

# Financing and Investment in Adaptation

Drivers, Barriers, Practices, Maturities and Opinions

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# 1. Executive Summary

Governments are attempting to advance public policies and implement their climate adaptation strategies and plans. However, attracting finance and in particular private capital for these efforts has been challenging. To address that, the EU Mission Adaptation project CLIMATEFIT conducted research on the drivers and barriers faced by financing and investment entities (FIE), namely banks, investors and insurers, in engaging in adaptation finance. Their level of maturity and perspectives have also been identified.

This report summarises the findings resulting from literature reviews, interviews and surveys with FIEs from mainly four EU countries (Belgium, France, Italy and Romania).

The main takeaway is that most FIEs are yet to be prepared for financing climate adaptation.

This report contains summary information that may be of interest to a broad range of practitioners, including government officials and administrations, the financial sector, and consultancy firms or research institutes with an interest in adaptation finance.

The research shows adaptation financing is in a very nascent state and that FIEs' perspectives of adaptation show a mismatch between the urgency of adaptation and the readiness of financing. This results in a low propensity to invest compared to other climate and sustainability challenges such as low carbon, nature and biodiversity initiatives. Analysis of FIEs' maturity, which assesses a company's progress on readiness to invest in adaptation, found that most are still in the 'learning stage'.

The four main barriers identified by the FIEs are: lack of knowledge, policy instability, lack of (bankable) projects and non-standardised data.

Market failures (information asymmetry, positive and negative externalities, short termism and market power) create these barriers. Market failures together with entrenched practices further inhibit investment in adaptation.

Enabling conditions such as industry leadership, regulations, supportive markets and increased knowledge are essential to accelerate the engagement of FIEs, who may see adaptation as sole responsibility of governments and may perceive action on adaptation as a failure.

When asked what needs to change, almost all FIEs cited regulatory change. Two additional key interventions were identified: creating a sense of urgency and putting a value on adaptation.

Our analysis showed that, in short, there is no single 'silver bullet', but that enabling conditions need to be considered in an integrated manner to successfully promote adaptation finance.

Indeed interviewees suggested a number of interventions which require a response of the whole industry (state investment banks, financial regulators, finance sector think-tanks, FIEs and governments), such as industry leadership and coordination, strengthened financial regulations and standards, incentivisation of adaptation activities through legal/ policy measures and development of financial instruments that add value to adaptation efforts, as well as education, knowledge production and training to build adaptation finance capacity.

Other interventions are the domain of project proponents e.g. governments, such as developing a well-structured project pipeline to attract investment, de-risking capital provision, project scaling and capital aggregation.

The research also highlighted the areas with the highest financing potential, namely real estate, infrastructure, water, biodiversity and forestry.

Under current market and regulatory conditions, the area with the lowest potential is coastal and sea-level rise protection. This is due to the limited number of privately owned coastal areas, significant knowledge and data gaps, perceptions of these areas as public goods, and property rights constraints. However, these coastal projects remain particularly important for many governments which means we have a critical mismatch between supply and demand.

Adaptation projects could be financed through blended finance approaches and income streams secured through land value capture and payment for ecosystem services approaches, such as carbon sequestration. The propensity to pursue these novel approaches is seen to be low.

There is a significant gap between those leading on adaptation and those just beginning to understand their climate risk, impacts, dependencies and opportunities.

FIEs exhibiting a growing level of curiosity benefit from an increase in understanding of their role in adaptation finance and organisational policies and practices that they can put in place to mainstream adaptation into investment decision-making.

Significant efforts are necessary by both the public and private sectors to accelerate the financing of adaptation projects with mutual benefits.

CLIMATEFIT aims to bridge the adaptation financing gap by providing critical insight and building the capacities to attract and orchestrate various public and private funding & financing sources and discover and access investment opportunities. Gaining an understanding of FIEs' experiences and perspectives in financing adaptation so far has been critical.

lack of knowledge

policy instability

lack of bankable projects

non-standardised data



# 2. Progress and maturity in a challenging market

Adaptation finance is in its infancy, yet its urgency is recognised by financing and investment entities.

45 % of the FIEs interviewed conduct climate risk screening. However, few could give specific details of how it is carried out. It was also not possible to discern how the screening affects investment decisions.

More than 55% of the FIEs interviewed are involved in some kind of adaptation and/or nature finance activity. For most this represented only a small number or scale of projects.

The adaptation investment being undertaken covered adaptation projects in water, real estate and agriculture. There was little mention of climate proofing of infrastructure. Nature finance was more prominent than adaptation finance.

We found despite a few FIEs are active in adaptation, this activity was small and not replicable and scalable. There is limited direct investment and there is scant evidence of mobilising private capital or leveraging state-of-the-art pooled or blended financing mechanisms.

Adaptation does not rank as a top priority for some FIEs, and falls below climate mitigation and other markets, such as nature finance. The stability of traditional markets, coupled with the preference for 'tried and tested' approaches to infrastructure planning and financing, work together to discourage investment in adaptation, which requires new ways of planning and financing, in general, and novel ways of generating income, in particular.

As we show below importance of valuing adaptation outcomes has been emphasised, with all FIEs highlighting the deficiency in current efforts to assess the value of adaptation. In this context, some pointed to a few innovative adaptation finance mechanisms observed in other countries, where adaptation is valued and integrated through climate risk pricing, climate risk-linked bonds and climate resilience bonds, etc

## Maturity of financing and investment entities

The trialling of a new Maturity Assessment Model (see box below) on FIEs participating in the research showed a wide divergence in FIEs' maturity.

A small number of FIEs consistently demonstrated capabilities and activities across more than 70% of the maturity assessment criteria. They were active in industry networks, policy, adaptation markets and knowledgeable on adaptation. Their activities included investment in climate risk screening, organisation level climate risk exposure assessments, investment in some way in adaptation and/or nature and having dedicated teams and resources for climate risk and adaptation. Almost all of these FIEs were engaged in finance for nature solutions with some adaptation benefit, resilience mortgages, concessional finance to municipalities, insurance products or property level climate risk assessment and associated adaptation activities.

Most of the FIEs in this small top-performing group were ones we sought out because of their well-known activity in adaptation. We designated these leaders as FIE Champions (see criteria for selection in the box below). Each of these FIE Champions provided us with a 'Success Story', an example is included below. (See: ask link2Amandine)

*Success story IMPact SGR is an asset management company based in Italy specialising in listed impact investing. IMPact's core focus lies in SFDR's Article 9 products, with a concurrent emphasis on Article 8, representing the highest level of sustainability ambition under this framework. IMPact's is developing climate adaptation technology tools enabling stakeholders to better understand and integrate risks into decision-making processes. One example of their innovative approach to climate finance is the quantification and measurement model of the net impact of investments adopted by IMPact, which relies on semantic artificial intelligence technology developed by a partner start-up. This technology enables the estimation of the net impact generated by each investment by quantifying the social and environmental costs and benefits generated by businesses.*



The **Maturity Assessment Model (MAM)** aims to inform discussions on what enables and prevents FIEs to invest in adaptation. The results can be used by the FIEs to assist in strategising, tracking, disclosing, positioning, and creating opportunities for adaptation investment. It can be used in conjunction with the PRI's Expectations Ladder in developing a Comprehensive Climate Action Plan, assisting FIEs in self-assessment and transition planning. The following criteria are used to estimate the maturity of FIEs.

1. **Industry:** Financier interest, readiness (climate risk assessment), commitment, leadership, plans to scale investment, networks, sense urgency and vision/pathway
2. **Policy/Disclosure:** Regulation/policy context, TCFD, TNFD, PRI, CDP
3. **Market:** Access to capital, access to securitisation vehicles, state of investment landscape in themes, % portfolio invested in related themes, barriers, opportunities, vehicles in use, trends in blended financing, challenges and opportunities in emerging financing structures, capital aggregation, de-risking, transaction history, transaction costs
4. **Technology:** Awareness, best practice, knowledge of technologies
5. **Knowledge:** Education, knowledge, awareness, learning by co-investing

We find similar conditions in the MAM as in the Index Assessment Framework of International Finance Corporation (IFC) which examines conditions that enable financier and private sector engagement in adaptation actions.

Generally, there was poor performance in relation to a number (15 of the total 30) of criteria across all FIEs including co-investment and public-private partnerships, vision/target setting, concessional finance, flexibility of risk/return hurdles, experimentation, familiarity with adaptation technology and use of innovative finance instruments/approaches.

'Regarding adaptation, I would say that now it is purely about fiduciary duty [...], being able to demonstrate that you are doing what is in the best interest of the client. I think that that is the main motivation now, and that is pushing me to think quite short term. There are not many companies that are really thinking seriously about longer-term climate change and making decisions accordingly. There is a lot of analysis done, but changing decisions based on that... I have not seen that happen. That is what I think it is today, but that is going to change quite soon'. (anonymous)

Across the conditions in our model the highest maturity across all FIEs was in exposure conditions, followed by commitment, market and knowledge and the lowest was both strategy and targets plus technology.

The assessment highlighted the need for FIEs to include adaptation in their climate commitments and to embed activities in key decision-making processes.

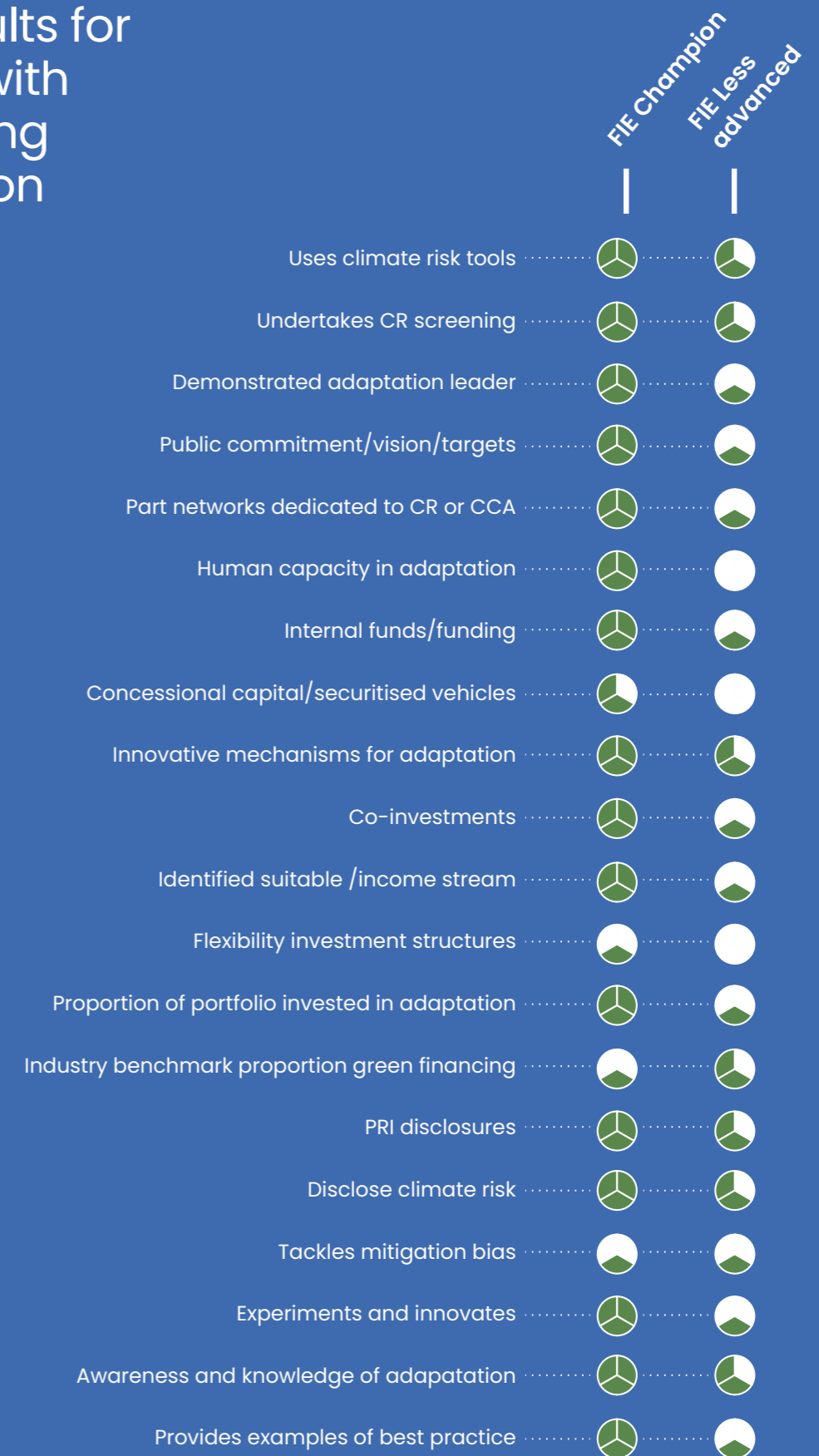
Contrastingly, other FIEs had a much lower level of activity across the maturity criteria, most only had activity in less than 40% of the criteria (see figure below). These FIEs were less informed about adaptation, lacked any history in adaptation finance, were not using any novel investment approaches and were not disclosing climate risks.

#### Box FIE Champion Criteria

To be called a 'Champion' in the context of the Project, **an organisation should meet simultaneously at least 3 of the following criteria:**

6. Implementing a robust framework to support climate adaptation (climate strategy, climate risk assessment, action plan, targets, KPIs, reports) (This criterion is MANDATORY).
7. Adhering to associations/initiatives on climate, sustainable investments, biodiversity protection or other typologies (e.g., being a member of a Sustainable Investment Forum – SIF/Subscribers of PRI).
8. Following the recommendation of the Task Force on Climate-related Financial Disclosure (TCFD)/ International Sustainability Standards Board (ISSB).
9. Implement climate stress test (Banks).
10. Investing in activities eligible for Climate Change adaptation according to the EU Taxonomy
11. Investing in Nature-Based Solutions (NBS).
12. Finance for Biodiversity Pledge Signatory.
13. Adaptation Plan in place or planned in the next three years (follow an annual plan that integrates criteria focused on climate change adaptation and resilience to address climate-related challenges).
14. Actively aiming for the goal of climate neutrality within investment activities (net-zero objective).
15. Investing in SDGs aligned activities (e.g., SDGs 9; 11; 13; 14; 15) and/or signatories of Principles for Responsible Investments (PRI)

## MAM results for two FIEs with contrasting adaptation finance maturity.



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# 3. The adaptation investment landscape

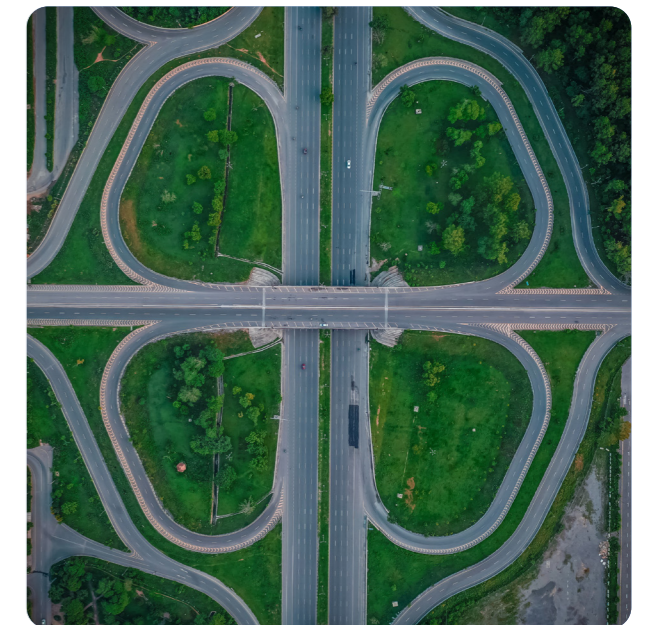
## The Adaptation Investment Landscape is shaped by public sector involvement and conventional approaches

An adaptation investment landscape is a description of the current state of adaptation finance, which serves as a tool to inform research, policy and business.

An adaptation investment landscape is descriptive, presenting prominent actors, exploited financing instruments and good practices associated with the funding and financing of climate adaptation. Aligning all these conditions can provide a more conducive investment environment.

In general, findings show that adaptation investment landscapes are largely shaped by public sector involvement and conventional approaches, with limited exploration of innovative financing solutions.

Four landscapes that have been described in the territories of Belgium, France, Romania and Italy can be viewed on CLIMATEFIT's website.



# 4. Barriers to financing adaptation at scale

Knowledge, stable climate policy, and market experience is lacking.

The top five barriers identified are:

- (i) lack of knowledge or advice
- (ii) policy instability
- (iii) lack of bankable projects
- (iv) non-standardised data
- (v) low returns on investment

## Lack of knowledge or advice

There is a lack of expertise and knowledge among many FIEs regarding adaptation, hindering their ability to make informed investment decisions. Knowledge barriers mainly revolve around understanding and quantifying risks and impacts of climate change, identifying best practices in their country or elsewhere and technical solutions.

Traditionally, FIEs would acquire tacit knowledge through co-investment activities, which are not widespread for adaptation. FIEs advocated for knowledge interventions capable of reshaping financial sector perspectives.

## Unstable adaptation policy

All financing and investment entities emphasised that regulation poses a significant barrier to accessing finance for adaptation.

Criticisms of the government were frequently voiced for its failure to provide a comprehensive vision of adaptation. Also, the lack of an overarching stable policy framework covering all types of climate hazards was pointed out.

Views emerged regarding regulatory stability, due to concerns about the current rate and extent of flux in climate policy in general. Many attributed this to the changes in climate commitments.

Many also mentioned the significant work imposed by the changes in regulations on sustainable finance in recent years.

## Limited bankable projects

Financing and investment entities commonly cite significant hurdles in identifying viable and financially feasible adaptation projects. Notably there is an absence of reliable cash flows and revenue streams.

**“There is a lack of capacity on the project developer side to speak the language of investors. And then there are very few of us that are willing to try to figure out the language of the cities and where they want to get to.**

**There really is a gap between the language, the capacity and the way that cities think about projects and then the way we do.”**

*(anonymous)*

**“If you’re looking to invest or you are looking to insure, you need to know that you have got long-term stability. Things are changing all the time! It becomes very difficult for any organisation to make any kind of move in that space.”**

*(anonymous)*

Despite various avenues for investing in adaptation, such as debt financing, equity investments and impact investing, these options often fail to attract interest. And so, FIEs struggle to provide examples of their involvement in adaptation finance.

Moreover, such projects face stiff competition and bias toward low-carbon and mitigation endeavours like renewable energy, which boast a proven investment track record and a favourable risk-return profile.

While FIEs claimed that the supply of finance was ample, they highlighted a demand-side issue: a scarcity of viable projects to invest in. Despite an abundance of available finance seeking investment opportunities, FIEs are often hesitant due to lack of track record of adaptation investments or, in many cases, unable to provide finance below typical risk-adjusted return ratios.

### Barriers to adaptation finance (FIE survey/interviewee responses)





Some of the FIEs, however, expressed interest in investments using new business models (incorporating climate risks). Particularly, those driven by societal impact. Such FIEs are willing to accept slightly lower returns or even incur losses to support the development of these projects or to establish a track record. It hinges on the FIEs' motivation.

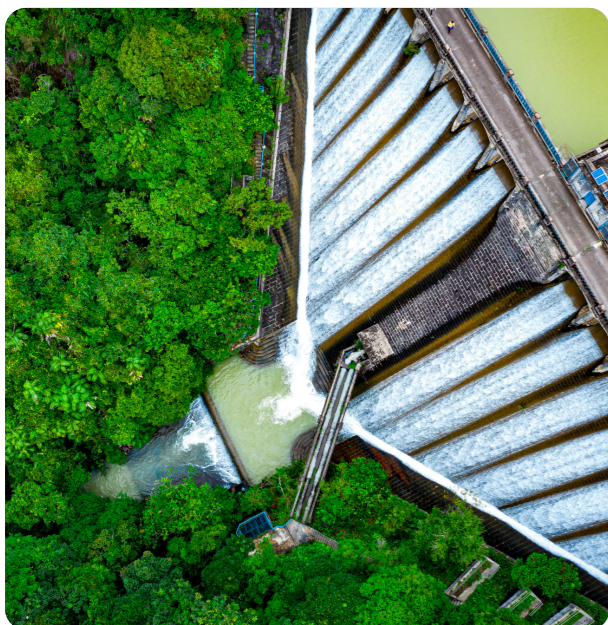
Financing and investment entities have clear criteria regarding the size of projects they find acceptable and are willing to invest in, often deeming many adaptation projects too small for investment. This reluctance among FIEs is closely tied to transaction costs, which can be too high for smaller adaptation projects.

## Lack of standardisation

While data, information and classifications are widely available on low carbon technologies, the same is not true for adaptation.

Furthermore, there is an evident lack of standardisation of climate data that prevents FIEs to confidently make informed decisions.

Additionally, the absence of methods to measure and monetise potential environmental and social benefits makes accurate return calculations and informed adaptation investments challenging.



## Low returns

When making investment decisions, the consideration of acceptable risk-adjusted return is widely acknowledged as paramount. However, adaptation ventures frequently present elevated risks coupled with lower rates of return, resulting in hesitancy.

**“If you extend the time horizon sufficiently, how are you going to get a cash flow from an adaptation investment? And this is where governments can use investment in a very different way than a financial institution. And yes, there will be social returns. But that does not help me to provide a pension return for our customers.”**

*(anonymous)*

There is a prevalent perception amongst FIEs that adaptation is a public good rather than a source of commercial returns. The perception is that they are challenging to monetise and FIEs do not have responsibility for adaptation.

Relatedly, FIEs' perspectives on the responsibility for adaptation projects and who should assume the associated burden represent another significant aspect. Respondents asserted that the onus for adaptation investments rests solely with the public sector rather than private entities, a sentiment echoed by many respondents.

Beyond the top five barriers, others were identified, also in line with the most frequently cited barriers in academic and practitioner literature.

## Technological uncertainty

Adaptation technology uncertainty was stressed as a major barrier.

Adaptation technologies, including early warning systems, floating houses, green roofs, desalination plants, and hybrid crops, struggle to advance beyond the demonstration phase to commercialisation and diffusion (Nemet et al. 2017). Investments in them are seen to have an increased technology risk, because they are not yet financially mature and there is no track record.

Overcoming technological challenges, along with the constraints of underused investment approaches and models demands significant institutional adjustments for FIEs.

## Difficulties in climate risk measurement

Financing and investment entities mentioned that standardised tools and benchmarks for evaluating and communicating climate risks are lacking, adding difficulty to forecasting and monetising. However, several FIEs are making advances in such measurement by developing in house such critical tools.

**“We are a bit equipped because, following the logic of risk management, we have developed proprietary methodologies for assessing climate risks that can impact our portfolio assets. We [...] determine the potential impact of acute and chronic climate events on our assets for different scenarios. This work is site-specific and examines how events can specifically impact the economic variables of our assets, such as asset value and expected revenues. We are applying this methodology not only to the existing portfolio but also to new investments we evaluate.”**

*(anonymous)*

## Lack of standardisation

Many respondents mentioned the lack of financing mechanisms and instruments dedicated to adaptation. Financial markets tend to favour incumbent technologies and approaches, leading to the use of traditional financing mechanisms.

A couple of FIEs mentioned there is a need to develop instruments to encourage FIEs to allocate resources specifically for climate adaptation projects (e.g., adaptation bonds, resilience-linked securities, climate-adaptation credit rating agencies), thus valuing adaptation as a critical component of the market.

**“We do not have a market; we do not have a culture for this kind of instruments. Yet, we are currently testing a hypothetical product that our customers are willing to buy. If there is such an interest, then we could start the process to make those products legal and possible for us to sell them.”**

*(anonymous)*

## Limited investment experience

Financial and investment entities seem to associate climate adaptation with a higher level of risk that perhaps does not exist in other investment areas, such as infrastructure development.

While some progress has been made in channelling finance to resilient infrastructure, the adoption of the instruments and investment models in the realm of adaptation has been limited.

Adopting and combining effective finance models, instruments and incentives from analogous sectors could markedly improve financing of adaptation.

Despite its acknowledged importance, there is a lack of leadership in adaptation finance from state investment banks and other key finance think-tanks and thought leaders within key financial organisations. Climate strategies of these institutions are yet to incorporate adaptation.

## Complex investment processes

Financial and investment entities stress the complexity, uncertainty, and sometimes politically controversial nature of investing in adaptation. It can involve political decisions, and these equate to many FIEs as delays and increased transaction costs.

There is an acknowledgement of complexity in identifying what constitutes adaptation because of its unclear taxonomy. Definition of adaptation and its tracking pose significant difficulties for FIEs (Boston Consulting Group 2022). Our findings point to an overwhelming complexity of adaptation finance, which is powering the investment hesitancy.

All these barriers indicate limited potential for increasing financing without tackling their causes. Pauw et al. (2022) and Whittaker (2024) list several market failures commonly cited by FIEs. Market failure occurs when a market fails to function efficiently, resulting in socio-economic consequences typically, not accounted for in markets and financial transactions. In addition, adaptation is generally considered a public good, which further complicates market dynamics. Understanding market failures is crucial to effectively tackling barriers and enabling investment.



# 5. Overcoming barriers to grasp opportunities

## Better public leadership along with more bankable adaptation projects.

When asked about what needs to change almost all FIEs cited regulatory change (see Figure 3). This was then followed by better impact measurement, more disclosure, changes to project size, better advice, higher returns, more liquidity and finally changes to liability arrangements.

Furthermore, several FIEs highlighted the need for project de-risking, co-financing and scale transformation, as well as more education/learning and industry collaboration.

Two crucial additional interventions identified are: establishing a sense of urgency and vesting a value in adaptation.

## Regulatory change

Financial and investment entities suggest ways to incentivise adaptation programs, such as insurance, mortgages and loans, tax incentives and credits, grants, regulations, and enhanced building codes (Olazabal et al. 2019).

Diverse forms of regulation (industrial, market, financial, fiscal and monetary) can bolster adaptation finance efforts (Mees et al. 2017; Jagt et al. 2019).

Financial and investment entities stated that far reaching changes in legislation and regulations are needed to solve the myriads of obstacles to adaptation finance. According to interviewees, investing in adaptation needs support throughout the finance

system, in legislation, regulations, and policy objectives, and in guiding principles, governing structures, processes, networks, heuristics, and relationships.

Financial and investment entities also specifically mentioned the need for a stable policy framework. There was an evidently strong desire for governments to act as a co-player in adaptation efforts.

Similarly, state investment banks (SIB) are pivotal in establishing, promoting, and sustaining an adaptation market.

Moreover, regulation is necessary to address complex property rights issues, such as monetising avoided costs or property value gains resulting from adaptation activities.

Financing and investment entities, though concerned about the significant recent changes in financial regulations related to sustainable finance and climate risk disclosure, were all supportive of further and more stringent regulation of all types (financial, fiscal and industry). Any regulatory change would need to gain acceptance from influential actors in the finance sector capable of driving these changes to policies like environmental regulations or fiscal measures to incentivise investments in adaptation solutions.

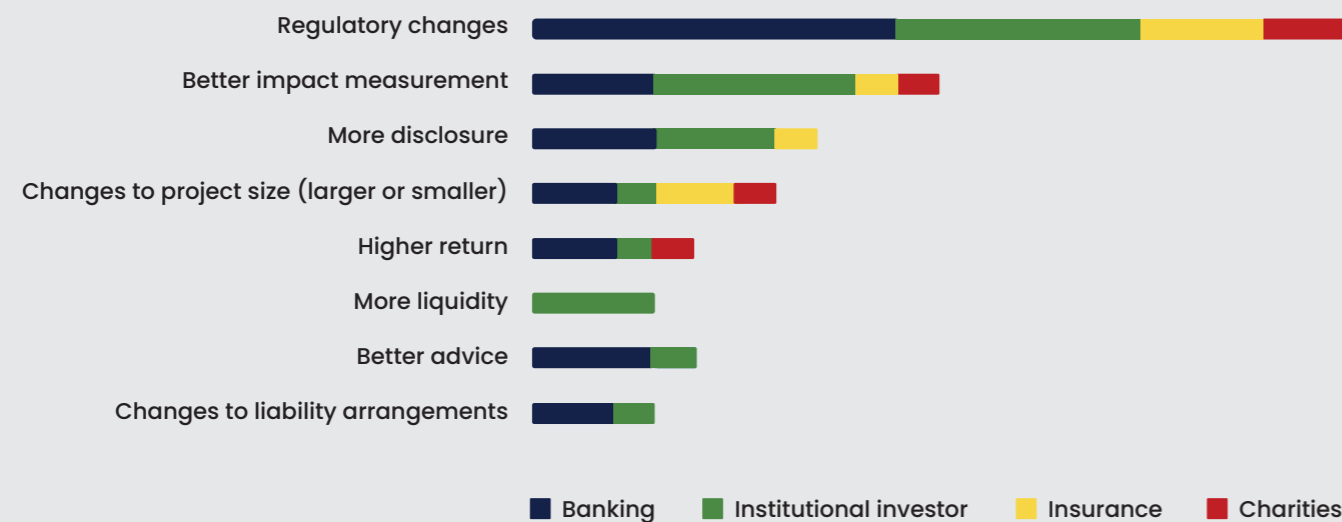
## Standardised corporate disclosure

Financial and investment entities call for more climate risk and adaptation-aligned investment disclosure. There is support for stringent financial regulations and standards that require all businesses to disclose and assess their climate risks and impacts, fostering transparency and accountability in climate-related investments (e.g., mandatory climate disclosures, adaptation finance standards, fiduciary duty changes, regulatory oversight).

**“[...] It is knowledge building, common language, and disclosure standards. That is important, but we have been missing it”.**

*(anonymous)*

## Changes to enable financing and investment in adaptation



## Financial incentives

Securing finance for adaptation necessitates implementing interventions that tackle market failures. These interventions include public and private financial incentives, such as preferential interest rates of debt for early-stage technology and innovation, and financial insurance incentives for flood risk.

Demand signals, like tax exemptions, and the institutionalisation of adaptation value and pricing resilience, such as through a bilateral exchange similar to carbon trading markets, are also important. In such an approach resilience or adaptation credits rather than carbon credits would be exchanged or traded.

The US municipal bond market successfully supports municipal large adaptation projects, partly due to tax exemptions applicable to such financing (Buhr 2022).

## Investable projects

Financial and investment entities request access and information on investable and bankable adaptation projects. FIEs are aware there are several possible routes to invest in adaptation, but they are not yet attractive enough. More efforts to improve the bankability of projects and identify income streams, as well as increasing transaction size are all needed.

Literature has long stressed the need for bankable adaptation projects to be developed based on identified income streams, project markets, historical performance data, project preparation, and end-user demand (ADB 2021).

## Public-private partnerships

Less than 15% of the FIEs stated they were engaged or committed to public-private partnerships in adaptation and very few could give concrete examples.

Partnering practises in low carbon (renewables), nature, and green infrastructure projects are more prevalent but not being transferred to adaptation.

Mobilising new partnerships to finance adaptation projects is crucial but depends on first resolving the complex governance and economic issues related to funding, trade-offs, equity, and the accrual of benefits (Bisaro et al. 2020).

Although public investment can be highly effective in mobilising and de-risking private investment, our study shows that de-risking approaches are not yet being considered for most of the FIEs.

**“I really believe in blended finance. But there is so far hardly any blended finance available in Belgium at least. I see some blended finance structures as it comes to developing countries and projects in developing countries. I think it is something Europe should reflect upon. Instead of giving subsidies to certain projects, I think it could make much more sense to contribute from a government perspective that same amount of money in equity form”.**

*(anonymous)*

## Industry networks and leadership

Participants underscored the importance of collaboration for adaptation between supply and demand sides.

For established technologies like low-carbon energy, FIEs benefit from well-established industry networks that encourage, support and facilitate financing for projects. These networks play a crucial role in fostering trust, collaboration, and knowledge-sharing, thereby instilling confidence in innovations and increasing the willingness of FIEs. Conversely, no similar industry networks exist among FIEs for adaptation, although robust inter-municipal networks have been established for this purpose.

Financing and investment entities engaged in adaptation detailed the intricate interagency process involved in designing and implementing adaptation projects, which entails the involvement of numerous actors and their perception that this means finance complexity and increased transaction costs.

State investment banks are seen as critical players able to coordinate and encourage investment activity in new areas such as adaptation, some SIBs in Europe are active in adaptation.



**‘There is a good enabling environment in the Netherlands. The central bank has just done a report on climate risk. They are one of the most proactive players [...]. There is now a repository for data on the real estate sector and for use by asset owners and property managers. [...] There is that one level playing field, and the climate proofing is accelerating now across the sector. And we’ve seen this change [here] in the last 3 to 4 years.’**

*(anonymous)*

## Interventions

We have identified from both literature (e.g. Whittaker, Ranger & Johnson [unpublished]) and FIEs’ input a wide range of both soft and hard interventions to address barriers to adaptation finance.

Soft interventions (S) typically involve specific actions, initiatives, or programs which focus on the behaviours – education, networks, and advice.

Hard interventions (H) involve structural changes to the system, organisations, policies, or frameworks that underpin the finance system (Banerjee, Servani & Shreedhar, 2021).

### 1. Industry leadership (H)

Encouraging finance sector leaders to drive climate adaptation initiatives by taking a proactive role (e.g., research, education, policy advocacy).

### 2. Financial regulations and standards (H)

Implementing stringent financial regulations and standards that require businesses to disclose and assess their climate risks and impacts, fostering transparency and accountability in climate-related investments (e.g., mandatory climate disclosures, adaptation finance standards, fiduciary duty changes, regulatory oversight).

### 3. Policy framework to protect property rights (H)

Developing mechanisms that recognise and protect property rights ensuring that ownership and usage rights support adaptation endeavours, which in turn can attract investment (e.g., legal property rights frameworks, regulatory bodies or agencies responsible, legal structures for compensation, protection of ownership and trading rights).

### 4. Financial instruments that vest value in adaptation (H)

Establishing dedicated financial instruments to encourage FIEs to allocate resources specifically for climate adaptation projects, thus valuing adaptation as a critical component of the market (e.g., adaptation bonds, resilience-linked securities, climate-adaptation credit rating agencies).

### 5. Financial incentives (H)

Offering financial incentives, such as tax exemptions or reductions, grants, low-interest loans, or subsidies, to incentivising companies to invest in adaptation activities (e.g., resilient tax breaks, resilient tax breaks, risk-reduction insurance premium reductions).

### 6. Specialised financial instruments (H)

Creating specialised financial instruments or investment vehicles tailored for climate adaptation projects, making it easier for FIEs to allocate capital to initiatives aimed at addressing adaptation (e.g., innovative in financial structuring, initiatives to accelerate business model, targeted investment vehicles, impact assessment and monetisation methods, labs/accelerators, crowdfunding, debt for swap, parametric insurance, weather-linked instruments, insurance linked infrastructure financing).

### 7. Redefined risk and return expectations (H)

Redefining and communicating risk and return expectations for climate adaptation/resilience investments (e.g., recognise resilience as an asset class, climate risk integration).

### 8. Trading climate resilience credits (H)

Developing a centralised platform for trading, enabling companies to buy and sell for instance resilience offsets while fostering investment in climate-resilient technologies and projects (e.g., resilience credit market, resilience credit trading rules, transparency, and verification mechanisms).

### 9. Industry co-ordination (S)

Encouraging industry coordination to drive climate adaptation investment and initiatives by taking a proactive role (e.g., learning by co-investment).

### 10. Governance of finance entities (S)

Facilitate improved internal structures, processes and maturity in financial institutions to improve accountability, etc. (e.g., supervisory practices, board supervision of climate risk etc., transition plans include climate risk and adaptation, integrate adaptation into micro prudential policy, integrate adaptation in the organisation, penalties, adopt precautionary principle).

### 11. Project pipeline (S)

Establishing a structured project pipeline that identifies FIEs and prioritises climate adaptation initiatives, making it easier for FIEs to find viable projects and allocate funds effectively (e.g., project identification, project packaging).

### 12. De-risking investments (S)

Implementing risk-sharing mechanisms, such as government guarantees or insurance, to reduce the perceived risk of investing in climate projects, thereby attracting more capital to these ventures (e.g., climate risk assessment, loan guarantees, contingency funds).

### 13. Size conversion and capital aggregation (S)

Facilitating the aggregation of small-scale climate projects into larger, more attractive investment opportunities, making it feasible for institutional FIEs to participate and allocate substantial capital (e.g., project bundling).

### 14. Education, knowledge and advice (S)

Knowledge, advice, and education to empower FIEs, individuals, organisations, and communities with the information and skills they need to make informed decisions and make effective adaptation investment (e.g., training programs, educational campaigns, peer-to-peer learning, advisory services, research and knowledge generation, share good practice).

## 6. Best Practice

Success requires win-win projects, use of innovative instruments and dedicated resources.

CLIMATEFIT aims at supporting the adoption of innovative financing instruments for adaptation to climate change. As such, the project included an analysis of international best practices, resulting in a database of more than 250 diverse international examples. Detailed reports of all twenty cases are available [here](#).

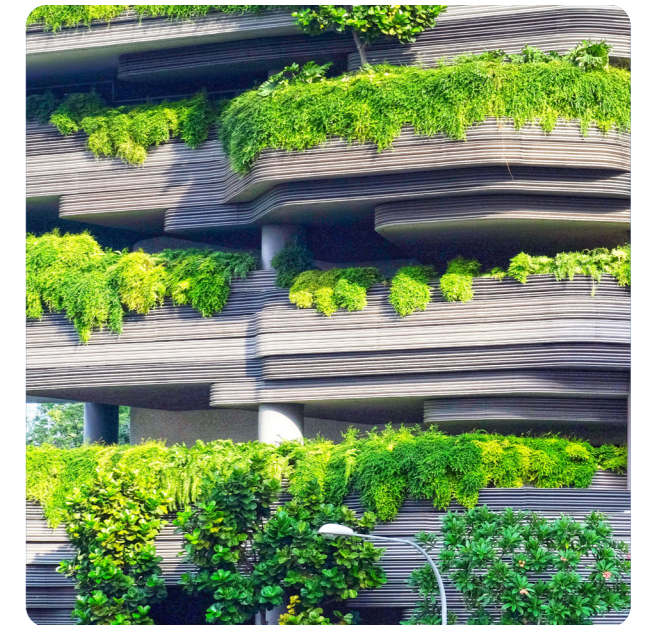
#### The key takeaways from those best-case practices are:

1. Good partnerships between public and private actors are important.
2. Successful multi-actor adaptation financing and funding solutions have a win-win for all partners involved.
3. Successful adaptation funding and financing solutions combine different financial instruments.
4. New approaches require significant resources.
5. Collaborations on a regional scale and/or between multiple public authorities may be necessary.

trust

collaboration

knowledge-sharing



# 7. Conclusions

The research results here summarised shed light on the insufficient progress in adaptation finance relative to the urgency to accelerate the implementation of adaptation projects across economic sectors in Europe.

Based on a new Maturity Assessment Model (MAM), the level of maturity of FIEs vis-à-vis their readiness to engage in that investment space is introduced, illustrating significant disparities among FIEs already engaged in adaptation finance and those demonstrating some initial level of curiosity.

To strengthen the knowledge base of FIEs through experience sharing, a database of 250+ international best practices in innovative adaptation financing solutions is also briefly presented. Lessons learned from these best practices showed that, in most cases, established or tested financial models and mechanisms used are not bound to their specific context, but can be replicated in other territories.

FIEs identified barriers to adaptation finance, such as the inability to make a business case, limited bankable projects, low returns, lack of financial instruments, insufficient climate risk measuring and disclosures, high transaction costs, and lack of liquidity.

One of the most significant barriers to financing adaptation identified is the lack of knowledge and expertise among FIEs. However, there is variability among FIEs. Those active in industry networks, progressing climate risk screening, with dedicated climate risk and adaptation teams, show some propensity to invest in adaptation. Conversely, others lack awareness, experience, and history in adaptation finance.

Overall, the research results pinpoint two major drawbacks related to barriers: (i) a notable lack of FIE buy-in for adaptation finance and (ii) policy and regulatory gaps. For instance, there was limited evidence that FIEs are interested in enhancing adaptation investment attractiveness and acceptability through de-risking measures, co-financing, and scale aggregation, all of which can facilitate 'learning by doing' and 'trust signalling' amongst FIEs over time.

Moreover, there seems to be an absence of public-private partnerships, as well as blended finance to support adaptation projects. FIEs mentioned blended finance instruments being used in markets in the Global South for adaptation projects and noted their absence in European markets.

To improve conditions favouring FIE investment in adaptation projects, a number of elements are suggested, including dedicated instruments, incentives, project de-risking, capital aggregation, and the development of pipeline of bankable projects by public authorities.

A further major challenge persists in quantifying the economic benefits of adaptation, particularly for adaptation projects with many non-monetizable co-benefits. Additionally, the scarcity of bankable projects due to unreliable cash flows and revenue streams limits investment opportunities for FIEs. Public-private partnerships (PPPs) were rare amongst our respondents. However, in identified international best practices, PPPs were common and had proven cost-efficient and critical for successful financing solutions. This is demonstrated by projects like the Hampton Environmental Impact 190 Bond, the Cloudburst Management Plan in Copenhagen and the Greater Cape Town Water Fund.

Finally, regulation remains a significant barrier, with a need for a stable policy framework encompassing all climate hazards. Having a long-term climate strategy proved to be an important success factor in more than half of the twenty deeply researched international best practices.

The research underscores the importance of bridging the gap between project proponents, often governments, and FIEs, whose objectives in climate financing often diverge. While project proponents may often focus on aligning with EU climate policy, addressing local climate vulnerabilities and achieving climate goals, FIEs prioritise return on investments, and are often primarily focused on climate mitigation. This mismatch necessitates enhanced collaboration and communication to develop bankable adaptation projects.

To facilitate collaboration among governments and FIEs, CLIMATEFIT will focus on three activity tracks: (i) awareness raising and capacity building: addressing the lack of knowledge and expertise through training on climate risks, adaptation, and financing solutions. (ii) stimulating adaptation financing solutions: developing investment strategies, plans, and identifying potentially bankable projects, and; (iii) policy recommendations: proposing regulatory changes to address barriers, such as public resource constraints, regulatory frameworks discouraging private financing, and the need for a stable climate adaptation policy.

In conclusion, while the journey to boost climate adaptation finance is complex, the findings outlined here provide a roadmap for research and innovation initiatives and activities and signpost ways to make a notable indent into the adaptation financing gap in Europe.

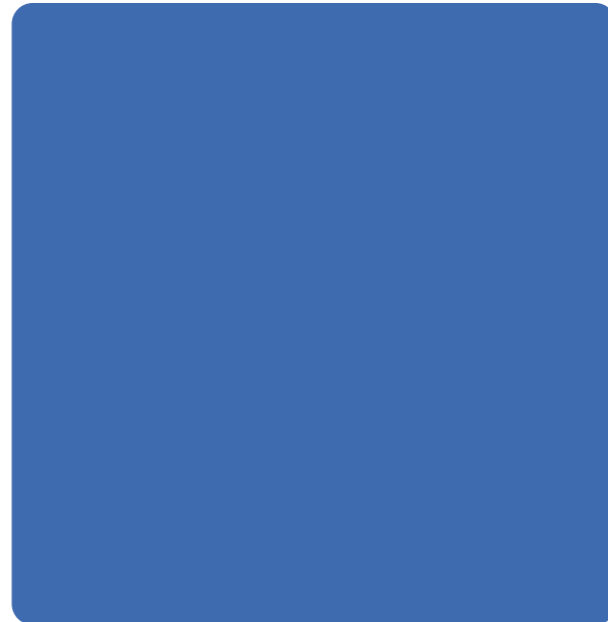


# 8. About

CLIMATEFIT is an EU Mission Adaptation project, which aims at increasing finance for adaptation to climate change in Europe. It does so by supporting collaboration among governments, financing and investment entities, and other relevant adaptation stakeholders. More than thirty organisations across Europe, including international consultancies, universities, climate and environmental agencies, municipalities and regions, as well as financial service providers, form its consortium. They join forces to provide new insights, innovative financial tools, capacity building as well as deliberative spaces that help public authorities and financial institutions come together. Ultimately, reaching financial agreements for climate adaptation resilience.

World Climate Foundation (WCF) coordinates the CLIMATEFIT project. Since 2010, WCF has worked with and engaged a network of global leaders and multi-sector stakeholders to combine the expertise and action needed, focusing on creating ambition loops through public-private partnerships in the areas of climate, biodiversity and health.

The Investment Mobilisation Collaboration Alliance (IMCA), launched at COP28 by the United States and Nordic governments, is an excellent example. IMCA is a new platform for public-private partnerships to create concrete pipeline collaboration, support blended finance vehicles, and catalyse private capital for investments in climate mitigation, adaptation, and nature in emerging markets and developing economies. Since launching, IMCA has made two announcements of joint support, one under the Blended Finance for the Energy Transition program and a second fund collaboration under the Adaptation Finance Window.



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# 10. Disclaimers

The sample of interviewees in the research included several leading financial entities, and so it was a biased sample, which is likely not to be representative of the whole European market.

The Maturity Assessment Model (MAM) uses five (5) enabling conditions found across reviewed maturity models, such as exposure, commitment, policy/strategy, disclosures, institutions, knowledge, technology, etc. Risk management and board conditions, as well as cost benefit and evaluation are excluded in this first version. These could be added in a later upgraded version.

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