



ENGAGE for ESG: a simple solution for ESG reporting

Thursday, 27 March 2025





Today's Speakers



Sergio Mayordomo
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European DataWarehouse

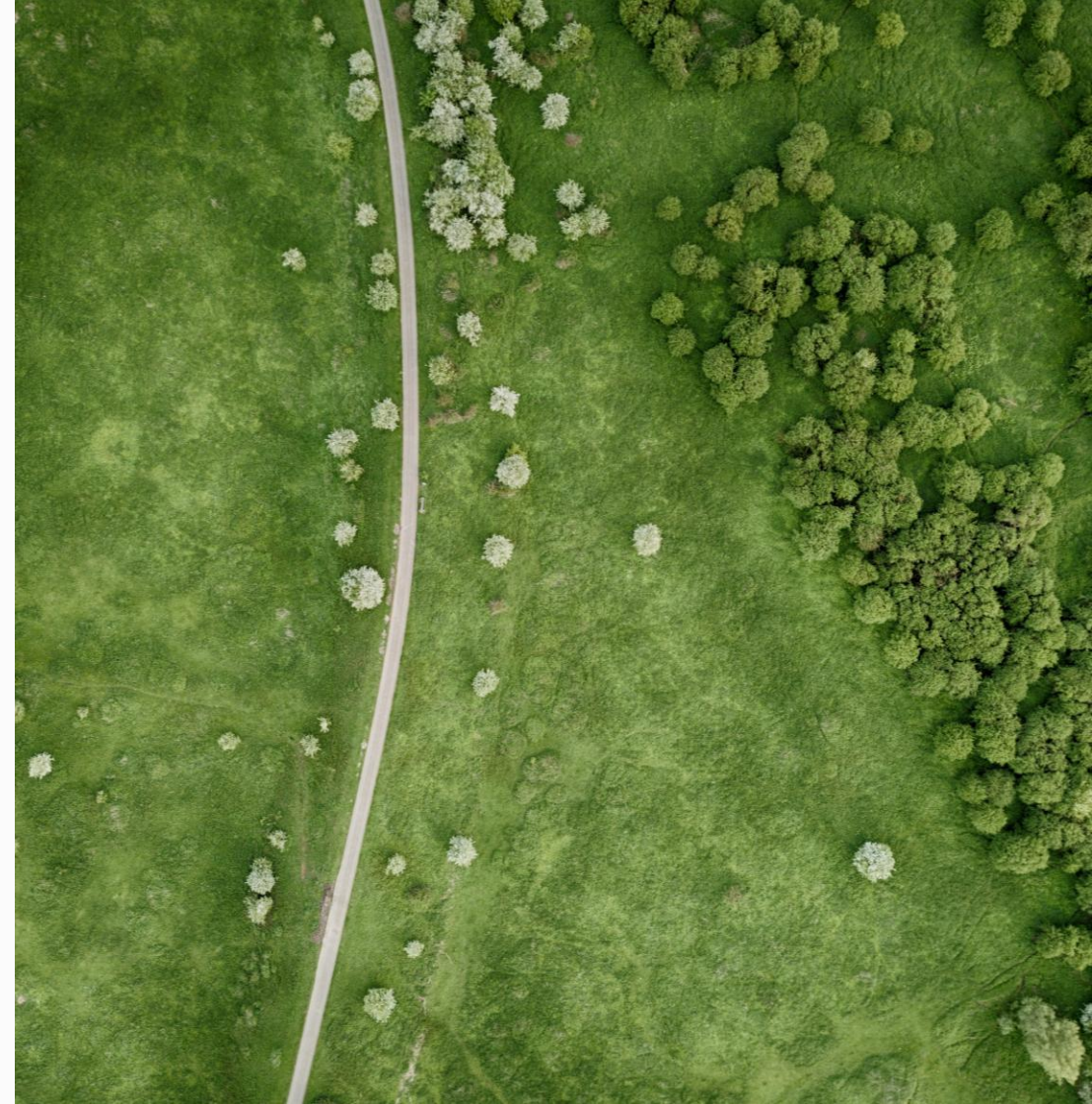


Gijs Verschuur
Business Analyst
Hypoport



Agenda

- I. Welcome and introduction
- II. Research Paper: “Climate Risk, Soft Information and Credit Supply”
- III. The ENGAGE Portal
- IV. What's next with the ENGAGE for ESG initiative





Welcome & Introduction

Maitane Puente González
European DataWarehouse





ENGAGE for ESG initiative

- Co-funded by the European Union with a LIFE grant
- **Duration:** 1 November 2022 – 31 October 2025
- Six consortium partners from across Europe
- **Scope:** ENGAGE for ESG aims to provide:
 - A. A **simple solution** for **ESG reporting**
 - B. For **mortgages** and **home renovation loans** to check **alignment** with:
 1. the **EU Taxonomy Regulation**;
 2. in compliance with the **Energy Performance of Buildings Directive**; and
 3. the **General Data Protection Regulation**.

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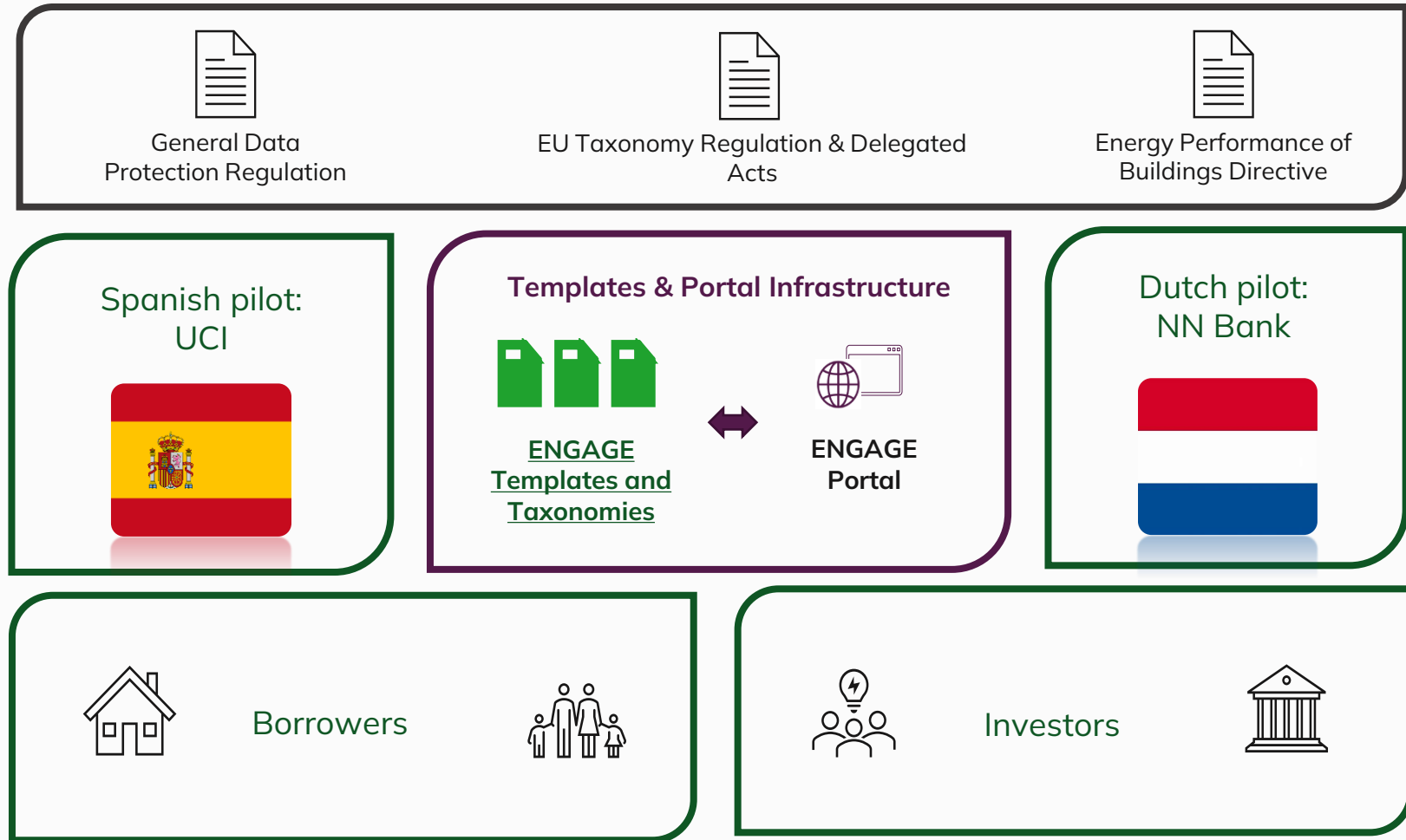
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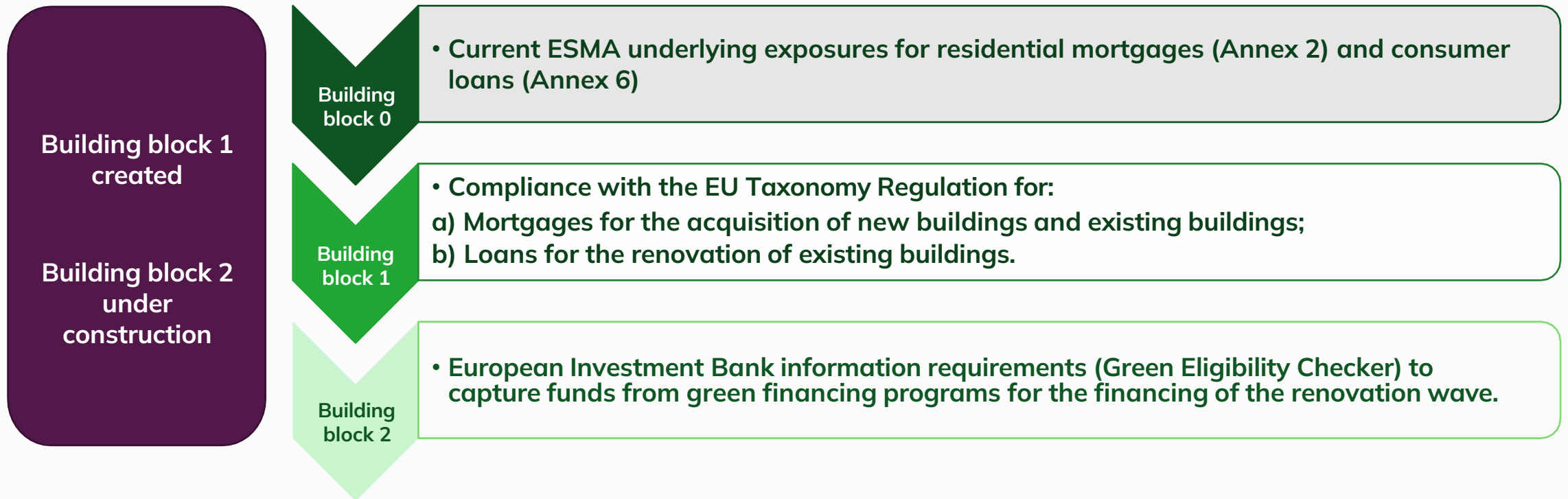
ENGAGE for ESG initiative description

Two main pillars:

1. A **disclosure template** for residential real estate data;
2. A **portal** to assess EU Taxonomy alignment.



The ENGAGE Templates: structure





Hellenic Financial Stability Fund Sustainability Report 2023

On 20 November 2024 the Hellenic Financial Stability Fund (HFSF) published its Sustainability Report for 2023.

The report covers the HFSF's ESG approach and its role in the banking sector of Greece, in particular, its role in strengthening the sustainable financing and climate transition of Greek banks.

In its report, the HFSF supports the ENGAGE for ESG initiative and urges Greek banks to join the initiative to support the increase of sustainable finance and promote better monitoring and measurement for banks' lending portfolios.



The full HFSF Sustainability Report 2023 is available at <https://hfsf.gr/en/hfsfs-esg-sustainability-report/>



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Research Paper: “Climate Risk, Soft Information and Credit Supply”

Sergio Mayordomo

Banco de España



Climate Risk, Soft Information, and Credit Supply

Laura Álvarez-Román (Banco de España)
Sergio Mayordomo (Banco de España)
Carles Vergara-Alert (IESE)
Xavier Vives (IESE)

2025 ENGAGE for ESG Webinar Series
27 March, 2025

Surge of high-intensity wildfires and climate change

- **High-intensity wildfires** are increasing in frequency and severity fostered by **climate change**
 - The duration of the wildfire season increased by 27% globally between 1979 and 2019 (Jonas et al., 2022).
- **Spain** is one of the countries most affected by wildfires in Europe (Costa et al., 2020).
 - Spain accounted for 40% of the EU territory consumed by forest fires in 2022.
- Wildfires have adverse effects on the **business activity**.
 - Drop in sales over assets of firms in affected areas of 7 pp (as compared to similar unaffected firms).

Wildfire risk is expected to increase significantly

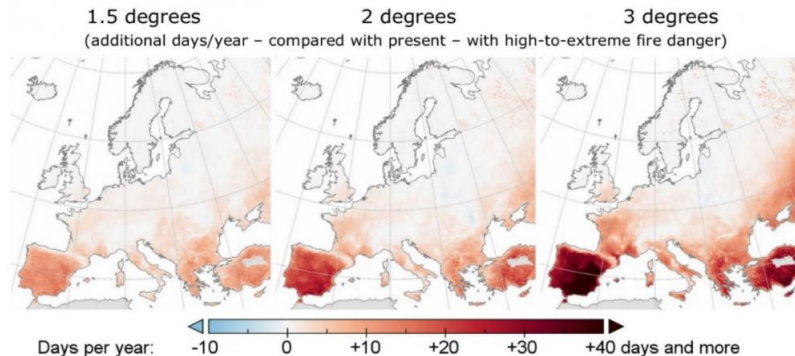


Figure: Additional days per year with high-to extreme fire danger for different levels of global warming compared to 1981-2010 (Feyen, L., et al. (2020))

- The projected increase in fire danger is strongest in southern European countries, where fires are already frequent and intense.

Research questions

- Do wildfires affect **bank lending**?
- Do **local banks** reduce lending to firms affected by a fire more or less than **outsider banks**?
- And to affected firms **in cases where soft information plays a critical role in lending decisions**?
- If local banks supply more credit post-fire to affected firms, do these lending practices increase their **risk exposure**?

Conceptual Framework

- **Portfolio allocation channel.**

- Outsider banks can reallocate capital away from disaster stricken areas.

- **Credit supply determinants.**

- Outsider banks are better equipped to absorb the financial shocks associated with climate disasters.

- **Soft information channel.**

- Soft information enables effective monitoring after climate disasters.
- Local banks can better monitor affected firms (lower physical distance).

Contribution to the literature

- We contribute to the literature that analyzes the role of **small or local banks** in maintaining the **supply of credit after natural disasters**.
 - See Chavaz (2016), Cortés y Strahan (2017), y Koetter, Noth, y Rehbein (2020).
- We find that the differential **use of soft information by local** and external banks significantly influences **credit allocation** after a climatic event.

Data

- **Firms' characteristics.** Banco de España's Central Balance Sheet Data Office (CBSDO) and SABI to obtain the geographical coordinates where each firm is located.
- **Corporate loan data.** Banco de España's Central Credit Register. Monthly data on all bank-firm relationships.
- **Wildfires.** CIVIO data on all fires in Spain with a burned area of at least 1 hectare from 2001 and 2017. We restrict the sample to those fires equal or larger than 500 hectares.

Our sample of wildfires

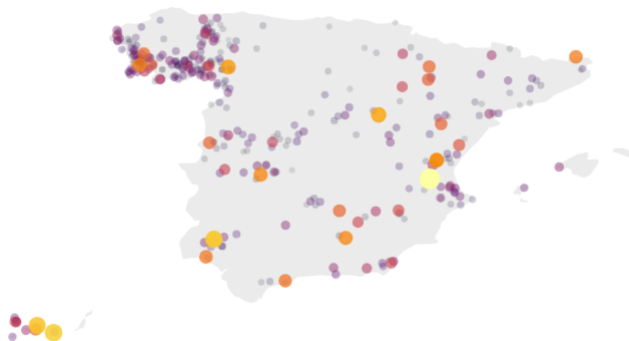


Figure: Map of Spain with the 337 wildfires larger or equal to 500 hectares during the period 2004-2017

Affected firms

Definition of affected and non-affected firms

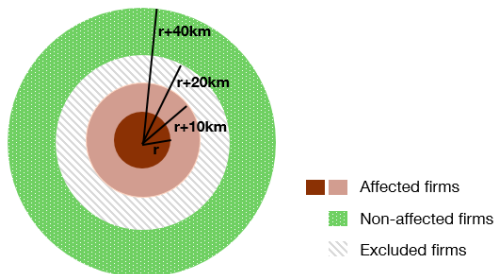


Table: Stats of firms affected and non-affected by fires (2004-2017)

	Affected firms		Non affected firms	
	Obs.	Mean	Obs.	Mean
Log (total assets)	54,317	5.8	423,342	5.9
ROA	54,317	-1.4	423,342	-1.5
Capital over total assets	54,317	14.7	423,342	14.4

Empirical strategy

- Econometric specification to disentangle credit supply provided by local banks to affected firms:

$$\Delta Credit_{f,b,t+1} = \beta PropCredit_{b,p,t-1} \times Fire_{f,t} + \gamma_{b,p,t} + \gamma_{f,t} + \epsilon_{f,b,t+1},$$

- $\Delta Credit_{f,b,t+1}$: log change in the amount of firm f 's credit with bank b between Dec of year $t - 1$ and Dec of year $t + 1$.
- $PropCredit_{b,p,t}$ is the fraction of bank b 's credit balance in province p where firm f is located, as of December of $t - 1$.
- $Fire_{f,t}$ is a dummy=1, if the firm is in the affected area.

Outline

- 1 Credit supply by local banks after fire
- 2 Credit supply by local banks after fire and soft information
- 3 Loan performance and employment in affected areas

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Credit growth after a fire

Hypothesis 1: *The amount of credit obtained by a given firm declines after a climate event.*

Dep. Var.:	(1) $\Delta Credit_{f,b,t+1}$	(2) $\Delta Credit_{f,b,t+1}$	(3) $\Delta Credit_{f,b,t-1}$	(4) Applications
Fire (10km)	-0.059* (0.032)		-0.005 (0.035)	-0.007 (0.008)
Fire (5km)		-0.065* (0.038)		
Fire (5km-10km)		-0.057* (0.033)		
Observations	444,772	444,772	356,621	43,983
R-squared	0.126	0.126	0.126	0.496
Firm controls	YES	YES	YES	YES
Ind.-Municipality-Size-Time FE	YES	YES	YES	YES

- $\Delta Credit_{f,t+1}$: log change in the amount of firm f 's outstanding credit between Dec of year $t - 1$ and Dec of year $t + 1$.
- $Fire_{f,t}$ is a dummy=1, if the firm is in the affected area.
- Col (4) based on loan applications.

Credit supply by local banks after a fire

Hypothesis 2: *Local banks reduce lending to firms to a significantly lesser extent than outsider banks.*

Dep. Var.: $\Delta Credit_{f,b,t+1}$	(1)	(2)	(3)	(4)
Prop Credit \times Fire	0.324*** (0.069)	0.358*** (0.071)	0.349*** (0.073)	0.308*** (0.066)
Bank Market Share \times Fire				0.210 (0.188)
Observations	664,960	663,481	653,201	664,960
R-squared	0.441	0.449	0.465	0.441
Firm-Time FE	YES	YES	YES	YES
Bank-Province-Time FE	YES	YES	NO	YES
Bank-Industry-Time FE	NO	YES	NO	NO
Bank-Industry-Province-Time FE	NO	NO	YES	NO

Credit supply by local banks after a fire depending on their lending opportunities to reallocate credit

*Local banks' credit supply to fire-affected firms is **not driven** by their **lack of lending opportunities** out of the affected area.*

Dep. Var.: $\Delta Credit_{f,b,t+1}$	(1) Sales Low LO	(2) Sales High LO	(3) GVA Low LO	(4) GVA High LO
Prop Credit \times Fire	0.468*** (0.084)	0.226** (0.087)	0.467*** (0.084)	0.227** (0.087)
Observations	119,854	545,092	116,442	548,506
R-squared	0.429	0.443	0.429	0.443
Firm-Time FE	YES	YES	YES	YES
Bank-Prov-Time FE	YES	YES	YES	YES

- Two groups based on **lending opportunities (LO)** in the province: Low if $LO_{p,t-1}$ is in the bottom quintile of the distribution and high if $LO_{p,t-1}$ is above the 20th percentile.

Credit supply by local banks. The role of other bank characteristics

*Only the **fraction of credit in a specific province** leads to a significant differential effect.*

Dep. Var.: $\Delta Credit_{i,b,t+1}$	(1)	(2)	(3)	(4)	(5)
Prop Credit \times Fire	0.324*** (0.069)	0.219*** (0.081)	0.290** (0.110)	0.328*** (0.091)	0.306** (0.118)
Fire		-0.082** (0.031)			
TA \times Fire			-0.007 (0.013)		-0.006 (0.023)
IRB \times Fire				0.003 (0.052)	0.015 (0.072)
Cap \times Fire					0.437 (0.621)
ROA \times Fire					-3.578 (8.245)
Observations	664,960	892,942	664,960	664,960	664,960
R-squared	0.441	0.146	0.441	0.441	0.441
Firm-Time FE	YES	NO	YES	YES	YES
Ind.-Municipality-Size-Time FE	NO	YES	NO	NO	NO
Bank-Province-Time FE	YES	YES	YES	YES	YES

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Credit supply by local banks after a fire and relationship lending

Hypothesis 2 (cont'd): *Local banks provide more credit to firms with **stronger relationships** but also lend to affected firms without prior relationships (credit supply due to **soft information** rather than **evergreening**).*

Dep. Var.:	$\Delta L_{f,b,t+1}$			Dummy $L_{f,b,t-1} > 0$
	(1)	(2)	(3)	(4)
	All	Low	High	All
		rel. lending	rel. lending	
LocalBank \times Fire	0.324*** (0.069)	0.136 (0.101)	0.214** (0.088)	-0.033** (0.016)
Observations	664,960	288,031	181,891	208,577
R-squared	0.441	0.509	0.608	0.502
Firm-Time FE	YES	YES	YES	YES
Bank-Province-Time FE	YES	YES	YES	YES

Credit supply by local banks firms without previous bank debt

*The soft information is further confirmed when we study credit supply by local banks to **firms without previous bank debt**.*

Dep. Var.: $\Delta Credit_{f,b,t+1}$	(1) All	(2) Distressed	(3) Non-distr.
Prop Credit \times Fire	0.220** (0.092)	-0.439 (0.454)	0.227** (0.113)
Observations	55,950	3,389	49,904
R-squared	0.361	0.464	0.367
Ind.-Municipality-Size-Time FE	YES	YES	YES
Bank-Province-Time FE	YES	YES	YES

- This table considers only firms that had no bank debt in year $t - 1$ and that applied for it in either year t or $t + 1$

Credit supply by local banks to opaquer firms after a fire

Hypothesis 2 (cont'd): *Local banks lend significantly more to opaque firms than outside banks.*

Dep. Var.: $\Delta Credit_{f,b,t+1}$	(1) All	(2) More opaque	(3) Less opaque
Prop Credit \times Fire	0.301*** (0.077)	0.382** (0.163)	0.247 (0.196)
Observations	590,683	114,001	117,853
R-squared	0.427	0.453	0.470
Firm-Time FE	YES	YES	YES
Bank-Province-Time FE	YES	YES	YES
Relative Economic Effect	0.019	0.024	0.015

- Opacity based on **accruals**: the higher the accruals the worse the quality of income reporting.
- Credit supply of local banks flows to **more opaque but non-distressed** firms (no misallocation) [▶ go to](#)

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Quality deterioration of loans granted by local banks

Hypothesis 3: *Local banks do not take more risk after a climate shock.*

Dep. Var.: $NPL_{b,m,i,t+2}$	(1)	(2)
Prop Credit	-0.022 (0.052)	-0.049 (0.515)
Observations	5,459	5,304
R-squared	0.397	0.449
Avg Firm controls	YES	YES
Ind-Municipality-Time FE	YES	YES
Bank-Time FE	YES	YES
Bank-Province FE	NO	YES

- We consider only the firm-bank pairs featuring no credit relationship before the fire.
- We compare the proportion of doubtful plus non-performing loans (NPL) at $t + 2$ of banks to firms in areas affected by a fire depending on the concentration of their credit in the corresponding province.

Contribution of local banks to mitigate the negative consequences of fires on firms' employment

Hypothesis 4: *Employment in fire-affected areas served by local banks does not decrease significantly after a fire.*

Dep. Var.: $\Delta Employment_{f,t+2}$	(1) All	(2) Local banks > 90%	(3) Non-local banks > 90%
Fire	-0.013* (0.007)	-0.006 (0.012)	-0.018* (0.010)
Observations	466,455	206,297	260,158
R-squared	0.136	0.119	0.150
Firm controls	YES	YES	YES
Ind.-Municipality-Size-Time FE	YES	YES	YES

- Dependent var.: Growth of the average number of employees at the firm level between $t - 1$ and year $t + 2$.
- Cols (2)-(3): Local banks defined as those with more than 90% of its credit balance in the province where the firm is located.

Conclusions

- The main **mechanism affecting bank credit allocation after a wildfire** is different access to information (soft vs hard) by local and outsider banks in their lending decisions.
- The access to **soft information** allows **local banks** to limit their lending less without incurring greater risk.
- Our results suggest that local banks play a critical **role in mitigating the effects of climate shocks in the economy**.

THANKS FOR YOUR ATTENTION

Credit supply by local banks after a fire. Alternative samples I

Dep. Var.: $\Delta Credit_{t,b,t+1}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Prop Credit \times Fire	0.324*** (0.069)	0.333*** (0.079)	0.368*** (0.085)	0.204** (0.093)	0.357*** (0.077)	0.351*** (0.100)	0.280** (0.133)
Observations	664,960	602,081	386,420	249,815	584,866	447,554	215,373
R-squared	0.441	0.437	0.452	0.449	0.450	0.428	0.494
Firm-Time FE	YES	YES	YES	YES	YES	YES	YES
Bank-Province-Time FE	YES	YES	YES	YES	YES	YES	YES

- (1) Same as column (1) in hypothesis 2 table for comparability reasons.
- (2) Affected firms restricted to first-time fire-damaged firms.
- (3) Only firms the first year that they appear in the sample.
- (4) Control group: radius +10km to +20km (instead of +20km to +40km).
- (5) Firms that have not received subsidies in t and $t + 1$.
- Include firms with ratio of tangible assets over TA below (6) and above (7) the median ratio each year.

Credit supply by local banks after a fire. Alternative samples II

Dep. Var.: $\Delta Credit_{f,b,t+1}$	(8)	(9)	(10)	(11)	(12)
Prop Credit \times Fire	0.320*** (0.113)	0.213*** (0.078)	0.423*** (0.139)	0.284*** (0.061)	0.486*** (0.109)
Observations	472,517	343,486	315,683	462,978	149,405
R-squared	0.465	0.434	0.457	0.471	0.389
Firm-Time FE	YES	YES	YES	YES	YES
Bank-Province-Time FE	YES	YES	YES	YES	YES

- Column (8) excluding firms that had credit with any type of guarantee.
- Column (9) based on firms located in municipalities with low probability of wildfires whereas column (10) is obtained using municipalities with higher probability.
- Column (11) includes the less strategic firms (based on their employment relative to total employment in the province) whereas column (12) considers more strategic firms.

Credit supply by local banks to opaquer and distressed firms after a fire

Dep. Var.: $\Delta Credit_{f,b,t+1}$	(1)	(2)	(3)	(4)	(5)	(6)
	More opaq All	More opaq Distressed	More opaq Non-distr.	Red. quest All	Red. quest Distressed	Red. quest Non-distr.
Prop Credit \times Fire	0.382** (0.163)	0.152 (0.313)	0.424*** (0.157)	0.332*** (0.064)	0.317 (0.243)	0.334*** (0.081)
Observations	114,001	12,351	100,316	608,003	62,856	543,307
R-squared	0.453	0.584	0.447	0.451	0.561	0.442
Firm-Time FE	YES	YES	YES	YES	YES	YES
Bank-Province-Time FE	YES	YES	YES	YES	YES	YES

- Opaque firms are split in distressed (**negative equity**) vs. non-distressed [◀ return](#)



The ENGAGE Portal

Gijs Verschuur

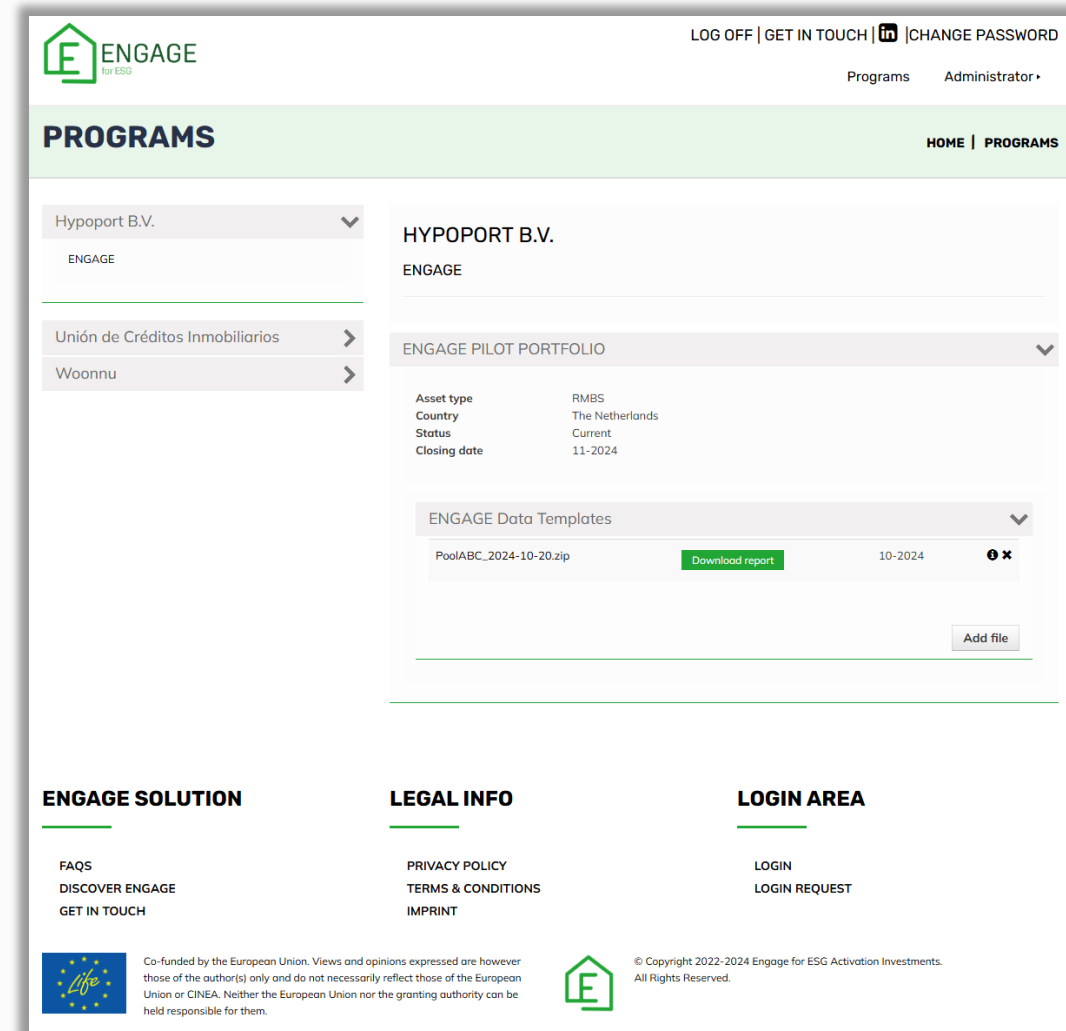
Hypoport





The ENGAGE Portal

- The ENGAGE Portal will enable lending institutions to **upload and assess the alignment of their loan portfolios with the EU Taxonomy**.
- The Portal incorporates detailed **loan** and **collateral level checks**.
- Access to multiple stakeholders (internal reporting, rating agencies, investors, regulatory supervisors, etc.) upon invitation.
- The ENGAGE Portal will enable users to assess multiple portfolios based on the EU Taxonomy.
- The Portal output is twofold:
 1. The **data quality feedback**;
 2. The **EU Taxonomy alignment report**.
- **Trial access** available subject to a standard legal arrangement (available upon request).





ENGAGE Portal output: data quality report (1/2)

Rule Description	Number of Fails
Primary Energy Demand (PED) of the building (EREC14) equal to ND5 when Nearly zero-energy building (NZEB) threshold (EREC18) populated	34,720
Top15_Explanatory Variable (EREC22) equal to ND5 when Building unit in top-15% indicator (EREC21) is equal to 'Yes'	8,999
Top15_Object Reference Value (EREC23) equal to ND5 when Building unit in top-15% indicator (EREC21) is equal to 'Yes'	8,999
Issuance date of most recent available Energy Performance Certificate (EPC) registration (EREC9) earlier than Construction Year (EREC5)	2,711
Construction Year (EREC5) earlier than the Date of the Construction permit application date (EREC6)	1,368
Construction Year (EREC5) earlier than or equal to 1900-01-01	980
Estimated or officially produced Primary Energy Demand (EREC15) equal to ND5 when General Activity Designation (EREC4) is equal to 'Construction of new buildings'	677
Primary Energy Demand (PED) of the building (EREC14) equal to ND5 when General Activity Designation (EREC4) is equal to 'Construction of new buildings'	677
Issuance date of most recent available Energy Performance Certificate (EPC) registration (EREC9) earlier than Construction permit application date (EREC6)	47
Building unit in top-15% indicator (EREC21) is equal to 'Yes' when Construction permit application date (EREC6) after 31 December 2020	7


Data quality report output by single position



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ENGAGE Portal output: EU Taxonomy alignment report (2/2)



Portfolio Name

Portfolio Date (DD-MM-YY)

1300

1100

€444,600,000.00

0.00%

Example Portfolio 2024

01-08-2024

TSC assessment*

SCC (check passed)

of loans

of Building Units

Balance

DNSH* (check) passed

of loans

of Building Units

Balance

TSC Passed (SCC + DNSH)

of loans

of Building Units

Balance

TSC pass Total Portfolio

SCC (check passed)

% of all loans

% of total Building units

% of total Balance

DNSH (check) passed

% of total loans

% of total Building units

% of total Balance

TSC Passed (SCC + DNSH)

% of total loans

% of total Building units

% of total Balance

Section

Economic Activity

Subsection

7.1

Construction of new buildings

7.2(1)

7.2(2)

Renovation of existing buildings

Major Renovations

Reduction of (net) Primary Energy Demand

7.3

7.4

7.5

7.6

Installation, maintenance and repair of energy efficiency equipment

Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)

Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings

Installation, maintenance and repair of renewable energy technologies

7.7(1)

7.7(1a)

7.7(2)

Acquisition and ownership of buildings

Buildings built before 31 December 2020: building has at least an Energy Performance Certificate (EPC) class A.

Buildings built before 31 December 2020 - Alternative: building is within Top 15%

Buildings built after 31 December 2020

Total


First overview of the ENGAGE – EU Taxonomy alignment report. Portraying a breakdown of Technical Screening Criteria assessment as per economic (sub) activity




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The gate to the ENGAGE Portal





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HOME | LOGIN

LOGIN TO YOUR ACCOUNT

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 Password

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ENGAGE SOLUTION

FAQS

DISCOVER ENGAGE

GET IN TOUCH

LEGAL INFO

PRIVACY POLICY


TERMS & CONDITIONS

IMPRINT


LOGIN AREA

LOGIN

LOGIN REQUEST



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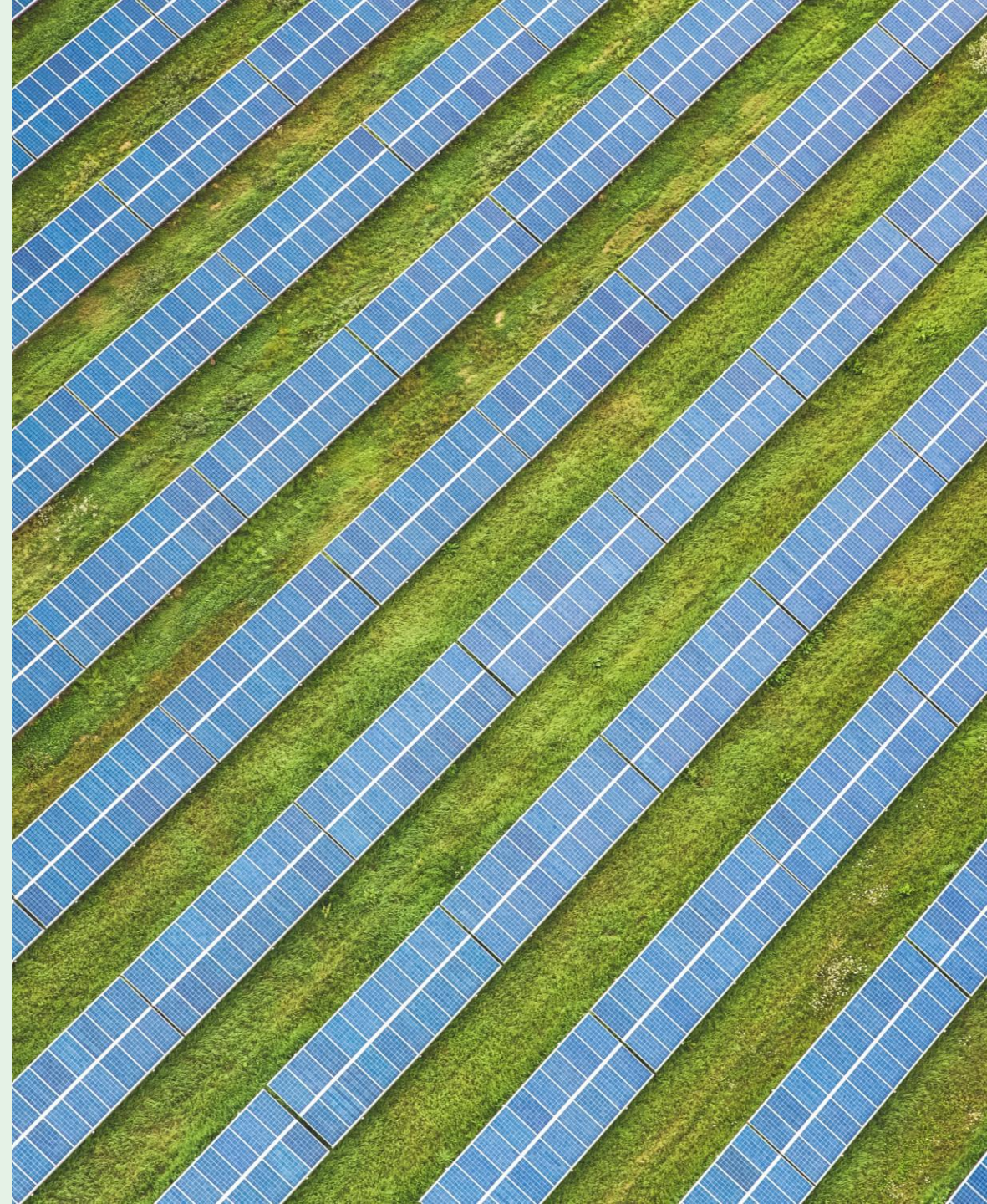


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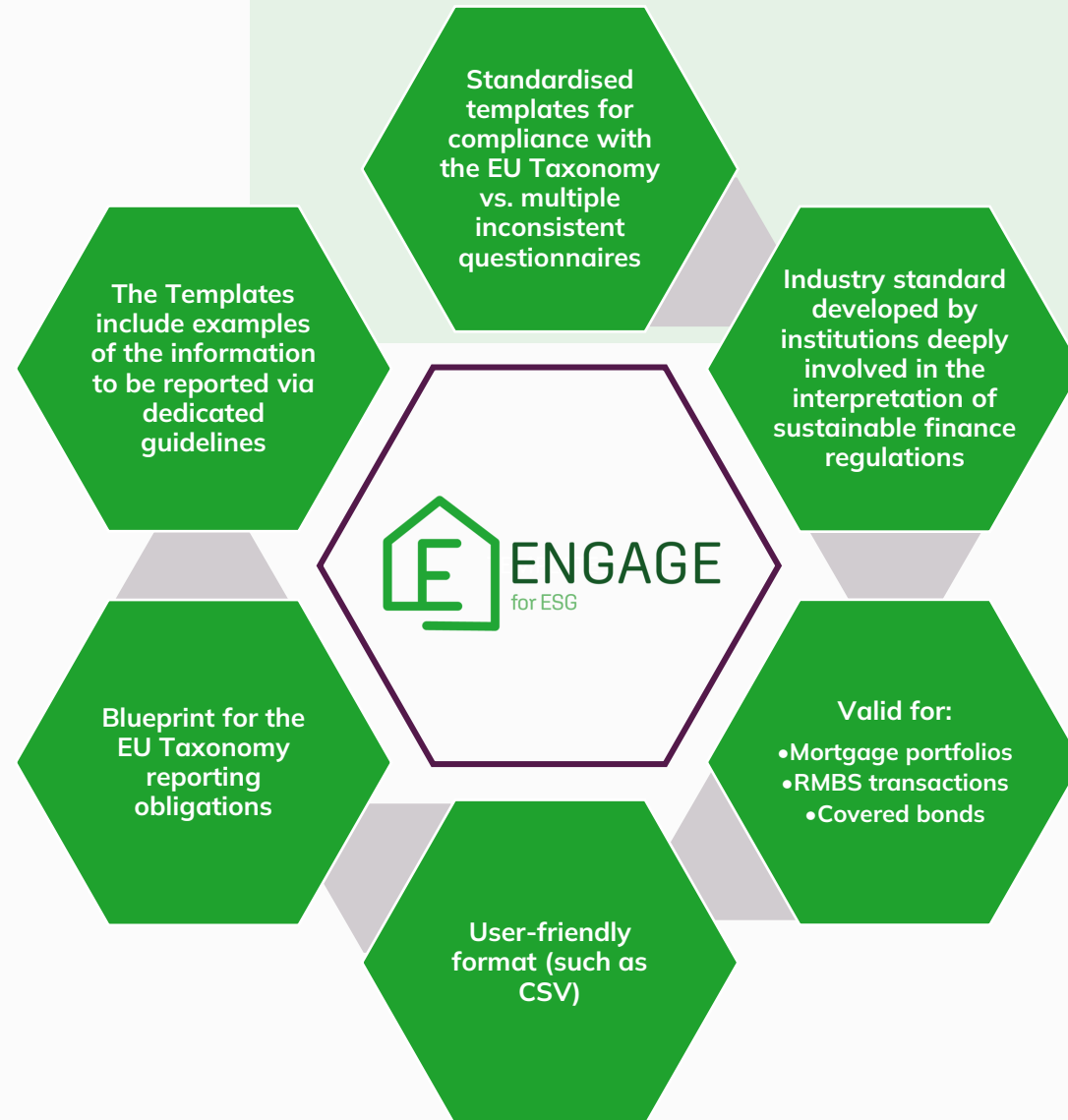
What' next with **ENGAGE** for ESG

Maitane Puente González
European DataWarehouse



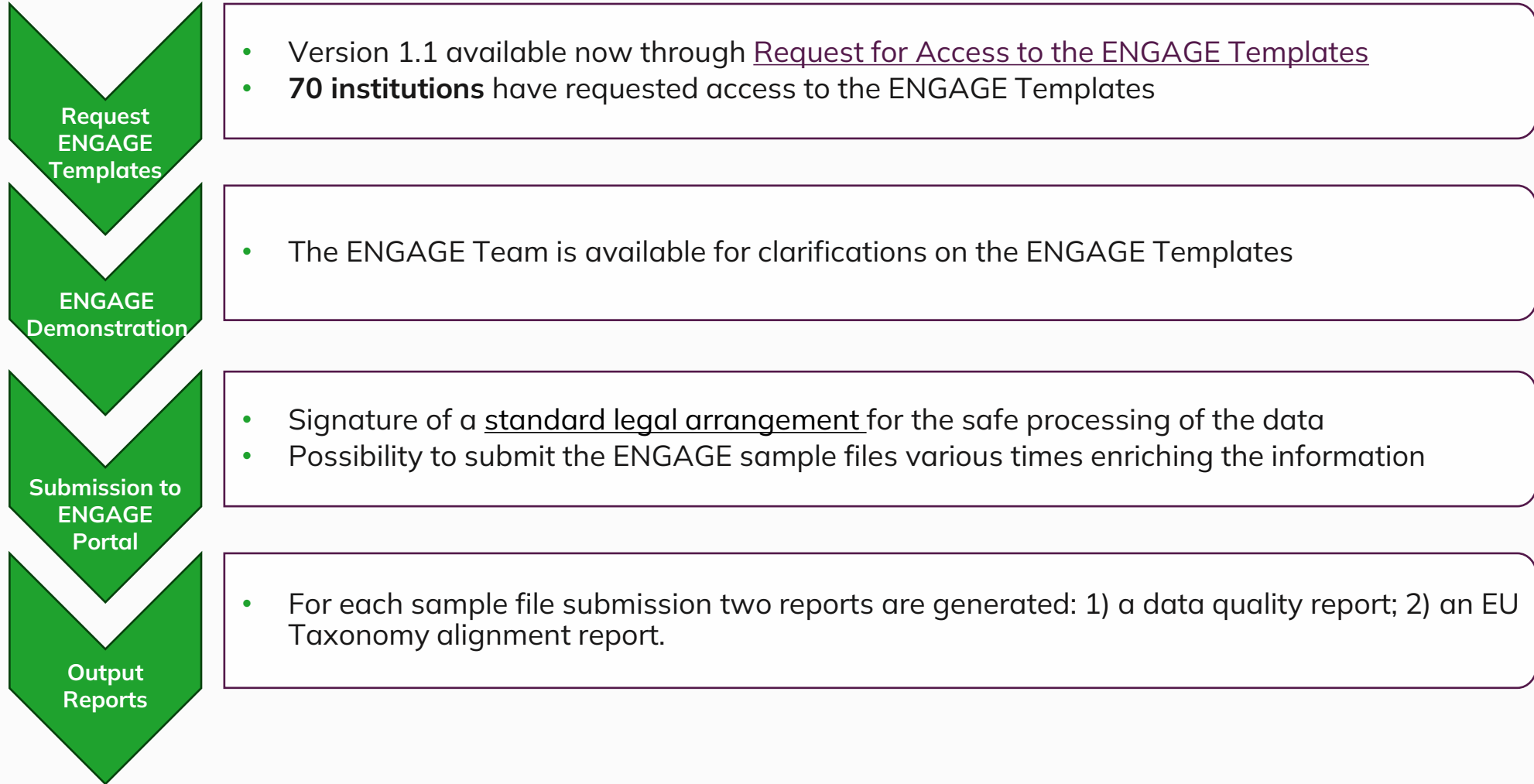


Why become a Trial User via the Portal





Free ENGAGE trial period until October 2025





Upcoming Events

Upcoming In-Person Events:

- Tendencias hacia la simplificación del reporting de sostenibilidad: la solución ENGAGE for ESG – Madrid, 7 May 2025. Register now [here](#)!

Upcoming ENGAGE Webinars:



Register here: [2025 ENGAGE Webinar Series: Session IV – ENGAGE4ESG](#)



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Website:

engage4esg.eurodw.eu/

Social Media:

<https://www.linkedin.com/company/engage-for-esg-activation-investments/>



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