

Green Bonds

Mumbai, January 2017
Senior Adviser Harald Francke Lund



Center for International
Climate and Environmental
Research - Oslo



Independent non-profit climate change
research center

Link between climate science and financial
community

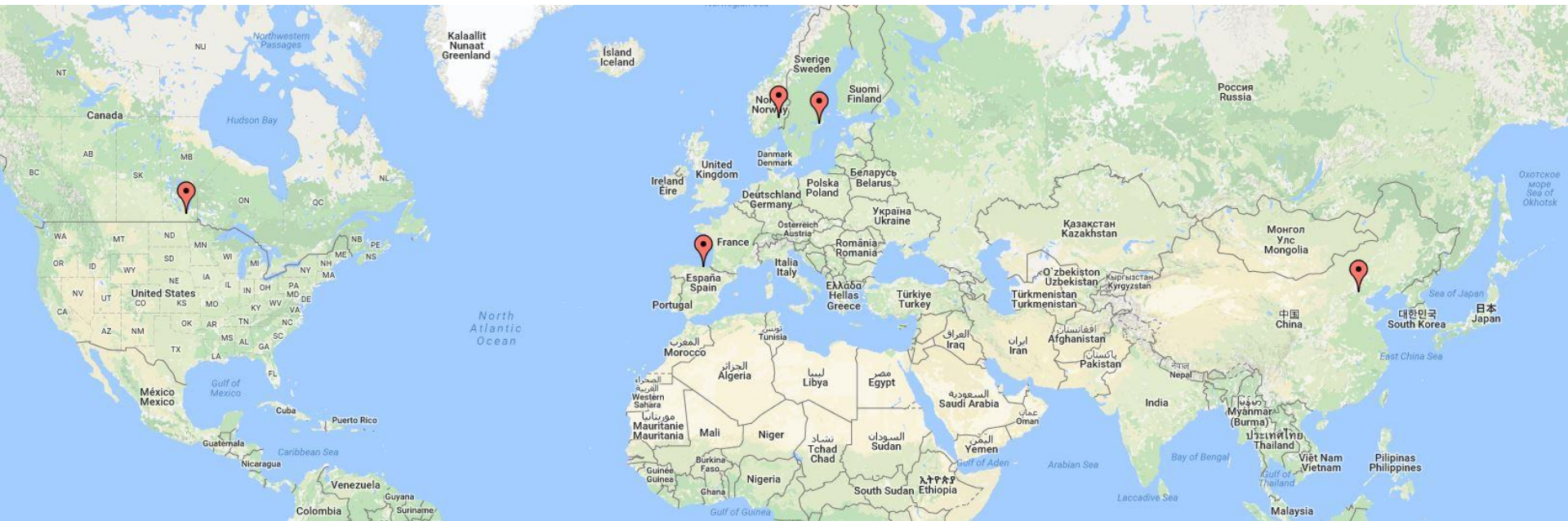
CICERO's involvement and motivations

World-leading provider of second opinions on green bonds

<http://www.cicero.uio.no/en/posts/news/green-bonds-and-environmental-integrity>



Expert Network on Second Opinions



iisd International
Institute for
Sustainable
Development Institut
international du
développement durable

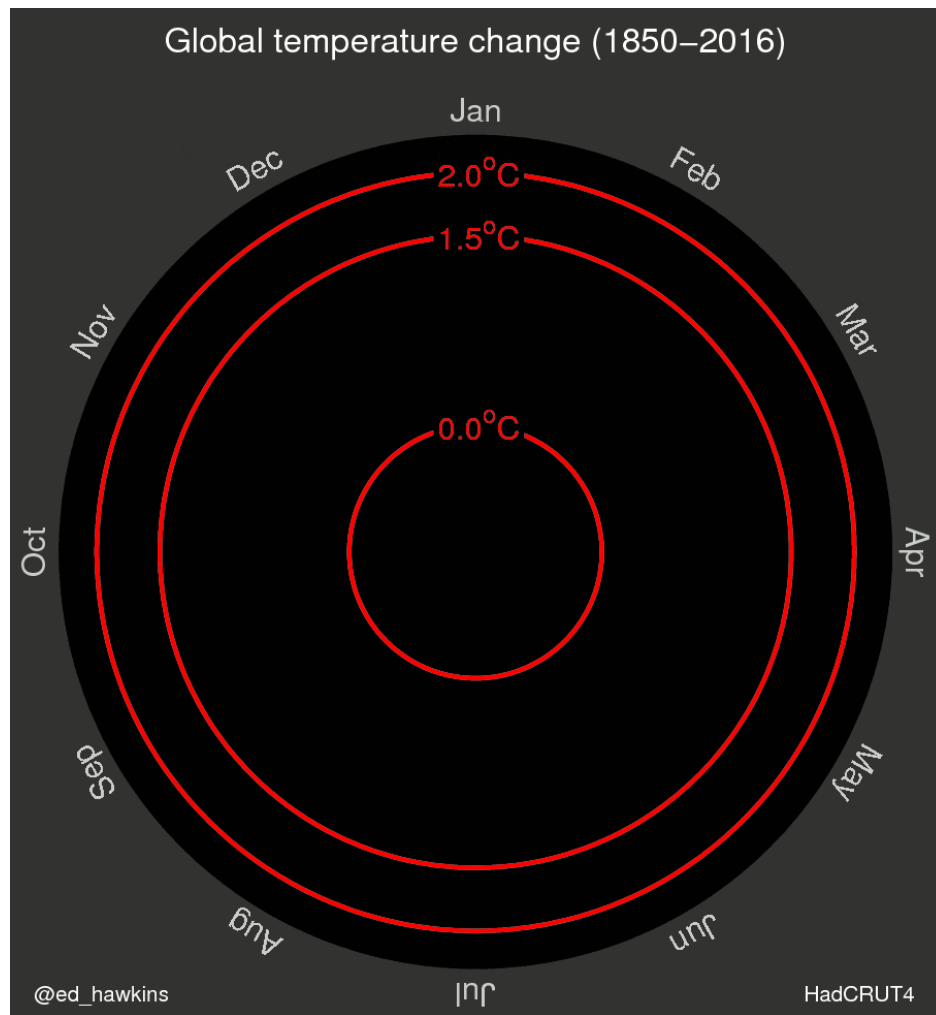
bc³
BASQUE CENTRE
FOR CLIMATE CHANGE
Klima Aldaketa Ikergai

°CICERO
Senter for
klimaforskning

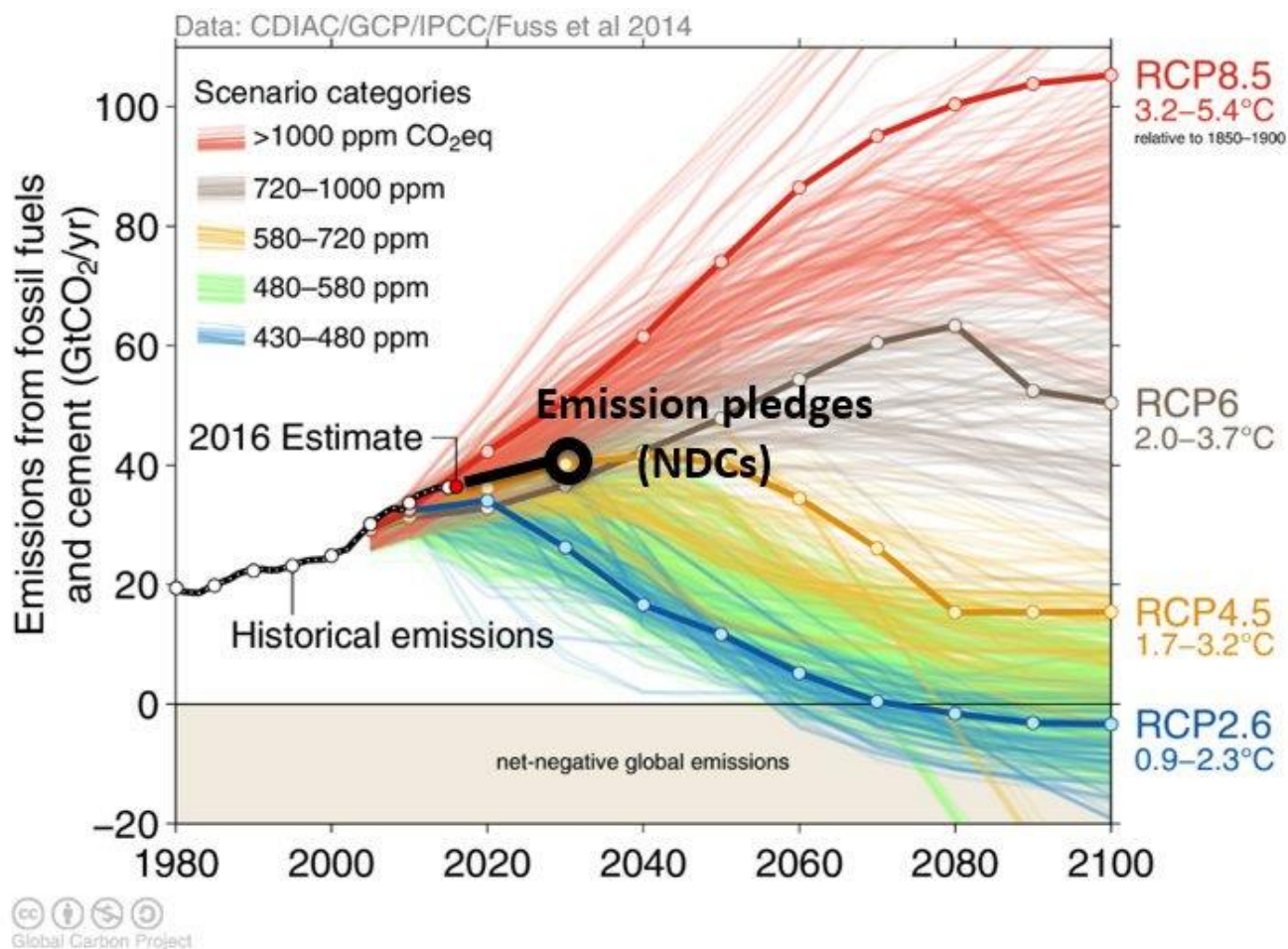
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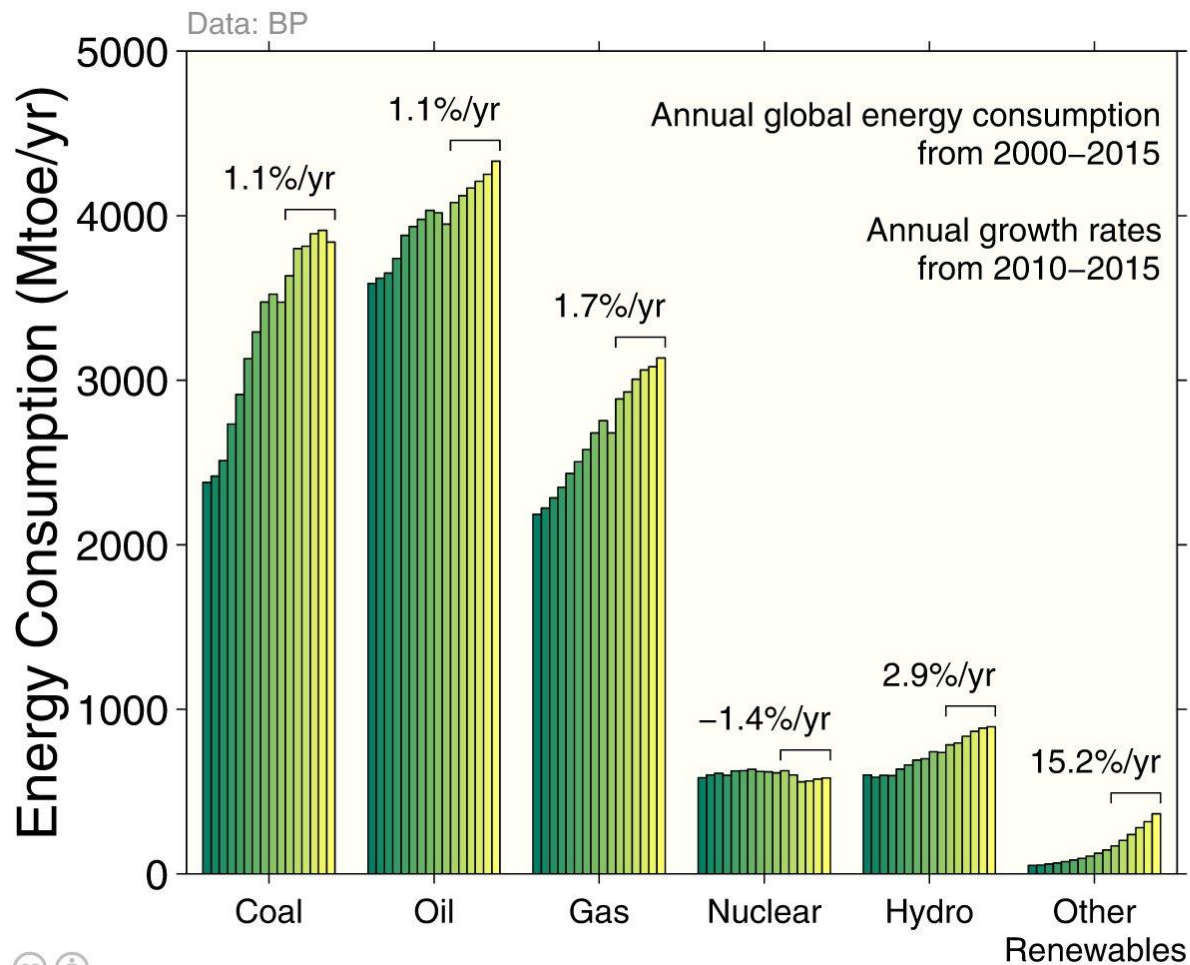


清华大学
Tsinghua University



Pledges to the Paris Agreement avoid the worst effects of climate change (4-5C) but still far from 2C





Climate change will increase extreme events

Sea level rise



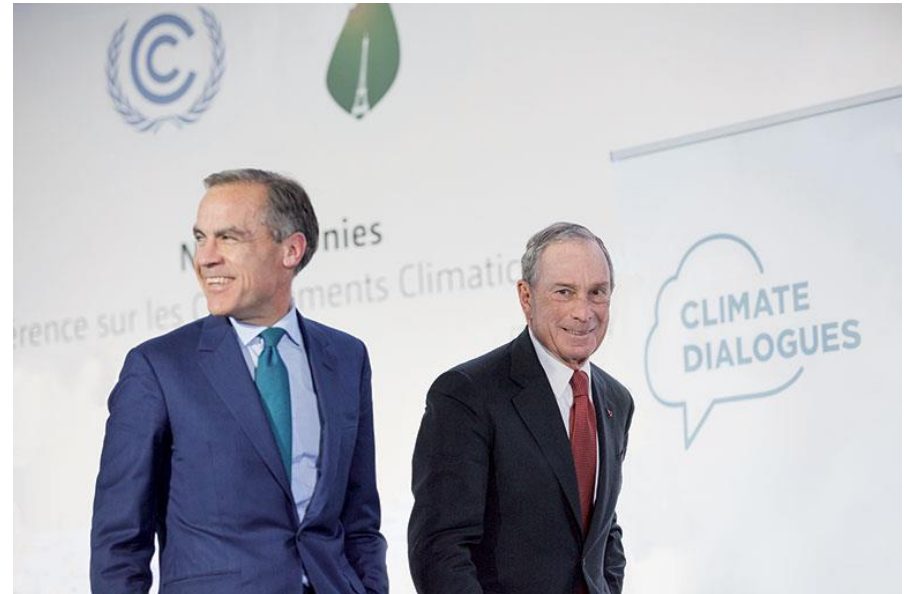
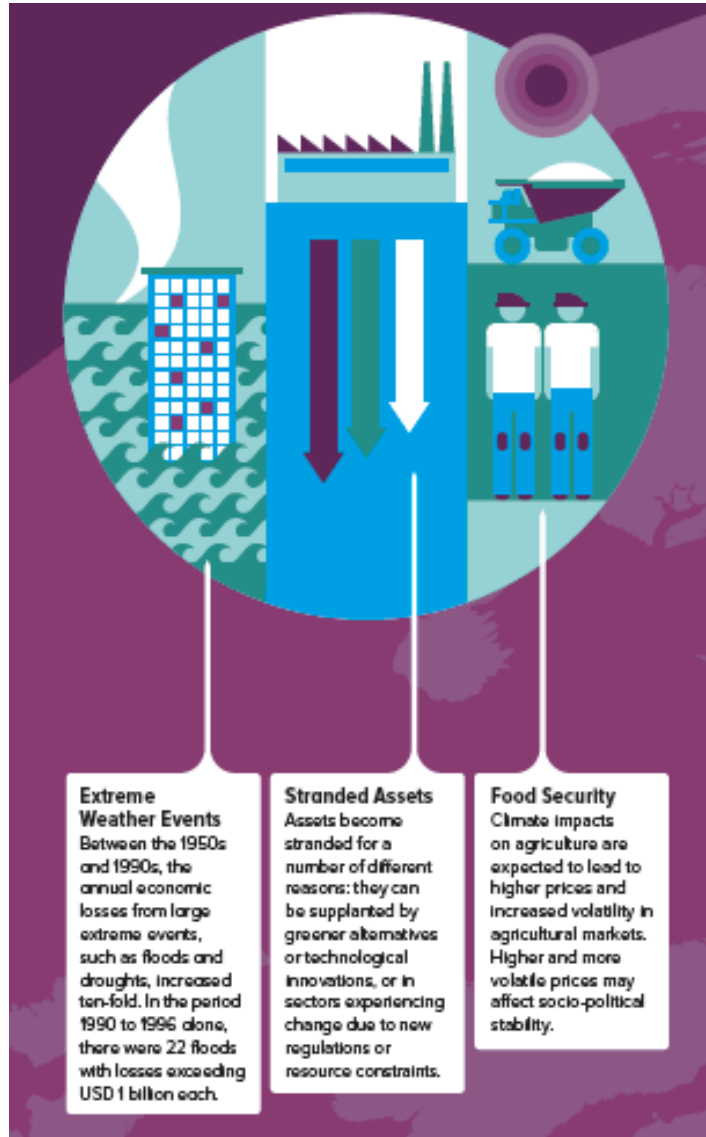
Droughts



Extreme precipitation

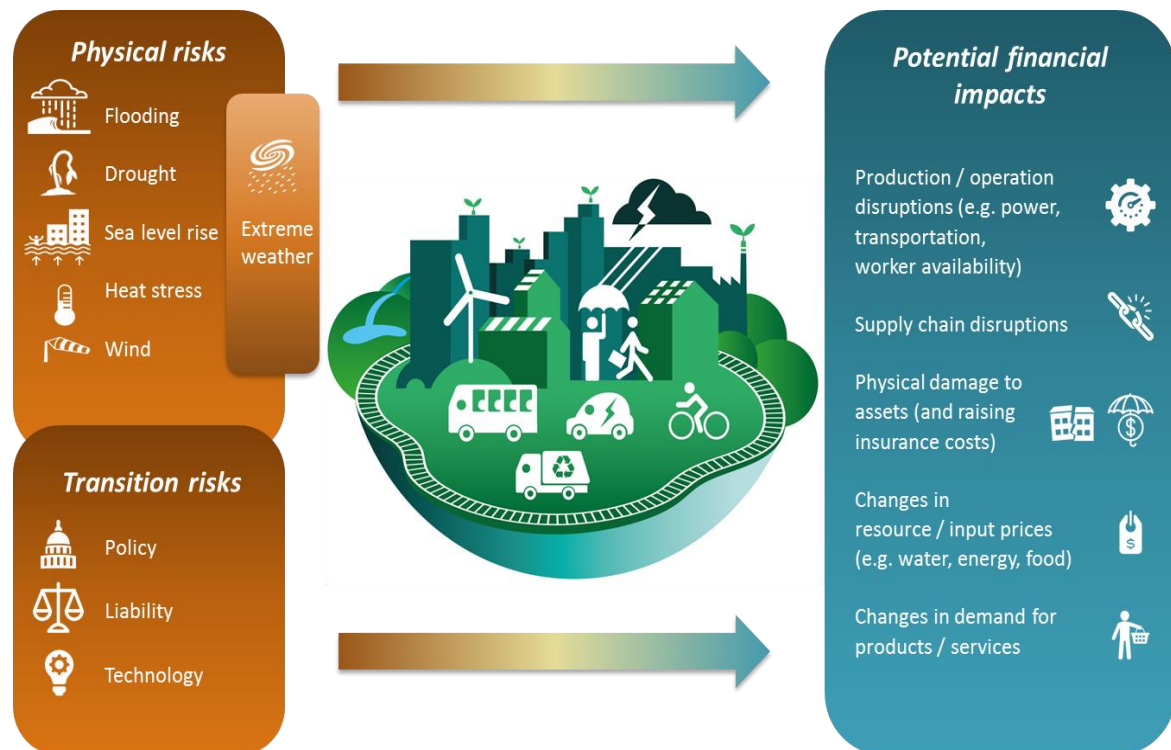


Physical impacts & policy measures could have major impacts on investors



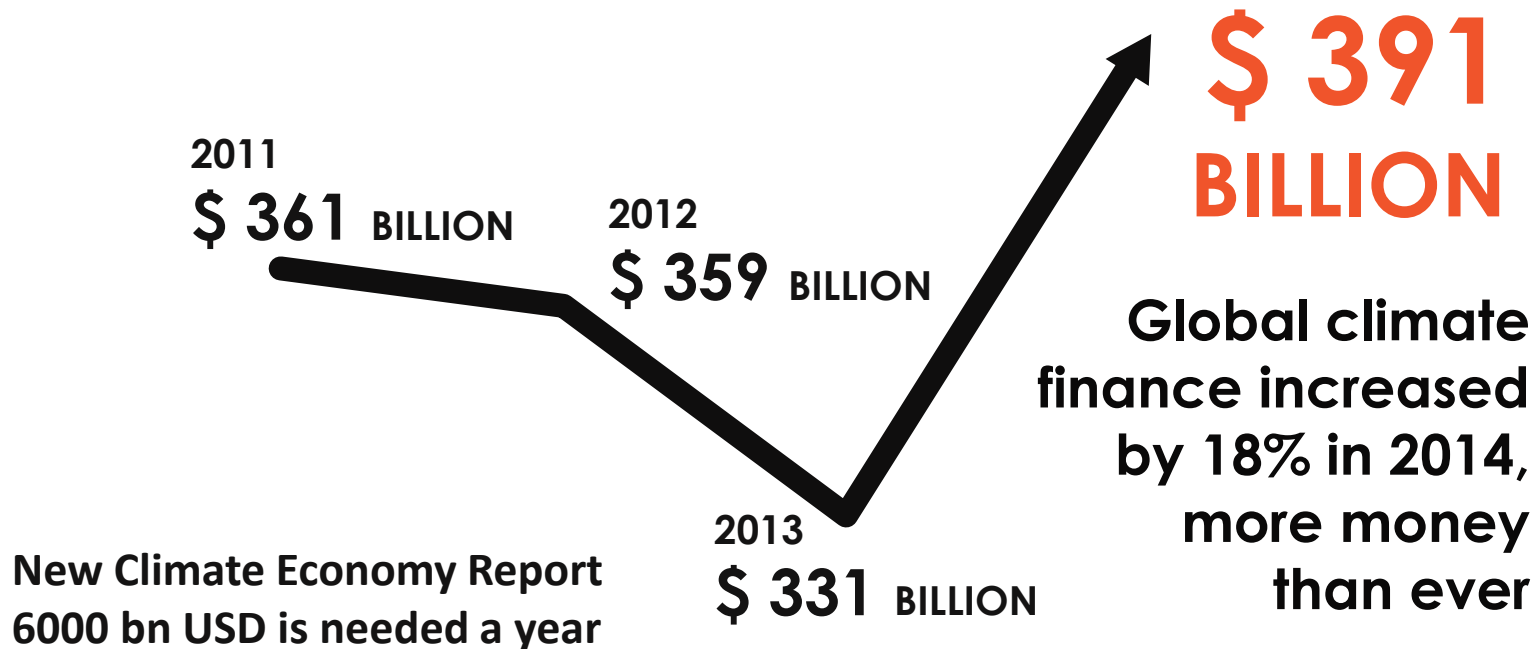
Task Force on Climate-related Financial Disclosures (TCFD) launched its report in December 2016 on voluntary, consistent climate-related financial risk disclosures

How can investors better secure the value of their portfolios against climate change risk?



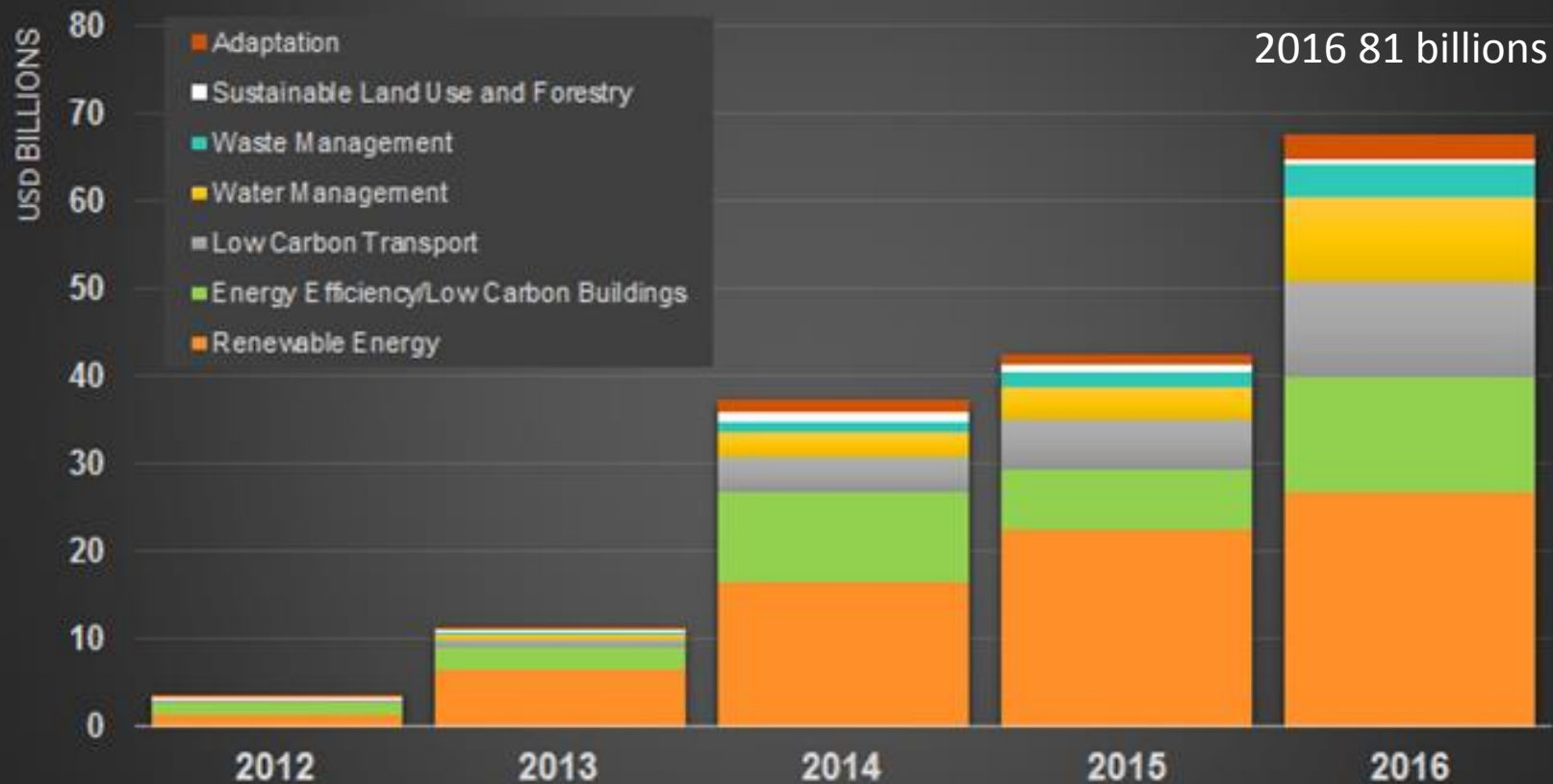
Climate finance flows in last five years have been significant despite economic crisis

TOTAL CLIMATE FINANCE IN 2014



Source CPI

Green bonds use of proceeds 2012-2016_{ytd}



Source: Climate Bonds Initiative

What is Green – and Who Decides?

Voluntary Principles



Recommends external review

Second Opinions



Standards



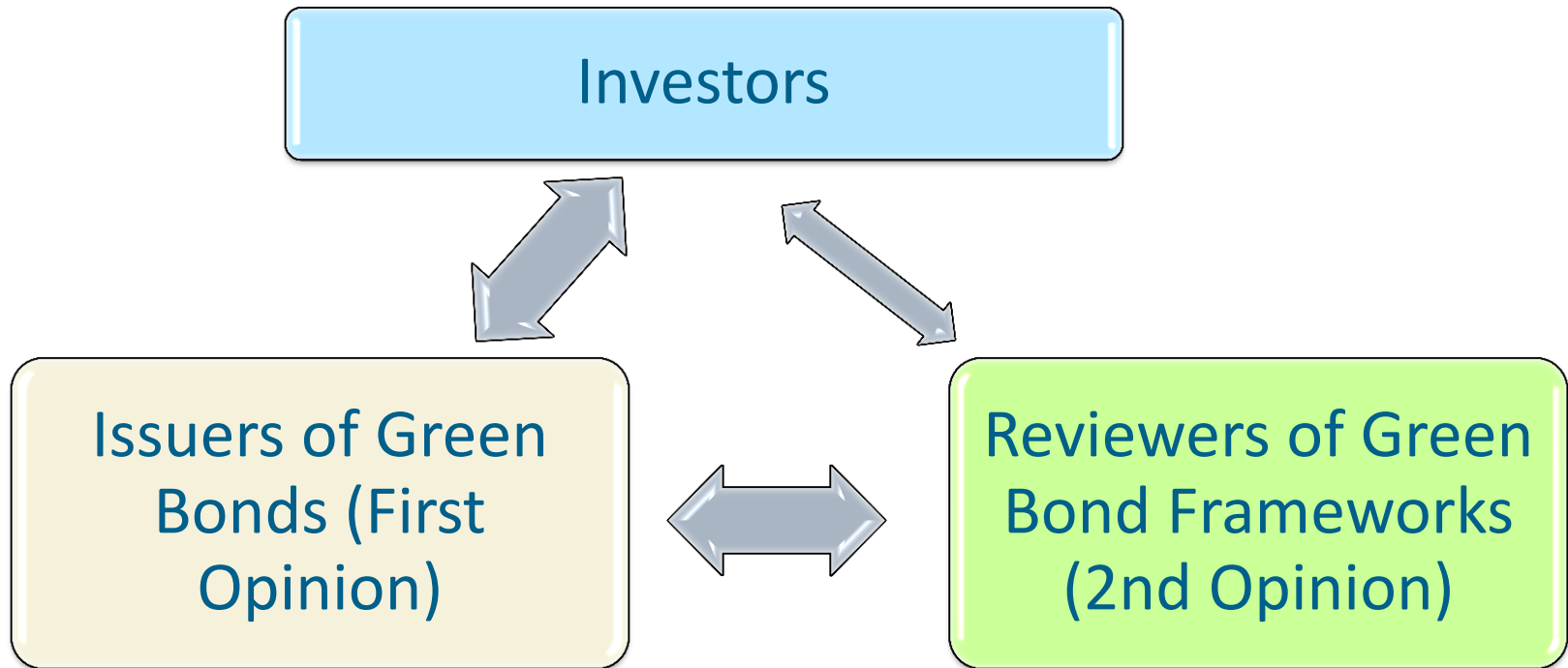
Stock Exchanges



Require independent second opinions

Funds & Indices





Green Bond Framework

1. Use of proceeds (definitions)
2. Selection process (governance)
3. Management of proceeds
4. Reporting

June 2016

KBN GREEN BOND FRAMEWORK

The purpose of this document is to describe KBN's Green Bond Framework built on KBN's overall environmental strategy. KBN is a member of ICMA's Green Bond Principles¹ (GBP) and is also aiming to comply with the "Harmonized Framework for Impact Reporting" developed by 11 Multilateral Development Banks in December 2015².

The framework has four components:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

1. Use of Proceeds

"Eligible Projects" means a selected pool of projects determined as eligible according to this Framework. Projects might be funded in whole or in part by KBN. Eligible Projects promote the transition to a low-carbon and climate resilient Public Sector. Such projects may target (a) mitigation of climate change through reduction of emissions from buildings, transportation and energy production, (b) adaptation to climate change, including investments in climate-resilient infrastructure, or (c) to a smaller extent (limited to 10%), projects related to a sustainable environment on a local scale.

Eligible Project categories

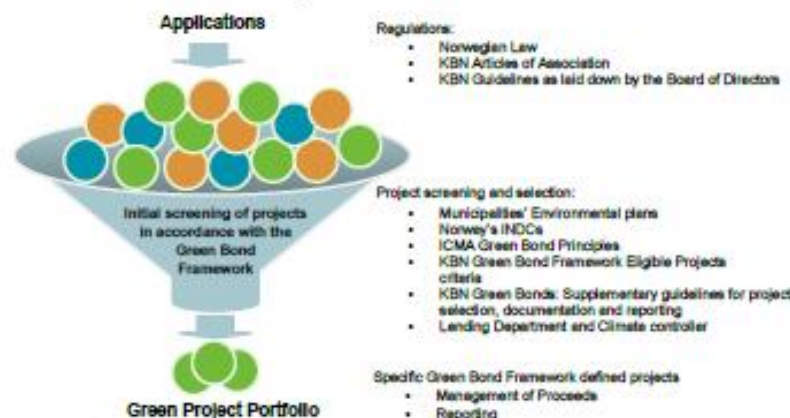
Please refer to "KBN Green Bonds: Supplementary guidelines for project selection, documentation and reporting"³ for detailed criteria and requirements of the Eligible Project categories.

- **Renewable energy (a):** to reduce the use of fossil fuel, KBN is financing installations for production of renewable energy. Please note that if the installation is part of a new construction it will fall under the "Green buildings" category.
- **Energy efficiency (a):** KBN is promoting projects aiming to lower both emissions from energy production and energy bills for the municipal sector by upgrading to higher energy standards or installing climate friendly technology such as heating or control systems.
- **Green buildings (a):** new buildings or additions to buildings with an energy performance superior to current energy standards according to the supplementary guidelines may qualify for KBN's green lending rate.
- **Waste management (a/b):** sustainable waste management is an important environmental initiative as it both reduces emissions and returns scarce resources to the value chain. KBN finances either new or upgrading of plants.
- **Land use (b/c):** projects including sustainable redevelopment of recreational and other areas.
- **Low-carbon transportation (a):** low emission or emission free public transportation. The category also includes pedestrian and bicycle lane projects.
- **Water and wastewater management (b):** a robust water and sewage infrastructure is important to handle increased pressure on existing systems due to heavier rainfall and population growth. Projects include replacing and upgrading of water and sewage pipes in addition to financing equipment of handling sludge and contaminated discharge.
- **Climate change adaption (b/c):** natural disaster warning systems, landslide security systems, climate research and education programs.

2. Process for Project Evaluation and Selection

For a project to be included in the Eligible Projects pool, it shall comply with a) the categories listed in section 1 above and in the "KBN Green Bonds: Supplementary guidelines for project selection, documentation and reporting", b) the Municipality's Environmental Plan and c) Norway's Intended Nationally Determined Contributions (INDCs) according to the Paris Agreement. Applicants are required to declare eligibility by filling in a designated section in the loan document. Additionally, relevant documents indicating the Project's estimated environmental performance shall be provided. A project's eligibility is assessed by the Lending Department and approved by two Climate controllers. Approved Green Projects are entitled to KBN's Green Lending Discount and included in the bank's portfolio of Green Projects.

Green Bond Project Selection Process Flowchart



3. Management of Proceeds

An amount equal to the net proceeds of the issue of the Notes will be credited to a special budget account that will support KBN lending for Eligible Projects, according to section 3 in the GBP. KBN will carefully manage the balance between green funding outstanding and green lending to make sure the green funding is disbursed in a timely manner. KBN aims to direct the predominant part of net proceeds to new projects. However, refinancing of selected projects with particularly high environmental or climate benefits is considered if in line with this framework.

4. Reporting

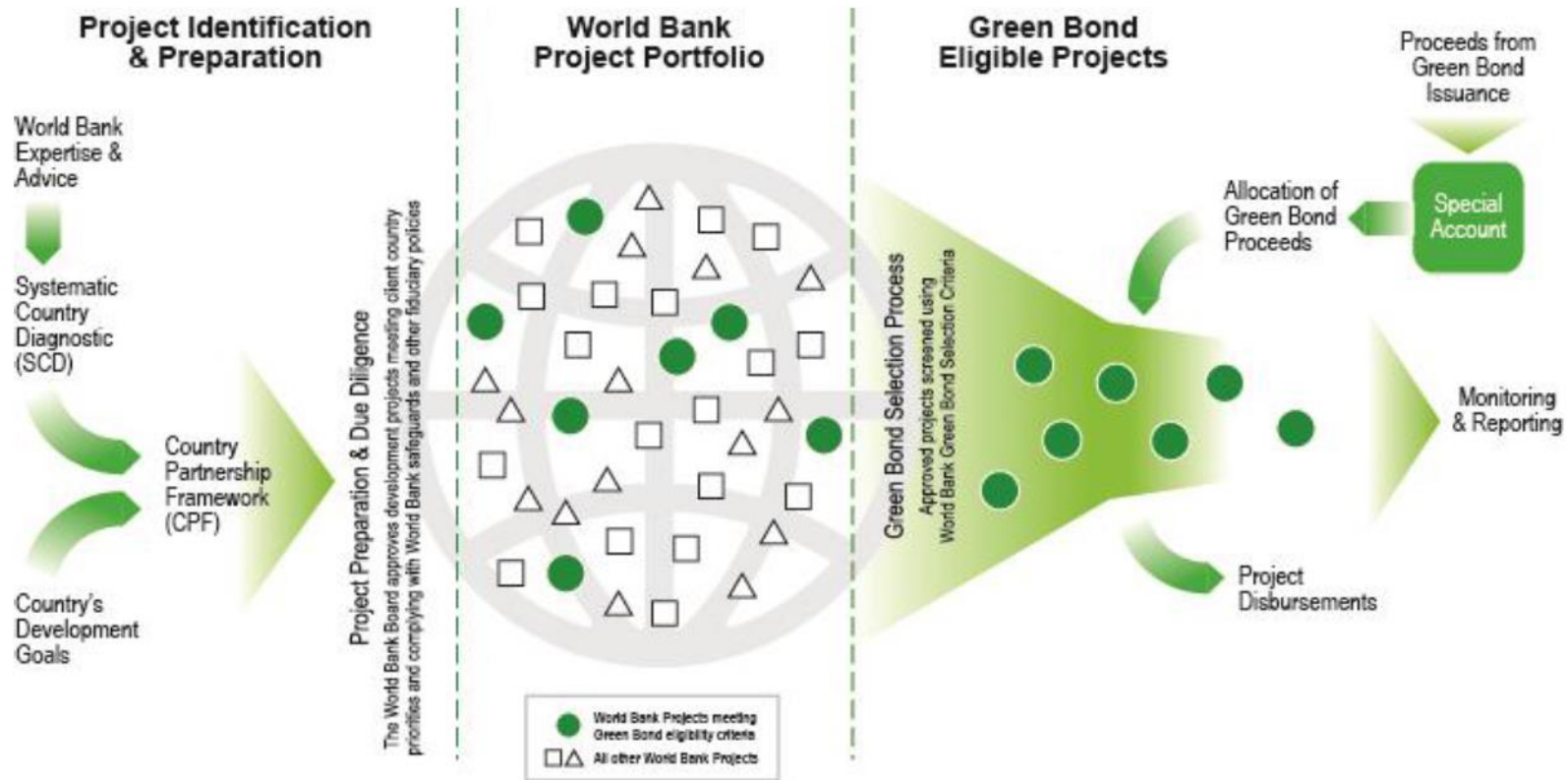
To enable investors to follow the development and provide insight into prioritized areas KBN will provide an annual SRI report linked to the annual financial results report. The SRI report will include a section on the progress of the Green Bond program. KBN will also keep the dedicated Green Bond webpages continuously updated with: 1) a list of projects financed; 2) a selection of project examples "Green Bond Stories" and; 3) a summary of the KBN Green Bond development including statistics on our Green Project portfolio with impact reporting, aiming to comply with the issuer group "Harmonized Framework for Impact Reporting" (Dec 2015).

KBN has appointed an advisory board, "The Green Committee", whose mandate will be to provide advice and guidance in matters related to the Bank's Green Bond Framework. The committee will primarily draw on external expertise in related fields, but will also include members of the KBN staff. Our Green Bond process will be audited by KBN's internal auditor, currently KPMG.

¹ <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practices/green-bonds/green-bond-principles/>

² <http://treasury.worldbank.org/cnd/pdf/InformationonImpactReporting.pdf>

³ <http://www.kommunalbanken.no/greencriteria>



Source: World Bank Group

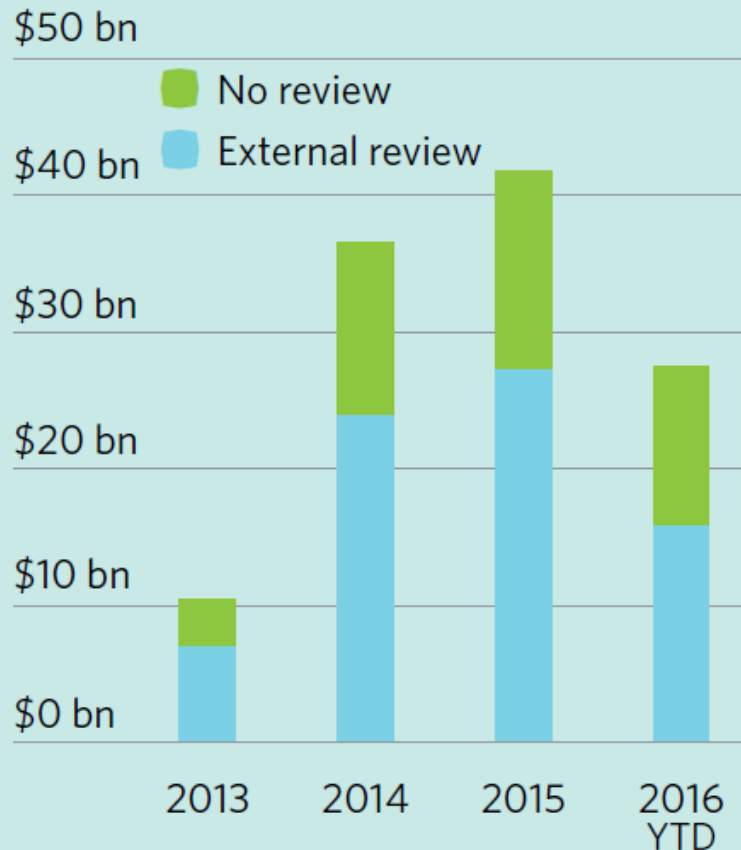
Flexible Frameworks vs. Standards

1. How to capture that both science and green bond market are dynamic in nature?
2. Could issuer specific frameworks be combined with international and regional standards with more fixed definitions (building standards etc.)?

CICERO's Second Opinion Methodology

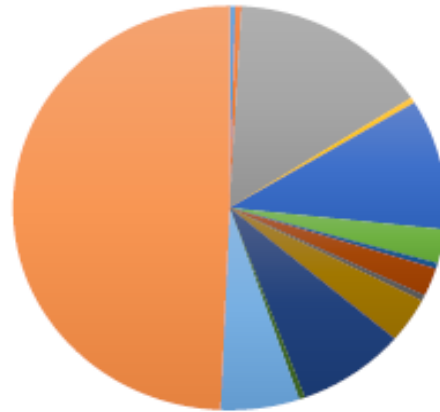
Review of Green Bonds

59% - 66% of green bonds have received an external review

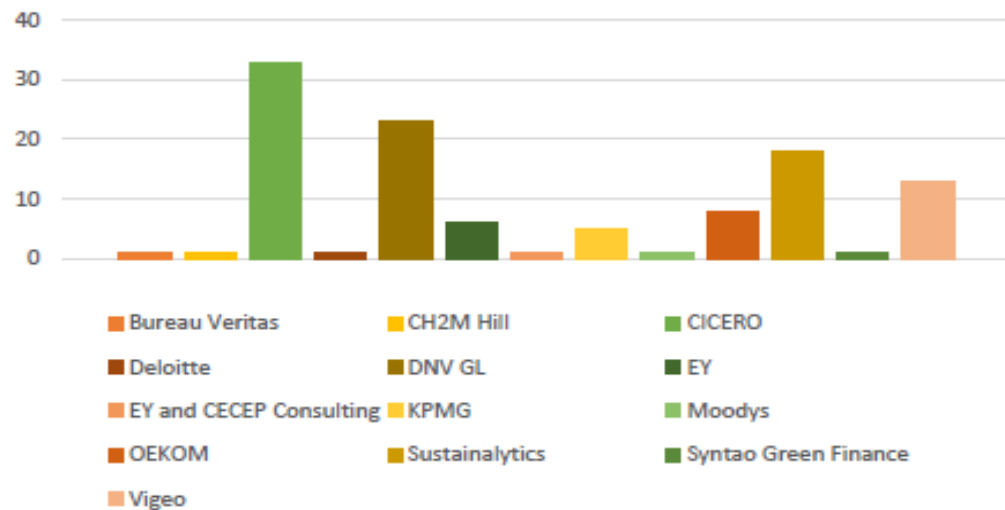


www.climatebonds.net

External Reviews



- Second Opinions
- Certifications
- Verifications
- Ratings



Environmental Finance:

Cicero is biggest second opinion provider in 2016

Second Opinion Provider	Total Value of issuances for second opinions provided over 2016 (\$billions)	Number of issuances in 2016	Value of new second opinions provided in 2016 (\$billions)	Number of new issuers
Cicero	14.106	56	2.762	10
Sustainalytics	11.234	21	10.728	19
Vigeo-Eiris	7.430	14	3.391	8
Oekom	6.301	10	1.850	3
DNV	0.640	4	0.592	3

Second Opinion Process



Issuer's information

- Green bond framework
- Sustainability reports
- Information on selection & reporting



CICERO's assessment criteria

- Use of Proceeds
 - Technologies and project types
 - Consideration of macro-impacts
- Management of proceeds
- Governance
 - Project selection and evaluation
 - Transparency
 - Reporting



CICERO recommendations and rating

Light green

Medium green

Dark green

CICERO's Shades of Green

Dark green	Implementing a long-term solution
Medium green	On the way to a long-term solution
Light green	Short-term benefits, but not a long-term solution

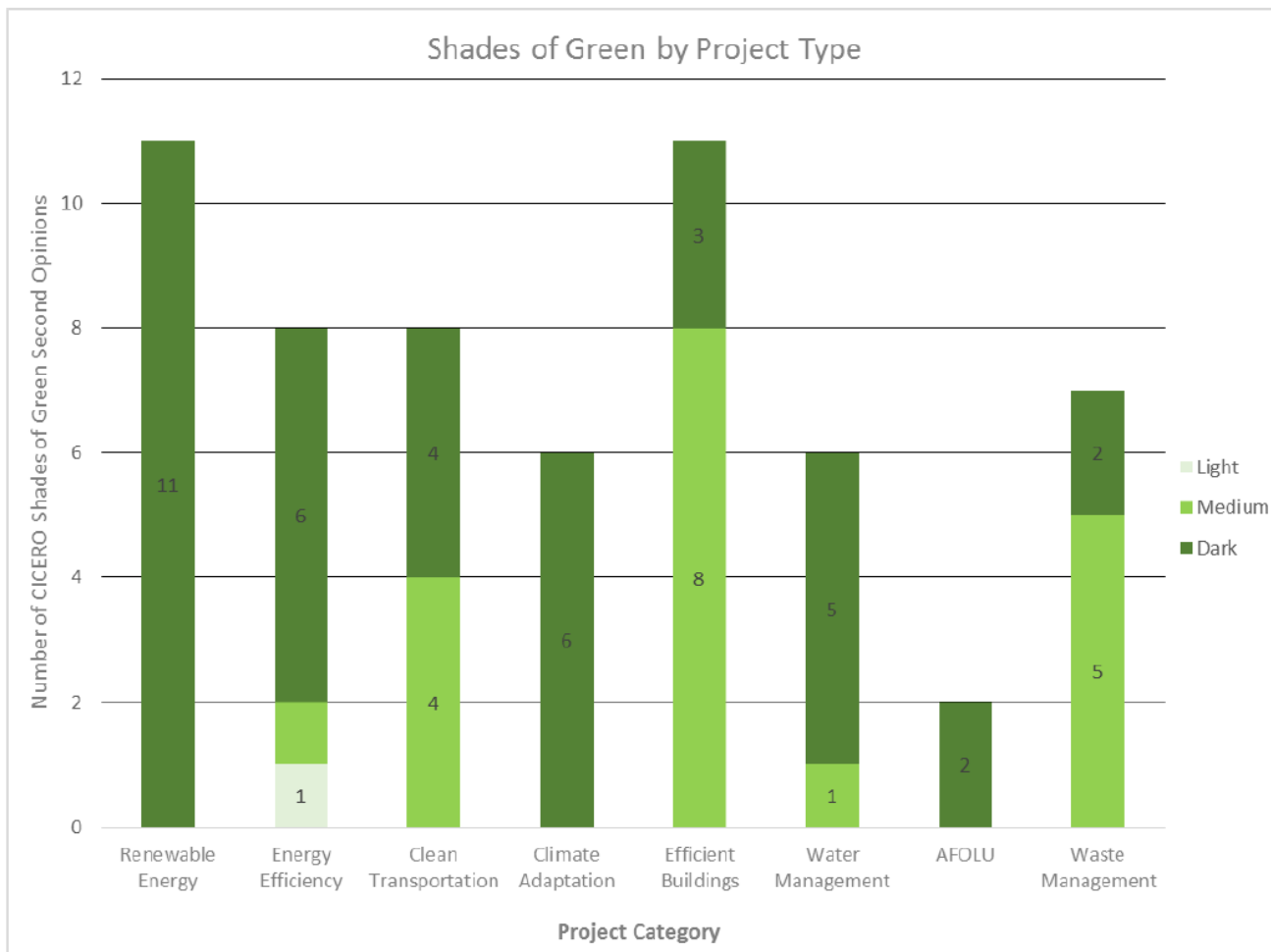


Figure 4: Number of CICERO second opinions by Shade of Green for each project type

Emerging Best Practice



- Improved internal dialogue between finance and environmental experts
- Increased focus on supply chains
- Impact reporting –beyond emission reductions

Looking forward: further harmonization or regionalization of second opinions and standards?

Standard structure of a second opinion report (~10 pages)

- Summary and recommendations (a concise overview for investors)
- Introduction and background (aim and approach of the second opinion)
- Disclaimer (CICERO is not liable for specific project validation)
- List of documents and brief description of green bond framework
- Assessment of framework in terms of
 - Strengths
 - Weaknesses, and
 - Pitfalls (areas where issuer should be aware of potential challenges)
- References

www.cicero.oslo.no/greenbonds

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