

D2.2 - The role of Financing and Investment Entities to reduce the climate resilience gap

Guidance document

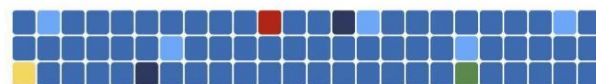
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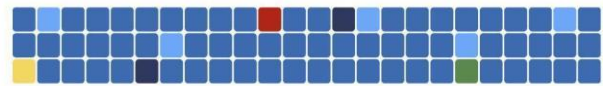
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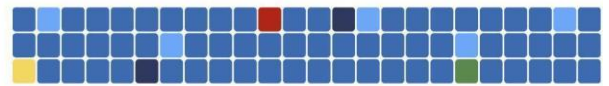
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ABSTRACT

The widening global adaptation finance gap requires a structural shift in how physical climate risks are assessed and managed within the financial system. This guidance document explores the evolving role of Financing and Investment Entities (FIEs) in mobilizing private capital for climate resilience. Drawing on the outcome of a comprehensive capacity-building series with public and private stakeholders, the report dissects the regulatory, economic, and structural barriers inhibiting adaptation investments. It argues that FIEs must transition from being passive capital allocators to active co-creators of bankable projects by engaging upstream with public authorities and bridging the data language disconnect between scientific hazard models and financial materiality.



EXECUTIVE SUMMARY

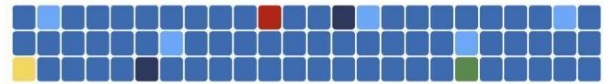
The escalating frequency and severity of climate-induced hazards pose systemic threats to global economic and financial stability. Despite this macroeconomic reality, a profound structural shortfall persists in how the global economy prepares for physical climate risks, resulting in a widening adaptation finance gap. This guidance document, developed within the framework of the CLIMATEFIT project, articulates the critical role of Financing and Investment Entities (FIEs) in closing this deficit. It provides a strategic blueprint to transition climate adaptation from a peripheral philanthropic endeavour into a core component of robust risk management and long-term value preservation.

The report synthesizes insights derived from a comprehensive capacity-building series involving financial market operators, public authorities, and other stakeholders active in the field of adaptation finance. The initial phase established the foundational imperative, confirming that **physical climate risks are material financial risks**. It underscored the necessity for FIEs to abandon static, backward-looking models in favour of integrating **forward-looking climate scenarios** into their stress-testing frameworks to prevent the mispricing of capital and the accumulation of stranded assets. The subsequent phase dissected the operational mechanics of capital deployment, highlighting that the fragmentation of adaptation interventions constitutes a primary barrier to institutional investment. Consequently, FIEs should embrace **aggregation models**, shifting from isolated project-by-project funding to programmatic financing vehicles capable of reaching requisite market scales.

Further thematic deep-dives drilled into regulatory, economic, and structural friction points. They revealed that regulatory compliance is rapidly evolving into an active determinant of capital cost. However, a pervasive challenge remains the **"data language disconnect"** between scientific hazard models and financial materiality, which FIEs must actively bridge to accurately value resilience. Furthermore, discussions confirmed a persistent misalignment between the high societal value of adaptation and the frequently low financial returns for private capital. Overcoming this viability gap requires the deliberate engineering of bankability through **innovative financial instruments** and the strategic allocation of risk between public and private sectors.

Synthesizing these lessons, the deliverable posits that FIEs must undergo a systemic organizational paradigm shift; bankable adaptation projects rarely materialize ready-made on the market. Therefore, financial market operators must transition from passive capital allocators to **active co-creators of climate resilience**. This entails engaging upstream with public authorities during the earliest phases of project design to ensure that technical specifications and revenue models align with commercial investment criteria.

To operationalize this transition, the report consolidates its findings into five core strategic recommendations. First, FIEs are advised to **recognize and value the full spectrum of adaptation benefits**, internalizing the "triple dividend" of resilience (avoided losses, induced economic benefits, and social co-benefits) to accurately reflect project viability. Second, they need to **strengthen upstream engagement** with public authorities and corporate counterparties to proactively structure investable pipelines. Third, FIEs should **mainstream physical risk assessments** into overarching asset allocation and credit



underwriting processes, effectively penalizing inaction and rewarding adaptive capacity. Fourth, financial institutions should **build dedicated internal capacity and governance structures**, embedding climate risk oversight directly into risk and investment committees. Finally, FIEs can actively **leverage public funding and blended finance** structures to absorb early-stage risks, combining these instruments with aggregation platforms to scale private capital deployment efficiently.

Ultimately, this document aims to demonstrate that by addressing informational barriers, innovating product design, and fostering robust public-private collaboration, financial institutions can successfully translate the clear **economic case** for adaptation into a concrete **financial case**.

1. INTRODUCTION

Purpose and relevance

The purpose of this guidance document (D2.2) is to provide actionable insights into the role of Financing and Investing Entities (FIEs)¹ in bridging the significant climate adaptation financing gap. It builds on the outcomes of the CLIMATEFIT training series under T2.2, which was designed to address the needs and challenges identified in D1.1, Adaptation Investment Landscape (AIL). D1.1 provided a comprehensive overview of the adaptation finance landscape, highlighting key enabling factors and barriers and incorporating the perspectives of FIEs through a series of in-depth interviews. Using the findings from D1.1 as a foundation, the training sessions were structured (1) to equip FIEs with the knowledge, tools, and strategies necessary to overcome barriers and leverage opportunities in adaptation finance and (2) to raise awareness on the important role that the private sector should play (together with the public sector) to overcome the resilience financing gap. This guidance document synthesizes the outcomes of those sessions, drawing on their content and insights, trying to provide recommendations for scaling climate-resilient investments. The document aims to inform and empower FIEs by presenting practical strategies for navigating regulatory landscapes, accessing innovative financial mechanisms, and collaborating effectively with public authorities (PAs).

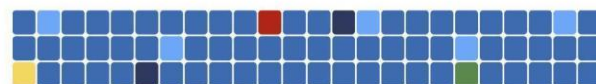
Overview of the climate resilience financing gap and the role of FIEs

The global adaptation finance gap, estimated at **US\$310-365 billion annually**, underscores the urgent need to scale up investments in climate resilience (UNEP, 2025). While public finance has been instrumental in addressing certain adaptation challenges, it is increasingly evident that private sector involvement is critical to closing this gap. A significant portion of adaptation needs (approximately one-fourth of modeled costs) falls within sectors which hold considerable potential for private financing, like agriculture, water management, and infrastructure (UNEP 2025a; see also CPI 2025a). However, even in these areas, public finance needs to play a crucial role in de-risking investments and creating enabling environments for private sector engagement.

Drawing upon CLIMATEFIT's research activities, particularly the analysis of the AIL (D1.1), several enabling factors that can catalyze private sector engagement in adaptation have been identified. These include the **emergence of sustainable financial instruments** (such as green bonds, insurance linked instruments) and **blended finance models**, alongside an **enabling regulatory environment** that should frame adaptation as a strategy for risk management and asset alignment.

On the other hand, significant barriers persist. Many financial market operators involved in CLIMATEFIT's activities expressly cited the **absence of a stable and comprehensive policy framework** as a main barrier to investments. Under this perspective, regulatory

¹ FIEs have been defined in CLIMATEFIT's glossary as any "[o]rganisation or stakeholder that enable or do the provision of any type of funding and financing solutions for climate adaptation". In other words, the term refers to 'traditional' financial institutions (e.g.: banks, insurances, pension funds), but also comprehend other organization that can mobilize capital for climate adaptation (e.g.: NGOs and philanthropic foundations),



frameworks function as a double-edged sword: while binding regulations drive investment, their rapid evolution and instability are frequently seen as major impediments to long-term capital deployment.² Another key barrier is the **lack of technical expertise** among FIEs in assessing and financing adaptation projects, coupled with difficulties in quantifying their economic or monetary benefits. Indeed, adaptation (co-)benefits often materialize as “avoided costs” or non-monetary public goods, complicating the calculation of risk-adjusted returns.

A fundamental difference also exists between the objectives of Public Authorities (PAs) and FIEs, creating a structural friction. While PAs prioritize social welfare and public goods, FIEs require clear commercial returns, often favoring mitigation over adaptation investments because mitigation projects generally offer more predictable revenue streams. Addressing this disconnect requires a coordinated approach that aligns public resilience goals with private investment logic, a central challenge that the CLIMATEFIT training series sought to address.

Structure of the deliverable

Recognizing the critical role of private finance in closing the adaptation finance gap, this deliverable translates the insights and outcomes of the CLIMATEFIT training series into guidance document for adaptation investments.³

Following this introduction, Chapter 2 constitutes the core of the deliverable, providing an analysis of the outcomes and lessons learnt from the capacity-building activities. Building upon these findings, Chapter 3 presents the recommendations for financial market operators, designed to help them unlock private capital for climate adaptation. Chapter 4 offers some final remarks, summarizing the overarching conclusions on the evolving role of FIEs in adaptation.

² In D1.1 interviews, representatives from FIEs explicitly identified the regulatory framework as both a driver and a barrier. Indeed, on the one hand a more stringent legislation (in particular on disclosure) has been mentioned as one of the strongest enablers for investing in adaptation, on the other hand regulatory instability was framed in itself as a primary barrier to capital deployment.

³ While the methodology and the descriptive list of topics addressed in each of the training activities have been presented in detail in “D2.1 – Capacity building package for PA and for FIEs”, the document at hand will reflect on the outcomes of the sessions.

2. TRAININGS: CONTENT AND LESSONS LEARNT

The training series for FIEs has been designed to address the barriers and specific market needs identified in D1.1. It was structured in four blocks (1st, 2nd, 3rd, and 4th level) intended to facilitate a progressive deepening of expertise. The scope of these activities evolved from raising high-level awareness regarding physical climate risks to conducting technical deep dives into regulatory compliance, instrument design, and the bankability of adaptation projects. The overarching objective was to equip financial market operators with the knowledge and tools necessary to bridge the gap between public resilience goals and private capital deployment.

This chapter will synthesize the knowledge and insights developed across the four-level training sessions. The report on each training level is organized into two subsections: (1) an introductory outline of the specific objectives and scope of the session; (2) Content, outcomes, and lessons learned: the analysis of the topics discussed. Chapter 2 documents the progression of the discourse, illustrating how the focus shifted from the conceptual framing of climate change as a source of structural economic change towards more practical strategies.

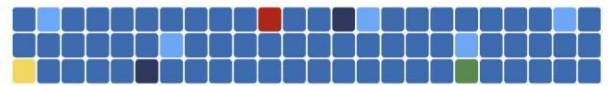
2.1. 1st Level training

The 1st level training aimed to establish a shared conceptual framework and a common language on adaptation. The session marked the first public presentation of the CLIMATEFIT project. It was conceived as an initial step towards bridging the gap between PAs, final owners of climate risks and directly experiencing the impacts of climate change, and FIEs, which control the capital necessary to implement and scale investments in adaptation projects.

The session transitioned the discourse from an environmental or scientific understanding of climate change toward a financial and economic interpretation. In line with perspectives advanced by central banks and financial supervisors (e.g. NGFS, 2019), climate change was presented as a driver of structural transformation within the economy and the financial system. This framing was instrumental in setting adaptation finance not as compliance-driven activity, but as a component of private investors' long-term risk management and financial strategies.

Content, outcomes, and lessons learned

Climate risk as a financial materiality One of the central themes of the training was the reconceptualization of physical climate risks as material financial risks. The discussions drew extensively on data from the European Climate Risk Assessment - EUCRA (EEA, 2024). Participants engaged with the reality that Europe is the fastest-warming continent, a fact that has profound implications for the stability of key economic sectors such as infrastructure, agriculture, and real estate (see among others EEA 2026 and NGFS, 2020). The training highlighted that climate risks are not spatially uniform; they are highly territorial and context specific. This creates a specific challenge for **financial institutions accustomed to standardized risk models**. The main takeaway from this section of the training was the following consideration: FIEs can no longer rely on backward-looking risk assessments based on historical weather patterns. Instead, forward-looking scenarios

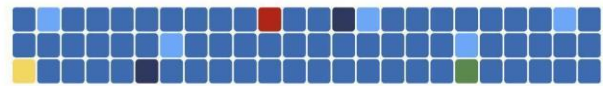


must be integrated into due diligence processes to prevent the mispricing of assets and the accumulation of stranded assets⁴ in portfolios.

Financing adaptation vs. mitigation The training clarified the **financial distinctions** between mitigation and adaptation. Unlike mitigation, which is global in impact, adaptation has a local impact. This localization implies that adaptation investments are often smaller, fragmented, and harder to aggregate into the large ticket sizes preferred by institutional investors. Discussions pointed to the necessity of **aggregation mechanisms** to attract institutional capital (the issue was tackled also during the discussion of the 2nd and 3rd level training – see Boxes 4-5 and pp. 13-14-15).

The economic rationale: cost of inaction vs. resilience dividend The session also addressed the prevailing misconception that adaptation is solely a cost center. Discussions emphasized the high **cost of inaction**, illustrating that early **investments in adaptation are significantly more cost-effective than post-disaster recovery** (on the matter see also World Bank 2024, WEF 2024 and CPI 2024). However, critical points of divergence emerged both regarding the time horizons and the practical quantification of these benefits. While the macroeconomic case for adaptation is clear – delivering significantly high benefit-cost ratios (see among others WRI 2025) – the capture of these benefits by private investors remains complex. While mitigation projects (e.g., renewable energy) often generate clear cash flows (through energy sales), adaptation projects frequently generate value through “avoided costs” (e.g., avoided flood damage) or improved public goods (e.g., improved ecosystem services), which cannot be easily monetized. The lesson learned here is that “bankability” in adaptation requires new methodologies to monetize the avoided costs.

⁴ Stranded assets are investments, infrastructure, or natural resources that lose their economic value prematurely due to shifts in market demand, regulatory changes, or environmental factors. In the scenario of the transition to a low-carbon economy not only companies extracting coal, oil and gas could be affected by stranded assets, but also sector based on the consumption of fossil fuels could be heavily affected (e.g.: the fast growing and energy consuming AI industry, and the transport sector).



Box 1: The triple dividend of resilience

Traditional financial assessments often undervalue adaptation by focusing solely on avoided losses (the first dividend). The Triple Dividend of Resilience (TDR) framework, developed by the World Resources Institute (WRI), argues that robust adaptation investments generate three distinct types of benefits:

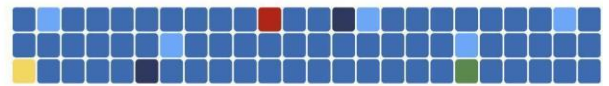
1. **Avoided losses:** the prevention of damage to assets, lives, and livelihoods when climate shocks occur.
2. **Induced economic benefits:** positive economic gains that accrue regardless of whether the specific disaster happens. By reducing background risk, these investments stimulate economic activity, innovation, and productivity.
3. **Social and environmental benefits:** “Co-benefits” such as carbon sequestration, biodiversity conservation, and improved public health.

The WRI analysis of 320 adaptation investments across 12 countries reveals that the value of the second and third dividends is often double that of the first. Overall, these projects demonstrated an average ROI of 27%, with \$1 invested yielding over \$10 in total benefits. For FIEs, adopting the TDR framework is essential to identify “no-regret” investments where the business case holds strong even in the absence of immediate climate extremes.

Regulatory landscape The training provided also an overview of the EU Taxonomy, the Corporate Sustainability Reporting Directive (CSRD), the Sustainable Finance Disclosure Regulation (SFDR) and the EU Green Bond Standard Regulation (EU GBS). The discussion underscored that regulatory compliance should be viewed not just as a reporting burden, but as a strategic tool to identify resilient assets that may outperform non-adapted peers in the long term.

To interpret the outcomes of this section of the training correctly, it is essential to highlight that at the time of the 1st level training (May 2024), the “Omnibus” simplification package⁵, which was subsequently proposed in early 2025, aiming to reduce administrative burden, simplify EU rules, boost competitiveness, and unlock additional investment capacity – and ending up significantly narrowing the scope of reporting obligations – had not yet been introduced. The main aspect that is worth highlighting is that the training framed **regulatory instability**, in itself, as a primary barrier to capital deployment. The rapid rate of policy evolution was already creating a perception of instability that hampered long-term decision-making. The key takeaway is that the lack of a stable, predictable policy framework creates uncertainty, making it difficult to model risk-adjusted returns over the long-time horizons required for adaptation projects.

⁵ The main changes related to the adoption of the Omnibus simplification package will be briefly presented in a dedicated box in the next sections (Box 8).



Box 2: The EU sustainable finance framework as a driver for adaptation

The EU Sustainable Finance Framework – comprising the EU Taxonomy, the Corporate Sustainability Reporting Directive (CSRD), and the Sustainable Finance Disclosure Regulation (SFDR) – establishes a comprehensive ecosystem designed to reorient capital flows towards climate resilience.

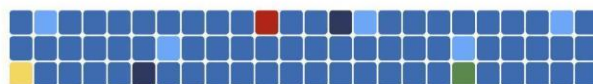
The **EU Taxonomy** serves as the cornerstone, providing a classification system for sustainable economic activities. It defines which economic activities make a “substantial contribution” to climate adaptation while doing “no significant harm” to other environmental objectives. By establishing technical screening criteria, it offers investors a “common language” to identify resilient assets and avoid greenwashing.

Complementing this, the **CSRD** mandates that companies disclose sustainability information based on “double materiality” – assessing both their impact on the environment and the financial risks they face from climate change. Specifically, the European Sustainability Reporting Standards (ESRS E1) require entities to report on physical climate risks and their adaptation strategies, aiming to guarantee that investors have access to comparable, meaningful data.

Finally, the **SFDR** imposes disclosure obligations on financial market participants, requiring them to report on how they integrate sustainability risks into their investment decisions and product categorizations (former Article 8 and 9 funds). Together, these regulations function as a powerful enabler: the Taxonomy defines the target, the CSRD generates necessary corporate data, and the SFDR guides capital allocation, empowering FIEs to assess and finance adaptation measures.

Adaptation supply and demand D1.1 focused also on the existing mismatch between PAs (demand) and FIEs (supply) in adaptation finance: the type of **investments that are attractive for FIEs are not those for which PAs require financial resources**. Public authorities often lack the capacity to structure projects that meet the risk-return profiles required by private capital, leading to a lack of bankable pipelines.

There is, indeed, a poor record of effective collaboration between FIEs and PAs in the field of adaptation finance, both inside and outside the EU; but CLIMATEFIT collected a series of 20 best practices in adaptation investments in D1.1, three of which were presented in the 1st level training. The session reinforced that FIEs need to shift from passively waiting for bankable projects to actively engage with PAs during the project preparation phase to align technical specifications with financial requirements. It was highlighted that adaptation finance suffers from “information barriers,” where perceptions of uncertainty driven by limited data access hamper investment priorities (see also ICC & Oxera, 2025). The training concluded that bridging this gap requires a structured collaboration between



FIEs and PAs, made possible by establishing a common language on adaptation, standardized metrics, and collaborative spaces.

Box 3: CLIMATEFIT's best practices

The collection of all 20 CLIMATEFIT's best practices is available in the [CLIMATEFIT's website](#).

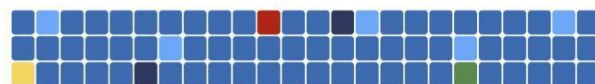
The Copenhagen Cloudburst Management Plan (CMP) (Copenhagen, Denmark) exemplifies how regulatory innovation can help unlocking long-term adaptation finance. Following a severe storm, the city started transitioning from traditional grey infrastructure to nature-based solutions (NbS) by securing a legislative change that allowed the water utility company to co-finance surface projects using water tariffs. This model demonstrates how identifying a reliable revenue stream (in this case, user fees) can secure large-scale resilience investments that would otherwise be unaffordable for municipal budgets alone. By proving that NbS were more cost-efficient than traditional solutions, the CMP established a robust business case, blending public tax revenues with utility fees to finance a 20-year pipeline of over 300 projects.

The Groenfonds Midden-Delfand case (The Netherlands) presents a model for financing the preservation of agricultural landscapes near urban centers. The fund collects the developer obligations collected from real estate projects, which are then invested defensively by a private asset manager. The returns on this capital are then used to pay farmers for "green services" (e.g., maintaining waterways and biodiversity) via results-based financing contracts.

The Viveracqua Hydrobond case (Veneto, Italy) exemplifies a multi-level collaboration between local utilities, regional public bodies, and international financial institutions. A consortium of eight local utilities aggregated their financing needs by issuing pooled minibonds. The issuance was backed up by the regional development agency, which provided a €6 million "first-loss" guarantee to enhance the creditworthiness of the structure. This public backing, combined with the technical structuring by a bank, was pivotal in de-risking the investment and in providing the robust structure that ultimately attracted the European Investment Bank (EIB) as the anchor investor (see also section 2.2 – 2nd level training, p. 14).

2.2. 2nd Level Training

The second-level training transitioned from the conceptual framing of climate risk established in the first level to the operational mechanics of capital deployment. While the first level training established the "why" (framing climate change as a systemic financial risk), this second session was designed to address the "how" of adaptation finance, focusing on the specific instruments and structural innovations required to move capital into resilient assets.



The session facilitated a dissection of specific friction points, namely data gaps, regulatory instability, and project fragmentation, that inhibit the scaling of private adaptation finance.

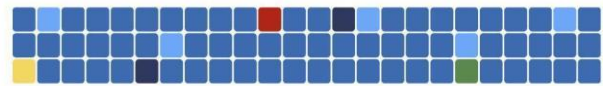
Content, outcomes, and lessons learned

The “finance COP” and the private sector imperative The training opened by contextualizing European adaptation efforts within the global discourse of the New Collective Quantified Goal (NCQG) being debated at COP29. A central insight from the plenary⁶ was that the global financial architecture needs to undergo a transformation to align public and private flows. The discussions emphasized that while sovereign entities often bear the ultimate risk of climate impacts, the private sector's role is to provide the liquidity, efficiency, and innovation required to implement resilience solutions.

The financial case: taxonomy as a performance indicator A section of the event focused on reframing the economic narrative of adaptation, building on the considerations already presented in the 1st level training. The prevailing view of adaptation as a cost center was challenged by data suggesting that stock markets may validate resilience. The session presented evidence that **companies and assets aligned with the EU Taxonomy have shown potential to outperform broader market indices**. This insight is critical for FIEs, as it suggests that regulatory compliance, often perceived solely as an administrative burden, can serve as a proxy for returns generation. However, the discussion also highlighted a disconnect in the sustainable bond market (“green”, “social”, “sustainable” and “sustainability-linked” bonds). Data shows that, despite the rapid growth of sustainable bonds, the percentage of proceeds that flows directly into adaptation amounts just to around 5% (MSCI, 2025).

Overcoming fragmentation through aggregation models The core technical contribution of the second-level training was the analysis of structural barriers, specifically the fragmentation of adaptation projects. Adaptation projects are frequently **too small, localized, and heterogeneous** to attract institutional capital directly. This observation is supported by literature identifying small investment sizes and high transaction costs as primary financial barriers to adaptation (UNEP, 2025a).

⁶ The 2nd level training has been structured with a plenary session, followed by two parallel technical breakouts. More details on the structure of each training are included in D2.1.



Box 4: Mini Green bonds and basket bonds

Mini-bonds allow unlisted SMEs to access capital markets, yet they frequently suffer from **low liquidity** and **high transaction costs**.

Basket bonds address this fragmentation through **aggregation**. In this model, multiple SMEs or utilities issue mini-bonds simultaneously with standardized characteristics, which are then pooled by a Special Purpose Vehicle (SPV) that issues asset-backed securities (ABS) to investors. This structure achieves two critical goals for FIEs:

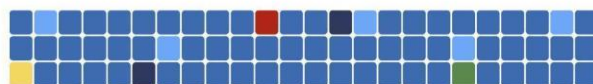
1. **Critical mass:** It creates a sufficiently large investment volume to attract institutional capital that would otherwise ignore individual small deals.
2. **Risk diversification:** It pools credit risk across multiple issuers (possibly enhanced by public guarantees on first losses).

To address this barrier, the training dig deeper into two distinct aggregation case studies, part of the 20 best practices collected by CLIMATEFIT:

- **Securitization and basket bonds:** The [Viveracqua Hydrobond case study](#) (which was already presented, under a different perspective, in the 1st level – see also Box 4)⁷ illustrated a financial engineering solution where fragmented water utilities aggregated their debt issuance into a single securitized vehicle. This allowed them to reach the “critical mass” necessary to attract institutional investors, including the European Investment Bank, which served as anchor investor.
- **Operational aggregation:** The [Clean Water Partnership](#) (a community-based public-private partnership – CB3P) model from the United States demonstrated how aggregating hundreds of micro-scale stormwater projects into a single procurement structure could attract private capital. By treating adaptation projects as a standardized production process rather than unique civil engineering works, the partnership reduced financial friction.

The data and pricing challenge (breakout session 1) The first breakout session, focused on aligning finance with policy requirements, confirmed that data scarcity remains a critical bottleneck. Discussions led by representatives from the insurance and academic sectors reiterated that **historical climate data is no longer a reliable predictor of future risk**. Participants noted that while insurers function as risk carriers, they face difficulties in integrating adaptation measures into underwriting and pricing models because the rapid evolution of climate risks outpaces the update cycles of pricing models. This aligns with findings that forward-looking physical risk assessments are essential for robust financial planning but are often hampered by a lack of granular asset-level data (IIGCC, 2025). Here again, the main outcome from the discussion was that “bankability” in adaptation requires

⁷ The Viveracqua case study was presented under different perspectives in the training series. In the 1st training it was highlighted as a successful model of multi-level governance collaboration; in the 2nd training as an example of how aggregation models (basket bonds) can overcome the ticket size/fragmentation barrier associated with adaptation projects.



new methodologies accounting for the TDR (avoided losses + economic benefits + social and environmental co-benefits), and that FIEs need standardized, forward-looking data to price this correctly (see also ICC & Oxera, 2025).

Mobilizing capital through PPPs (breakout session 2) The second breakout session explored the mechanics of risk-sharing in Public-Private Partnerships. Inputs from international development finance experts emphasized that robust government capacity and clear legal frameworks are prerequisites for making PPPs bankable. This echoes the broader literature, which identifies weak institutional capacity and regulatory uncertainty as major impediments to private investment in developing and developed economies alike (World Bank, 2021a). The discussion highlighted that investors require transparency and established regulatory policies to trust long-term partnerships. Tools (like the FAST-Infra Label) were discussed as mechanisms to standardize ESG credentials, signaling quality to the market and reducing due diligence costs for private investors.

Box 5: Public-private partnerships (PPPs) & community-based public-private partnerships (CB3P)

PPPs function as **long-term contractual arrangements** between governmental agencies and private entities, encompassing the design, construction, financing, and operation of infrastructure assets. The primary rationale for adopting PPPs lies in their ability to **leverage private capital**, technical expertise, and managerial innovation, thereby optimizing limited public resources while fostering the development of complex, innovative adaptation solutions.

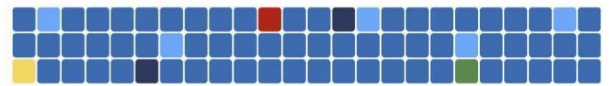
PPPs facilitate the **transfer of specific risks** to the private sector, which is often better equipped to manage them, while the public sector retains regulatory and political risks. However, the application of PPPs for adaptation remains limited compared to mitigation, constituting only a small fraction of global climate investment flows.

To address the specific challenges of decentralized adaptation projects, the CB3ps model has emerged. Unlike traditional PPPs, **CBP3s focus on aggregation**, bundling thousands of small-scale Green Infrastructure interventions (e.g., rain gardens, retrofits) into a single procurement structure to solve the fragmentation barrier. This model allows municipalities to expedite project delivery and leverage private equity, strictly mandating local economic benefits, such as the creation of local "green jobs" and support for small businesses.

2.3. 3rd Level Training

The 3rd level training shifted toward a granular exploration of specific financing mechanics, structured as a series of three thematic workshops. The overarching objective was to facilitate a peer-to-peer exchange among FIEs, moving beyond passive learning to the co-definition of practical solutions for mobilizing private capital.

The series commenced with a dedicated session on the **EU regulatory framework** regarding the operational challenges of compliance and the integration of physical



climate risk data into asset valuation. This was followed by a second workshop focused on **incentive mechanisms**, where the discussion centered on how public sector interventions can bridge the viability gap for projects that are non-bankable under current market conditions. The final event, organized as an open roundtable, addressed **innovative financial instruments and business models**, challenging the narrative of adaptation as a cost center by exploring instruments like resilience bonds and blended finance solutions.

Workshop 1

2.3.1. Navigating the regulatory framework on adaptation finance

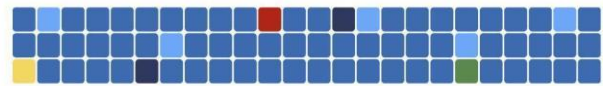
Building on the regulatory overview provided in the 1st level training (section 2.1), this first workshop of the series focused on dissecting how current disclosure requirements and classification systems – primarily the EU Taxonomy, the CSRD, and the SFDR – function in practice as drivers or inhibitors of adaptation finance. The session facilitated a direct dialogue between financial market operators, data providers, and policy experts to identify where regulatory intent diverges from market capability, particularly regarding the availability of decision-useful data.

Content, Outcomes, and Lessons Learned

The EU taxonomy: mitigation vs adaptation A primary insight emerging from the discussion was the structural asymmetry within the EU Taxonomy between mitigation and adaptation. Participants noted that while the Taxonomy is relatively mature and granular for climate mitigation activities, the framework for adaptation remains fragmented and unclear. A specific point of divergence highlighted by financial market operators was the Taxonomy's insufficient coverage of **acute physical risks**; for instance, while water-related risks are well-addressed, gaps remain regarding other extreme climate events such as storms.

The "Substantial Contribution" criteria for adaptation were debated extensively. Participants argued that the lack of **standardized metrics** makes it difficult for FIEs to prove alignment, leading to a reliance on "proxies" that may not accurately reflect resilience. The lesson learned is that for the Taxonomy to function as an effective capital allocation tool rather than a compliance burden, it requires further refinement to include more granular, activity-specific criteria that account for the local nature of physical risks. This observation resonates with broader literature suggesting that private sector engagement is often held back by inconsistent metrics to track impact and a lack of shared taxonomies to compare the costs and benefits of resilience projects (see among others World Bank 2021a, and ICC & Oxera, 2025).

This aligns with recommendations from the NGFS, which emphasizes that a robust taxonomy is essential to facilitate financial institutions' identification of climate-related risks and to mobilize capital (NGFS, 2019).



Box 6: the omnibus package

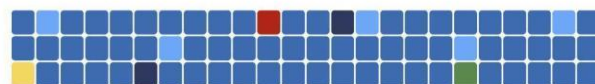
In late 2025, the EU adopted the "Omnibus I" package to reduce administrative burdens, alongside a proposal to revise the SFDR. These changes significantly reshape the EU sustainable finance policy landscape:

- **EU Taxonomy and CSRD:** The Omnibus package limits mandatory Taxonomy reporting to very large enterprises (>1,000 employees, >€450 million turnover), aligning with a drastically reduced CSRD scope. It introduces a financial materiality threshold, exempting non-core activities from alignment assessments, and simplifies the DNSH criteria.
- **CSDDD:** Due diligence obligations are restricted to direct suppliers with >500 employees (Tier 1), and while the adoption of climate transition plans remains mandatory, the obligation to implement them has been removed.
- **SFDR revision:** The proposal replaces the current Article 8/9 framework with a formal product categorisation system: "Transition" (focusing on assets improving their performance), "ESG Basic" (former art. 8), and "Sustainable" (former art. 9 – high ambition). Also, it eliminates entity-level Principal Adverse Impact (PAI) reporting and removes the specific SFDR definition of "sustainable investment" and the DNSH test, relying instead on the new categories.

While reducing compliance costs and administrative burdens, these shifts create potential risks for adaptation finance. The reduced scope of CSRD and Taxonomy may generate significant data gaps, hindering the assessment of physical risks in smaller counterparties.

Data language barrier Expanding on the data scarcity challenge identified in section 2.2, participants highlighted a critical "translation gap" or "language barrier" between data providers and financial investors. While technical data on climate hazards exists, often held by public authorities or scientific bodies, it is frequently not presented in a format that aligns with investor's expectations or financial risk models. Financial market operators expressed that data must be translated into financial materiality: investors do not trade in precipitation levels but in credit risk and asset valuation. The discussion challenged the common narrative that a "lack of data" justifies inaction. Participants suggested that the issue is often a lack of standardized data that can be integrated into due diligence processes. To drive investment, data must bridge the gap between scientific observation and financial performance, showcasing how resilience strategies explicitly mitigate downside risk or generate financial returns. This reinforces the need for governments to make localized climate risk and vulnerability data available and to embed climate risks in capital investment planning (World Bank, 2021b).

Pricing climate risk The workshop provided valuable insights into how banking regulations are beginning to influence lending behaviors. Participants from the banking sector indicated that adaptation criteria are increasingly factoring into interest rate determinations. Projects that fail to align with adaptation goals or present unmitigated



physical risks may face higher costs of capital, while resilient projects could benefit from more favorable terms. This suggests that the market is beginning to price physical climate risk, albeit imperfectly. However, a significant constraint remains the difficulty of modeling long-term returns on adaptation investments.

Current banking regulations do not yet fully mandate the integration of adaptation into internal risk evaluation processes, but the 2025 EBA guidelines on ESG risks represent a first step in the right direction. Furthermore, the integration of adaptation into corporate **transition plans** was identified as a frontier area. Financial institutions are increasingly expecting counterparties to demonstrate not just decarbonization pathways but also physical climate resilience strategies. The consensus was that adaptation must be mainstreamed into transition planning alongside mitigation to avoid the accumulation of systemic risk (on the matter see also NGFS, 2025).

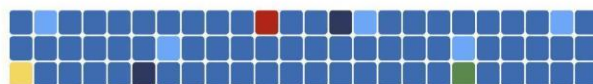
Box 7: EBA guidelines

The current framework does not explicitly mandate the integration of “adaptation” as a standalone category of risk. However, the EBA guidelines on the management of ESG risks, published in January 2025, **mandate a comprehensive integration of ESG risks**, encompassing physical climate risks, into the institution-wide risk management framework. The guidelines require banks to adopt a forward-looking approach to measure and manage both physical and transition risks across short, medium, and long-term horizons of at least ten years.

Directly influencing the mechanics of capital allocation and pricing, the EBA specifies that environmental factors (including the vulnerability of counterparties and physical collateral to specific climate hazards based on geographical location) must be systematically embedded into internal credit scoring, rating models, and collateral valuations. To manage these exposures, the guidelines explicitly instruct financial market operators to consider adjusting financial terms, lending conditions, and pricing based on ESG risk-relevant criteria.

Furthermore, to ensure long-term resilience, the EBA mandates that **institutions develop specific risk-based transition plans**. These plans must articulate how banks will monitor and address the financial risks stemming from the economic adjustment toward sustainability, which includes actively engaging with counterparties to evaluate the soundness of their own transition strategies and their overall adaptability to physical and transition risks (EBA, 2025).

Incentives and mandatory mechanisms Finally, the discussion turned to the role of the public sector in creating demand for adaptation finance. Participants emphasized that voluntary action is insufficient; regulatory drivers such as mandatory insurance coverage for natural catastrophes were cited as powerful levers. The Italian model of natural catastrophe insurance (see for more information NRF, 2025) was discussed as a potential blueprint for linking insurance policies with adaptation strategies, effectively forcing companies to assess and manage their physical risk exposure. This aligns with findings that insurance sectors can drive resilience by integrating physical risks into their policies and pricing (UNEP, 2025). Additionally, the role of public procurement was highlighted: if



public tenders required specific resilience measures, this would create a market signal that incentivizes private sector compliance and investment.

Workshop 2

2.3.2. Incentive mechanisms and the bankability of adaptation

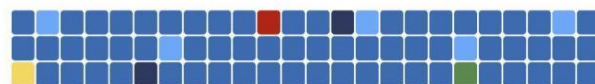
Addressing the central economic friction of climate adaptation – the gap between the high societal value of resilience and the frequently low financial returns for private investors – this workshop focused on the micro-economic mechanics required to transform non-bankable projects into attractive investment opportunities. The session brought together private investors, development finance institutions, and policy experts to categorize and evaluate public sector interventions, specifically financial and non-financial incentives, that can bridge the risk-return expectations of commercial capital. The dialogue moved beyond “public-private collaboration” to a technical dissection of specific instruments, such as conditional lending, risk guarantees, and the granular pricing of resilience benefits within broader infrastructure projects.

Content, outcomes, and lessons learned

Economic vs financial returns A foundational insight from the workshop was the misalignment between economic and financial metrics. Participants analysed why adaptation projects, despite yielding high benefit-cost ratios, fail to attract private capital. The discussion highlighted that while the “economic rate of return” (ERR) accounts for avoided damages and public goods, private investors operate strictly on the “financial rate of return” (FRR), which depends on capturable cash flows. The consensus was that “bankability” is not an inherent property of a project but an engineered outcome. It was confirmed by the discussion that for adaptation, this engineering often requires external incentives to internalize the positive externalities of resilience, effectively monetizing the “avoided cost” so it appears on a balance sheet.

Valuation of “hidden” resilience A portion of the debate, led by asset managers, focused on the need to reframe existing technologies and services. It was argued that many “mitigation” or “infrastructure” assets already possess adaptation characteristics that are undervalued. For instance, battery storage systems are typically financed for their mitigation potential (emissions reduction), yet they provide critical resilience services during extreme weather-induced blackouts. By explicitly valuing this resilience function, financial market operators can “stack” revenue streams, thereby improving the project’s risk profile. This led to a focus on the need for frameworks that identify investment opportunities based on revenue exposure to specific adaptation solutions, rather than waiting for a distinct “adaptation asset class” to emerge.

Granularity in project finance A sharp divergence emerged regarding how adaptation finance is tracked and structured. Representatives from MDBs described methodologies that isolate specific adaptation components within larger infrastructure projects (for example, the 1% incremental cost of a bridge to withstand higher flood levels) and label this ‘fraction’ as adaptation finance. However, private investors countered that **commercial markets rarely finance ‘fractions’ of a project**. Private capital assesses the risk-return profile of the *entire* asset. If the adaptation component (the 1%) does not generate a distinct revenue stream or significantly reduce the cost of capital for the whole project, it is viewed merely as an additional cost. The lesson learned is that for private finance to flow, the adaptation component must be integrated into the overall financial structure in a way that visibly reduces the aggregate credit risk or the OpEx of the asset (see further World Bank, 2021a).



Product innovation: conditional lending and insurance Participants identified **conditional lending** and **conditional insurance** as important mechanisms to drive private adaptation. In this model, banks offer preferential loan rates or insurers offer reduced premiums *conditional* upon the borrower implementing specific resilience measures (see among others GIZ, 2025). Borrowers benefit from lower financing costs, while lenders mitigate their exposure to climate-related physical risks embedded in collateral assets (e.g., real estate or production facilities). Evidence suggests that linking insurance pricing to risk reduction behaviours can be a lever for influencing private sector adaptation (see among others World Bank, 2021a and ICC & Oxera, 2025). However, uptake is limited by the absence of standardized metrics to quantify the risk-reduction benefits of specific adaptation measures. In the end, without data proving that a specific adaptation measure reduces default risk by a quantifiable margin, credit committees remain hesitant to authorize rate discounts.

Role of guarantees and blended finance Finally, participants emphasized that public sector **de-risking instruments**, particularly first-loss guarantees and blended finance structures, are prerequisites for entering markets where revenue streams are uncertain or rely on future public payments (World Bank, 2021a). The dialogue suggested that public funds should transition from funding projects directly (grants) to funding the *risk* of projects (guarantees), thereby leveraging private capital multiples higher than direct public spending could achieve.

Workshop 3

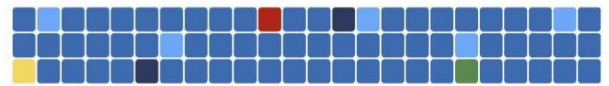
2.3.3. Innovative financial instruments and business models

The final workshop of the third-level training series focused on the practical mechanics of transaction structuring. Having established the regulatory drivers and the necessity of incentives in previous sessions, this workshop aimed to identify the specific financial vehicles capable of bridging the gap between available institutional capital and the specific needs of adaptation projects. The session facilitated a technical dialogue between asset managers, banks, and development finance experts to evaluate the maturity and scalability of instruments such as resilience bonds, catastrophe bonds (CAT bonds), and blended finance structures.

Content, outcomes, and lessons learned

Innovation vs familiarity A dominant theme in the discussion was the tension between financial innovation and the market's preference for standardization. Participants from the asset management sector argued that while "innovative" instruments are theoretically attractive, institutional investors prioritize liquidity and familiarity. Consequently, Green Bonds remain the primary vehicle for channeling funds into climate resilience, despite the fact that adaptation components often constitute a minor fraction of the total use of proceeds. The lesson learned was that creating entirely new asset classes faces significant hurdles due to the lack of historical performance data. Instead, the consensus leaned toward embedding adaptation KPIs into existing instruments, such as bonds.

Adaptation bankability The workshop provided a critical dissection of "bankability" across different adaptation sectors. Discussions revealed a clear hierarchy: "grey" infrastructure and utilities (particularly water management) are perceived as highly bankable, while Nature-Based Solutions (NbS) remain challenging. Participants noted that water utilities are characterized by stable cash flows derived from tariffs or government availability payments, which can easily service debt issuance. This observation is supported by literature indicating that adaptation projects with clear revenue streams, such as water

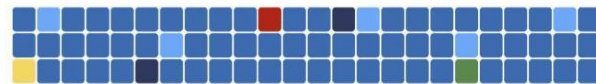


and waste management, account for the majority of private finance flows, whereas sectors producing public goods with no direct cash flow require significant public intervention. Conversely, NbS for heat mitigation or flood defense often lack a direct revenue capture mechanism, rendering them dependent on public grants or complex land-value capture models that are difficult to finance through commercial debt (UNEP, 2025).

De-risking through blended finance Blended finance was universally acknowledged as the necessary bridge for the “viability gap,” yet participants highlighted a disconnect between its conceptual popularity and its practical deployment. While public funds are intended to de-risk private capital through first-loss tranches or guarantees, financial market operators again reported a scarcity of “investable pipelines” that fit these structures. The discussion suggested that the complexity of structuring blended deals often outweighs the financial benefits for smaller adaptation projects. This mirrors global data showing that while blended finance is effective in sectors like agriculture, it has struggled to scale in infrastructure due to high transaction costs and a lack of standardized deal structures (UNEP, 2025). The insight for FIEs is that blended finance should not be viewed as a silver bullet for individual projects but rather as a tool for **aggregation platforms** that can bundle multiple small-scale assets to reach the ticket sizes required by institutional investors (World Bank, 2021a).

Catastrophe bonds A debate emerged regarding **catastrophe bonds (CAT Bonds)**. While these instruments are growing in popularity among investors due to their high yields and lack of correlation with the broader economic cycle, participants from the asset management side voiced caution regarding their adaptation efficacy. It was noted that CAT bonds are effective for transferring risk from the balance sheet but do not necessarily reduce physical risk. Furthermore, the parametric triggers (e.g., specific wind speeds or atmospheric pressures) used to release funds are often so specific that they may fail to payout during events that cause significant economic damage but do not meet the technical threshold. This aligns with broader critiques that while insurance-linked securities provide liquidity post-disaster, they must be paired with ex-ante investments in adaptation to function as a true resilience strategy (ICC & Oxera, 2025).

From cost to value preservation Finally, the workshop addressed the fundamental business model challenge: the perception of adaptation as a cost rather than an investment. Participants emphasized that for business models to succeed, the narrative must shift from “compliance” to “value preservation.” The Italian “Superbonus” tax credit for building renovation was cited as a case study where a strong fiscal incentive successfully aligned the interests of banks (protecting loan-to-value ratios), homeowners (increasing asset value), and the construction sector (revenue generation) (see Banca D’Italia, 2024, for an in-depth analysis of the fiscal measure). However, the fiscal unsustainability of that specific measure served as a warning that public incentives must be calibrated to leverage private co-investment rather than fully subsidizing it. The lesson, heavily reiterated also in the previous workshops and training, is that sustainable business models for adaptation must eventually rely on the **monetization of avoided losses** rather than public subsidies (see also IIGCC, 2025).

**Box 8: Tax incentives, the case of the Italian “Superbonus”**

The Italian “Superbonus,” introduced in 2020, represents the largest fiscal stimuli targeted at the residential construction sector in Europe, offering a tax deduction of 110% for energy and seismic renovations. While the measure successfully catalyzed a rapid recovery in the construction sector, driving dwelling investments up by approximately 67% compared to a synthetic counterfactual, **its design revealed significant trade-offs** regarding fiscal sustainability and economic efficiency.

The analysis by Banca d'Italia (Banca d'Italia, 2024) indicates that the program generated a fiscal multiplier below one, implying that **the policy did not “repay for itself”** through generated economic growth. Specifically, the extra public revenues generated were significantly lower than the gross cost to the state, leading to a substantial accumulation of public debt. Furthermore, the scheme suffered from a “deadweight loss” estimated at around 27%, financing investments that would likely have occurred even without the subsidy.

Consequently, the analysis suggests that future incentives must be designed to be **more financially sustainable and socially equitable**. Effective policy calibration should involve setting coverage rates below 100% to ensure beneficiaries remain sensitive to costs, thereby containing price inflation. Moreover, to maximize efficiency, **subsidies should be inversely related to income**, targeting financially constrained households, and maximizing the “green” content of interventions rather than subsidizing broad renovations for wealthy asset owners.

2.4. 4th Training (Upcoming – to be drafted after the completion of the 4th level training – April 2026)

This section will describe contents, outcomes, and lessons learnt from the roundtable discussion (PAs + FIEs) taking place in April 2026.

3. RECOMMENDATIONS FOR FINANCING AND INVESTMENT ENTITIES

3.1. Taking stock

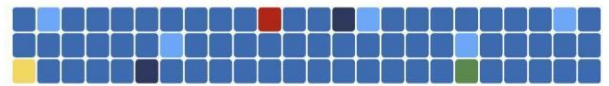
The CLIMATEFIT training series for FIEs constituted a structured progression: moving from general framing and awareness (1st level), through a more operational content (2nd level), to a detailed analysis of certain instruments and incentives (3rd level). Reviewing the outcomes across the capacity building series reveals a coherent narrative regarding the shifts required to unlock private capital for adaptation. A central conclusion emerging from these engagements is that **“bankability” in the context of adaptation is an engineered outcome resulting from the alignment of risk assessment, regulatory compliance, and financial structuring.**

The dialogue within the different sessions confirmed that FIEs can no longer rely on backward-looking data but are encouraged to integrate forward-looking climate scenarios into their asset valuation and risk management frameworks to avoid the mispricing of capital and the accumulation of stranded assets. However, a critical friction point identified throughout the series was the structural misalignment between the high economic value of adaptation – measured in avoided societal damages – and the frequently elusive financial returns required by private investors. This disconnect underscores the necessity for financial market operators to adopt new methodologies that can internalize and monetize the “resilience dividend,” **transforming avoided costs and the social and environmental co-benefits into visible value on balance sheets.** Furthermore, the different exchanges highlighted that the perceived scarcity of investable projects is often a symptom of the structural disconnect between public planning and private investment logic. The fragmentation of adaptation assets, often too small or localized for institutional capital, remains a significant barrier that demands active intervention. The consensus among participants was that FIEs should move upstream in the project lifecycle, building the internal capacity to bridge the “translation gap” between scientific climate data and financial decision-making. By **engaging early with public authorities and developers,** financial institutions can help structure aggregation mechanisms and standardized instruments that align technical resilience goals with commercial ticket sizes and risk profiles. Finally, the technical deep dives into innovative instruments such as resilience bonds and blended finance structures demonstrated that the market may exist, but it requires specific catalysts to flow toward adaptation. The training outcomes suggest that the **strategic use of public funds** (not merely as grants, but as de-risking tools like guarantees and first-loss mechanisms) is essential to crowd in private capital for high-impact resilience measures. While the complexity of implementing blended finance structures often acts as a constraint, combining these instruments with the aggregation platforms can overcome high transaction costs.

These insights, emphasizing the shift from compliance to value creation and from passive selection to active co-creation, provide the foundation for the recommendations outlined later in this chapter.

3.2. Relevance of the training outcomes for Financing and Investment Entities

The insights generated during the capacity-building series have direct implications for financial market operators. The training shifted the narrative for FIEs from viewing



adaptation as a philanthropic endeavor to recognizing it as a **complex but essential market opportunity** requiring active efforts on FIEs side.

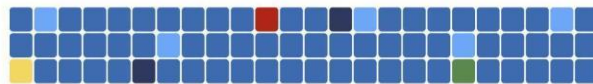
Asset allocation, risk pricing, and risk management Understanding the systemic nature of climate risk is the prerequisite for robust risk management and asset valuation. FIEs should integrate the data and scenarios discussed (such as those from EUCRA) into their stress-testing frameworks. If physical risks are underestimated, FIEs face the tangible threat of devaluation in real estate portfolios, increased default rates in corporate lending due to supply chain disruptions, and higher claims in insurance portfolios. The training underscored that **adaptation is the primary mechanism to hedge against these physical risks**, making the financing of adaptation measures a defensive strategy to protect existing asset value (NGFS, 2019).

The evidence regarding the potential outperformance of Taxonomy-aligned assets suggests that FIEs should view adaptation finance not merely as a compliance exercise but as a source of **long-term value preservation**. Physical climate risks are increasingly recognized as material to financial stability, affecting asset valuations and creditworthiness (NFS, 2019). FIEs are therefore encouraged to utilize the EU Taxonomy and forward-looking climate risk assessments as screening tools to identify companies and assets better positioned to withstand climate shocks. By integrating these criteria into portfolio construction, FIEs can manage downside risk (avoided losses) while potentially capturing the upside of the transition to a resilient economy (see also IIGCC 2025a).

The discussions confirmed that regulatory compliance regarding adaptation is shifting from a passive reporting exercise to an active **determinant of capital cost**. FIEs, particularly banks, need to prepare for a landscape where loan pricing and creditworthiness are directly linked to a counterparty's adaptive capacity. The ability to assess whether a client has a credible adaptation plan will become a core component of credit risk management. This requires FIEs to move beyond static risk assessments and adopt forward-looking methodologies that account for physical climate risks over the lifetime of the asset (EBA 2025). For the banking sector, the relevance of the incentives is directly tied to collateral value. Since real estate and physical assets often secure lending portfolios, adaptation is a defensive strategy. FIEs should integrate physical risk assessments, requiring "adaptation plans" as a condition for financing in high-risk zones. This shifts adaptation from a "nice-to-have" feature to a core credit risk parameter.

The lesson regarding the "data language disconnect" implies a need to **actively engage with investee companies and data providers** to demand decision-useful information. FIEs cannot wait for perfect data; they must develop internal capacities to "translate" scientific hazard data into financial materiality. This is crucial for asset valuation, as physical risks that are not properly priced can lead to the overvaluation of vulnerable assets and sudden corrections (World Bank 2021). By integrating better data, FIEs can identify undervalued assets that are resilient or have adaptation potential. Furthermore, the content regarding the regulatory environment nudged FIEs toward a more effective compliance and disclosure. The training highlighted that early movers who develop the capacity to screen and report on adaptation alignment will face lower transition risks and may benefit from better capital access and reputational advantages.

The discussion on conditional instruments highlights a product development opportunity. Banks and insurers with the internal capacity to assess the resilience of their clients can offer **differentiated pricing**. This not only attracts clients but also improves the quality of the FIE's own loan book by reducing exposure to physical climate risks. FIEs can effectively protect their own balance sheets by **incentivizing their clients** to adapt. For banks and bond issuers, this insight directly lies in the design of financial products. FIEs should actively explore green loans and bonds where the interest rate margin is tied to



the borrower's achievement of specific physical resilience targets (e.g., flood-proofing assets or supply chain diversification). This incentivizes clients to adapt while improving the credit quality of the bank's portfolio. FIEs play a critical role in defining rigorous, science-based KPIs safeguarding prudential soundness and ensuring genuine risk reduction (ICC & Oxera, 2025).

For institutional investors, the discussion on insurance-linked securities highlights a strategic mechanism for risk management. FIEs should consider incorporating CAT bonds or resilience bonds into their portfolios not just for yield, but as a **hedge against climate shocks** that could correlate with broader market downturns. Furthermore, investors should demand that investee companies disclose not just their physical risk exposure, but their insurance coverage and adaptation capex, using these data to price climate risk into asset valuations more accurately.

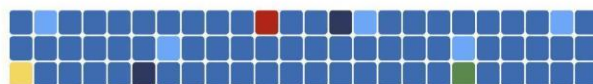
Collaboration with PAs and market shaping The issue of bankable pipelines is clearly of paramount importance. The outcomes of the discussion point to the fact that FIEs cannot remain passive capital providers. The focus on the supply-demand mismatch is critical for the origination and development of bankable projects. The lesson for FIEs is that, to secure bankable projects, **FIEs need to engage with public authorities and project developers in upstream project preparation.**

By collaborating with public authorities and developers during the first phase of the project development, FIEs can help structure projects to ensure they generate sufficient cash flows. By understanding the specific barriers PAs face, FIEs can tailor their financial instruments to address specific risks, thereby unlocking new investment opportunities that offer stable, long-term returns. This shift from "project selection" to "project co-creation" is essential for unlocking opportunities in the water and urban infrastructure sectors (WEF 2022).

Finally, the sessions highlighted the role of FIEs in market shaping. **Financial institutions should advocate for public policies**, such as mandatory insurance or resilient building codes, that de-risk their portfolios (UNEP 2025a). By engaging with policymakers to refine the EU Taxonomy and other regulatory frameworks, FIEs can help create an enabling environment that supports the scalability of adaptation finance, transforming it into a standard part of fiduciary duty.

Project structuring through aggregation and blended finance Another crucial theme that emerged from the discussions is the issue of the small ticket size of most adaptation projects; the analysis of basket bonds and CBP3 models provided an example for solving the liquidity and scale issues associated with adaptation. For banks and asset managers, the relevance lies in the shift from project-by-project financing to "programmatic" financing. The literature confirms that **aggregation is essential to convert small, context-specific adaptation projects into investable asset classes** that meet the ticket size requirements of institutional investors (see among others CPI, 2022). FIEs should actively seek or help structure investment vehicles that pool multiple small-scale assets, acting as intermediaries that bundle fragmented public sector needs into products suitable for the market.

The session underscored that "bankability" in adaptation is often a **function of risk allocation between the public and private sectors**. For FIEs, the relevance lies in understanding how to utilize public guarantees and credit enhancements to mitigate risk. Blended finance structures, where public funds take the first loss or provide guarantees, are identified as critical enablers for private investment in adaptation (see also IFC 2025). Asset managers (and other institutional investors) should actively articulate exactly what



is required to make an adaptation pipeline investable, requesting mechanisms such as tax credits, concessional capital, or first-loss guarantees. By engineering these blended structures, FIEs can successfully deploy capital into frameworks where the private partner assumes the delivery and performance risks, while the public partner secures the necessary revenue certainty through mechanisms like long-term availability payments or stable tariff regimes (World Bank, 2025).

To translate these strategic imperatives into an actionable framework, the following section consolidates the insights progressively discussed throughout the capacity-building sessions into five core recommendations. These directives serve as a blueprint to guide financial institutions towards the active co-creation of climate adaptation projects, across valuation methodologies, upstream engagement, portfolio risk mainstreaming, internal capacity building, and blended finance.

3.3 Recommendations

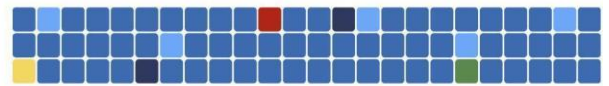
The financial landscape for climate action remains characterized by a profound asymmetry, where adaptation finance faces a widening investment gap compared to mitigation. As already detailed, this shortfall is not merely a function of capital scarcity but stems from structural market failures, primarily the misalignment between the high societal value of resilience and the narrower financial returns visible to commercial investors. Furthermore, persistent informational barriers and a "translation gap" regarding physical climate risks continue to inhibit accurate asset pricing and integration into standard due diligence.

Consequently, the private financial market is encouraged to evolve from being a peripheral actor to central operator in the adaptation ecosystem. This suggests a new "active co-creation" role, where financial market operators engage upstream to structure bankability. The following recommendations aim to help the acknowledgment of this role, guiding FIEs to first internalize the "resilience dividend" to bridge the valuation gap (**Recommendation 1**) and actively collaborate with public authorities to design investable pipelines (**Recommendation 2**). Simultaneously, FIEs are encouraged to mainstream and strengthen forward-looking physical risk assessments into their portfolios (**Recommendation 3**) and build the necessary internal capacity to facilitate adaptation investments (**Recommendation 4**). Finally, the leverage of public funding (**Recommendation 5**) is identified as a critical enabler for scaling private capital deployment.

Recommendation 1: recognize and value adaptation benefits

To bridge the structural misalignment between the high societal value of resilience and the narrower financial returns visible to private investors, FIEs should evolve their investment processes to **internalize the "resilience dividend."** This involves broadening the definition of "return" beyond cash yield to include the financial value of stability and avoided losses.

- Adopt "triple dividend" metrics: FIEs could integrate methodologies that quantify the three types of adaptation benefits: (1) avoided losses, (2) induced economic benefits. (3) social and environmental co-benefits.
- Monetize avoided costs: FIEs may actively explore mechanisms that convert avoided costs into revenue streams. This can be achieved through "beneficiary pays" models, where the entities that benefit from resilience (e.g., insurance companies saving on claims, municipalities saving on emergency repairs) contribute to the project's financing costs, or via "as-service-contracts" (e.g.: Energy



Saving Companies (ESCO) providing upfront capital for financing a project being repaid by the realized savings on clients' energy bills reduction). Additionally, payments for ecosystem services (PES), when carefully designed, have the potential to translate environmental risk reduction into revenue streams.

- Update discount rates: FIEs could review the discount rates applied to resilience projects. High discount rates disproportionately devalue future avoided losses; adjusting these rates to reflect the intergenerational nature of climate risk can improve the NPV of adaptation investments. Applying lowered, "resilience-calibrated" discount rates allow to reflect the long-term value preservation of resilience more accurately.

Recommendation 2: strengthen engagement with PAs and companies

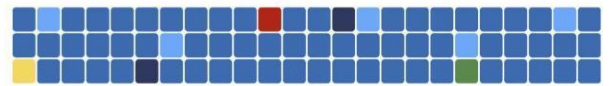
The scarcity of "investment-ready" adaptation projects is rarely a failure of demand, but a failure of coordination. To secure investable pipelines, FIEs are encouraged to transition from a passive role of project selection to an **active role of project co-creation**.

- Upstream project preparation: FIEs may engage with PAs and project developers at the feasibility stage. This early-stage collaboration represents a "low-hanging fruit" that can significantly accelerate the implementation of adaptation investments. By providing early feedback on financial structuring, revenue models, and risk allocation, FIEs can help shape projects that meet commercial investment criteria.
- Engagement on resilience: For banks and asset managers, engagement activities with invested firms should focus more on adaptation and resilience. FIEs' relationship managers should initiate dialogues with clients in high-risk sectors (e.g., agriculture, real estate) to assess their adaptive capacity. FIEs can support these clients not just with capital, but by connecting them with technical expertise to develop robust adaptation plans, thereby protecting the bank's own loan book. For instance, a bank could offer more favourable loan conditions or specific credit covenants linked to projects that include certified adaptation measures; simultaneously, asset managers should actively engage with investee companies to demand decision-useful information regarding their physical risk exposure and adaptation capex.
- Collaborative aggregation: To address the small ticket sizes of adaptation projects, FIEs may actively collaborate with public entities to structure aggregation vehicles. This involves bundling multiple small-scale interventions into larger, diversified portfolios that reduce transaction costs and appeal to institutional investors.

Recommendation 3: mainstream risk assessment and portfolio alignment

FIEs could systematically integrate physical climate risk assessment into their core **risk management and asset allocation processes**.

- Portfolio screening and stress testing: Asset managers, for example, could conduct more granular screening of their portfolios to identify assets with high exposure to physical hazards. This should progress to stress testing against specific warming scenarios to understand potential value-at-risk.
- Integrate risk into credit models: For the banking sector, physical risk scores could be explicitly incorporated into credit adjudication. Investors could assess "Capital allocation alignment" to ensure appropriate resources are directed toward adaptation options. This data could feed into decisions on capital cost, effectively penalising inaction and rewarding resilience.



- Resilient asset allocation: investors may use adaptation alignment as a factor in asset allocation. By investing in assets and companies that demonstrate robust adaptation strategies, FIEs can hedge against climate volatility and potentially capture revenues from the market outperformance of resilient firms. As a practical application, an asset manager might choose to systematically reallocate capital away from highly vulnerable assets, underweighting assets lacking credible adaptation plans in high-risk regions, while an insurer could offer premium discounts where resilience measures demonstrably reduce expected catastrophe losses.

Recommendation 4: build internal capacity on A&R

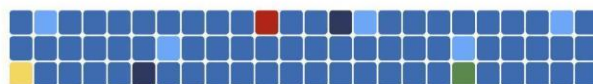
FIEs should invest in **human capital and organizational change** to navigate the specific complexities of adaptation finance.

- Specialized training and teams: FIEs should establish dedicated A&R competence centers within their organizations. These teams should be trained not only in financial structuring but also in the fundamentals of climate science. This enables the “translation” of hazard data into financial materiality.
- Cross-departmental integration and governance changes: capacity building ought not be siloed in sustainability departments. Risk officers, deal origination teams, and relationship managers should all receive targeted training on how to identify adaptation opportunities and better assess physical risks. An effective capacity building requires cross-departmental integration and must extend beyond simple ‘training’ to encompass governance changes. Specifically, banks and asset managers could explicitly integrate physical climate risk oversight into credit or investment committee mandates, while insurers might embed it into underwriting committees. Furthermore, FIEs should update investment guidelines, assign explicit organizational responsibility for climate risk data analysis, and foster day-to-day coordination between risk, sustainability, and investment teams.

Recommendation 5: leverage public funding and blended finance

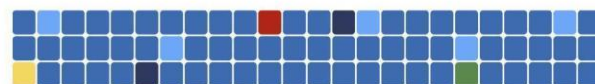
FIEs should strategically **utilize public de-risking instruments** to enter the ‘adaptation market’.

- Active search of de-risking instruments: FIEs, particularly Development Finance Institutions (DFIs), could structure deals that utilize public guarantees, first-loss tranches, or concessional capital. These instruments can be used to mitigate specific risks that deter private investment.
- Structure blended finance frameworks: while the complexity and high transaction costs of implementing blended finance structures often acts as a significant barrier, in particular for small, localized projects, FIEs could work with public partners to create standardized blended finance vehicles that can aggregate capital at scale.
- Advocacy for incentives: FIEs are encouraged to engage in dialogue with policymakers to design financial incentives that improve the bankability of adaptation. This includes advocating for tax incentives, subsidies for resilience-building measures, or regulatory changes that support market stability.



4. FINAL REMARKS (To be drafted after the completion of the 4th level training)

Overall outcomes of the discussions + conclusion on the role of FIE in A/R



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The CLIMATEFIT project aims to support EU territories in their just and transformational journey toward climate resilience by bridging the finance gap, providing critical insight and building the capacities of (i) Public Authorities (PAs) to identify, orchestrate and attract various public and private financing sources and (ii) Financing & Investment Entities (FIEs) to identify and access resilient investment opportunities. CLIMATEFIT opens a significant opportunity to foster innovative resilience investments in vulnerable EU territories and to boost competitiveness and EU leadership in a growing market. The project will build on a deep understanding of existing initiatives to sustain systemic and catalytic resilience investments by engaging its Technical Partners, PAs and FIEs in the co-creation of twenty innovative investment strategies, ten concrete and scalable investment plans and four bankable transformational investment cases, increasing the bankability of resilient project pipelines across a diversity of scales, financing gaps, contexts, barriers to financing, climate risks and vulnerabilities, biogeographical regions, adaptive capacities and maturity regarding climate change represented from its twenty case studies grouped in three clusters: Northwestern, Eastern and Southern.

