UNEP Finance Initiative

Energy Efficiency Finance capacity building

25-28 April 2023

Workshop 2#

Financing energy efficiency

27 April 2023

Questions

Go to **www.slido.com** and
enter code: 3910962

or scan QR code:

- Post questions in Slido Q&A or speak up

- Recordings and material will be shared after the meeting to participants

9.00 Opening

9.05 **EE Underwriting toolkit** (Steven Fawkes/EEFIG)

- Forms of financing
  - Conventional lending, ESCOs, Green bonds, on-bill financing, energy savings insurance etc.
- Risk management perspective
- Energy efficiency first principle in banking

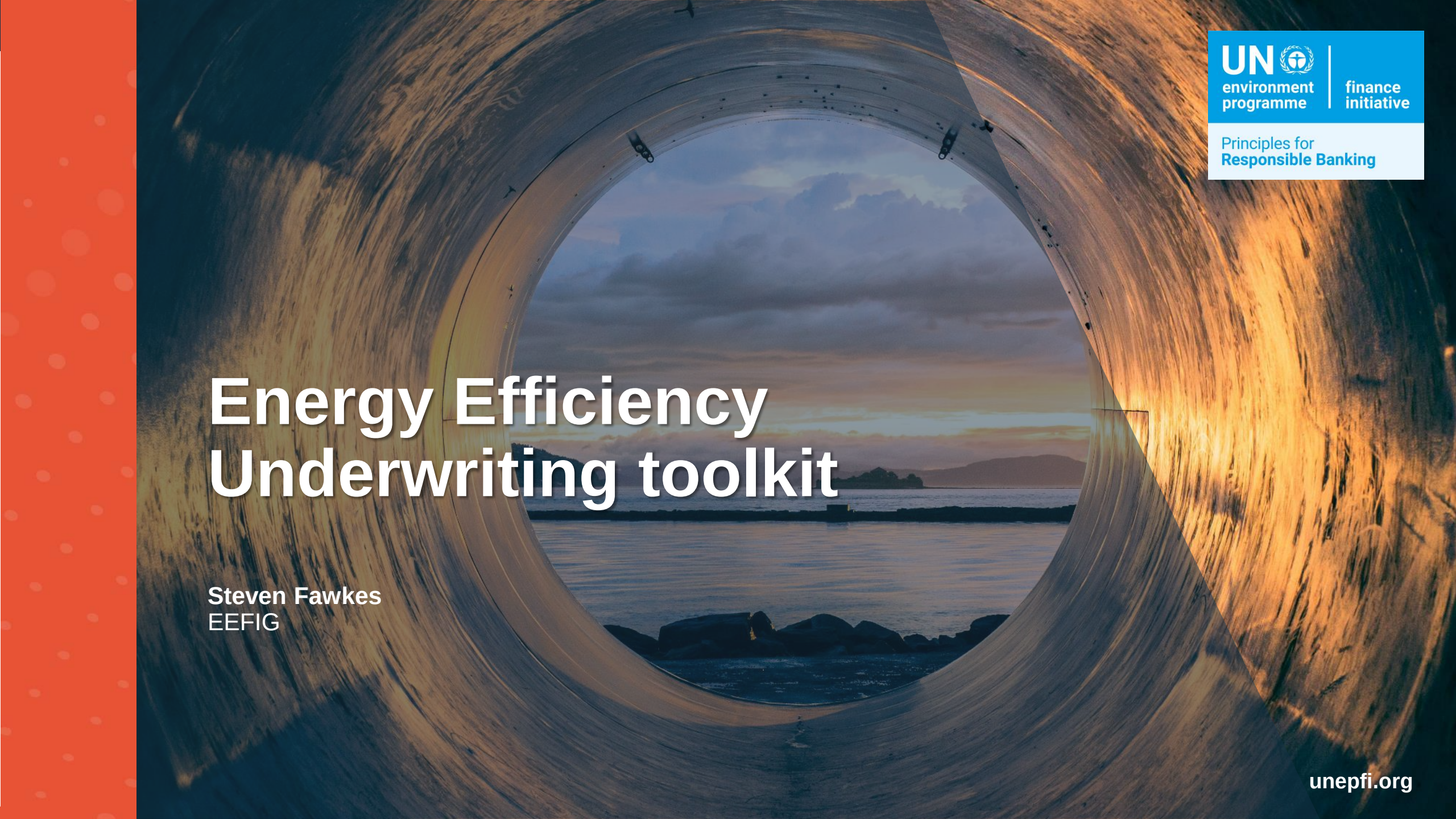
10.05 **Energy efficiency target setting & implementation** (UNEP FI)

- Baseline measurement, indicators
- Types of targets

10.45 **Break**

11.00 **EBRD case study** (Dana Kupova/EBRD)

11.40 **Wrap up - energy efficiency target setting & implementation** (UNEP FI)



UN environment programme | finance initiative

Principles for Responsible Banking

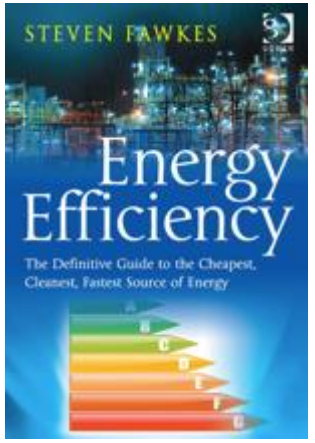
Energy Efficiency Underwriting toolkit

Steven Fawkes
EEFIG

unepfi.org

Introduction

- Dr. Steve Fawkes
  - PhD on the potential for energy efficiency in UK industries
  - 40+ years experience in energy efficiency
  - Advised corporates, investors, multi-lateral institutions and governments
  - Experience:
    - designing and implementing large-scale energy management programmes (up to 1,500 buildings)
    - Developing and implementing innovative energy outsourcing contracts for Sainsburys, Diageo, Corus
    - Introduced the Investor Confidence Project to Europe and secured €3.5m of H2020 funding
    - Corporate finance raising capital for energy transition and clean-tech companies
    - Co-leader EEFIG consortium 2016-2017 and leader of Working Groups in EEFIG 2019-2023
  - Current roles
    - Founder and Managing Partner ep group
    - Partner Cameron Barney
    - Independent member of IC for London Energy Efficiency Fund
    - NED for EESL EnergyPro Assets Ltd – JV with Indian state owned energy efficiency company
    - NED for Latvian and Baltic Energy Efficiency Fund
    - NED for ZPN Energy
  - More than 350 publications – mainly on energy efficiency & energy services – including 3 books and a blog called onlyelevenpercent.com



Contents

Phrases around energy efficiency I would ban

- “low hanging fruit”
- “innovative financing”
- “creative financing”
- “energy efficiency is a ‘no brainer’”
- “energy efficiency has little or no risk”
- “ESCOs are the answer to energy efficiency”

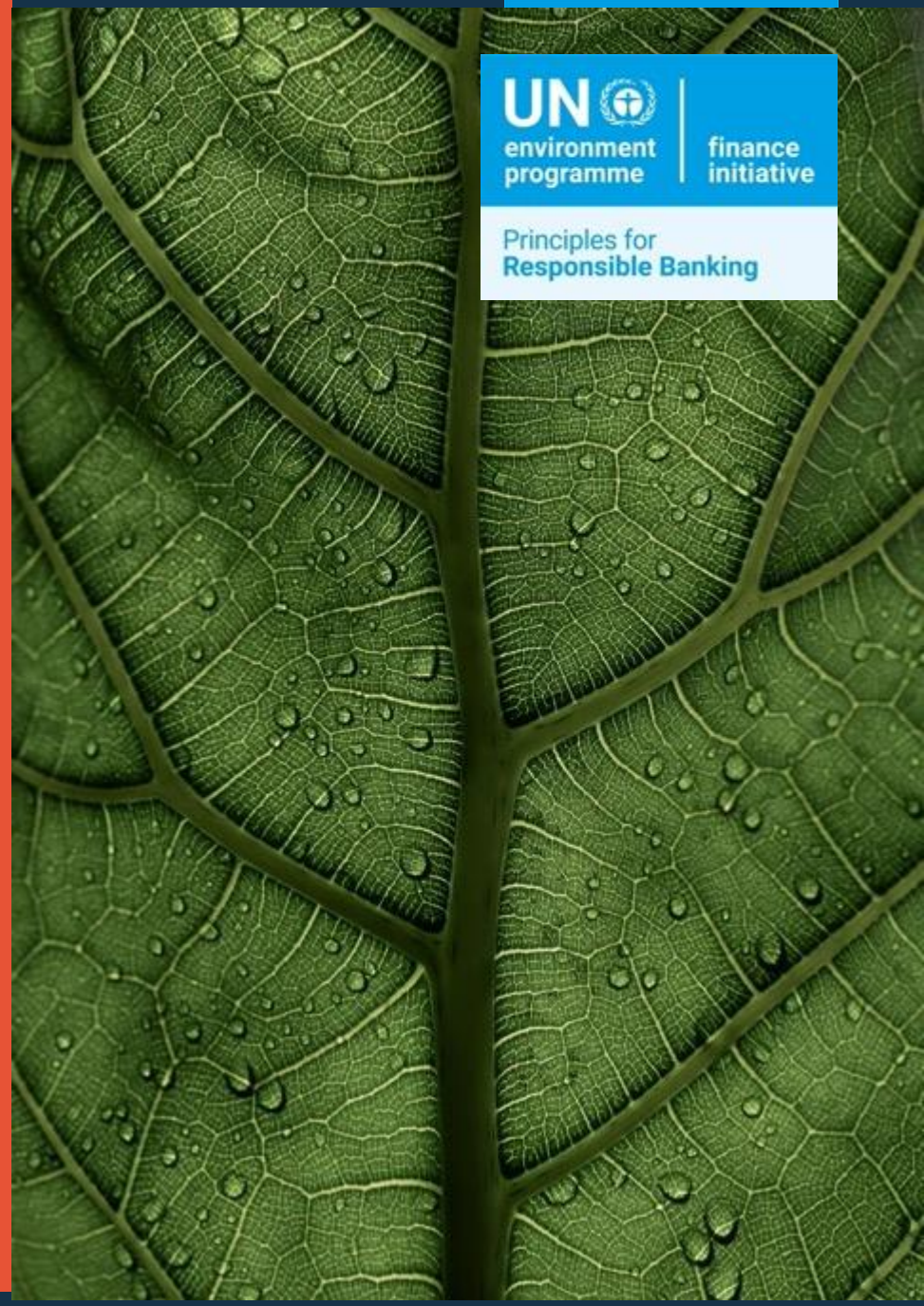
Why financial institutions should like energy efficiency

- Market opportunity
- Risk reduction
- Improving energy efficiency is vital to achieving our climate goals

Energy efficiency is the single largest measure to avoid energy demand in the Net Zero Emissions by 2050 Scenario, along with the closely related measures of electrification, behavioural change, digitalisation and material efficiency.

International Energy Agency
https://www.iea.org/reports/energy-efficiency

Introduction to the EEFIG Underwriting Toolkit

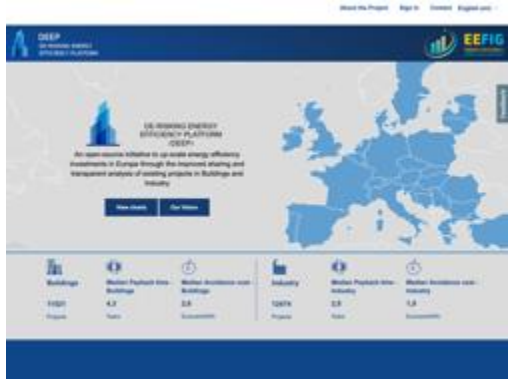


EEFIG Derisking project 2016-2017

- Phase II of EEFIG delivered two tools to help derisk energy efficiency:

Derisking Energy Efficiency Platform (DEEP)

An open source database of >11,500 energy efficiency projects in buildings and industry across Europe



Underwriting Toolkit

A guide for financial institutions better able to assess the value and risk of energy efficiency projects

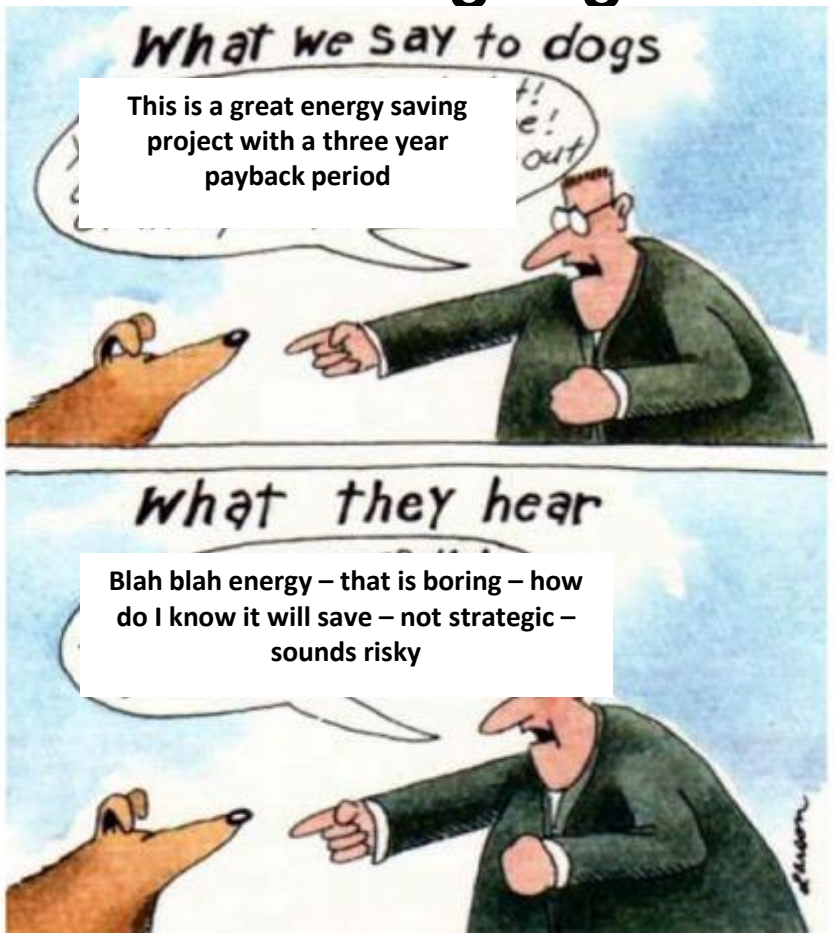
EEFIG Underwriting Toolkit

- **Designed to assist financial institutions to scale up their deployment of capital into energy efficiency.**

- **Objectives:**
  - to help originators, analysts and risk departments within financial institutions **better understand the nature of energy efficiency investments** and therefore better evaluate both their value and the risks.
  - to provide **a common framework for evaluating energy efficiency investments and analysing the risks** that will allow training and capacity building around standardised processes and understanding.
  - **to help developers and owners** seeking to attract external capital to energy efficiency projects to develop projects in a way that better addresses the needs of financial institutions.
  - **to foster a common language** between project developers, project owners and financial institutions.

- Although **the focus is on value and risk appraisal**, additional material on the size of the potential market, methods of financing and the project life cycle have been included to give a fuller picture and **help build capacity** within financial institutions.

The need for a common language



Structure of the Underwriting Toolkit

- Introduction
- Financial institutions and energy efficiency
  - Why?
- Financing energy efficiency
  - How?
- The project life cycle
  - Stages of a project
- Value and risk appraisal
  - How to assess value and risk
- Resources

Types of energy efficiency financing

Types of energy efficiency financing

- On Bill Recovery (OBR)
- Property Assessed Clean Energy (PACE) financing
- Energy efficient mortgages
- Specialised funds – public or blended
- Energy Service Companies (ESCOs)
- Bonds
- Yieldcos
- Normal lending taking into account energy efficiency (see Energy Efficiency First section)

On Bill Recovery (or On Bill Finance)

- Customer repays a loan for energy efficiency equipment through an additional line item on their electricity bill
- Advantages to financial institutions:
  - Uses existing electricity company billing system
  - Large customer base
  - Low default rate
  - Transferable as it is tied to property
- Used in several US states and was basis of UK Green Deal (which failed for other reasons)

Property Assessed Clean Energy (PACE)

- PACE is a way of repaying loans for energy efficiency improvements (and other measures including solar, water projects and in some cases earthquake protection measures)
- A PACE repayment is added to the property taxes and collected by the local authority
- Developed in US, also applied in Australia and Canada, Horizon 2020 project to introduce it to Europe
- Highly dependent on property tax system – the US property tax system puts local taxes above mortgages so minimal default risk
- Can be long-term – up to 20 years
- Can be residential (R-PACE) or commercial (C-PACE)
- R-PACE active in 3 states
- C-PACE active in 30 states
- In US $11.9 billion invested across 325,000 projects

Energy Efficient (or Green) Mortgages

- Mortgages where some portion of the loan funds energy efficiency (green) upgrades to the home
- Energy Efficiency Mortgages Initiative (an EU funded project) includes 70 lenders
  - Energy Efficiency Mortgage valuation checklist
  - Harmonised Disclosure Template for portfolio reporting
  - Energy Efficient Mortgage Label
- Green mortgages in Romania developed in conjunction with Romania Green Building Council

Specialised funds

- Can be private, public or blended (private/public)
- Can be debt or equity
- Can be focused on specific sectors eg property
- Examples
  - The European Energy Efficiency Fund
  - Carbon Neutral Real Estate Fund
  - Mayor of London's Energy Efficiency Fund
  - Credit Suisse European Climate Value Property Fund
- Experience shows that these kinds of funds are helped by having some Technical Assistance (TA) facility to help develop projects

Energy Service Companies (ESCOs)

- Much talked about – little understood
- An Energy Service Company (ESCO) develops and implements energy efficiency (and sometimes energy supply) projects and guarantees a level of energy performance through an Energy Performance Contract (EPC)
- Projects are usually financed by a financial institution
- Often the guaranteed level of savings will exceed the repayments, making the project cash flow positive for the client from the beginning

ESCOs and EPCs are good but not *the* answer

- Complex
- Suitable for large projects (€ millions)
- High transaction costs
- Measurement and Verification issues
- Balance Sheet issues
- 80-90% of global ESCO EPC business is in the public sector – it has never caught on in other sectors

Note: ESCOs are not new – Boulton & Watt

Super ESCOs

- In some countries there are now Super ESCOs being promoted by IFIs as a way of accelerating uptake of energy efficiency
  - Etihad Super-ESCO
  - Tarshid
  - Kenya Super ESCO
- Super ESCOs develop projects at scale, using standardized approaches and contracts, arrange finance, and then let projects to ESCOs

Varieties of ESCOs and contracts

- Energy Performance Contract is the standard and most talked about
- Variations include:
  - Chauffage (supply of heat)
  - Efficiency Services Agreement (ESA)
  - Managed Energy Services Agreement (MESA)
  - Metered Energy Efficiency Transaction Structure (MEETS)
  - Lighting as a Service (LaaS)
  - Cooling as a Service (CaaS)
- With the exception of Chuaffage, the others are relatively new and emerging, reflecting the general growth of ‘as-a-service’ models

Bonds and yieldcos for energy efficiency

- Bonds often talked about in relation to energy efficiency but problem is one of scale and the fact that bonds are most often used for re-financing
- Berlin Hyp has used bonds to finance green, energy efficient commercial property
- Some energy efficiency focused yieldcos have appeared in the last few years
  - SDCL Energy Efficiency Investment Trust
  - Triple Point Energy Transition
  - Hannon Armstrong

Normal lending taking into account energy efficiency

- See section on Energy Efficiency First

The risks of energy efficiency projects

The old view of energy efficiency

"Energy efficiency has high returns and virtually no risk"

Energy efficiency text book from the 1980s

"The returns are tremendous, and there's virtually no risk," said Mark Orlowski, the founder and executive director of the Sustainable Endowments Institute"

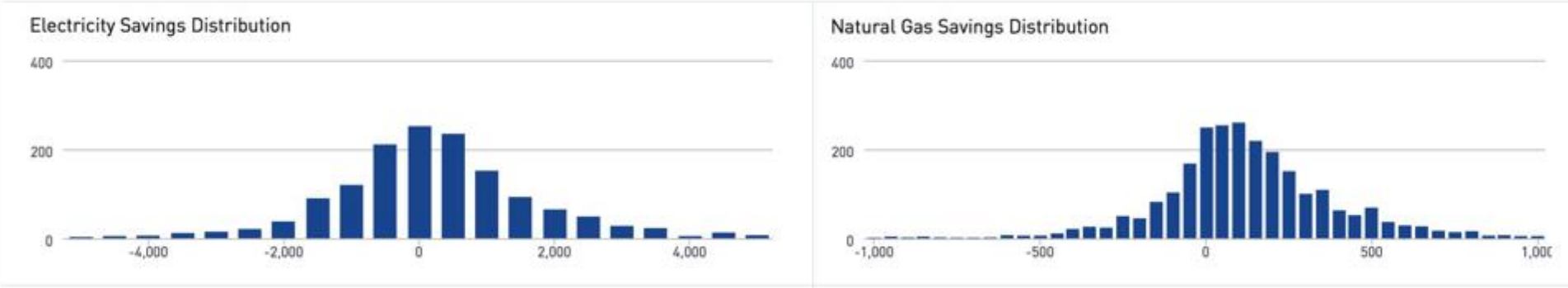
New York Times, 6 February 2015

Energy efficiency projects do have risks

- Energy efficiency projects, like all investments, have risks
- The main types of risk are:
  - Performance risks (NB the performance gap)
  - Equipment risks
  - Operation and Maintenance risks
  - Weather risks
  - Changes in production volume, production mix, patterns of building use (e.g. COVID!!)
- All these can be mitigated and transferred to the correct party
  - Contracts eg ESCO through an EPC
  - Insurance

In reality energy efficiency is low risk but not no risk

- Portfolios of projects perform – individual projects may not
- Only just beginning to get the actual performance data that allows us to measure this performance



Value of energy efficiency

The old view of energy efficiency

"Implement this project, spend €1,000 and save €300 a year"

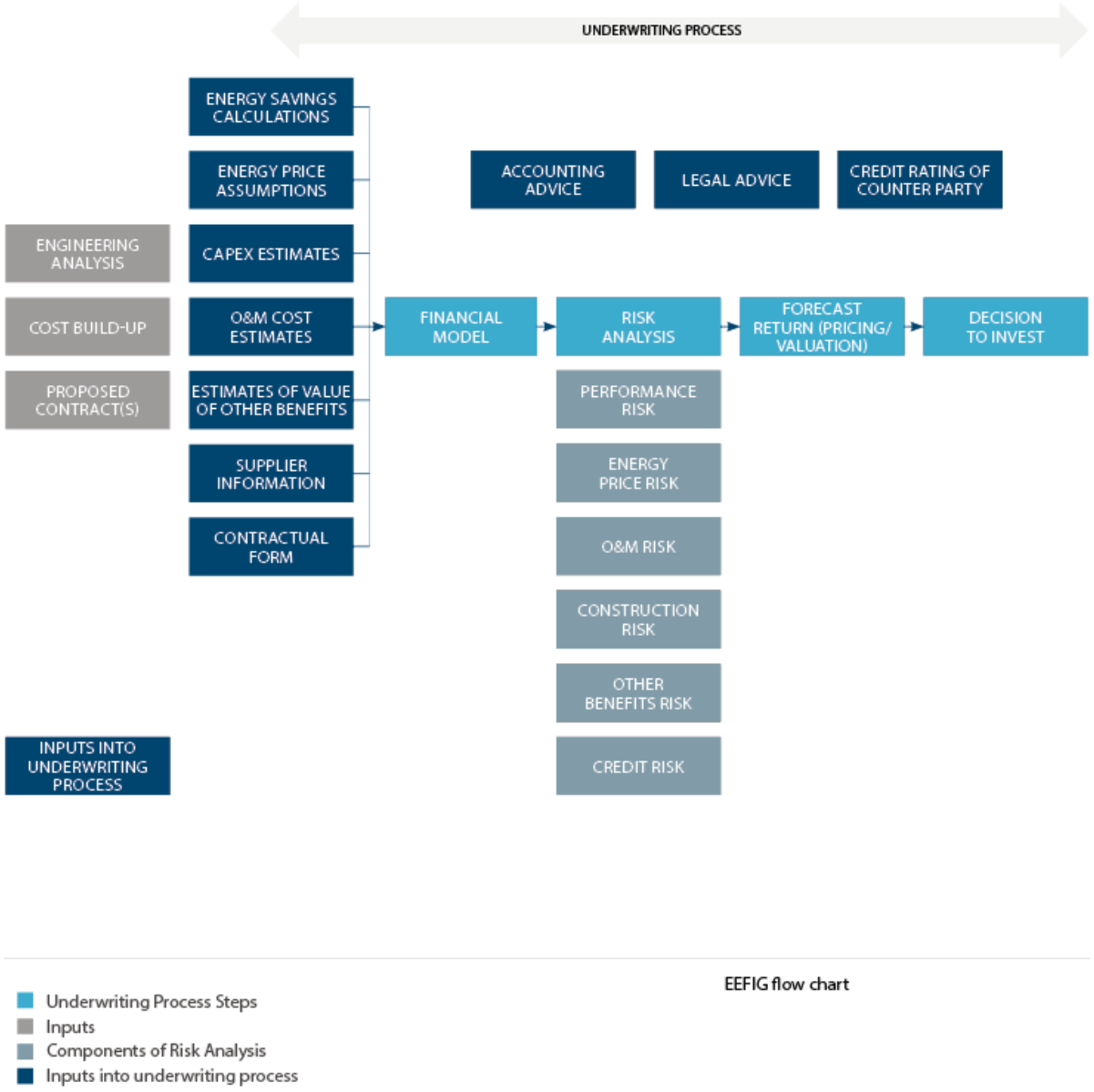
- Boring
- Non-strategic
- 'Defensive' spending versus 'offensive' spending
- Non-core

The new view of energy efficiency – multiple benefits

- Energy efficiency projects create multiple benefits
- Many of these benefits can be valued and included in investment case
- Many of them are much more strategic and interesting to decision makers than just energy cost savings e.g. improved health, improved customer experience
- Tools exist to help assess multiple benefits e.g. M-BENEFITS

The valuation and risk assessment process

Value and risk process



EEFIG flow chart

Energy Efficiency First

Energy Efficiency First

- Often implementing energy efficiency is cheaper, faster and cleaner than energy supply options
- Energy Efficiency First is a pillar of EU energy policy
- It means that energy efficiency options *should* always be considered as an alternative to energy supply options
- In practice they are not considered on most investment or lending options
- Every day buildings and assets are financed that don't even include the *cost-effective level of energy efficiency*
- Why?
  - Lack of capacity on supply side, demand side and finance industry
  - The need for speed
  - Standard supply side solutions are developed
  - Financial institutions don't want to add 'bureaucracy' and hamper themselves in relation to competition
  - Typically they review projects as they are delivered to them and are not proactive in their development

EEFIG Energy Efficiency First Working Group

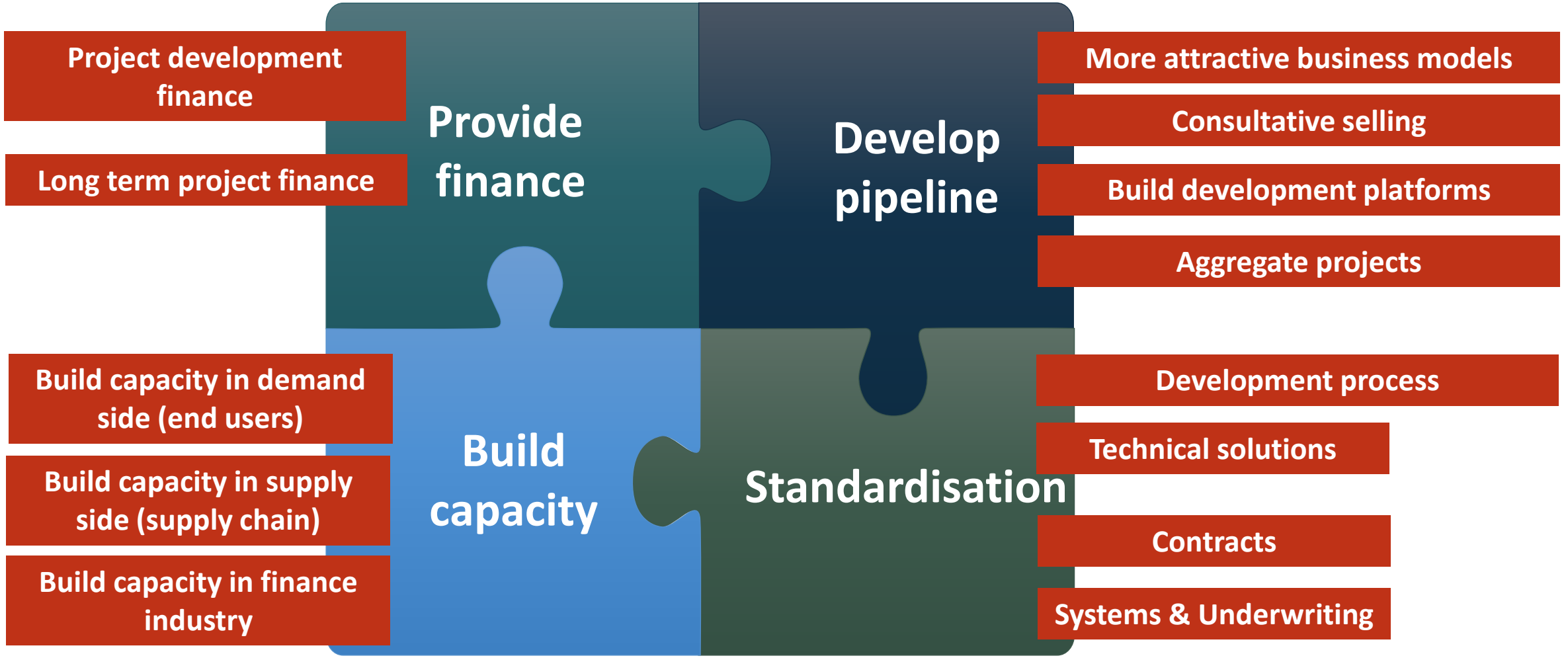
- Preparing Final Report now
- Studied practices on energy efficiency within public and private financial institutions
- Identified processes and tools that could help financial institutions operationalize energy efficiency first
- Tools are required at 3 levels:
  - Policy and governance
  - Portfolio
  - Deal
- Examples:
  - CREFC Europe Due diligence questions
  - ING REF app for real estate owners
  - D-fine and SkenData portfolio tool
  - Green Technology Selector
  - Investor Confidence Project protocols
  - International Performance Measurement and Verification Protocol

The evolution of the energy efficiency market

Trends in energy efficiency

- Integration of RE, EE and micro-grids
- Data
- Real time performance measurement
- Recognition and valuation of multiple non-energy benefits
- Metered energy efficiency

Scaling up EE needs more than just finance



Contact

Dr. Steven Fawkes
Steven.fawkes@energyproltd.com
+44 7702 231995
@DrSteveFawkes
www.epgroup.com

UN environment programme | finance initiative

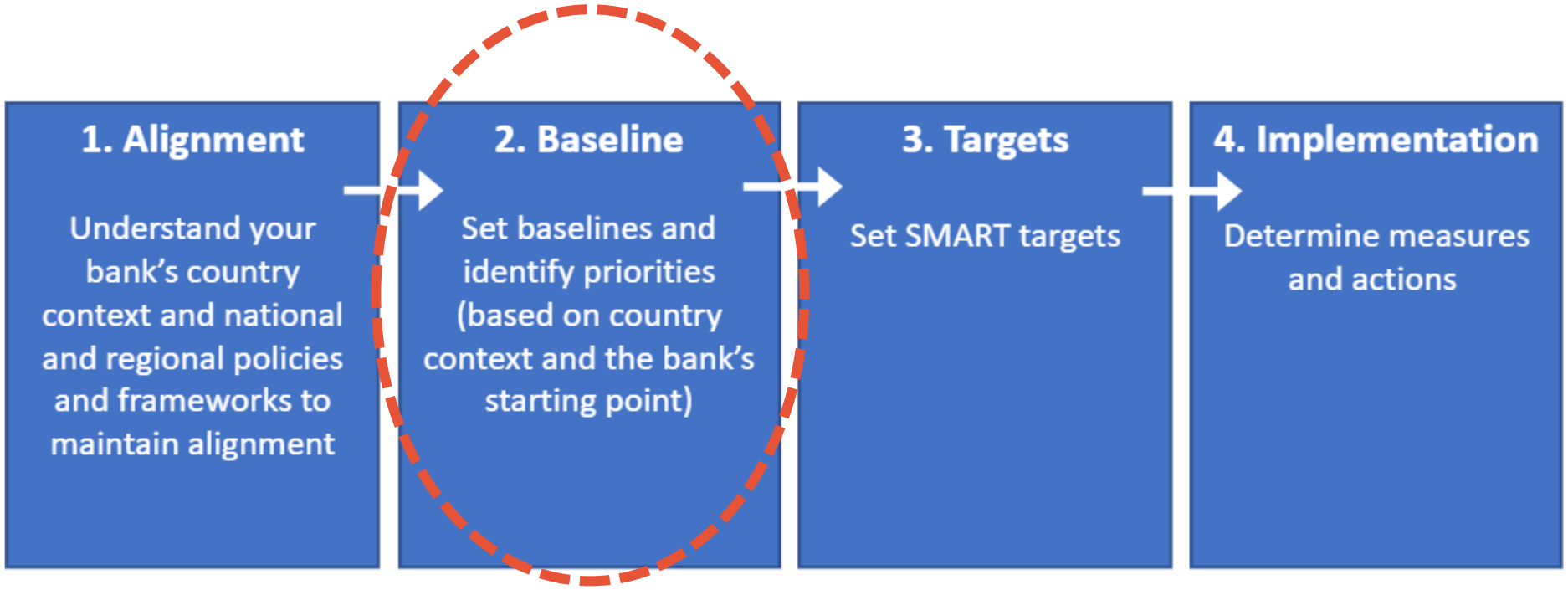
Principles for Responsible Banking

PRB EE Target setting:
Baseline measurement

UNEP FI

unepfi.org

The target setting process (climate or resource efficiency)



Measuring your baseline and monitoring your progress

- Your bank needs to select enough relevant indicators to measure its current baseline and to monitor and report its progress towards achieving targets.
- The goal is understand how resource efficient and/or climate-friendly your clients' activities are and how those can be improved, through an energy efficiency lense.
- You are encouraged to use a core set of indicators including both practice indicators and impact indicators.

Practice indicators
Portfolio composition and financial flows indicators
Client engagement indicators
Impact indicators

Portfolio screening is key to baseline measurement

Thus, screening your portfolio against a categorisation system will allow your bank to identify:

(i) the activities screened positively, for which your bank should increase its support and exposure,

(ii) the activities screened negatively, for which your bank should engage with its clients and support them to materialise the circular opportunities, and

(iii) the activities screened negatively with no improvement opportunities, for which your bank should decrease exposure and consider exiting the relationship. It will rarely be the case that an activity or a business has no possibility to improve its energy efficiency and circularity (or GHG emissions). Hence, exiting a relationship is thus the solution of last resort.

The EU Taxonomy can be a basis/inspiration for your screening criteria

- Some activities are directly linked to EE
  - Manufacture of energy efficiency equipment for buildings
  - Installation, maintenance and repair of energy efficiency equipment
  - Installation and operation of electric heat pumps
- But also embedded in many other activities
  - e.g. Manufacture of low carbon technologies for transport, Renewal of waste water collection and treatment etc., Data processing, hosting and related activities, etc.
- **For most banks, *Construction and real estate activities* will be most relevant**
  - **7.1 Construction of new buildings**
  - **7.2.Renovation of existing buildings**

5 April – 3 May: consultation on new set of EU taxonomy criteria for sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control and protection and restoration of biodiversity and ecosystems

EU Taxonomy Navigator (europa.eu)

Baseline measurement for resource efficiency target setting - indicators

Practice baseline		Impact baseline		
Portfolio composition and financial flows	Client engagement	Circularity impact	Environmental impact	Social impact

Exemplary baselines

Percentage of portfolio that meets a set of energy efficiency (circularity) criteria (e.g. green mortgages, defined based on the EU or other taxonomy)

Number/percentage of clients engaged to collect data (energy consumption, EPC ratings etc.) and identify energy efficiency (circular) opportunities

In addition to energy usage, use of primary raw material in the construction of the buildings / water usage, waste recycling, etc. in the existing building stock (use phase) etc.

Energy consumption / net revenue
Energy consumption / balance sheet total
Energy consumption / unit of production
Real estate assets by energy efficiency classes
Real estate energy consumption / m2

+Renewable energy installed capacity

Energy poverty related indicators

See later slides about target setting explaining out links to renewable energy (mandatory), circularity (optonal) and social (optional) targets

Briefly about energy poverty

The EU Energy Poverty Observatory (now EU Energy Poverty Advisory Hub) produced a 2020 methodology guidebook, which identified several primary and secondary indicators to measure energy poverty across the EU.

The four primary indicators include:

1) Arrears on utility bills;

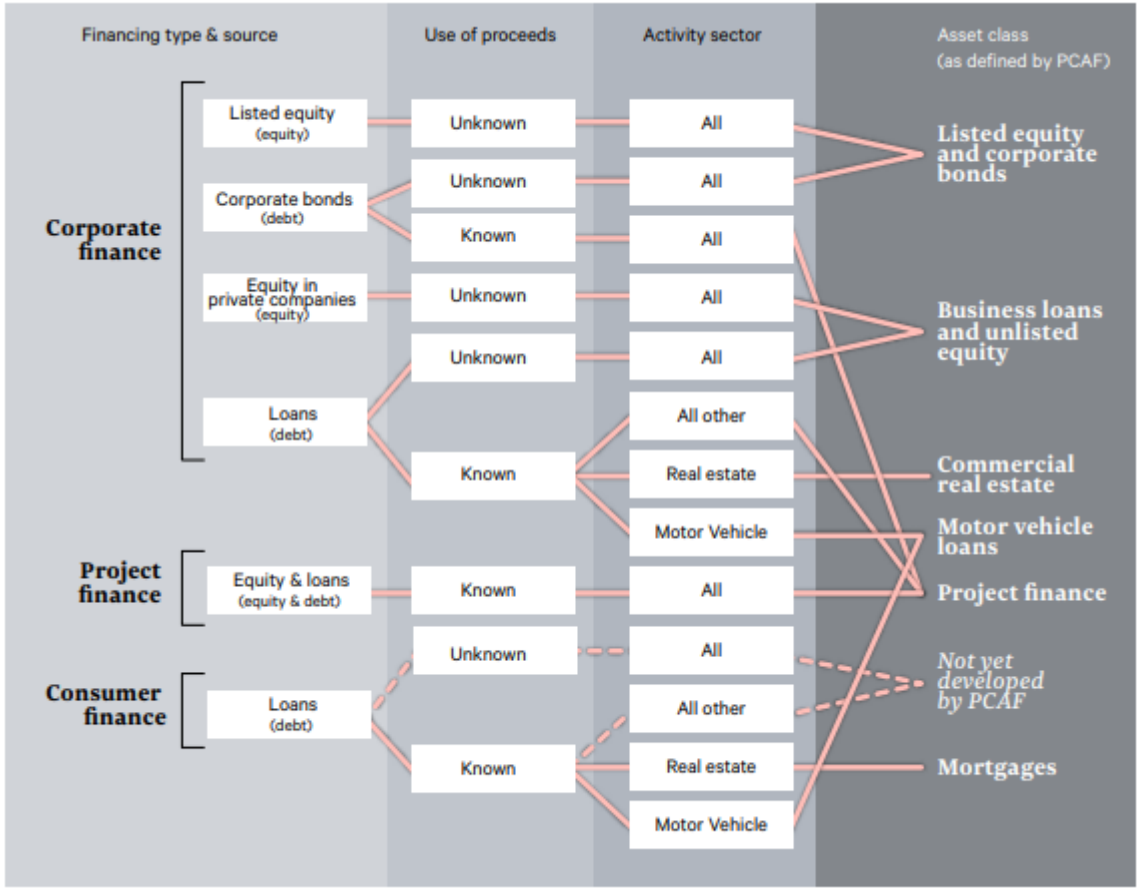
2) Low absolute energy expenditure;

3) High share of energy expenditure in income;

4) Inability to keep home adequately warm

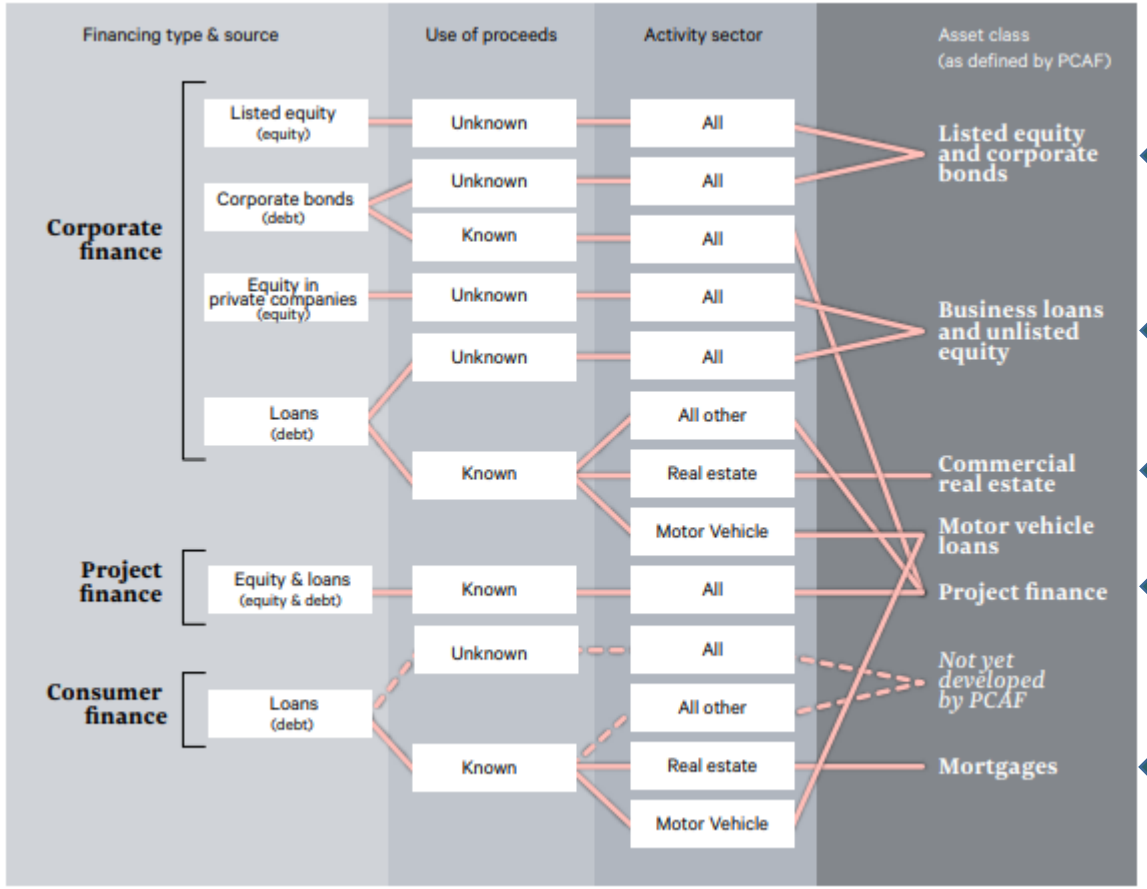
See report about national definitions and further resouces:
https://energy-poverty.ec.europa.eu/index_en

Measuring your baseline for climate target setting – financed emissions and EE



Please refer to PCAF's website for detailed guidance on GHG accounting. Our workshop just flags the most important links between EE and financed emission calculations.

Measuring your baseline for climate target setting – financed emissions and EE



In some cases the company's energy consumption can be used as a proxy to estimate emissions

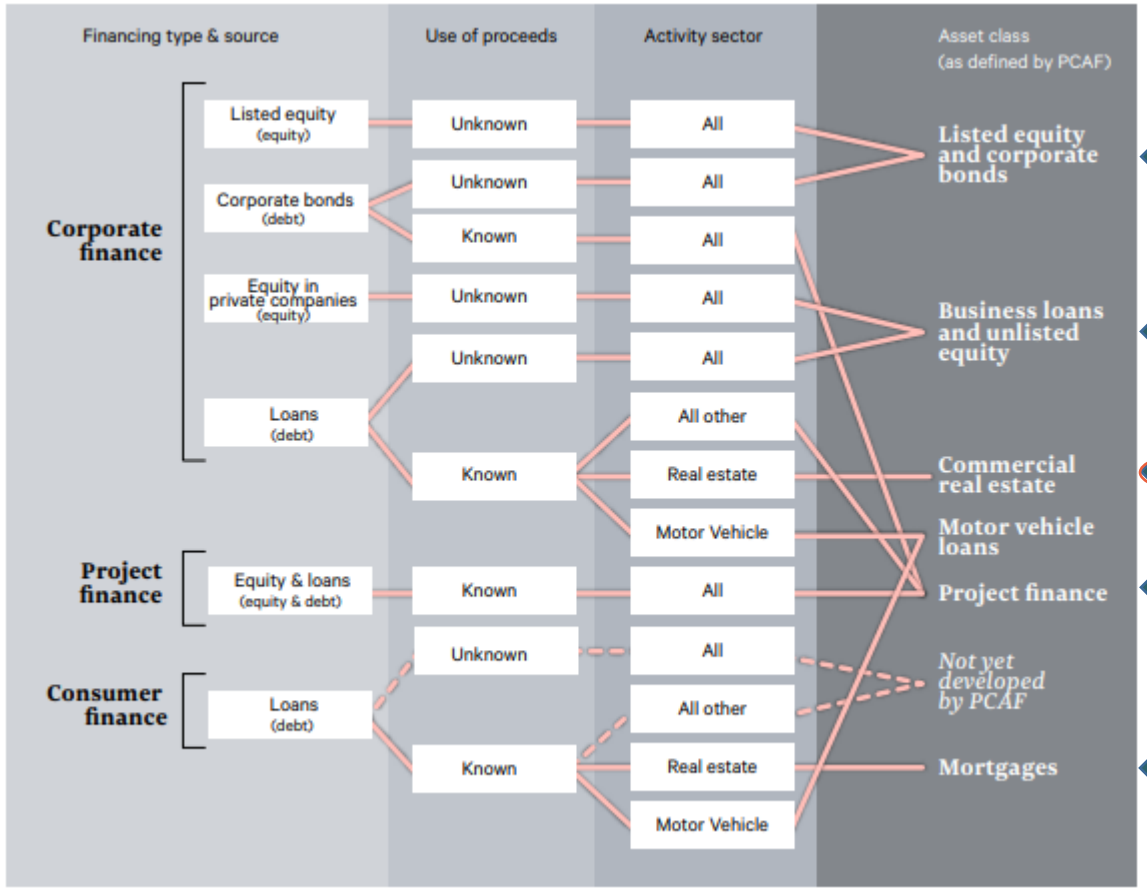
Emissions are mainly calculated based on energy consumption

EE project loans: calculation of avoided emissions are allowed by the Standard

Emissions are mainly calculated based on energy consumption

Please refer to PCAF's website for detailed guidance on GHG accounting. Our workshop just flags the most important links between EE and financed emission calculations.

Measuring your baseline for climate target setting – financed emissions and EE



In some cases the company's energy consumption can be used as a proxy to estimate emissions

Emissions are mainly calculated based on energy consumption

EE project loans: calculation of avoided emissions are allowed by the Standard

Emissions are mainly calculated based on energy consumption

Please refer to PCAF's website for detailed guidance on GHG accounting. Our workshop just flags to most important links between EE and financed emission calculations.

Measuring your baseline for climate target setting – financed emissions and EE

PCAF's Data quality score table for Commercial Real Estate

(score 1 = highest data quality; score 5 = lowest data quality)

Data Quality	Options to estimate the financed emissions		When to use each option
Score 1	Option 1: Actual building emissions	1a	Primary data on **actual building energy consumption** (i.e., metered data) is available. Emissions are calculated using actual building energy consumption and **supplier-specific emission factors**[129] specific to the respective energy source.
Score 2		1b	Primary data on **actual building energy consumption** (i.e., metered data) is available. Emissions are calculated using actual building energy consumption and **average emission factors** specific to the respective energy source.
Score 3	Option 2: Estimated building emissions based on floor area	2a	**Estimated building energy consumption per floor area based on official building energy labels AND the floor area** are available. Emissions are calculated using estimated building energy consumption and **average emission factors** specific to the respective energy source.
Score 4		2b	**Estimated building energy consumption per floor area based on building type and location-specific statistical data AND the floor area** are available. Emissions are calculated using estimated building energy consumption and **average emission factors** specific to the respective energy source.
Score 5	Option 3: Estimated building emissions based on number of buildings	3	**Estimated building energy consumption per building based on building type and location-specific statistical data AND the number of buildings** are available. Emissions are calculated using estimated building energy consumption and **average emission factors** specific to the respective energy source.

PCAF's Data quality score table for mortgages

Data Quality	Options to estimate the financed emissions		When to use each option
Score 1	Option 1: Actual building emissions	1a	Primary data on **actual building energy consumption** (i.e., metered data) is available. Emissions are calculated using actual building energy consumption and **supplier-specific emission factors**[136] specific to the respective energy source.
Score 2		1b	Primary data on **actual building energy consumption** (i.e., metered data) is available. Emissions are calculated using actual building energy consumption and **average emission factors** specific to the respective energy source.
Score 3	Option 2: Estimated building emissions based on floor area	2a	**Estimated building energy consumption per floor area based on official building energy labels AND the floor area** are available. Emissions are calculated using estimated building energy consumption and **average emission factors** specific to the respective energy source.
Score 4		2b	**Estimated building energy consumption per floor area based on building type and location-specific statistical data AND the floor area** are available. Emissions are calculated using estimated building energy consumption and **average emission factors** specific to the respective energy source.
Score 5	Option 3: Estimated building emissions based on number of buildings	3	**Estimated building energy consumption per building based on building type and location-specific statistical data AND the number of buildings** are available. Emissions are calculated using estimated building energy consumption and **average emission factors** specific to the respective energy source.

Please refer to PCAF's website for detailed guidance on GHG accounting. Our workshop just flags to most important links between EE and financed emission calculations.

Recommended resource: PCAF European buildings database

The PCAF European building emission factor database contains ~20,000 emission factors so far

Physical activity-based emission factors for mortgages (i.e. residential buildings) and commercial real estate (i.e. residential or non-residential buildings) provided in the PCAF European building emission factor database can be extracted per EPC rating and are either expressed in:

- tCO_2e per unit (e.g. per building)
- tCO_2e per floor area (e.g. square meter)
- MWh per unit (e.g. per building)
- MWh per floor area (e.g. square meter)

Asset classes

Emission factors are provided for two asset classes:

- **Commercial Real Estate:** residential or non-residential buildings
- **Mortgages:** residential buildings

Geographies

Emission factors are provided for all countries in the European Union, as well as Norway, Switzerland and the United Kingdom

For countries where EPC bands are defined for climate zones/regions (i.e. Croatia, Greece, Italy, Sweden and UK), the EPC energy and emission intensity factors can be extracted per climate zone/region.

Building types

Emission factors are provided for several different building types:

- **Commercial Real Estate:** Retail (High street; Shopping center; Strip mall); Office; Industrial distribution warehouse; Hotel; Healthcare; Leisure and sport facilities; Non- residential total
- **Mortgages:** Single family house (SFH); Multi-family house (MFH); Residential total

EPC ratings

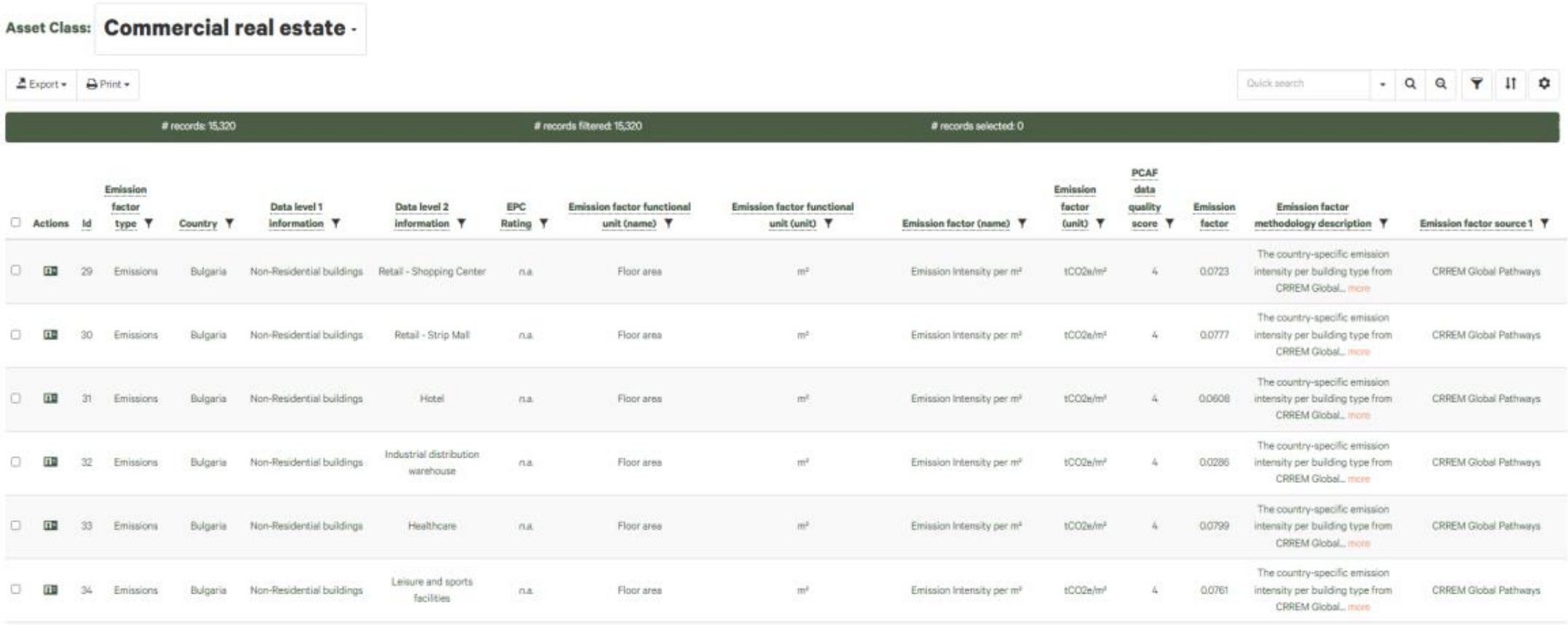
Emission factors can be extracted per country-specific energy performance certificate (EPC) rating per floor area or unit.

PCAF emphasizes that using floor area data together with the EPC rating enables a higher quality approach.

See: https://building-db.carbonaccountingfinancials.com/index.php

Recommended resource: PCAF European buildings database

The database is structured in an Excel-style manner with rows representing emission factors and columns showing features



Asset Class: **Commercial real estate**

Export | Print | Quick search

records: 15,320 | # records filtered: 15,320 | # records selected: 0

Actions	Id	Emission factor type	Country	Data level 1 information	Data level 2 information	EPC Rating	Emission factor functional unit (name)	Emission factor functional unit (unit)	Emission factor (name)	Emission factor (unit)	PCAF data quality score	Emission factor	Emission factor methodology description	Emission factor source 1
	29	Emissions	Bulgaria	Non-Residential buildings	Retail - Shopping Center	n.a.	Floor area	m²	Emission Intensity per m²	tCO2e/m²	4	0.0723	The country-specific emission intensity per building type from CRREM Global... more	CRREM Global Pathways
	30	Emissions	Bulgaria	Non-Residential buildings	Retail - Strip Mall	n.a.	Floor area	m²	Emission Intensity per m²	tCO2e/m²	4	0.0777	The country-specific emission intensity per building type from CRREM Global... more	CRREM Global Pathways
	31	Emissions	Bulgaria	Non-Residential buildings	Hotel	n.a.	Floor area	m²	Emission Intensity per m²	tCO2e/m²	4	0.0608	The country-specific emission intensity per building type from CRREM Global... more	CRREM Global Pathways
	32	Emissions	Bulgaria	Non-Residential buildings	Industrial distribution warehouse	n.a.	Floor area	m²	Emission Intensity per m²	tCO2e/m²	4	0.0286	The country-specific emission intensity per building type from CRREM Global... more	CRREM Global Pathways
	33	Emissions	Bulgaria	Non-Residential buildings	Healthcare	n.a.	Floor area	m²	Emission Intensity per m²	tCO2e/m²	4	0.0799	The country-specific emission intensity per building type from CRREM Global... more	CRREM Global Pathways
	34	Emissions	Bulgaria	Non-Residential buildings	Leisure and sports facilities	n.a.	Floor area	m²	Emission Intensity per m²	tCO2e/m²	4	0.0761	The country-specific emission intensity per building type from CRREM Global... more	CRREM Global Pathways

See: https://building-db.carbonaccountingfinancials.com/index.php

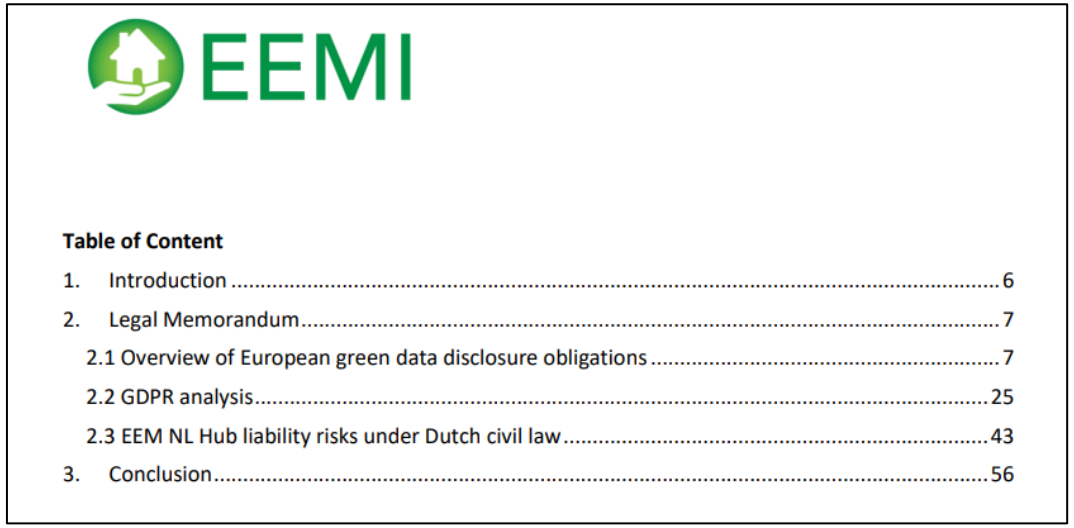
Recommended resource: GDPR considerations linked to energy efficiency data

Energy Efficient Mortgages Initiative

EEM Label GDPR Compliance Considerations

Version: Final
Main author: Vasco Hoving, Catrien Noorda
Dissemination level: Confidential
Lead contractor: EMF - ECBC
Due date: 28.02.2022

The EeMMIP project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 894117.



EEMI

Table of Content

[EEM Label GDPR Compliance Considerations]

EBRD approach to green transition

Dana Kupova – EBRD

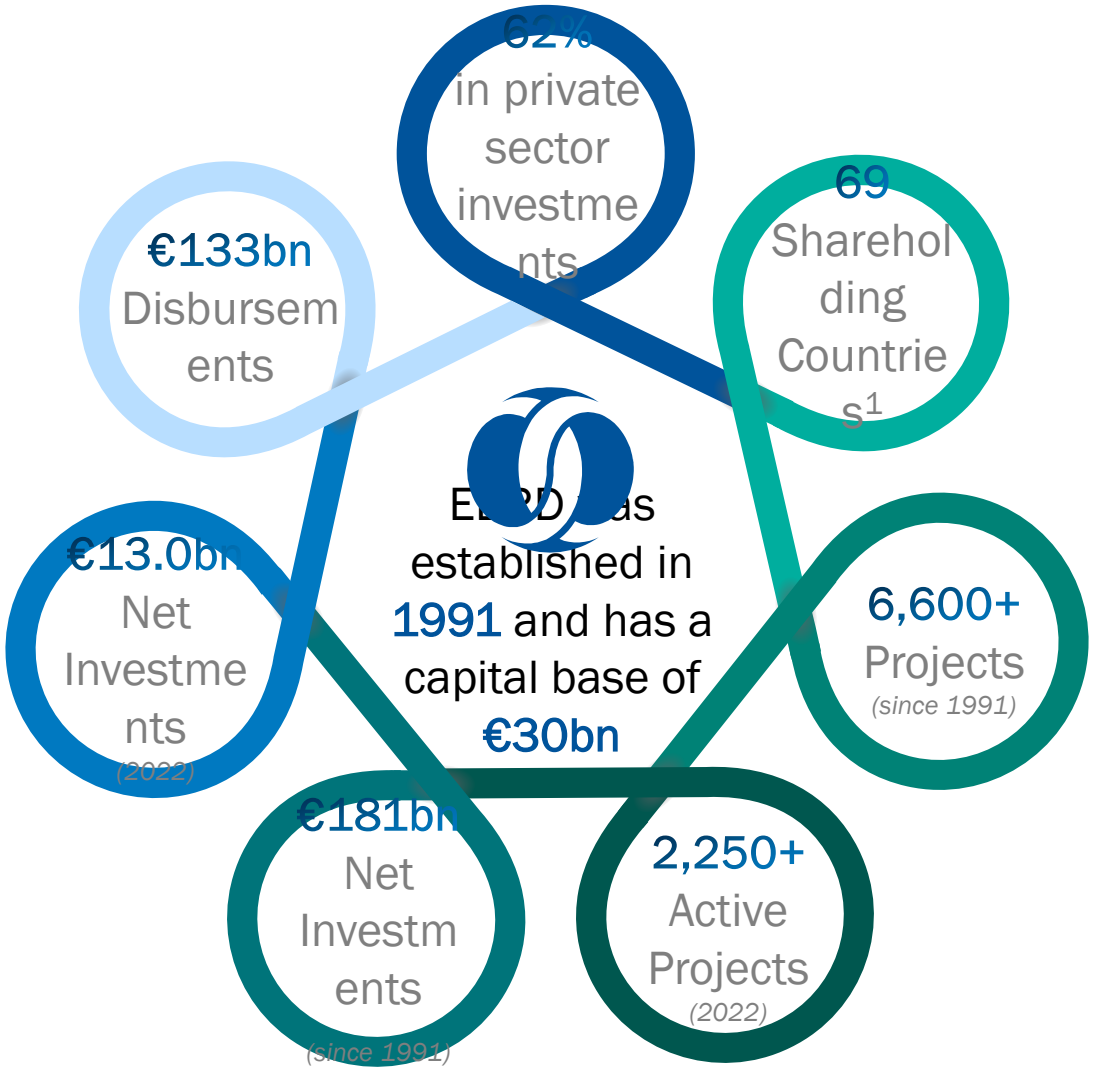
EBRD approach to green transition

April 2023

European Bank
for Reconstruction and Development

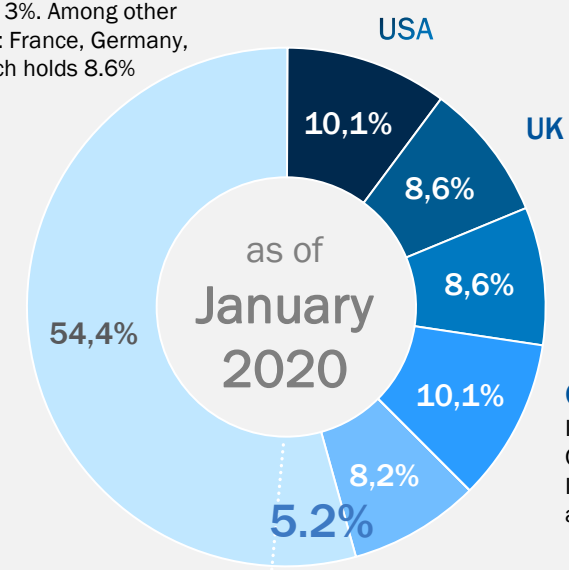
EBRD's Shareholding Structure & Results

European Bank
for Reconstruction and Development



EBRD's Shareholding Structure (%)

EU27 countries
Includes European Union and European Investment Bank (EIB) each at 3%. Among other EU countries: France, Germany, and Italy, each holds 8.6%



Other
Including Australia, Canada, China, Korea, India, Israel, Norway and Switzerland

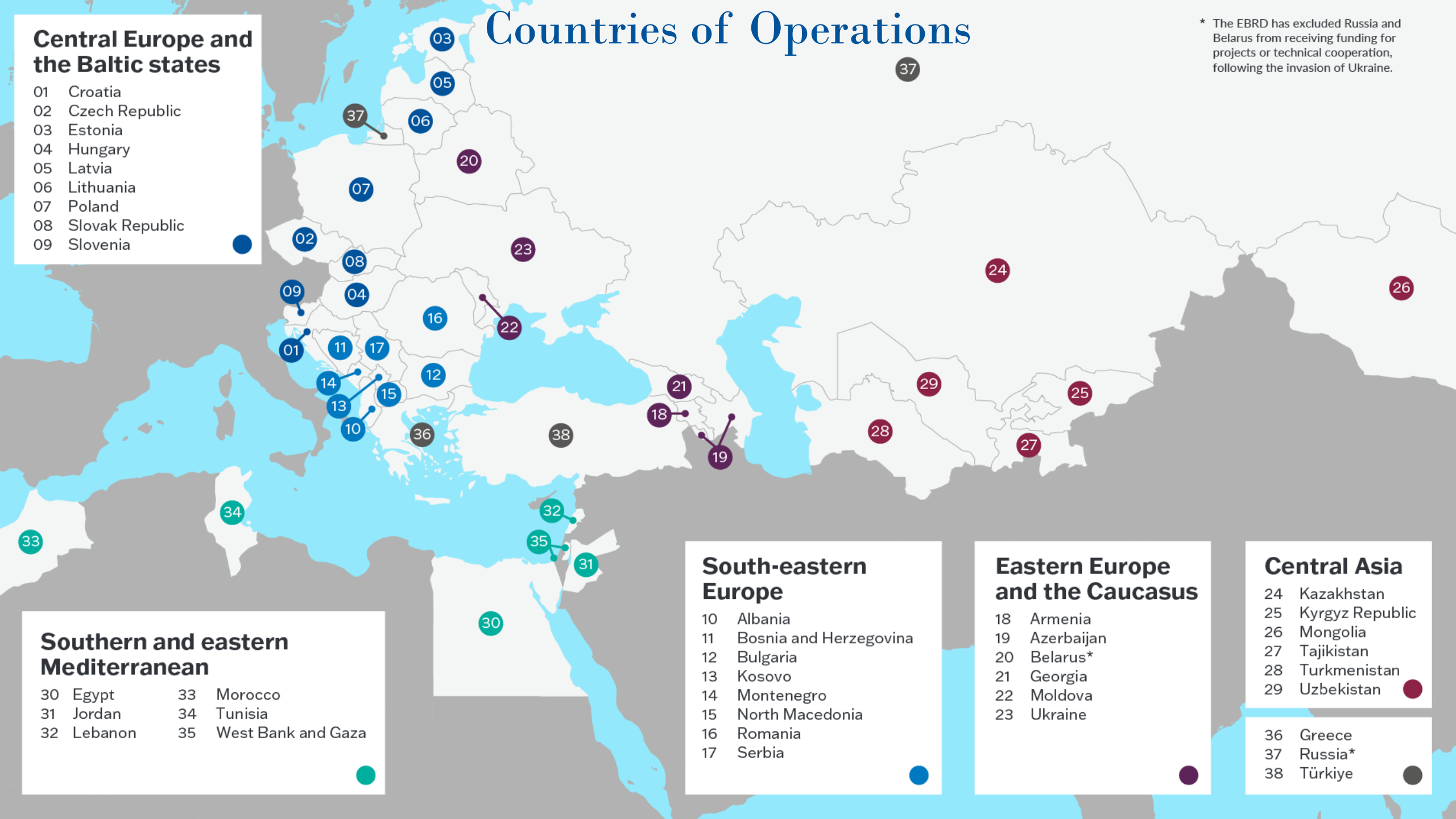
EBRD recipient countries
Who are members of the EU

EBRD recipient countries
Not members of the EU. Includes Russia at 4%

For a full list of the shareholding of the EBRD visit:
www.ebrd.com/shareholders

[1]from five continents, as well as the European Union and the European Investment Bank. These shareholders have each made a capital contribution, which forms our core funding.

Countries of Operations



Central Europe and the Baltic states

01 Croatia
02 Czech Republic
03 Estonia
04 Hungary
05 Latvia
06 Lithuania
07 Poland
08 Slovak Republic
09 Slovenia

Southern and eastern Mediterranean

30 Egypt
31 Jordan
32 Lebanon
33 Morocco
34 Tunisia
35 West Bank and Gaza

South-eastern Europe

10 Albania
11 Bosnia and Herzegovina
12 Bulgaria
13 Kosovo
14 Montenegro
15 North Macedonia
16 Romania
17 Serbia

Eastern Europe and the Caucasus

18 Armenia
19 Azerbaijan
20 Belarus*
21 Georgia
22 Moldova
23 Ukraine

Central Asia

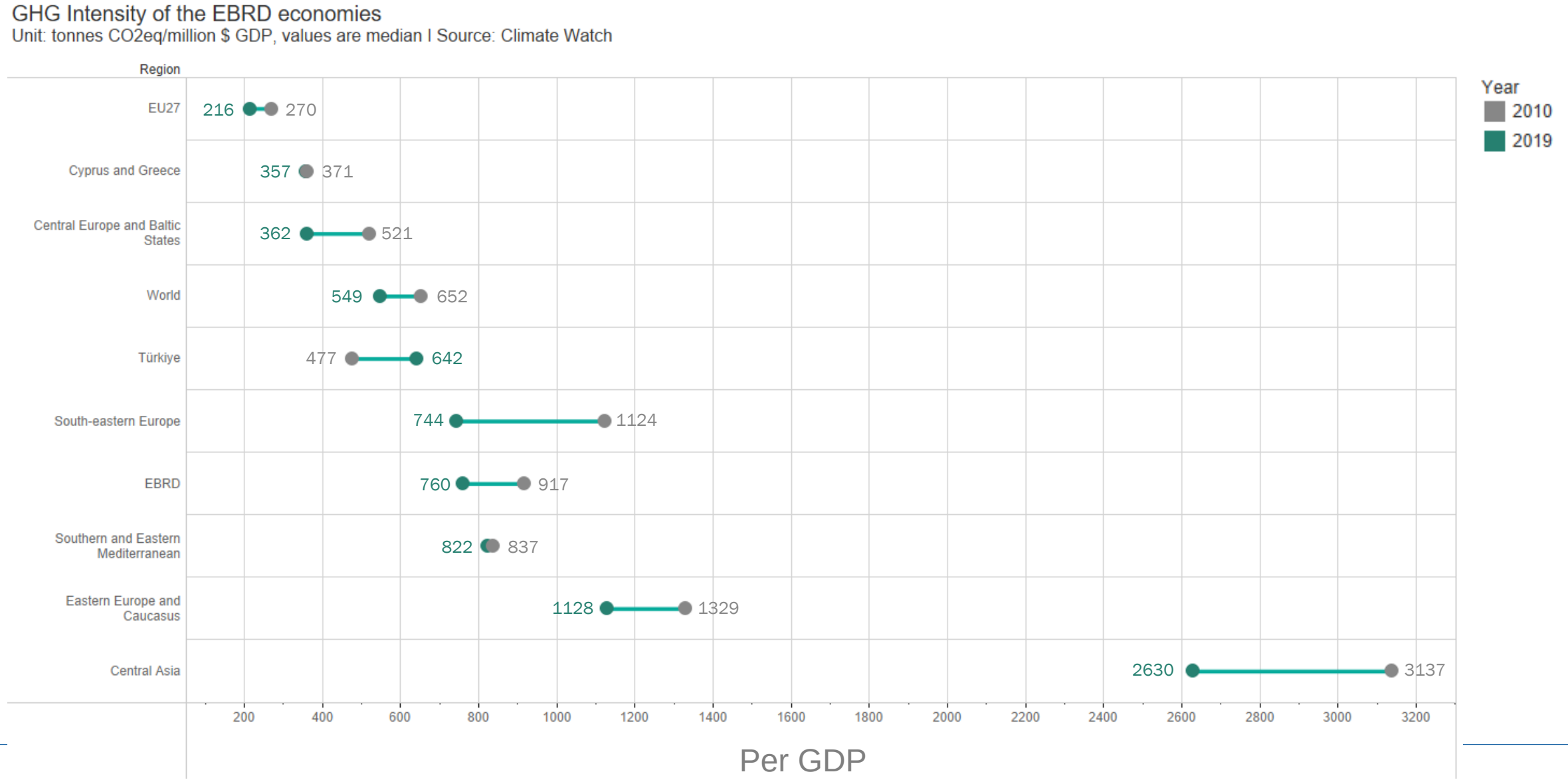
24 Kazakhstan
25 Kyrgyz Republic
26 Mongolia
27 Tajikistan
28 Turkmenistan
29 Uzbekistan

36 Greece
37 Russia*
38 Türkiye

* The EBRD has excluded Russia and Belarus from receiving funding for projects or technical cooperation, following the invasion of Ukraine.

EBRD economies are reducing their carbon intensity, but more needs to be done

European Bank
for Reconstruction and Development

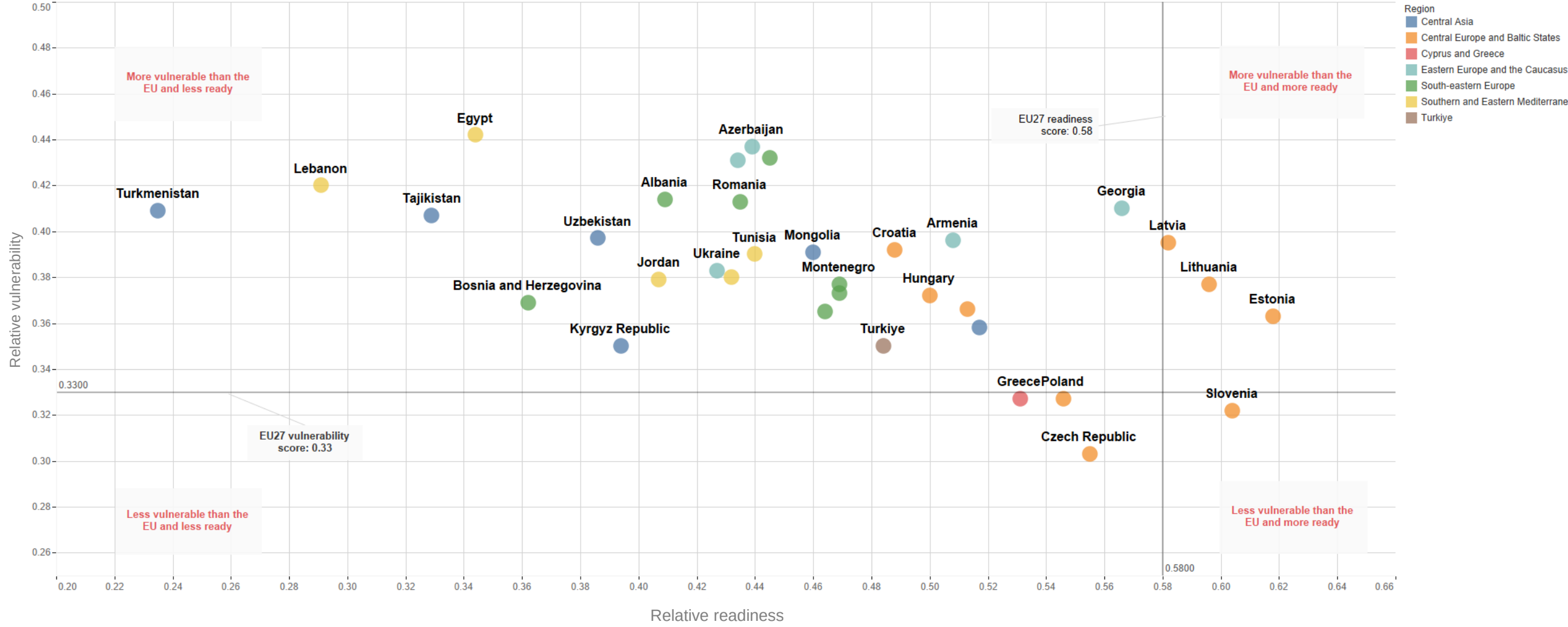


High vulnerability and gaps in readiness pose climate risks in the EBRD region

European Bank
for Reconstruction and Development

Climate vulnerability and readiness in the EBRD region

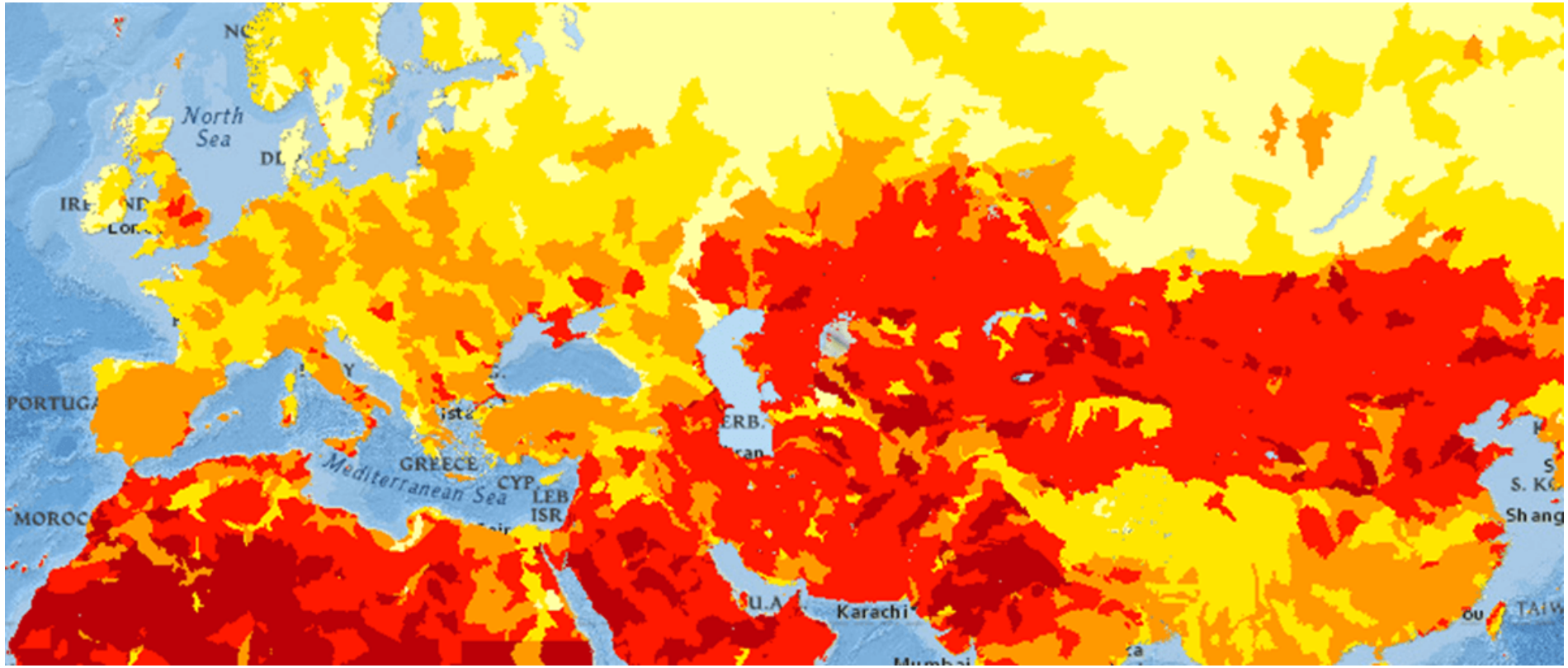
The relative vulnerability score shows a country's exposure, sensitivity, and capacity to adapt to the negative side effects of climate change, with a lower score indicating less vulnerability. The relative readiness score shows a country's ability to leverage investments and convert them into adaptation actions, with a lower score indicating less readiness. I Source: ND-Gain and EBRD calculations.

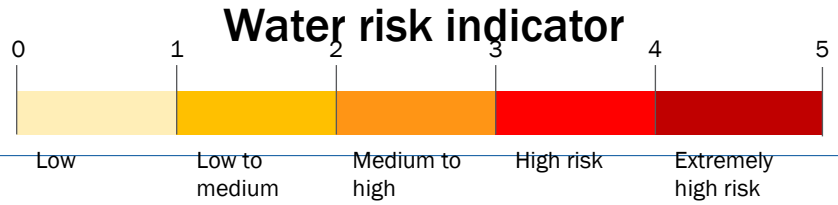


Water stress in the EBRD region

European Bank
for Reconstruction and Development

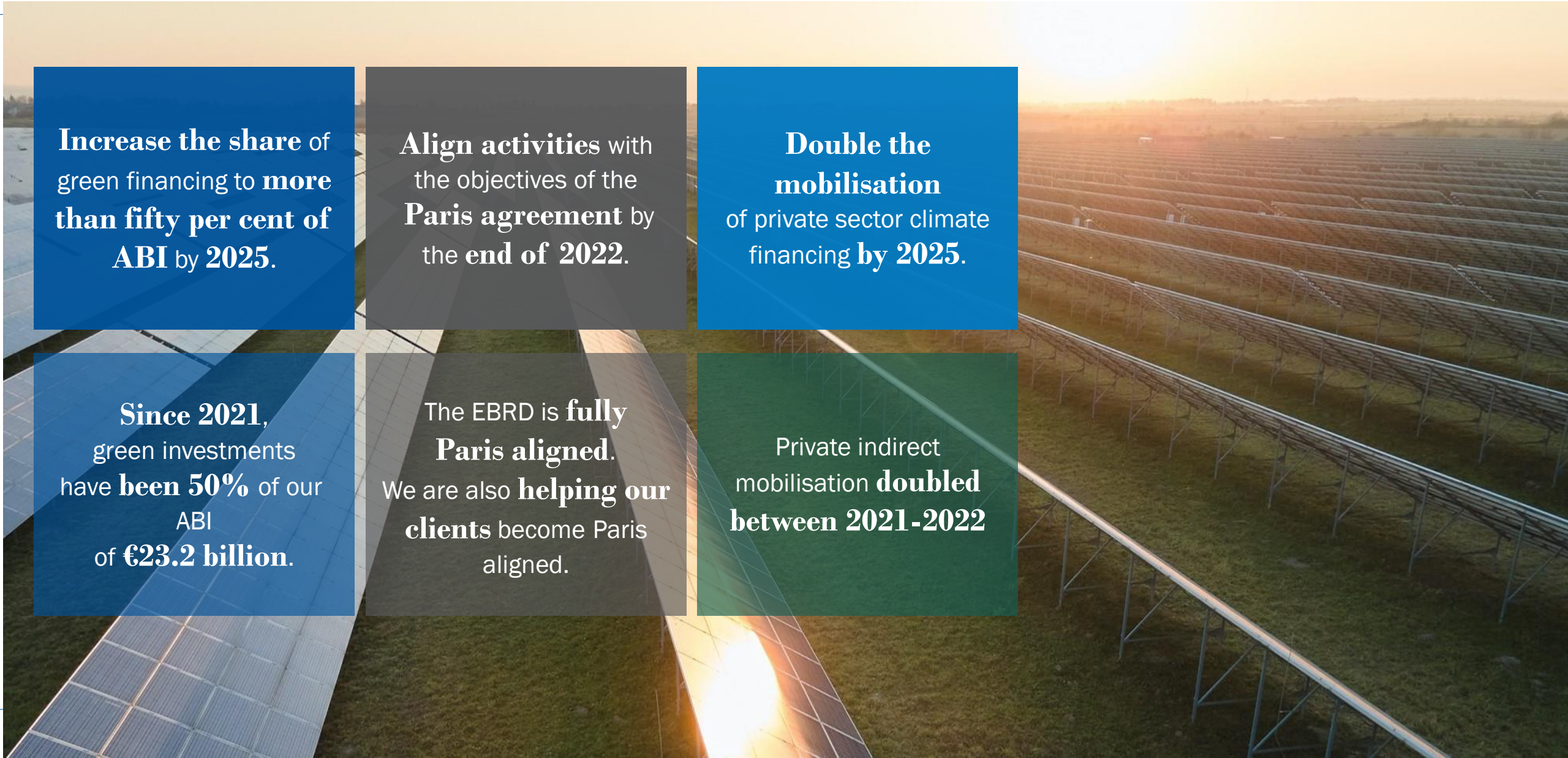
Water efficiency is an important driver of business competitiveness, especially in the most water-scarce EBRD region such as North Africa and Central Asia.





We are on track to meet our climate commitments

European Bank
for Reconstruction and Development



Increase the share of green financing to **more than fifty per cent of ABI** by **2025**.

Align activities with the objectives of the **Paris agreement** by the **end of 2022**.

Double the mobilisation of private sector climate financing **by 2025**.

Since 2021, green investments have **been 50%** of our ABI of **€23.2 billion**.

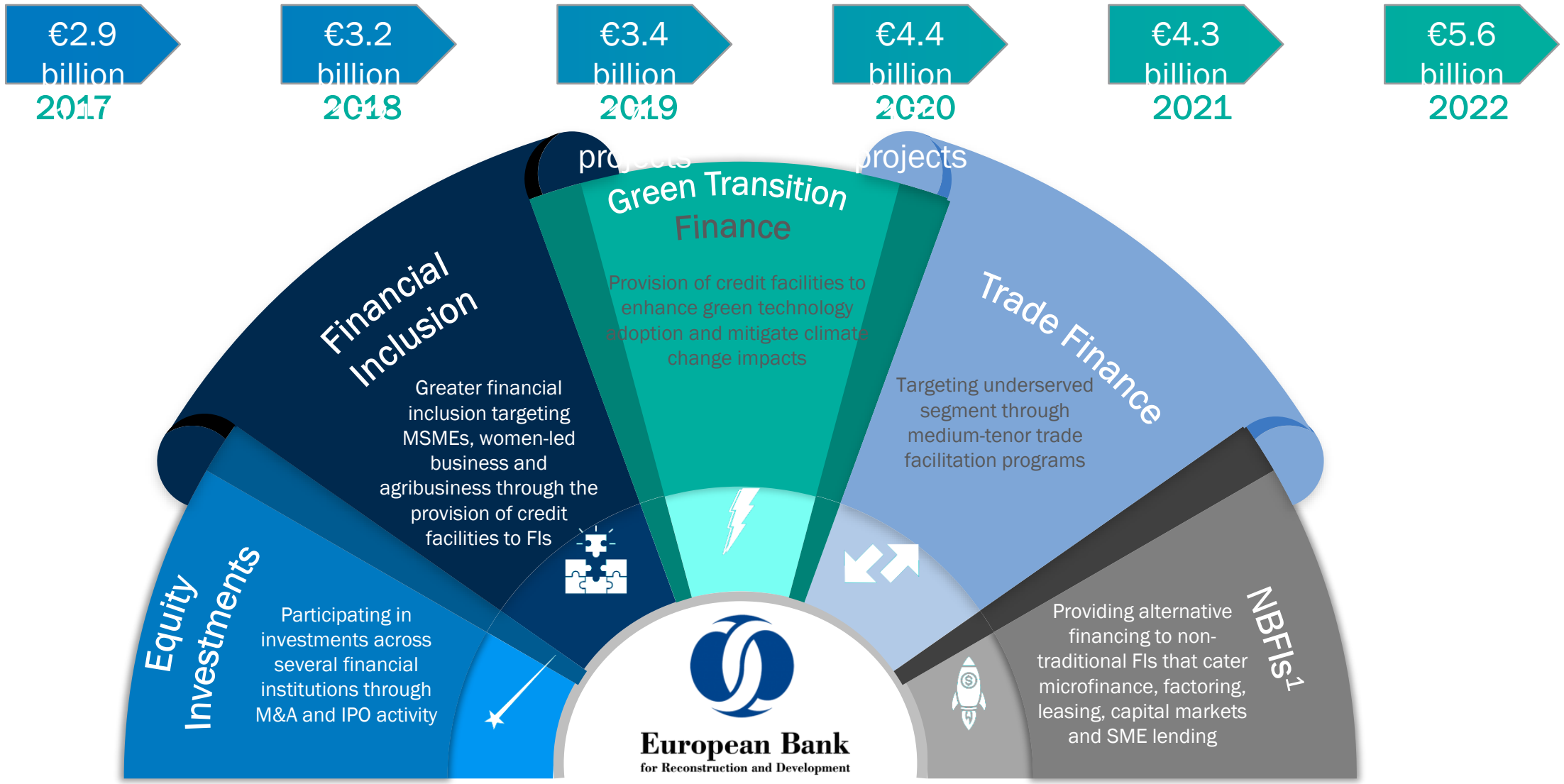
The EBRD is **fully Paris aligned**. We are also **helping our clients** become Paris aligned.

Private indirect mobilisation **doubled between 2021-2022**

Financial Institutions

Core business investment and product areas

European Bank
for Reconstruction and Development



[1]Non-bank Financial Institutions

Our financial products respond to the needs of our region.

Green Intermediated Finance products – cross-sectoral

Supporting green transition through financial institutions

European Bank for Reconstruction and Development

- EBRD has cooperated with around **200** partner **financial institutions** across 34 **countries** via its **Green Economy Transition (GET) approach**
- Products are based on an established business model, combining (i) financing, (ii) technical assistance, (iii) policy dialogue, and where critical also (iv) blended finance to address specific barriers.

GREEN ECONOMY FINANCING FACILITIES (GEFF)

Credit lines and technical support

to partner financial institutions seeking to on-lend funds to small and medium-sized businesses, corporate, municipal, and residential borrowers for the purpose of financing green projects.

GREEN & SUSTAINABILITY BONDS

Investments, and issuance support

as well as participation in best practice standard setting via membership in Green Bond Principles Executive Committee and in regulatory development via EU Technical Expert Group on Sustainable Finance.

GREEN TRADE FACILITATION PROGRAMME

Guarantees and cash-advances

to partner financial institutions in order to increase availability of green technologies in EBRD countries, thus building and strengthening green technology supply chains.

UNFUNDED INSTRUMENTS

Risk-sharing facilities

either (i) direct, where risk-sharing is linked to clients' existing green project portfolios, or (ii) indirect, where risk-sharing is linked to clients' commitment to deliver pre-agreed volume of green financing.

GEFF: proven business model for delivery

Overall GEFF Results as of September 2022

European Bank
for Reconstruction and Development

188
participating financial institutions

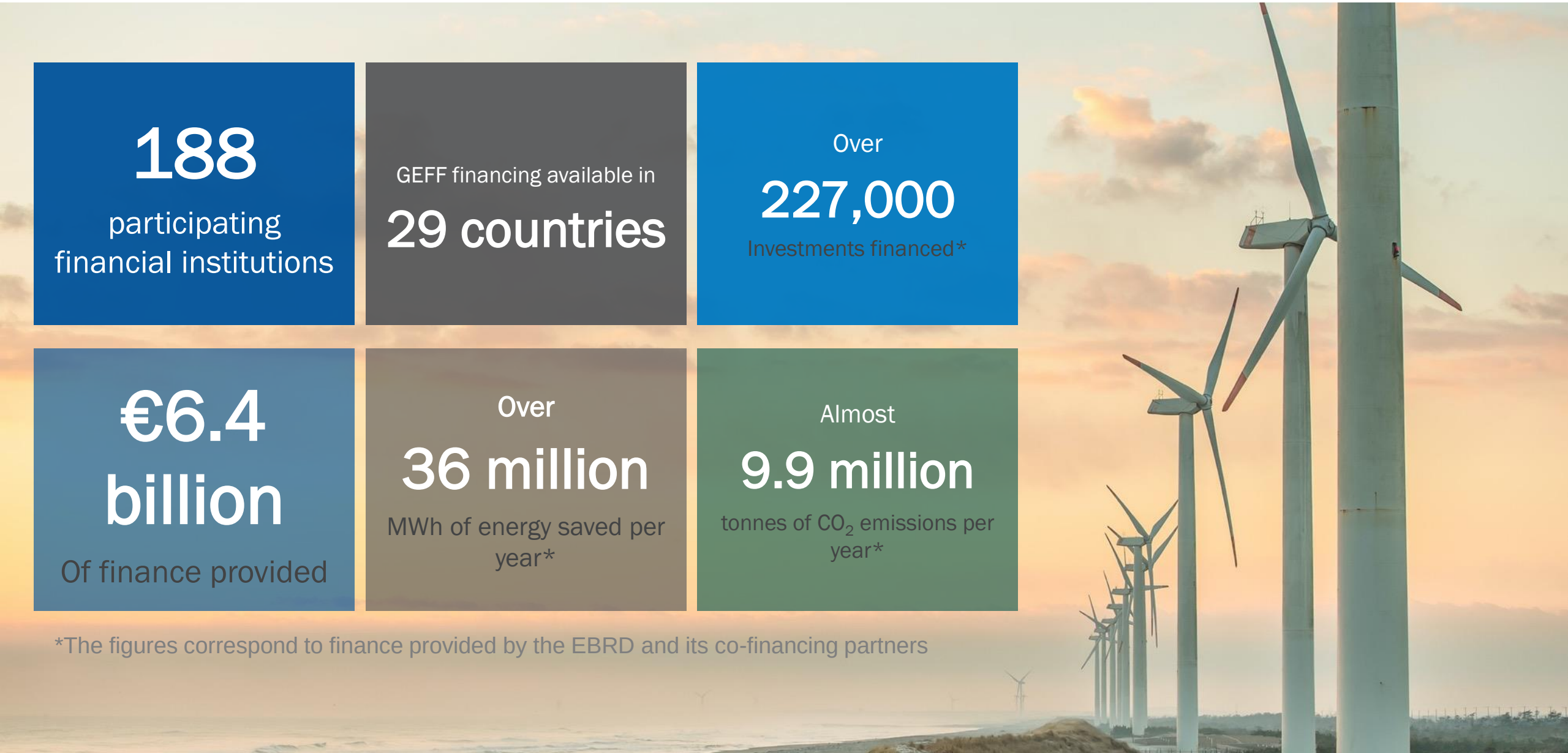
GEFF financing available in
29 countries

Over
227,000
Investments financed*

€6.4 billion
Of finance provided

Over
36 million
MWh of energy saved per year*

Almost
9.9 million
tonnes of CO_2 emissions per year*

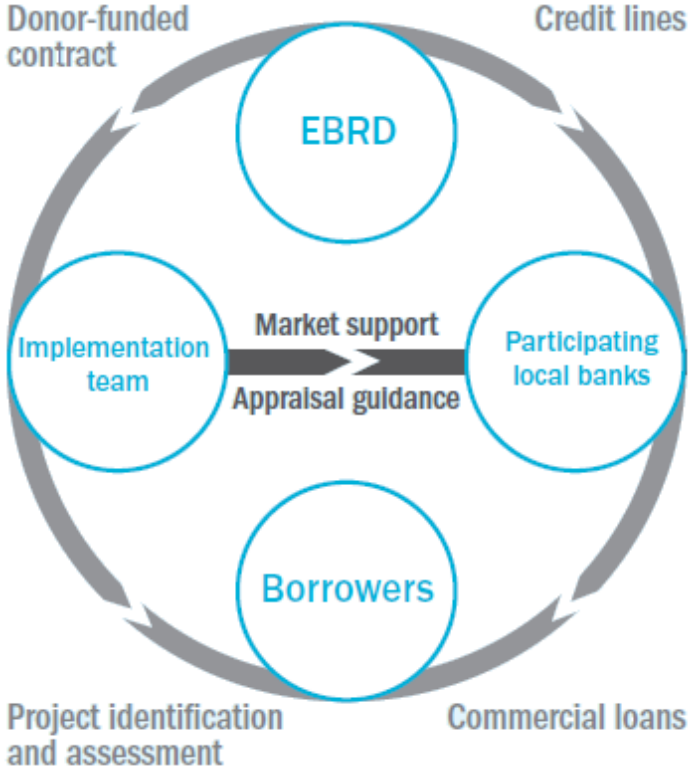


*The figures correspond to finance provided by the EBRD and its co-financing partners

GEFF business model

European Bank
for Reconstruction and Development

- Through GEFFs the EBRD extends credit lines to local financial institutions seeking to develop sustainable energy and resource financing as a permanent area of business.
- Local financial institutions on-lend funds to small and medium-sized businesses, corporate and residential borrowers.
- Finance is provided for energy efficiency, small-scale renewable energy, water and material efficiency projects as well as climate change adaptation.
- The green performance criteria for specific project categories form part of the legal agreements between the EBRD and our partner financial institutions.
- GEFFs establish project implementation teams who support local financial institutions and their clients through dedicated technical assistance and support integrity of the product.



*The green performance criteria are set through a rigorous internal process within EBRD based on the assessment of market conditions and methodologies agreed among multilateral development banks.

GEFF Investment areas

European Bank
for Reconstruction and Development

Industrial and commercial sector:

- SME/Corporate borrowers
- Vendors and suppliers of equipment

Agriculture, forestry and fishing

Food processing

Manufacturing

Commercial sector

Residential sector:

- Individuals
- SME/Corporates in the residential sector

Individual households

Multi-family residential buildings

Municipal sector:

- Municipalities and municipal companies
- Municipal service providers (including ESCOs)

Municipal infra and services

- Public transport
- district heating
- water supply
- waste and waste water treatment

Public buildings

GEFF tools for assessments

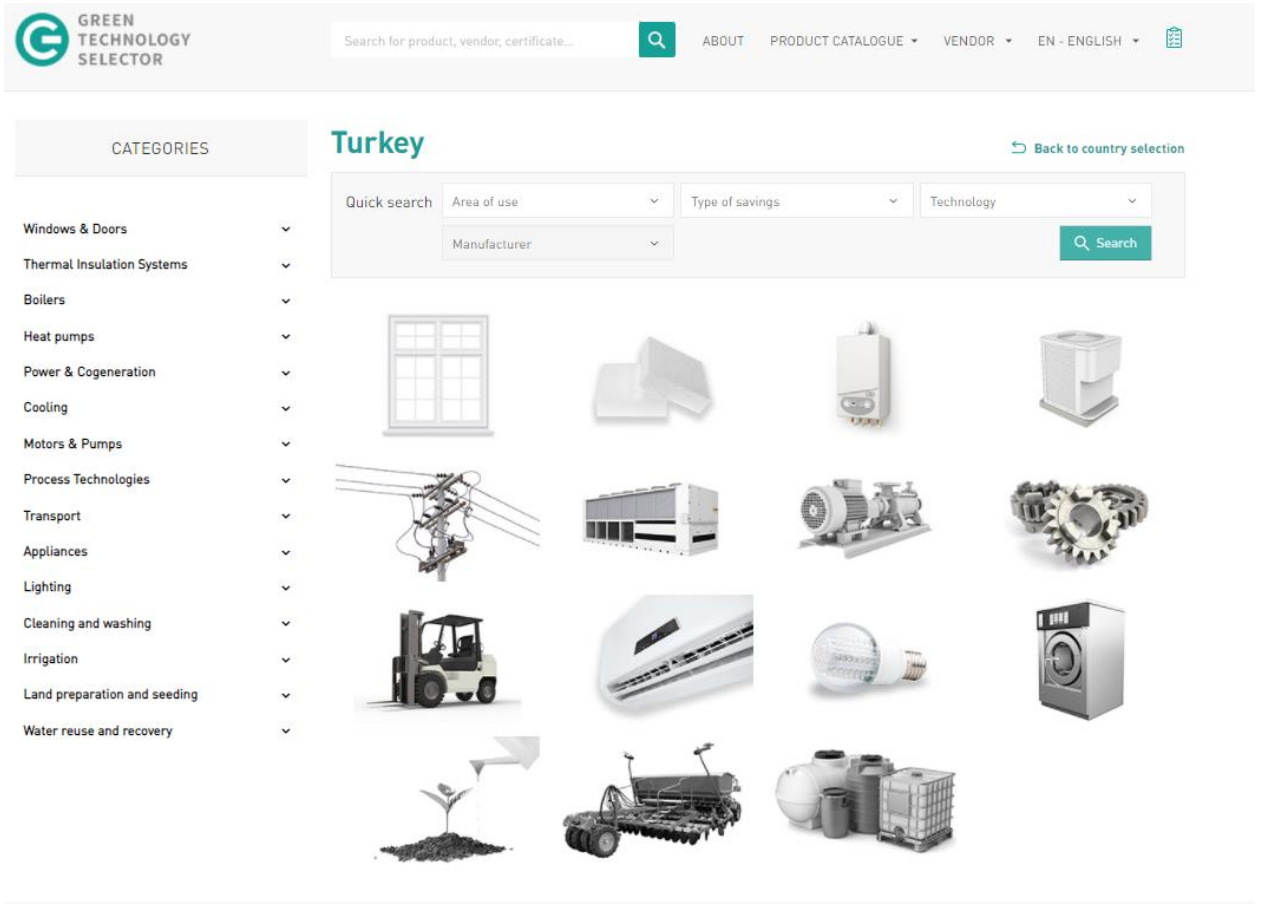
The Green Technology Selector

European Bank
for Reconstruction and Development

Powerful tool for banks and sub-borrowers to identify green technologies

Green Financing

- ❑ Identification of suitable products through Technology Selector for piloting green finance
- ❑ Training for staff on green finance and green lending (eLearning)
- ❑ Technology Selector and possible joint development of API
- ❑ Mobilisation of and engagement with green technology vendors to support origination and sales efforts (if relevant)



https://ts.ebrdgeff.com – the Technology Selector is the online vendor-driven self-populating catalogue of high-performance technologies leading to straightforward energy and water savings

Technical Assistance

Complementing other tools such as GTS

European Bank
for Reconstruction and Development

Originate Client Opportunities

- *Marketing* to clients, suppliers, staff
- *Helpline* to answer FAQs
- Joint client site-visits to *advise* on *investments*
- Joint *client meetings*
- Advise on *cross-selling* opportunities
- Scale up through *vendor distribution* channels
- Greater *advertising opportunities* and convenience for clients. Straight forward via *Technology Selector*

Product Development Support and Training Features

Face-to-Face Training
Face-to-face training courses to close know-how gaps

Train-the-Trainer
Train-the-trainer program to ensure sustainability

GEFF product design
Support in designing GEFF product features

Portfolio Screening
To identify most promising costumer segments

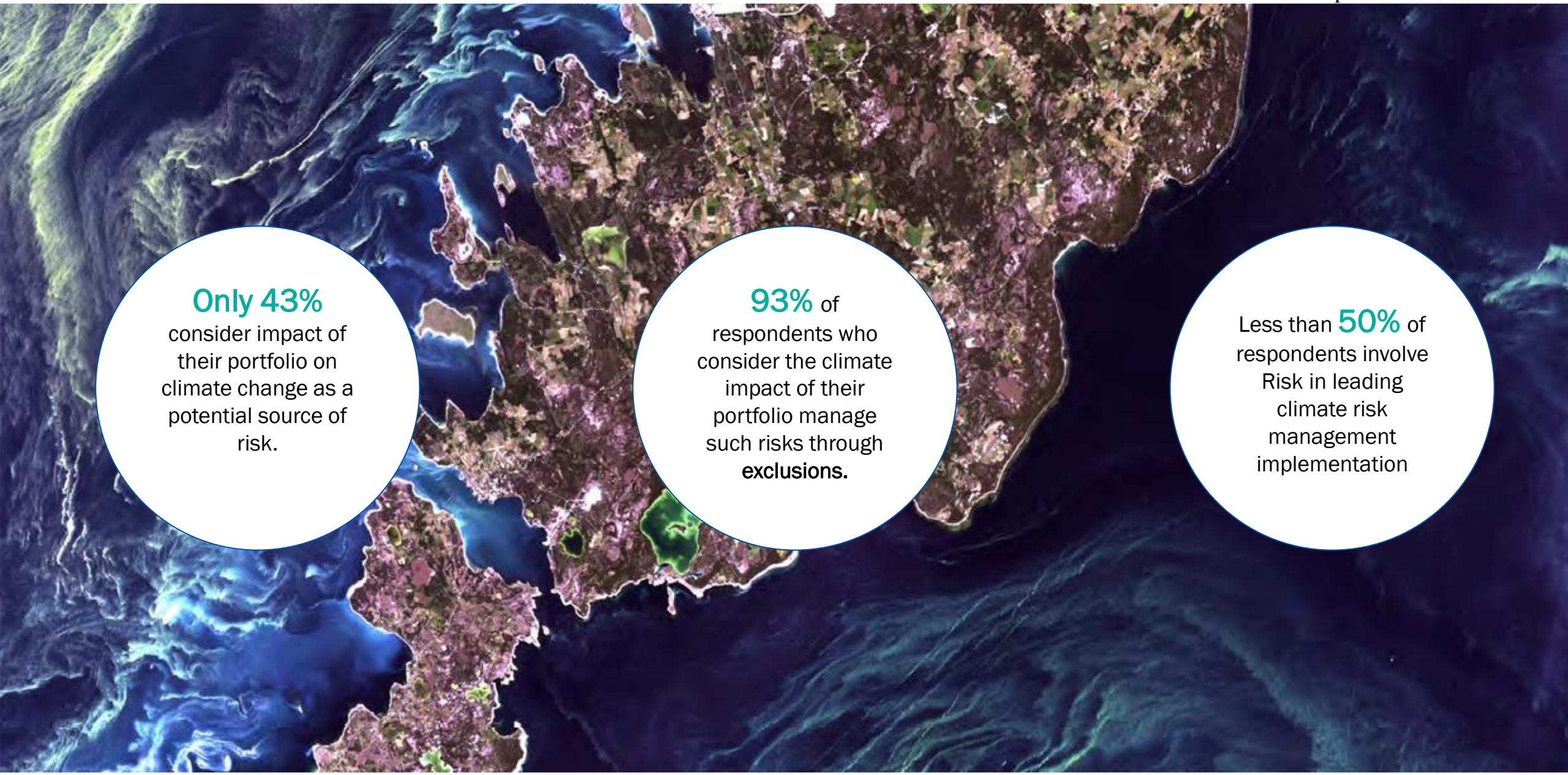
Capacity Gap Analysis
Define capacity building needs and agree on training plan

E-Learning
Participate in EBRD Green Finance Academy E-Learning Programme

90% of training participants: "very useful" or "extremely useful"
(EBRD evaluation study, 2016)

EBRD Climate Readiness Survey (2021) – Key Highlights

European Bank



Only 43% consider impact of their portfolio on climate change as a potential source of risk.

93% of respondents who consider the climate impact of their portfolio manage such risks through **exclusions.**

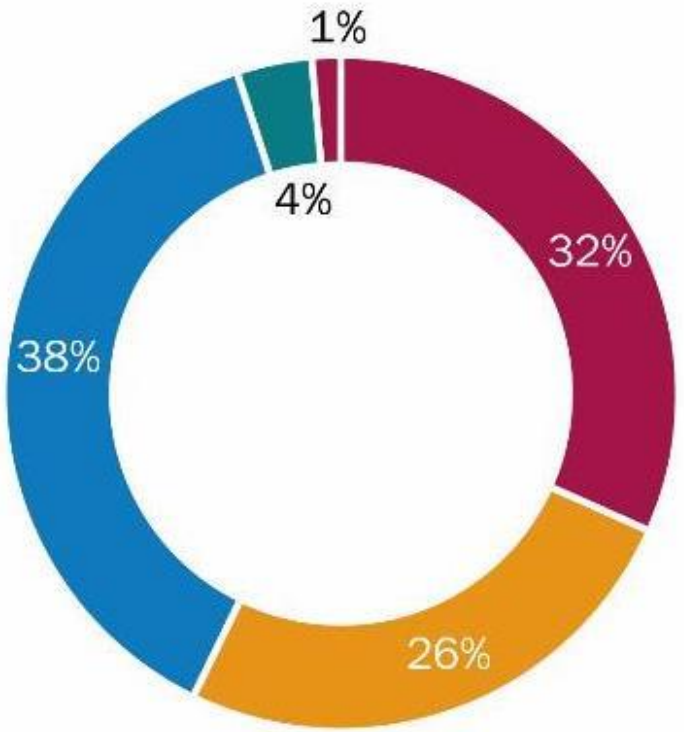
Less than **50%** of respondents involve Risk in leading climate risk management implementation

Climate change consideration in investment decisions

European Bank
for Reconstruction and Development

Commercial Banks

Do You Consider the Impact of Your Operations on Climate Change?



26%	These factors do not affect our investment decisions.
21%	These factors affect our investment decisions for specific products only.
31%	We consider the impact to be a source of potential risk and manage it through exclusions.
3%	We consider the impacts to be a source of potential risk and we price investments accordingly.
1%	Other

Paris Alignment: Use of proceeds approach

Exclusions, environmental safeguards, and nature of sub-transactions

European Bank
for Reconstruction and Development

A number of factors are taken together to determine whether sub-transactions are consistent with a pathway towards low GHG and climate resilient development:

1 

Fossil fuel exclusions.
All EBRD intermediated financing is subject to the Bank's approach to fossil fuels as set out in the EBRD's Energy Sector Strategy. The policy excludes PFI sub-transactions that are clearly not aligned with the mitigation goal of the Paris Agreement (i.e. coal power generation capacity) in addition to investments with a high risk of non-alignment (for example, upstream oil).

2 

Requirements around environment safeguards.
EBRD Environmental and Social Policy sets out standards for all EBRD investments with financial intermediaries. This is based on a "delegation principle" whereby the EBRD sets organisational capacity requirements to manage environmental and social risk, stakeholder engagement and accompanying reporting to the EBRD. It also includes a list of sub-transaction types that would require escalation to the EBRD.

3 

The nature of the majority of sub-transactions with FI clients
In most cases, the financing provided to FI clients results in sub-transactions which: (i) are relatively small and have short tenors; (ii) support climate change goals; or (iii) target SMEs, resulting in sub-transaction portfolios which are diversified in sectors which typically exhibit a low GHG footprint. Where EBRD financing to an FI client is not consistent with these factors, there is a higher risk of financing a not aligned sub-transaction. Where this risk is material, the PFI will be assessed following the counterparty approach.

Paris Alignment: Transition planning

The EBRD's expectations from partner financial institutions' transition plans

European Bank
for Reconstruction and Development

The EBRD expects FI clients to make progress towards best climate practices along the following five dimensions.

The exact actions, milestones and short-term targets in FI clients' transition plans will depend on existing climate practices:

Early stage practice | **Developing practice** | **Advanced practice**

Governance

The client's governance of climate-related risks and opportunities, including **the role of the board and management** in determining and managing climate issues.

Strategy

The **actual and potential impacts of climate-related risks and opportunities in the client's strategy**, covering both internal matters (such as financial planning, product offering, policies and procedures) and external engagements (with clients and industry groups).

Risk management

The processes used by the organisation to **identify, assess and manage material climate-related risks and opportunities.**

Metrics and targets

The **metrics and targets used to assess and manage relevant climate-related risks and opportunities**, including those that support the long-term goals of the Paris Agreement

Disclosure

The FI client's **reporting on the impacts of their activities** on the climate and the impacts of climate change on their activities.

Transition Planning: testimonials

European Bank
for Reconstruction and Development

Case Study 1: UniCredit Serbia

In an interview with UCB, the CEO highlights how the transition plan will help the bank implement the Unicredit Group strategy on climate-related matters.

In the case of **Unicredit Serbia**, part of the EU-based UniCredit Group**,** the transition plan will allow the PFI to translate the Group's climate strategy into the Serbian context and to embed commitments made as supporters of TCFD and the Net-Zero Banking Alliance into its day-to-day practices.

Watch Video

UniCredit

بنك الاتحاد
Bank al Etihad

Case Study 2: Bank Al-Etihad Jordan

In interview with the BAE, the CEO emphasizes how the transition plan will promote institutional learning on climate matters across the business sectors.

The development and implementation of a transition plan will help Bank Al-Etihad position itself further as a leader in green finance in the country. As the fourth-largest Jordanian bank, the commitment will **promote best climate-related business practices in the Jordanian financial sector**. BAE will be supported with TC on the transition planning commitment.

Watch Video

Contacts

European Bank
for Reconstruction and Development

Dana Kupova

Associate Director
Financial Institutions,
Head of FI Green Products
Email: KupovaD@ebrd.com

EBRD, 5 Bank Street,
London E14 4BG,
United Kingdom
www.ebrd.com

EBRD MFI Partners

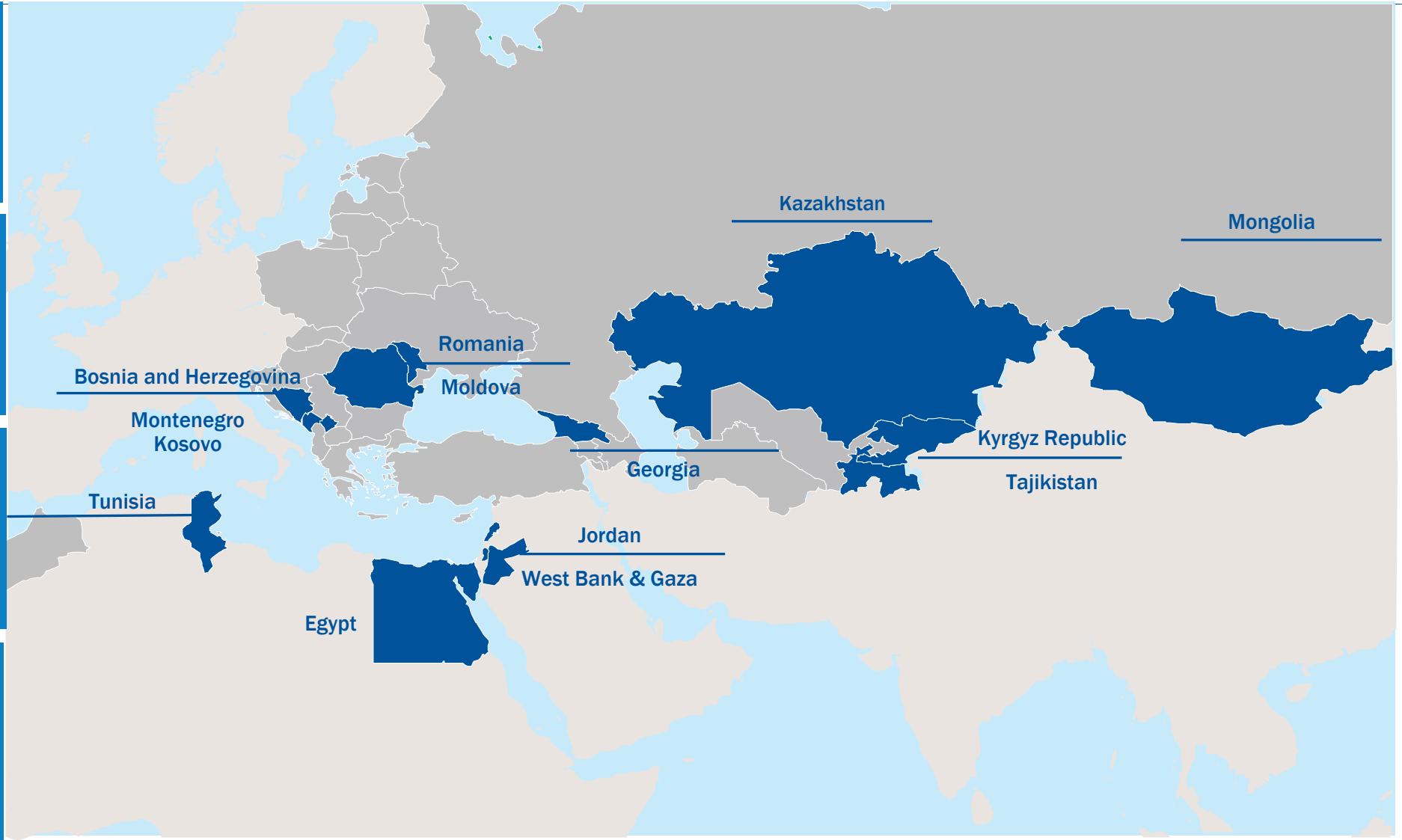
European Bank
for Reconstruction and Development

14
ECONOMIES
with active engagements

27 Clients

€216.8m Total EBRD Finance

Across various product lines



UN environment programme | finance initiative

Principles for Responsible Banking

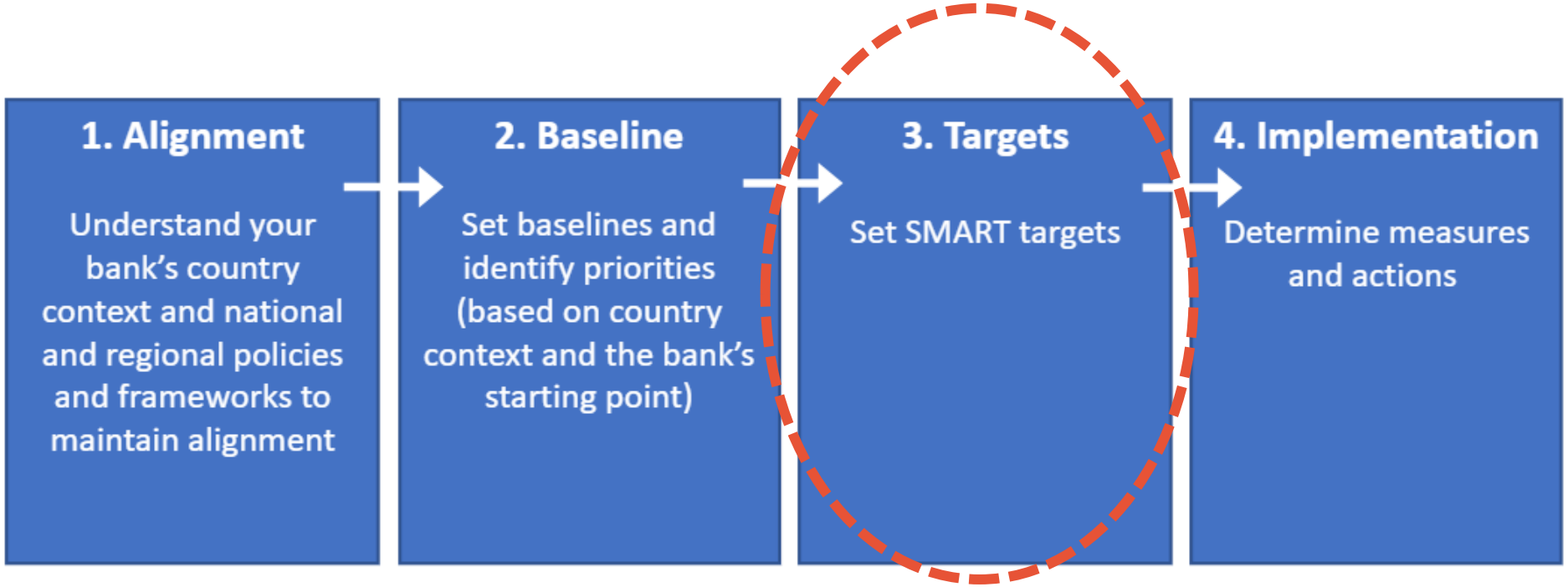
PRB EE Target setting:

SMART Target setting

UNEP FI

unepfi.org

The target setting process (climate or resource efficiency)



Target setting – climate focus

- Your bank should ultimately set impact targets, i.e. targets to increase positive impact and decrease negative impact.
- If your key impact area is **climate change**, your impact targets will be financed GHG emission targets, and energy efficiency will be a key driver

Climate Change

1 Understand the landscape

Energy production / consumption is a huge source of GHG emissions in many sectors

2 Measure & disclose financed emissions

In certain asset classes energy consumption is the main proxy for the calculation of financed emissions

3 Set robust, science-based targets

Energy efficiency is a key driver of Paris Aligned decarbonization scenarios. In some sectors banks' climate targets will be based on EE targets.

4 Implement the targets

In line with your targets, implementation will in many sectors be centered around offering your clients EE advice and investment finance.

Target setting – climate – theoretic example

- Residential mortgages – impact target as GHG emissions:

Baseline (2022)	Intermediate target (2028)	Long term target (2050)
12.500 tCO2e	9700	1300

- CRE loans – impact target as GHG emissions:

Baseline (2022)	Intermediate target (2028)	Long term target (2050)
61.000 tCO2e	40.000	2560

Target setting – climate – theoretic example

Impact targets

- Residential mortgages – impact target as GHG emissions:

Baseline (2022)	Intermediate target (2028)	Long term target (2050)
12.500 tCO2e	9700	1300

- CRE loans – impact target as GHG emissions:

Baseline (2022)	Intermediate target (2028)	Long term target (2050)
61.000 tCO2e	40.000	2560

Practice targets

Portfolio composition and financial flows

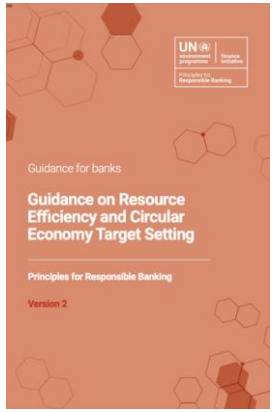
By **2026,** ensure that at least 30% of new mortgages meet the EU Taxonomies criteria.

Client engagement

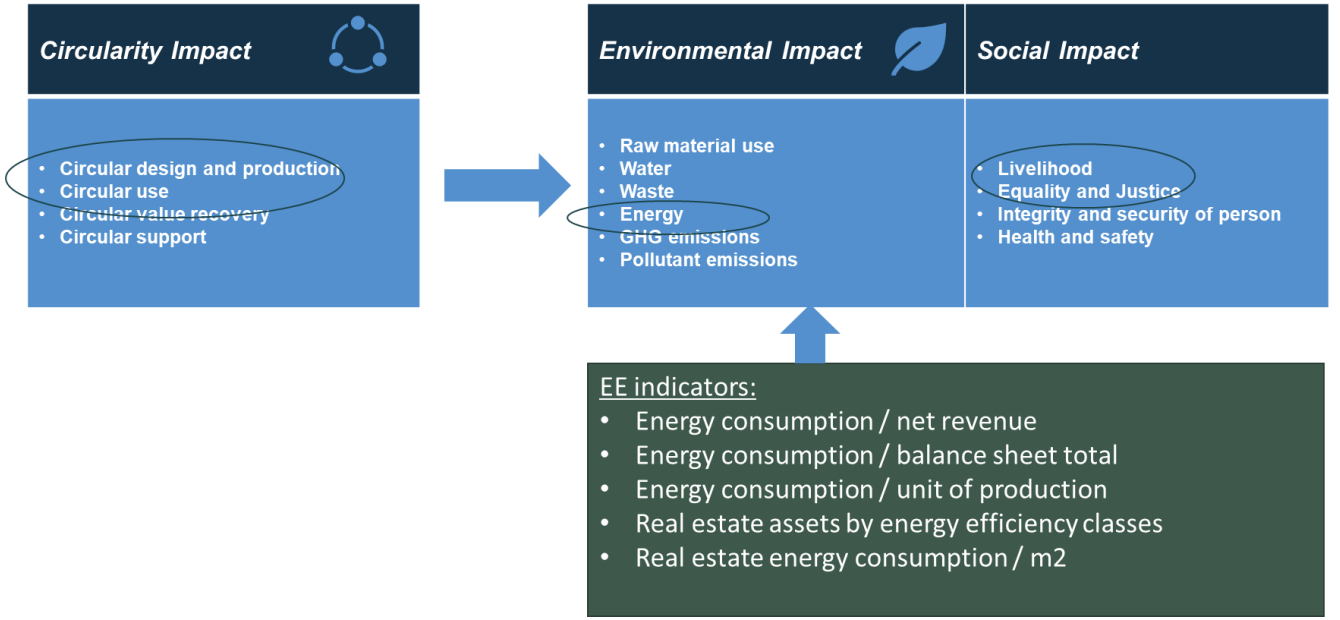
By **2024,** ensure that every year at least 5% of clients are advised about behavioral and renovation opportunities to improve energy efficiency.

Target setting – circular economy/resource efficiency focus

- You should set both long term targets (e.g. 10 years or longer), and interim targets (to be delivered in 1-5 years).
- Impact targets should be set using the impact indicators set in the Guidance (see also previous slide!), adjusted as needed by your bank.
- It is recommended to use EE indicators together with increase in **renewable energy**
- Ideally, your bank should set impact targets on environmental impact (energy efficiency + renewable energy) and circularity impact.
- You are also encouraged to set social impact targets.



Resource efficiency & Circular economy



Target setting – circular economy/resource efficiency focus - Example

	Circularity Impact	*Environmental Impact*	*Social Impact*
Impact targets		Mandatory Mortgage portfolio **EE target** for avarage primary energy consumption 290 kWh/m2 for **2026** and 200 kWh/m2 for **2033** (baseline 2022: 320 kWh/m2). The bank also set a **renewable energy production** target (solar and wind): 1250 MW installed capacity for **2026** and 2700 MW for **2033** (baseline 2022: 600 MW)	

Target setting – circular economy/resource efficiency focus - Example

	Circularity Impact	*Environmental Impact*	*Social Impact*
Impact targets	(Optional, but recommended) The bank considered setting also a circular impact target for the residential buildings portfolio, but due to the lack of data, the bank ultimately decided to postpone target setting until the baseline can be established. *(Reaching out to a sample of clients, it started to gather data about raw material use and construction waste.)*	Mandatory Mortgage portfolio **EE target** for avarage primary energy consumption 290 kWh/m2 for **2026** and 200 kWh/m2 for **2033** (baseline 2022: 320 kWh/m2). The bank also set a **renewable energy production** target (solar and wind): 1250 MW installed capacity for **2026** and 2700 MW for **2033** (baseline 2022: 600 MW)	(Optional, but recommended) At least 3000 borrowers affected by energy poverty benefiting from retrofit loans by 2026, bringing down their energy cost/income ratio by 15pp (baseline 2022: avarage ratio is 40%)

Target setting – circular economy/resource efficiency focus - Example

Impact targets

Circularity Impact	*Environmental Impact*	*Social Impact*
(Optional, but recommended) The bank considered setting also a circular impact target for the residential buildings portfolio, but due to the lack of data, the bank ultimately decided to postpone target setting until the baseline can be established. *(Reaching out to a sample of clients, it started to gather data about raw material use and construction waste.)*	Mandatory Mortgage portfolio **EE target** for avarage primary energy consumption 290 kWh/m2 for **2026** and 200 kWh/m2 for **2033** (baseline 2022: 320 kWh/m2). The bank also set a **renewable energy production** target (solar and wind): 1250 MW installed capacity for **2026** and 2700 MW for **2033** (baseline 2022: 600 MW)	(Optional, but recommended) At least 3000 borrowers affected by energy poverty benefiting from retrofit loans by 2026, bringing down their energy cost/income ratio by 15pp (baseline 2022: avarage ratio is 40%)

Practice targets

Portfolio composition and financial flows

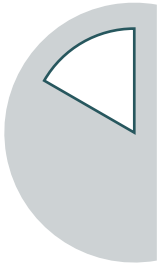
By **2026,** ensure that at least 30% of new mortgages meet the EU Taxonomies criteria.

Can be similar as in the case of climate targets

Client engagement

By **2024,** ensure that every year at least 5% of clients are advised about behavioral and renovation opportunities to improve energy efficiency and make their buildings more circular.

Wrapping up workshop 2#



Day 1

Why energy efficiency

PRB and Energy efficiency (EE)

Business opportunities: EE in industry sectors – EU Macro perspective

Focus on SMEs

Key EE regulations and policies for banking and EE

PRB target setting and implementation

Day 2

Financing energy efficiency

EE Underwriting toolkit

Energy efficiency target setting & implementation

EBRD case study

Energy efficiency target setting & implementation

Day 3

Financing renovations/new constructions in the buildings sector & Wrap up

Focus on buildings

Stimulate consumers' demand for energy efficiency investments

How to finance buildings energy efficiency? Commercial real estate focus

Putting the pieces together