Introduction to Green Finance

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ECWs 2017

GREEN FINANCE: DEFINITION

Use of financial products and services,

such as loans, insurance, stocks, private equity & bonds

in green (or eco-friendly) projects

Green finance is more than climate finance, but includes land, forests, water, oceans, conservation, resilience--indeed every type of GEF investment

"Introduction to Green Finance" brochure - goo.gl/VzoRVF

NEED FOR ADDITIONAL FINANCE

Annual funding needed:

Conservation

$400-600 billion (spent only $50-62 billion)

$300-$400b **gap = 1% of private sector investments**

Public $ can cover less than 15%

Energy

Access - $45 billion (spent $9 billion)

Renewables - $320 billion (spent $154 billion)

Efficiency - $390 billion (spent $225 billion)

Additional finance (**gap**) - $350 billion

Climate

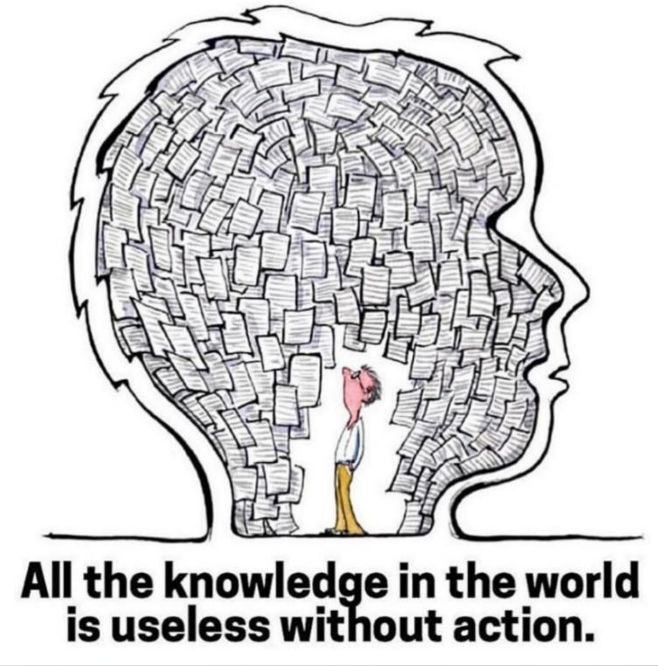
$392 invested in 2014 (>60% private$) - **still falling short $250 billion**

SESSION OVERVIEW

1. **Main financial instruments in conservation**
   - Debt / Equity / Guarantees
2. **Leveraging private sector capital**
3. **Cases**
   - Forestry fund
   - Fisheries fund
   - Energy efficiency program

Audience: professionals entering Green Finance space

WHY THIS SESSION?



- ✓ **Private capital -** the biggest part of conservation/climate funding
- ✓ To access private finance, we need to **know how it works**
  Finance can be **explained in simple terms**
- ✓ **We can apply this knowledge** to answer the following:
  - How do we develop socially beneficial projects which attract private finance?
  - How do we make the project sustainable long term (after the funding is over)?
  - How do we prioritize our work program to attract more capital?

GREEN FINANCE: BRIEF HISTORY

Investment in conservation evolved:

- 19th century: simple public sector financing
  (taxes, fees, stamps and government spending)
- 20th century: mix of public & philanthropic finance
- Last 25 years: **growing involvement of the private sector**
  + the development of new financial mechanisms

E.g. we can use **tropical forest** assets to generate **revenues** from operations in fields of **sustainable timber, agriculture and ecotourism**

Financial innovations: social policy bonds, crowdsourcing initiatives (online platforms to mobilize capital) – will transform raising capital

GREEN FINANCE: ASSET CLASSES

Asset class - group of financial instruments:

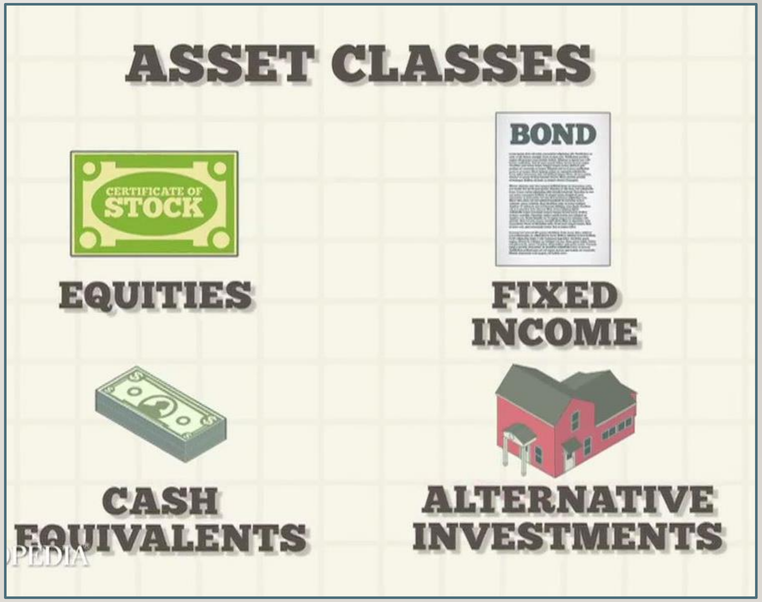
- with similar **characteristics**,
- that **behaves** similarly in the marketplace,
- and subject to the same **laws/regulations**

2 Asset classes / financial instruments commonly used in green finance:

(1)Equity (Stocks)

(2)Debt Fixed Income)

+ risk management tool: **Guarantees**

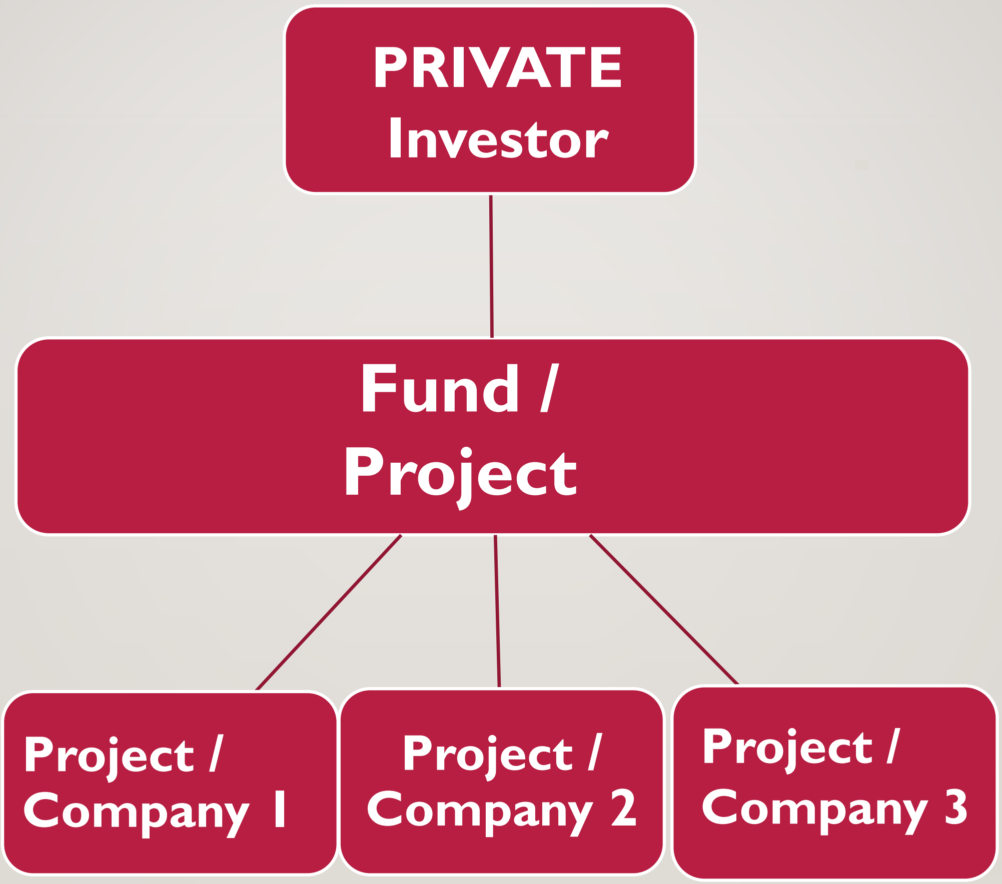


BLENDED FINANCE – HOW IT WORKS

Can Invest $8m

Required return 7%

Projects can generate 6%



To simplify calculations, we assume projects last only 1 year

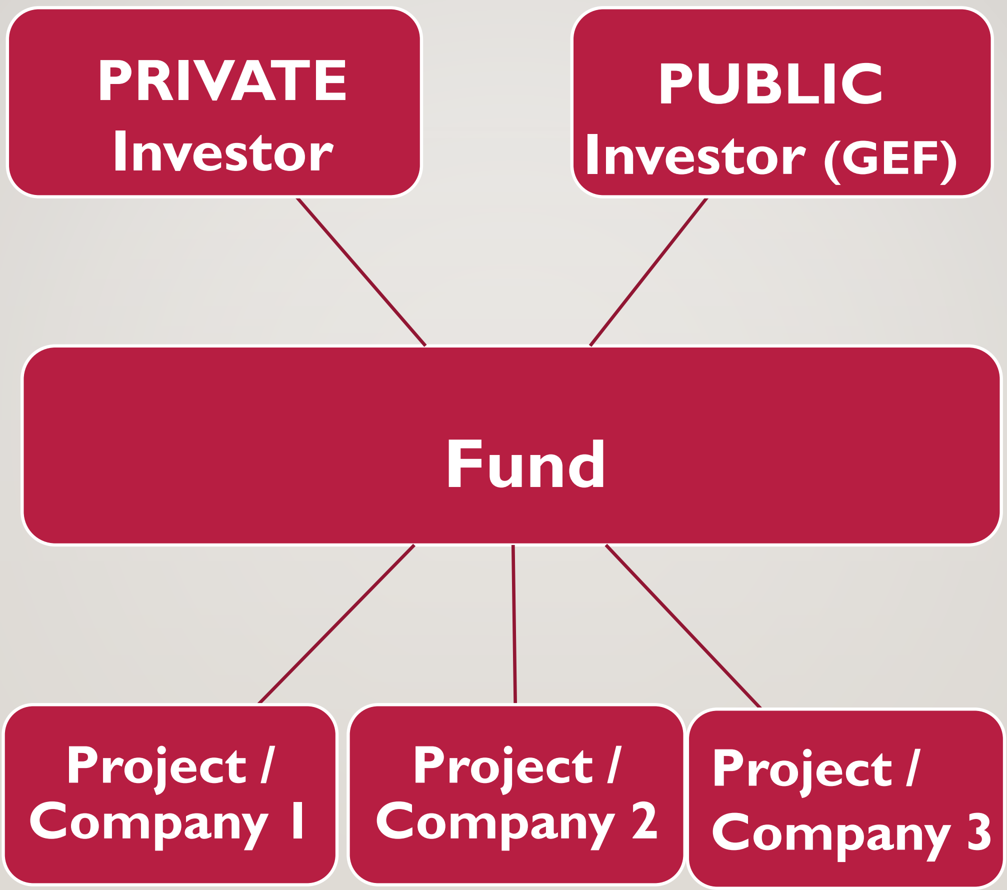
BLENDED FINANCE – HOW IT WORKS

Invested $8m

Required return 7%

Invested $2m

Required return 2%



Total Invested $10m

Projects can generate 6%

To simplify calculations, we assume projects last only 1 year

BLENDED FINANCE – HOW IT WORKS

Invested $8m

Required return 7%

PRIVATE Investor

PUBLIC Investor (GEF)

Invested $2m

Required return 2%

Fund

Total Invested $10m

Projects can generate 6%

Project / Company 1

Project / Company 2

Project / Company 3

Total generated $10.6m - 6%

To simplify calculations, we assume projects last only 1 year

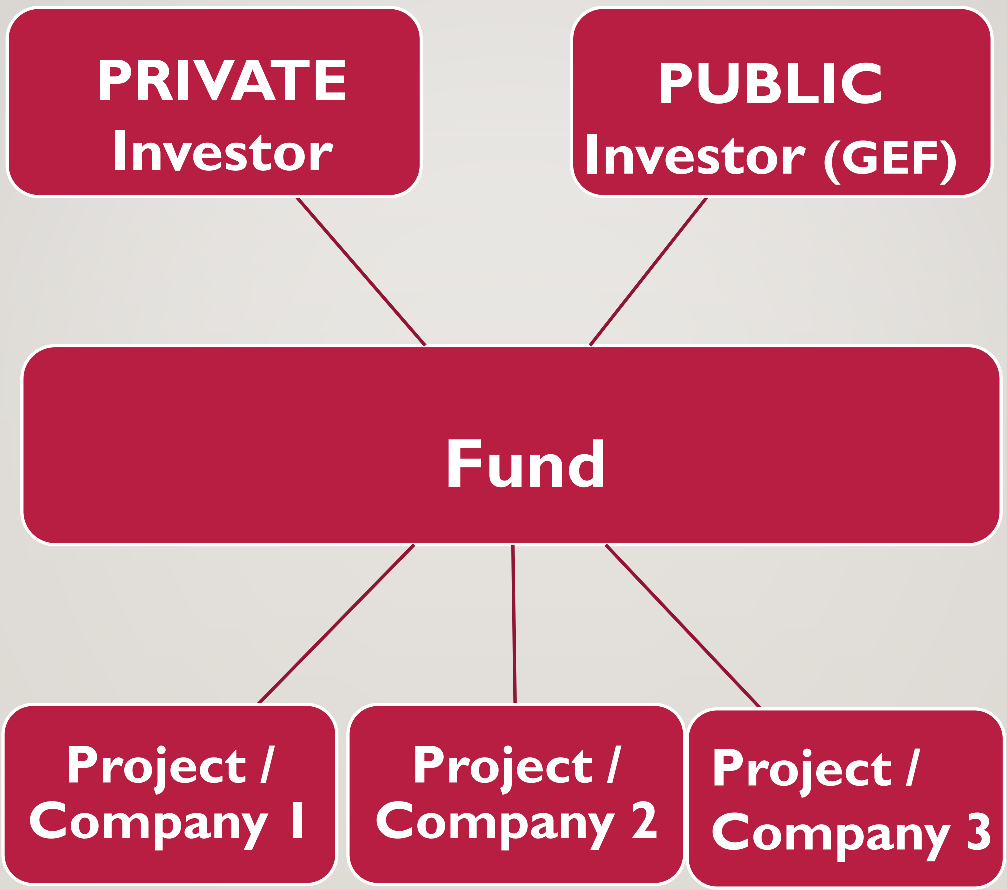
BLENDED FINANCE – HOW IT WORKS

Invested $8m

Required return 7%

Invested $2m

Required return 2%



Total Invested $10m

Projects can generate 6%

Total generated

$10.6m - 6%

$2.04m - GEF

$8.56m - Private

To simplify calculations, we assume projects last only 1 year

BLENDED FINANCE – HOW IT WORKS

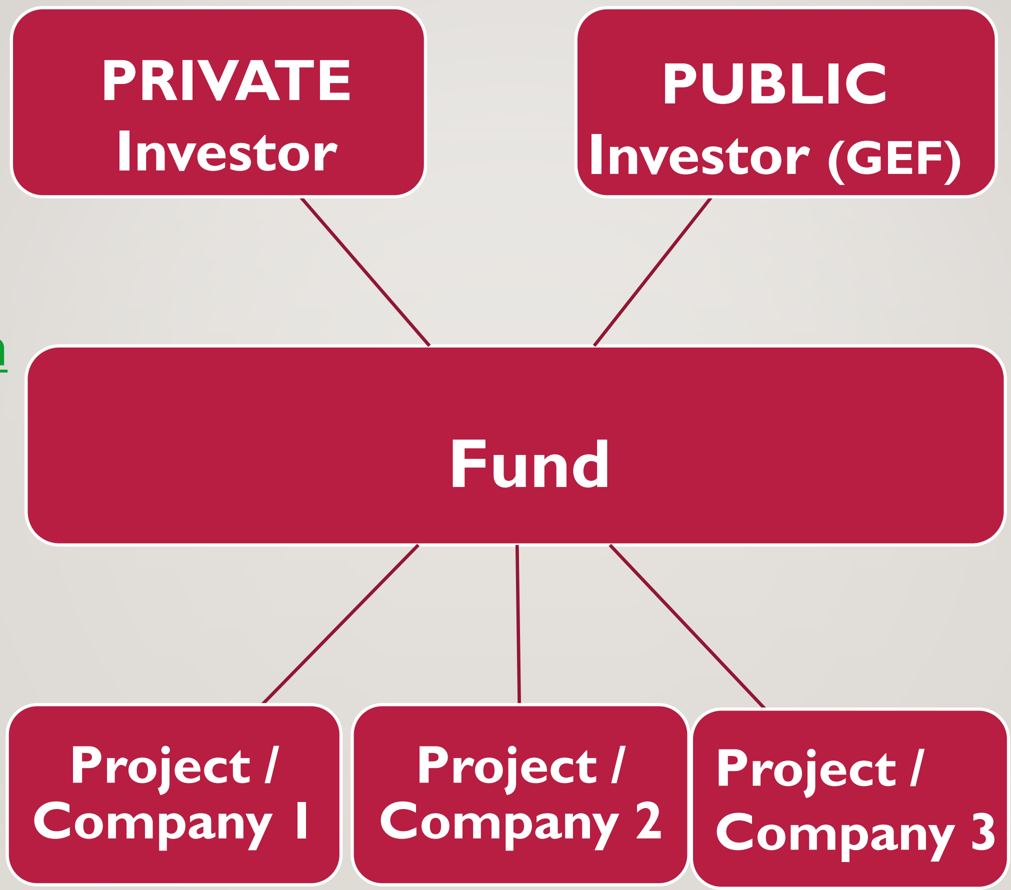
Invested $8m

Required return 7%

<u>8x1.07=$8.56m</u>

Invested $2m

Required return 2%



Total Invested

$10m

Projects can generate 6%

Total generated

<u>$10.6m</u> - 6%

$2.04m - GEF

$8.56m - Private

To simplify calculations, we assume projects last only 1 year

EQUITY FINANCING

Equity - ownership in the business

Common shares (junior equity) vs Preferred shares

- Junior shares are subordinated to preferred shares
- Liquidation: preferred stockholders paid first
- Dividends: different/greater for preferred shares

Public institutions often invest in **junior equity** → absorbs risks of first losses (but perhaps also seeks risk-adjusted returns);

Private investors invest in preferred shares (senior shares)

Private Investors, DFIs, IFIs	**Senior/Preferred Shares,** Senior Debt
Public Donors, GEF	**Junior Shares,** Grants

EQUITY IN GEF PROJECTS

Objective: Supporting small-scale clean energy projects to reduce CO_2

Input:

- GEF invested $4.5m in junior equity of Africa Renewable Energy Fund (AREF) with capped return of 4%
- African Development Bank (AfDB) and other Donors provided $25m
- Co-financing of at least $150m

Process and Output:

- AfDB manages AREF
- AREF invests in clean energy projects
- GEF capped return enables returns to other investors to increase by 2-3%
- Number of projects to be developed (currently 18 at project initiation)

Impact: reduction of 3.8 million tons CO_2 during the project life (10 years)

DEBT FINANCING

Notes, bonds, loans, debentures, certificates, mortgages, leases & other agreements

- **Loan: $ from a bank to a company, with interest payment, over specific time**
  - **collateral to guarantee repayment (if difficult → equity preferred)**
- **Bond: $ from the public market to a company**
  - **trade on public market and involve larger amounts (typically min $100m)**

Seniority

- **Senior debt: greater security (lower risk) & lower interest payment**
- **Debt is senior to Equity - creditors are paid before shareholders**

Private Investors	**Senior Debt (Senior Notes, Loans)**
Public Donors, GEF	Subordinated Debt (Subordinated Notes, Loans)

DEBT IN GEF PROJECTS

Objective: Improving freight transport efficiency to reduce GHG emissions in the Black Sea Region

Input:

- GEF provided $16.4m in subordinated debt (junior funding)
- Co-financing: $155m during, and $250m after project completion

Process and Output:

- EBRD manages The Green Logistics Program (ongoing)
- GEF investment in subordinated debt reduces the cost of project financing (reduces required interest rates) → enabling EBRD investment

Impact: estimated GHG reduction by 9.1 million tons CO2e

GUARANTEES

Reduce the probability of default

Support the flow of private investments - in projects where investors and lenders are seeking to mitigate risk

- **Credit guarantee – covers non payment by private borrowers.** Full or partial guarantee. Partial guarantee – up to a predetermined amount
- **Performance guarantee -** agreement between a client and a contractor for the contractor to perform all of their obligations under the contract

GUARANTEES IN GEF PROJECTS

Objective: Supporting land restoration in Latin America

Input:

- GEF invested $15m in guarantees and subordinated loans
- Co-financing $120m by Inter-American Development Bank and others

Process and Output:

- Private sector interested in restoration of degraded lands. These investments have long payback periods & high financial risk →
- GEF reduces risk → enables private investments + public investmt (IADB)
- Activities: landscape regeneration; intercropping; shade-grown systems for coffee and cocoa; timber and non-timber product; improving soil, water and temperature regulation by improving agric. land management

Impact: restoration min 45,000 ha, emissions reductions 4.5m tCO2e

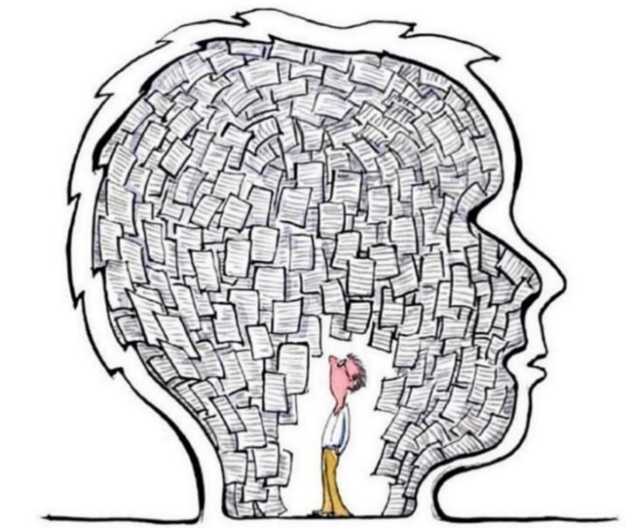
Example of Blended Capital Structure

Source of Capital:	Structure No. 1:	Structure No. 2:
Private Investors	Debt (Notes)	Senior Debt (Senior Notes, Loans)
DFIs, IFIs	Senior Shares	**Subordinated Debt** (Subordinated Notes, Loans)
DFIs, IFIs	Mezzanine Shares (Hybrid of Debt & Equity)	Senior Shares
Public Donors	**Junior Shares**	**Junior Shares**
	Guarantee	**Grant**

BARRIERS
FOR PRIVATE CAPITAL

- High search costs - attractive risk returns, sufficient and predictable cash flows, bigger projects
- Lack of track record of projects and developers
- Monitoring of conservation impact
- Scalability/replicability for future projects

SO WHAT'S NOW?



- ✓ **New types of collaboration** btw investors, NGOs /project developers & public entities
- ✓ **Blending** of non-concessionary and concessionary capital
- ✓ **Addressing the barriers within the GEF framework:**
  - How do we develop socially beneficial projects which attract private finance?
  - How do we make the project sustainable long term (after the funding is over)?
  - How do we prioritize our work program to attract more capital
- ✓ **GEF-led Green Finance Community of Practice:**

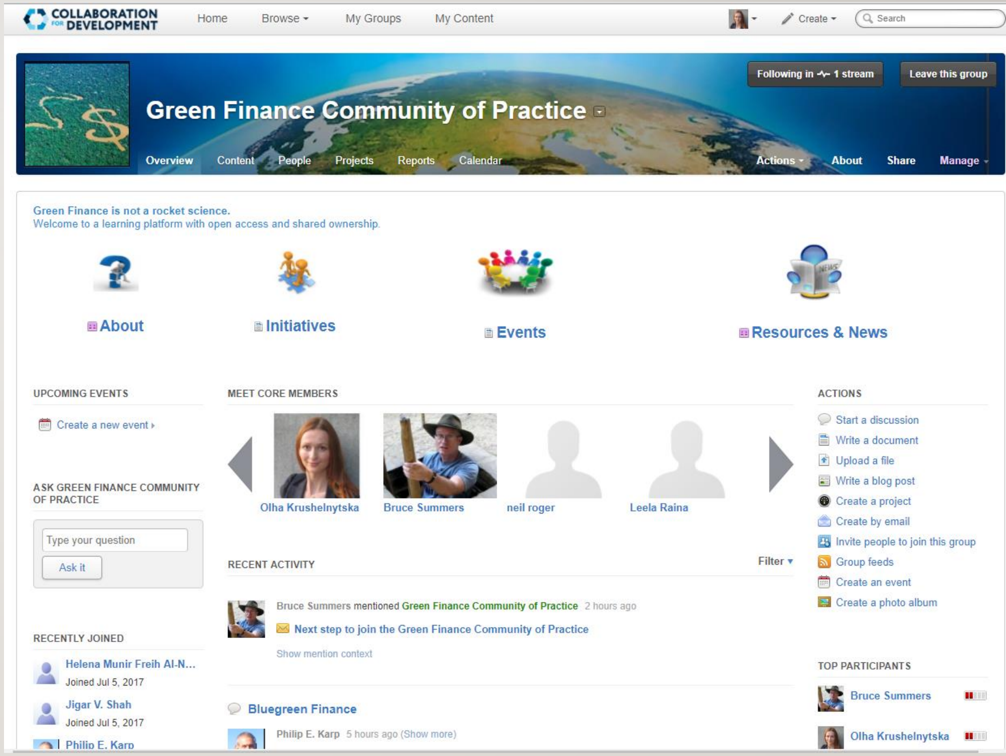
https://collaboration.worldbank.org/groups/green-finance-community-of-practice

Shortened URL: goo.gl/LySZkU

GREEN FINANCE COMMUNITY OF PRACTICE (COP)

- **Wikipedia style**
- **Open Access**
- **Shared Ownership:**

everybody can create a page,
edit existing content,
start a discussion, and more



URL: **https://collaboration.worldbank.org/groups/green-finance-community-of-practice**

Shortened URL: **goo.gl/LySZkU**

GREEN FINANCE COP - HOW TO JOIN

1. You will receive a official invitation - click on the link
2. Enter your email in the box in the lower right hand under "Your email and click "Confirm address"
3. Check your email for a message that contains further instructions
4. In the email you receive, click on the link to validate your address and complete a short registration
5. Complete the required fields to Create your account. Notes: you will need to create a strong password as prompted. If "Enter the code" does not work, try refreshing but you may need to re-enter data.
6. Click on the Orange Oval next to the Inbox on the C4D home page and then click on Notifications
7. Click Accept the Invitation Notification. This should place you on Green Finance Community of Practice

Problems? Email Bruce Summers bsummers@worldbank.org
or Olha Krushelnytska okrushelnytska@thegef.org


CASES

CASE 1: FORESTRY FUND

Investors (GEF and others) → Forestry Fund → Forestry projects/businesses

(1) Forestry companies need capital. But private sector investors reluctant to invest due to: long payback periods, lack of track record and uncertainty over product prices.

(2) The Fund will provide long-term (**debt / equity**) funding to 5-6 existing projects to scale them up, so they can further attract (**debt / equity**) financing from financial institutions

(3) The GEF has taken a (**lower return & higher risk / higher return & lower risk**) position in the fund, which helps lower risks for private sector investors

(4) The interests of private sector (**debt / equity**) investors are closely aligned with those of the other shareholders: they want to add value by ensuring effective governance and high environmental & social standards of funded companies.

CASE 1: FORESTRY FUND (1/4)

(1) Forestry companies need capital. But private sector investors reluctant to invest due to: long payback periods, lack of track record and uncertainty over product prices.

CASE 1: FORESTRY FUND (2/4)

(2) GEF helps establish the Forestry Fund, which will provide long-term **(debt / equity)** funding to 5-6 existing projects to scale them up, so they can further attract **(debt / equity)** financing from financial institutions.

CASE 1: FORESTRY FUND (3/4)

(3) The GEF has taken a **(lower return & higher risk / higher return & lower risk)** position in the fund, which attracts private sector investors.

CASE 1: FORESTRY FUND (4/4)

(4) The interests of private sector **(debt / equity)** investors are closely aligned with those of the other shareholders:
they want to add value by ensuring effective governance and high environmental & social standards of funded companies.

CASE 1: FORESTRY FUND ANSWERS

Investors (GEF and others) → Forestry Fund → Forestry companies

(1) Forestry companies need capital. But private sector investors reluctant to invest due to: long payback periods, lack of track record and uncertainty over product prices.

(2) The Fund will provide long-term **equity** funding to 5-6 existing projects to scale them up, so they can further attract **debt** financing from financial institutions

(3) The GEF has taken a **lower return/higher risk** position in the fund, which helps lower risks for private sector investors

(4) The interests of private sector **equity** investors are closely aligned with those of the other shareholders: they want to add value by ensuring effective governance and high environmental & social standards of funded companies.

CASE 2: FISHERIES FUND

(1) **Fund for sustainable small-scale fisheries** will be one of the very few financial institutions providing long term financing in community fisheries.

(2) Fund Will provide long-term **(debt / equity / debt and equity)** investments to promising enterprises operating in the sustainable wild-caught seafood and mariculture sectors.

Capital to be used for the acquisition of fixed assets by borrowers.

(3) GEF invests in **(stocks / loans)** of 5-7 years and expects to earn 10-15% return.

CASE 2: FISHERIES FUND (1/3)

(1) **Fund for sustainable small-scale fisheries** will be one of the very few financial institutions providing long term financing in community fisheries.

CASE 2: FISHERIES FUND (2/3)

(2) **Fund** will provide long-term **(debt / equity / debt and equity)** investments to promising enterprises operating in the sustainable seafood sector.

Capital used for the acquisition of fixed assets by borrowers.

CASE 2: FISHERIES FUND (3/3)

(3) GEF invests in **(stocks / loans)** of 5-7 years and expects to earn 10-15% return.

CASE 2: FISHERIES FUND
ANSWERS

(1) **Fund for sustainable small-scale fisheries** will be one of the very few financial institutions providing long term financing in community fisheries.

(2) **Fund** will provide long-term **debt and equity** investments to promising enterprises operating in the sustainable seafood sector.

Capital to be used for the acquisition of fixed assets.

(3) GEF invests in **loans** of 5-7 years and expects to earn 10-15% return.

CASE 3: ENERGY EFFICIENCY PROGRAM

(1) Energy Service Companies (ESCOs) - private enterprises that implement improvements to reduce energy consumptions. Require lending for equipment and process improvements. However they lack access to **(commercial credit / capital markets)**.

(2) The banks conventionally lend against high levels of **(fixed asset collateral / guarantees from other financial institutions)**. ESCOs often cannot meet these requirements.

(3) The project objective is to develop energy efficiency industry, through **(risk sharing / co-investing)** with commercial lenders.

(4) GEF funds will be used to create a **(performance risk guarantee / credit enhancement guarantee)** program. The program includes creation of the Risk Facility.

(5) The Risk Facility will be used to share the risk with commercial banks. Its funds would be paid out to participating banks in the event of a loss or default - partial coverage of banks risk exposure. Thereby ESCOs can obtain a bank debt with a **(lower / higher)** cost and a **(shorter / longer)** term.

Banks	
Risk Facility	**Banks**
Risk Facility	

Final 10% Loss: Banks

Next 80% Loss: Shared equally between Risk Facility and banks

First 10% Loss: Risk Facility

CASE 3: ENERGY EFFICIENCY PROGRAM (1/5)

(1) Energy Service Companies (ESCOs) - private enterprises that implement improvements to reduce energy consumptions. Require lending for equipment and process improvements. However they lack access to (**commercial credit / capital markets**).

CASE 3: ENERGY EFFICIENCY PROGRAM (2/5)

(2) The banks conventionally lend against high levels of (**fixed asset collateral / guarantees from other financial institutions**). ESCOs often cannot meet these requirements.

CASE 3: ENERGY EFFICIENCY PROGRAM (3/5)

(3) The project objective is to develop energy efficiency industry, through **(risk sharing / co-investing)** with commercial lenders.

CASE 3: ENERGY EFFICIENCY PROGRAM (4/5)

(4) GEF funds will be used to create a **(performance risk guarantee / credit enhancement guarantee)** program.

The program includes creation of the Risk Facility.

CASE 3: ENERGY EFFICIENCY PROGRAM (5/5)

(5) The Risk Facility will be used to share the risk with commercial banks. Its funds would be paid out to participating banks in the event of a loss or default - partial coverage of banks risk exposure.

Banks		**Final 10% Loss: Banks**
Risk Facility	**Banks**	**Next 80% Loss: Shared equally between Risk Facility and banks**
Risk Facility		**First 10% Loss: Risk Facility**

Thereby ESCOs can obtain a bank debt with a **(lower / higher)** cost and a **(shorter / longer)** term.

CASE 3: ENERGY EFFICIENCY ANSWERS

(1) Energy Service Companies (ESCOs) - private enterprises that implement improvements to reduce energy consumptions. Require lending for equipment and process improvements. However they lack access to **commercial credit.**

(2) The banks conventionally lend against high levels of **fixed asset collateral**. ESCOs often cannot meet these requirements.

(3) The project objective is to develop energy efficiency industry, through **risk sharing** with commercial lenders.

(4) GEF funds will be used to create a **credit enhancement guarantee** program. The program includes creation of the Risk Facility.

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Thank you!
QUESTIONS?
Brochure: goo.gl/VzoRVF