ASSESSING THE CLIMATE CHANGE MITIGATION IMPACT OF GREEN BONDS
1. **THE GREEN BOND MARKET**

- Investors interested in ESG and non-financial returns;
- Demand for Green Bonds has boomed over the past 5 years;
- Green Bonds have mainstreamed environmentally aligned investment;
- US$144 billion of Green Bonds outstanding denominated in 26 currencies

![Green Bond Market Amortisation Profile](image)
To keep global warming to below 2°C, GHG emission must reduce by \(~60\text{GtCO}_2\text{e vs. BAU}\) by 2050.

An estimated $93\text{tn of investment is needed by 2030}$ globally to transition to a Low Carbon Economy;
“Transparency is of particular value in communicating the expected impact of projects... The GBP recommend the use of qualitative performance indicators and, where feasible, quantitative performance measures”
THE QUESTIONS EVERYONE IS ASKING

- ... What impact are Green Bonds having on global emissions reductions?
- ... What is the prospective GHG impact of my Green Bond investment portfolio?
- ... How much potential Green is there in this Green Bond?

You can’t value what you don’t measure
And some issuers and investors are already calculating GHG impact;

- We’ve worked with an external expert to develop a framework for measuring the environmental impact of the projects and deals. For the full year 2016, the renewable energy projects amounted to a total carbon emissions avoided of 744 kilotonnes, which is the equivalent of removing the annual emissions of 93,000 Dutch households.

But currently calculation methodologies and results presentation vary across the market.
The Carbon Yield quantifies the environmental impact of a Green Bond in terms of GHG emissions avoided per annum through the financed activities.

e.g. Company Corp. €500 million 02/2025 3.5% $0.735(C_Y)$

$(C_Y) = \text{tCO}_2\text{e/year/€1,000}$

That is: an investor holding €1,000 of this bond for a year, would have enabled 0.735 tCO$_2$e of potential abatement.

The Carbon Yield methodology is publicly available [www.carbonyield.org](http://www.carbonyield.org)
CALCULATING THE CARBON YIELD

- Emissions allocated evenly across **capital structure** of a project:

  - **Debt**: 60% of CO2e reductions
  - **Equity**: 40% of CO2e reductions

- Impact of project depends on: **size, technology** and **geography**
Impact averaged over **full lifetime** of project:
THE CARBON YIELD: APPLYING IT

- Can be used to assess a portfolio of existing Green Bonds;
- Can be published by issuers of new Green Bonds;
- Is applied at Framework level: i.e. one Carbon Yield for one issuer;
- Can be used by anyone;
- Is publicly available;
- Allows upfront assessment of impact of different Green Bond Frameworks;
- Most of the data necessary to calculate it is already being collected by issuers.
THE CARBON YIELD: USING IT

- Is a straightforward **quantitative** metric;
- It introduces a **common language** around GHG impact across the market;
- Increases **transparency** in the Green Bond market;
- Is designed to **complement the existing Green Bond Ecosystem** of qualitative assessments;
- Allows **upfront assessment** of impact of different Green Bond Frameworks;
- Could lead to creation of **relative value** for Green Bonds;
- Increase flows of Green capital overall and to **Ems**;
- Provides investors with **additional information** on the issuances.
... But they’re a good place to start

- The Carbon and GHG accounting systems are the most advanced and familiar;
- We hope that in time the Carbon Yield will give rise to other “sister” metrics tackling for example water intensity;
- **The Carbon Yield methodology is publicly available** and looks to evolve and become more sophisticated with the market.