



# Exploring Financial Solutions to the Wildfire Crisis in Portugal

Prepared for U.S. Embassy Science Fellow Kick-off Roundtable

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Science + Finance + Collaboration

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### About Blue Forest

Blue Forest is a non-profit that advances ecosystem restoration through scientific research, financial innovation, and collaborative partnerships.



- Founded in 2015
- Now around 40 people
- Launched our work in the Western U.S. and currently have initiatives in Canada, Central America, and southern Europe
- We bring together stakeholders & arrange financing to support naturebased landscape restoration projects
- Primarily work in fire-prone ecosystems to reduce the risk of catastrophic wild fires



## What is **conservation finance?**

Conservation finance is the practice of raising new funding and financing capital to support holistic ecosystems and community health.

CF options vary by **source** (e.g. public, private, and nonprofit funders); by **type** (loans, grants, tax incentives, market mechanisms); and by **scale** (local to national to supranational).







## **Goals of Conservation Finance**



Larger Projects

Non-traditional funding sources → landscape-scale projects



Faster Projects

Streamline project management and contractor payments → quicker implementation



Capacity Building

Promote partnership opportunities, build local capacity, and leverage funds







# Our Approach



Science

Centers science and analysis anchored in rigorous, empirical research



**Financial Innovation** 

Uses concessional financing & blended capital to support nature - based solutions



**Partnerships** 

Partners with communities, investors, & other local stakeholders to support restoration



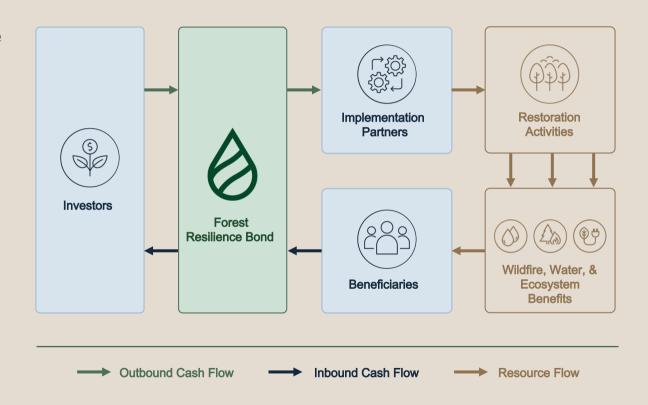
Blue Forest does NOT plan projects





# **Example Flow of Funds**

The Forest Resilience Bond is a conservation finance vehicle that helps deploys capital to ease cash flows and add new value streams to fund restoration work, while **shifting** the risk from landowners and public agencies to private investors.





# Types of Ecosystem Benefits

# Revenue enhancement



- Improved crop quality, quantity, & reliability
- Enhanced tourism revenue
- Increased hydropower revenue from water supply reliability

# Cost avoidance or risk mitigation



- Reduced fire risk
- Reduced flooding risk
- Increased water supply & quality reliability
- Avoided sedimentation

# Compliance & Values



- Aquatic habitat obligations
- Water quality standards
- Cultural resource protection
- Partnership goals





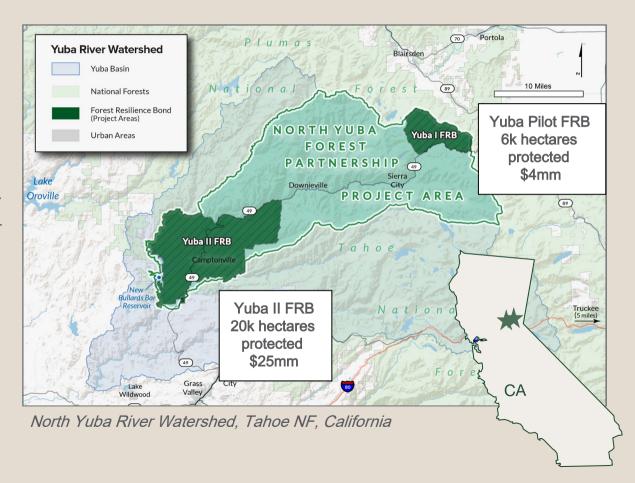
## Project Case Study: Yuba I & II FRBs

**Activities :** Thinning, prescribed burning, meadow restoration, etc.

Implementer: non-profit National Forest Foundation

**Beneficiaries :** Yuba Water Agency, State of California, and – for Yuba II – private corporations

Impact: FRB development catalyzed formation of the North Yuba Forest Partnership and follow-on funding opportunities



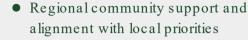




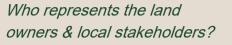
# **Elements of Successful Projects**



Vision and



• Strong engagement from land manager





Operations

• Planned and permitted project

• High-capacity implementation partner(s)

How will the project be planned & permitted? Who are the implementation partner(s)?

Outcomes and Modeling

 Scientific data and models to benchmark ecological and economic benefits

What benefits do these projects bring? How do we model them?



Funding and Beneficiaries

Multiple parties that benefit from project implementation

Who are the project beneficiaries? What level of contribution could they make?



Finance and Legal

- Engaged and committed investors
- Executed contracts and agreements

What contracting types make the most sense?



# Thank you!

If you'd like more information, please get in touch.

Email connect@blueforest.org



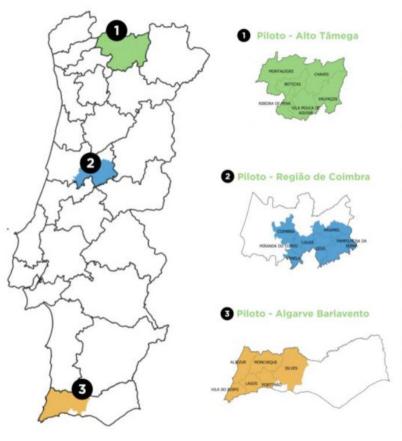






#### Conservation Finance Portugal Context

- Management for Fire Resilient Landscapes
- ► Mediterranean climate, long growing season, ample precipitation
- ▶ Private land. 93 percent forestland private
- ► Small parcels
- ▶ Historical trend of decreasing land use and maintenance



#### Municipalities

Montalegre Boticas Chaves Ribeira de pena Vila Pouca de Aguiar Valpaços

#### Municipalities

Coimbra Miranda do Corvo Lousã Arganil Penela Góis Pampilhosa da Serra

#### Municipalities

Aljezur Monchique Silves Vila do Bispo Lagos Portimão Pampilhosa da Serra



Pilot Area Assessment:

What factors favor Conservation Finance

- Wildfire Fuels Reduction Need
- Landowner Incentive/Interests
- ► Investor Return
- Natural Resource Markets
- ▶ Potential Resource Revenue or High Probability, Attributable Risk
- Scale

## From Fire Liability to Fire Resilience



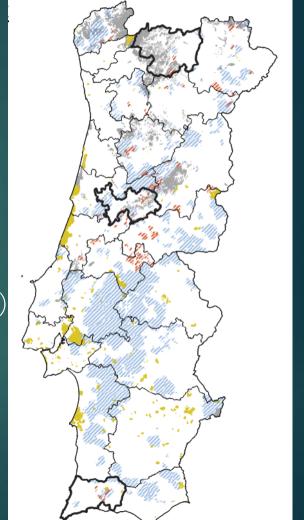




Scale: Feasibility and Effectiveness

- ► Forest Intervention Zones (ZIF)
- ▶ 1.94 M ha, 31,000 forest owners (ICNF)

▶ Integrated Landscape Management Areas (AIGP)



- ► Conservation Finance can be understood as a contract or set of contracts.
- Direct contract between investor and landowner versus Forest Resilience Bond (three party: investor, beneficiary, landowner).
- ▶ Fewer parties are more efficient but tradeoff might be less capital.
- ▶ Bonds typically requires uniform covenants and enforceable repayment.
- Are ZIF FOAs able to enter into land use contracts in exchange for forest improvement treatments?