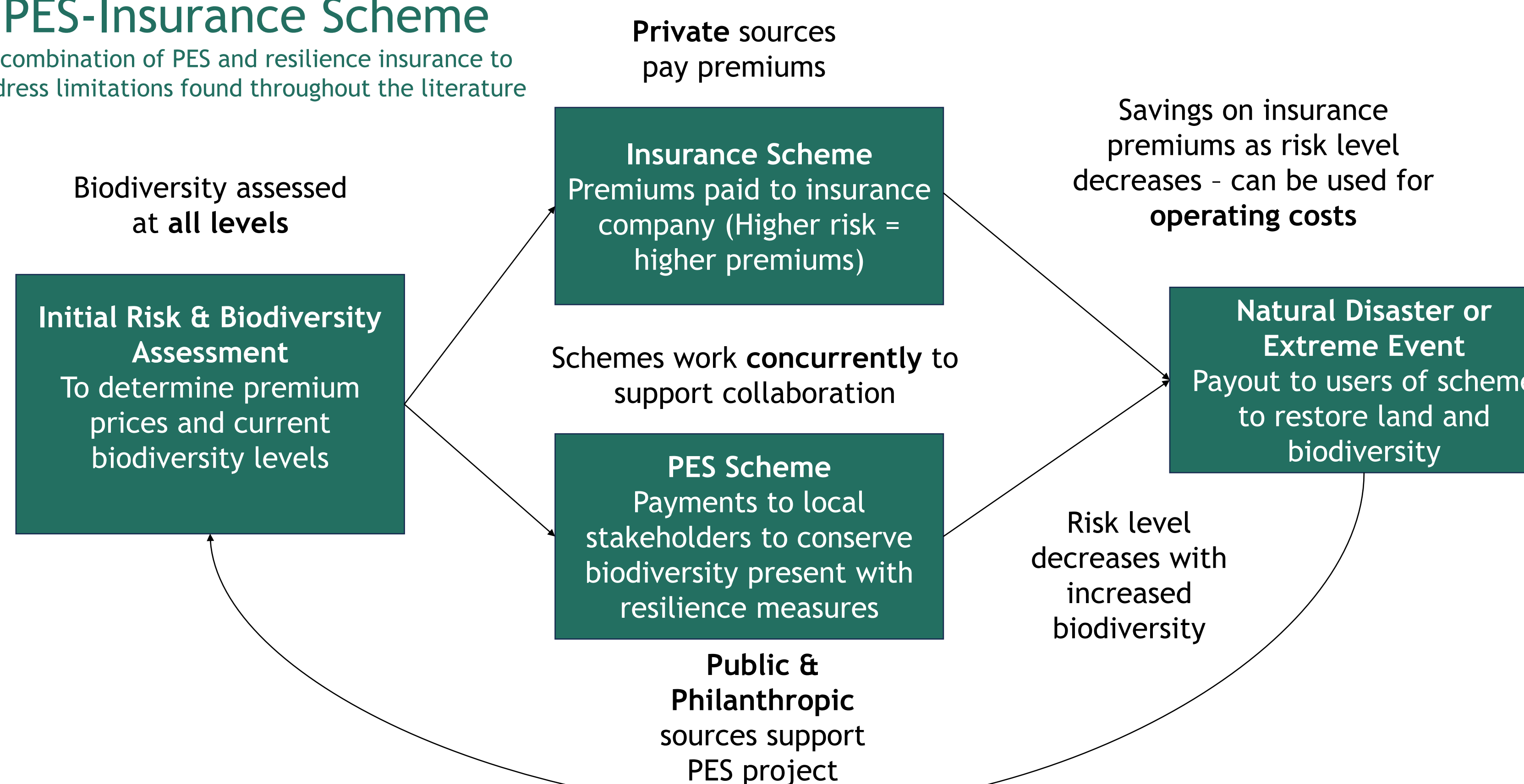
Species and Genetic level

Integrating the **genetic and species level** of biodiversity into mechanism designs can ensure more thorough protection of ecosystem services

Potential Solution

PES-Insurance Scheme

A combination of PES and resilience insurance to address limitations found throughout the literature



Key References

1. Andrew Karolyi, G., Tobin-de la Puente, J., Karolyi, A., & Johnson, C. S. (2023). *Biodiversity finance: A call for research into financing nature*. <https://doi.org/10.1111/fima.12417>
2. Arlaud, M., Bellot, M., Cumming, T., van den Heuvel, O., Maiden, J., Meyers, D., Paxton, M., Riva, M., Seidl, A., & Trinidad, A. (2018). *BIOFIN Workbook 2018*. www.biodiversityfinance.org
3. *CBD - Use of Terms*. (2006). Convention on Biological Diversity. <https://www.cbd.int/convention/articles/?a=cbd-02>
4. Deutz, A., Heal, G., Niu, R., Swanson, E., Townshend, T., Li, Z., Delmar, A., Meghji, A., Sethi, S., & Tobin-de la Puente, J. (2020). *Financing Nature: Closing the Global Biodiversity Financing Gap*. Lynn Scarlett (The Nature Conservancy).
5. Diaz, S., Settele, J., Brondizio, E. S., Ngo, H. T., Gueze, M., ... Zaya, C. N. (2019). *The global assessment report on biodiversity and ecosystem services*. <https://www.ipbes.net/global-assessment>
6. Nedopil, C. (2022). *Integrating biodiversity into financial decision-making: Challenges and four principles*. <https://doi.org/10.1002/lbse.3208>
7. Tobin-de la Puente, J., & Mitchell, A. W. (2021). *The little book of investing in nature*. Global Canopy- Oxford. https://globalcanopy.org/wp-content/uploads/2021/07/LBIN_2020_RGB_ENG.pdf

Contact

✉ ellen.ferguson@mail.utoronto.ca

🌐 <https://www.linkedin.com/in/ellenferguson2/>