IKEM

CLIMATE FINANCE WEEK

Banking on a brighter future

Recommendations for more sustainable investment flows

MAY 2021

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About

This publication is a result of the five briefings published during IKEM's Climate Finance Week between May 17th and May 21st, 2021. The briefs summarise research IKEM conducted together with project partners within the last 3 years.

#IKEMClimateFinanceWeek

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Interview with Aleksandra Novikova

Energy Efficiency and Climate Finance Team Lead

Aleksandra Novikova was a Lead Author of the Fourth Assessment Report, published by the Nobel Prize-winning Intergovernmental Panel on Climate Change (IPCC) in 2007. The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) has also nominated her to serve as a Lead Author of the upcoming Sixth Assessment Report. Aleksandra has studied in Siberia, Hungary and California and holds a PhD in environmental sciences and policy. She leads the Energy Efficiency and Climate Finance team at IKEM.

I always wanted to become a scientist. I knew that when I was still a child. My dream was to be an inorganic chemist and perform experiments. I come from a family of scientists: my parents belonged to the first generation of aeronautics and space programmers. I also had the exceptionally good luck of being able to spend the last two years of school at a boarding school for gifted children. The former Soviet Union had four of these boarding schools, which were part of a Russian programme to train future scientists from the school's bench. So, I essentially never had a choice – I had to be a scientist.

My family asked me to study something more practical than inorganic chemistry, so I decided to study mathematical economics.

The dream came crashing down in the 1990s: the old system was gone, and a new one wasn't in place yet. We are often called the 'lost generation' in Russia. Our old values were lost – including the value placed on being a scientist, which became one of the lowest-paid professions of all. Times were hard. My family asked me to study something more practical than inorganic chemistry, so I decided to study mathematical economics at Novosibirsk State University in Siberia. Alongside my studies, I worked as a research assistant in the economic laboratory at the Institute of Oil and Gas Geology of the Russian Academy of Sciences. During that time, two things happened. First, I realised how important energy is for economic development and ultimately for human development. Countries and regions rich in energy have a higher human development index. Second, I witnessed firsthand how the exploitation of oil and gas fields made an impact on the fragile landscape and biodiversity of the taiga and the tundra. When I saw how resource exploitation had changed Siberia, I realised that we need to start living in a way that is more efficient and more sustainable. So, I switched sides: I shifted my focus from energy production to energy consumption. I completed a master's programme and later a doctoral programme in environmental sciences and policy at Central European University (CEU) in Budapest.

While at CEU, I worked under the supervision of Professor Diana Ürge-Vorsatz, a world-renowned expert in environmental science. She was a Coordinating Lead Author of the Fourth IPCC Assessment Report, and I was in the right place at the right time: I helped her prepare the report chapter on mitigation in buildings. The decarbonisation of buildings is particularly important, because at a global level, buildings are one of the sectors consuming a large share of energy. The building sector is directly or indirectly responsible for a large share of greenhouse gas emissions. These years of intensive work with leading world scientists were amazing, and I had a chance to work on very challenging topics. Based on my contributions, I was nominated as a Contributing Author, but ultimately our findings were so significant that I was nominated as a Lead Author. Our

conclusions contributed to a growing international awareness of the enormous role that the building sector plays in the mitigation of climate change. This awareness is reflected in the growing number of policies that aim to improve energy efficiency and building-integrated renewable energy. I am very pleased that our work helped shape better policies around the world. In 2007, the IPCC was awarded the Nobel Peace Prize. This was a nice recognition of the authoring scientists, who usually work on the report without financial compensation – that means the research has to be done on weekends and at night, in addition to eveyday work. But even more importantly, it was an important recognition of why we were doing it – to call attention to an unequivocal global challenge. I am very honoured that I was also nominated to serve as a Lead Author of the forthcoming Sixth Assessment Report, which will be published later in 2021. This time, I was nominated by the BMU based on life-long achievements on the topic.

I want to give back to the world – to share my knowledge and experience.

After the fourth report was completed, I became a research scholar at the Lawrence Berkeley National Laboratory in California, where I wrote part of my doctoral thesis and contributed to projects in the US. The Berkeley Lab brings together the best scientists from around the world, and many of my current role models are people I met during that time. Their influence still shapes my standards for my own research.

Since 2014, I have been working as a senior research associate at IKEM, where I focus on the evaluation of energy efficiency and climate mitigation policy and the financing of climate actions at international, national and subnational levels. We assess policies to understand what worked and what did not, and we contribute to work on various aspects of financing climate action. This is important because climate measures require a great deal of additional capital or the restructuring of the current capital assets, but public budgets are limited. Most of my research centres around the building of bridges between Western Europe and the rest of the world – especially Eastern Europe and Southern Europe, but also the rest of Eurasia.

I was very fortunate to obtain scholarships for my studies, and I am thankful for everything I was able to learn. That makes me want to give back to the world – to share my knowledge and experience to make this world a better place.

As told to Adrian Röhrig.

Climate Finance Week

This publication is the outcome of IKEM's Climate Finance Week, which highlighted the crucial role of investment decisions in building a sustainable future. The five briefs feature lessons learned at international, regional, national and local levels and include recommendations for both developing and advanced economies.

DAY 1

Lessons learned from EU funds

International level

Authors: Aleksandra Novikova (IKEM), Marina Olshanskaya (AvantGarde Group), Rimantė Balsiūnaitė (AvantGarde Group)

The target audience of this brief is development finance institutions and global climate funds as well as multilateral and bilateral development agencies that provide international climate finance in developing and emerging countries. The brief draws on lessons learned from the programming and implementation of climate finance disbursed by the European Structural and Investment Funds in EU Member States from 2000–2020. Lessons learned from European countries provide insight into how a stable long-term climate policy framework can be formed and financed. These lessons suggest that the programming and implementation of international climate policy could benefit from the following: strengthening partnership aspects throughout the negotiation and implementation processes; aligning better climate programmes with national priorities other than the climate; orienting these programmes towards long-term development finance; promoting national ownership of programme implementation; and providing comprehensive technical assistance, not only to manage the disbursement of funds, but also to increase the supply of quality projects.[1]

The European Structural and Investment Funds (ESIF) are a part of the EU budget. These funds accounted for 43% of the EU budget from 2014–2020; the total EU budget scaled to approximately 1% of EU's gross national income in 2019. Each Member State contributes to the EU budget based on its gross national income. The EU budget is implemented through a range of EU funds and programmes that disburse finance to beneficiaries located in the EU Member States. The beneficiaries include regional and local authorities, small and medium-sized enterprises (SMEs), large enterprises, farmers, non-governmental organisations and academic and research institutions. These entities obtain finances disbursed by the ESIF through grants and other financial instruments. In some EU Member States, the cumulative support that beneficiaries receive from the EU budget exceeds the amount that the respective Member States contribute to the budget; other Member States are net contributors to the EU budget.

Lessons learned from European countries provide insight into how a stable long-term climate policy framework can be formed and financed. Many challenges that arise in Europe, especially in Central and Eastern European countries, are also relevant to emerging countries. The flow of ESIF financing from the EU budget to beneficiaries in the EU Member States bears certain resemblances to the structure of international climate finance that is provided by developed countries to developing economies via development finance institutions (DFIs) and global climate funds.

This brief analyses two ESIF: the European Regional Development Fund (ERDF) and the Cohesion Fund (CF). We studied the changes to and impacts of these funds in EU Member States from 2000–2020 and examined factors contributing to and limiting success, with examples provided from Lithuania and Slovakia. Viewed through the prism of international climate finance policy, these conclusions and lessons learned could be useful for donors and recipients. We narrowed our focus to the analysis of energy efficiency as a component of mitigation action.

It is important to note that not all lessons from the EU are easily transferrable or applicable to the international climate finance regime due to the differences between the legal nature of the ESIF and that of international climate policy. The ESIF is a solidarity mechanism among the EU Member States and a means to reach common EU objectives, defined as economic and social cohesion.[2] Global climate finance architecture is largely governed by the United Nations Framework Convention on Climate Change (UNFCCC), which obliged developed countries to provide new and additional financial resources for climate actions in developing countries.

LESSON 1:
Strengthen partnership aspects throughout the negotiation and implementation process

The focus on partnership-building throughout the negotiation process was identified as a success factor in the formulation of programming objectives and priorities in a mutually acceptable way. In this context, negotiations between the European Commission and Member States on the programming of EU funds are perceived as occurring between equal parties, with both sides having an equal impact on the outcome. In contrast, the programming of international donor support for climate finance more closely resembles a stakeholder consultation than a negotiation.

> Negotiation between the European Commission and their countries as equal parties was identified by Latvian and Lithuanian interviewees as a success factor in the formulation of programming objectives and priorities that were acceptable to and politically feasible for both sides. Inevitably, however, consensus-building of this kind requires more time and effort than does the top-down approach, in which priorities are dominated by the donor. Even the language of the key documents reflects this difference: 'Partnership Agreements' are signed between the European Commission and the EU Member States, while the prevailing practice in international

climate finance is to enter into 'Grant Agreements' or 'Funding Agreements'. Whereas 'partnership' suggests collaboration towards common goals, 'grant' implies a more unequal, top-down relationship between parties. Although we cannot draw an exact parallel between EU and international climate finance, the EU's partnership-based approach does offer useful lessons for the architecture of global climate finance and the achievement of global climate goals.

LESSON 2:
Involve stakeholders to ensure an alignment with national priorities and a maximisation of non-climate benefits, such as new jobs, poverty reduction and economic recovery

ESIF negotiation and programming involves extensive analytical and consultation processes, which were identified as another success factor. The most important level is negotiation among individual ministries and central government bodies. This is followed by several rounds of negotiations with the European Commission. Member State negotiators are required to include national stakeholders – including ministries, business representatives, social partners, and civil society representatives – in the consultation process. Such extensive preparatory processes with stakeholders at various levels support the design of a programme that responds best to national and local priorities and is well received by stakeholders. A maximum alignment of climate actions with national socio-economic and environmental priorities is critical to ensure buy-in, wider uptake, acceptance and demand from national stakeholders, which is especially important in times of economic crisis.

We found that the most successful measures were those which were aligned with national priorities. Lithuania's experience offers a powerful example in this respect: when a national renovation programme for energy efficiency in buildings was launched with ESIF support following the 2008 crisis, it generated significant positive co-benefits for the local economy in the form of jobs, support to small and medium enterprises (SMEs), and improved bank liquidity in addition to a substantial reduction in CO_2 emissions. Similarly, in Slovakia, some of the most successful interventions implemented with ESIF support were those with strong benefits for local communities; for example, a project to modernise technology at a steel factory led to a significant improvement in air quality in the city of Košice.

LESSON 3:
Promote national ownership of programme implementation, including the involvement of national institutions, financial organisations and civil society in programme delivery to ensure sustainability and replication

The definition of programming and funding directions at country, regional- and/or country-wide theme - levels for the ESIF (as opposed to the project-based programming typical of multilateral donors) has also contributed to success. This approach, which leaves the detailed design of operational programmes and modalities of their implementation to Member States, has been identified as particularly instrumental. The ESIF are managed by EU Member States themselves based on Partnership Agreements: even though the European Commission is formally responsible for the implementation of the EU funds, the actual implementation is outsourced to Member States (the principle of 'shared management'). This principle enables countries to take full account of domestic circumstances, constraints and opportunities while remaining within the general direction and framework determined by the Partnership Agreement.

The principle of shared management entails various benefits. It fosters a broad participation of social organisations in promoting economic growth. Involvement at various policy levels also results in the design of well-suited programmes and projects. In addition, the principle promotes the use of new public management practices and positive spill-overs to domestic policy, as Lithuanian representatives indicated during interviews.

LESSON 4:
Design climate finance as long-term development finance to enable market transformation

The overall design of the ESIF as a 'development finance' instrument, as opposed to only a 'climate finance' instrument, has enabled countries to move beyond direct and immediate climate actions. On the one hand, such a broad design cannot always be directly translated into immediate emission reductions; on the other hand, it has enabled the implementation of broader social and economic reform processes, which are essential for achieving longer-term decarbonisation goals. As a result, the ESIF have been used across the board to mitigate negative socio-economic impacts of decarbonisation policies, making it possible for many difficult policy decisions to take an effect. In all countries where interviews were conducted, the ESIF's long-term budget planning horizon was said to be instrumental in removing numerous barriers, facilitating necessary reforms, making instruments more mature and bringing the private sector on board. It could send long-

term signals to the market about funding availability, which would not be possible within the framework of annual national budgets.

> In Lithuania, the massive ESIF-financed investment programme for the energy-efficient modernisation of residential buildings has laid the groundwork and prepared tenants for a gradual removal of subsidies and a liberalisation of heat tariffs. This 'difficult' policy has in turn created a lasting incentive for consumer energy efficiency while simultaneously saving a substantial amount of public money on subsidies and improving the overall performance and competitiveness of the heat supply sector. To achieve the impact at scale, Lithuania worked for over 15 years to gradually improve the share of private finance in programme funds, which has risen from zero to over 50%. It was also necessary to prepare the local technology and labour markets to address demand. Similarly, in Czechia and the Slovak Republic, the ESIF have been used to support a painful, but essential transition process related to the economic transformation of coal.

LESSON 5:
Provide comprehensive technical assistance to support the supply of and demand for projects, and ensure that technical assistance and financial instruments are aligned within one funding framework

Technical assistance is extremely important for the self-empowerment of less developed countries. It enables these countries to continue projects without support in the medium to long term, as many lack strong institutions and extensive experience in managing complex policies. Workable implementation arrangements and the provision of additional technical support throughout the project preparation and implementation process have been critical to success, i.e., timely disbursement of ESIF funds and the achievement of intended results. Experiences of Member States offer numerous examples of successful and not-so-successful practices that either contributed to or jeopardised implementation.

> Lithuania provides one example of an effective, well-coordinated and dedicated institutional system that offers technical assistance for renovation programmes in multi-apartment buildings with the involvement of local governments. A dedicated public agency, the Housing Energy Efficiency Agency (BETA), has been set up to administer and coordinate the provision of technical support to various stakeholders – including local governments, housing administrators and energy services companies – throughout the design and implementation of projects in multi-apartment buildings. This provides assistance not only on the supply side of projects, but also in the creation of demand for them.

LESSON 1:
Strengthen partnership aspects throughout the negotiation and implementation process

LESSON 2:
Involve stakeholders to ensure an alignment with national priorities and a maximisation of non-climate benefits, such as new jobs, poverty reduction and economic recovery

LESSON 3:
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[1] For further information and for references, please see the background study: Marina Olshanskaya, Aleksandra Novikova, Janna Hoppe, Erik Grigoryan. 2020. Evaluating the fiscal and environmental efficacy of debt-for-climate swaps: Us-ing global case studies to derive recommendations for countries of Central Asia and the Caucasus. Berlin: Institute for Climate Protection, Energy and Mobility (IKEM).

Partners:

AvantGarde Group

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

INTERNATIONAL CLIMATE INITIATIVE (IKI)

IKEM

DAY 2

Debt-for-climate swaps

Developing countries

Authors: Aleksandra Novikova (IKEM), Marina Olshanskaya (f. UNDP and f. AvantGarde Group), Janna Hoppe (ETH Zurich and f. AvantGarde Group), and Erik Grigoryan (Environment Group and f. Minister of Environment of the Republic of Armenia)

Climate finance plays a pivotal role in enabling developing countries to mitigate climate change and adapt to its impact. Thus far, the international community has failed to make progress towards the goal of mobilising an annual USD 100 billion for climate projects in the developing world by 2020. Meanwhile, substantial public debt and persistent fiscal deficits limit access to concessional and non-concessional climate finance in most of the developing world. Debt-for-climate swaps offer a solution to both challenges by providing debt relief while mobilising funds for climate protection. Based on past evidence, we assessed the applicability of the scheme to countries of the Caucasus and Central Asia. They can stand as a good example for the challenges and opportunities of debt-for-climate swaps for other developing countries. This brief summarises our recommendations for the design of a debt-for-climate swap to maximise financial value, achieve climate benefits in line with national goals and ensure effective and to transparent governance and implementation. [1]

What is a debt-for-climate swap & why do we need it?

Developed countries have pledged to help finance climate actions in developing countries but have thus far fallen short on their commitments. On the one hand, many bi- and multilateral donors report challenges in disbursing their funds due to a failure to identify fundable projects, especially related to adaptation. On the other hand, many developing countries report difficulties in accessing available resources due to a lack of capacity and an inability to fulfil specific requirements established by donors or financing institutions.

High external debt burdens further hamper the efforts of many developing countries to access finances and set their economies on a low-emission and climate-resilient path. External debt owed to the private sector, bilaterally to countries or multilaterally to financing institutions, is particularly high in low- and middle-income countries and commonly surpasses the sustainability threshold of 18–22% of debt relative to GDP. This debt overhang is detrimental to economic growth and an obstacle to ambitious climate change mitigation measures.

A similar situation is apparent in the countries of Central Asia and the Caucasus, all of which report difficulties in accessing climate finance. On the one hand, the COVID-19 pandemic has worsened this situation: a high level of indebtedness affects creditworthiness and investor perceptions and makes it impossible to attract additional finance for climate resilience and a low-carbon transition. On the other hand, addressing these challenges could also bring new opportunities. Linking debt reliefs to climate actions is one of them and it must not be overlooked.

Debt-for-climate swaps provide debt relief while mobilising new finance for climate change mitigation and adaptation – a solution that can avert the climate crisis as well as the debt crisis. While specific designs vary, all debt swaps share the same underlying mechanism: the public debt of a developing country is cancelled in exchange for investments in climate-related projects within the debtor country and counts towards the creditor's climate finance commitments. We see debt-for-climate swaps as an opportunity to enable the financing of climate actions in the countries of Caucuses and Central Asia.

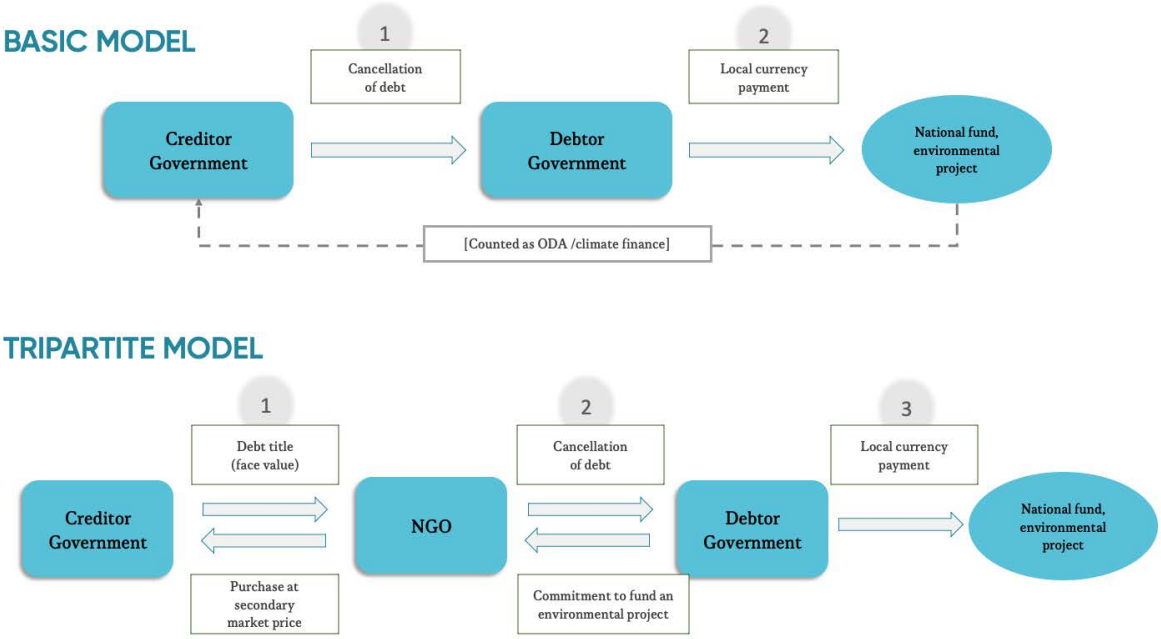
What are the key features of debt-for-climate swaps?

Debt relief in the past:

Debt relief linked to environmental goals or debt-for-climate swaps is not a new concept: after World War II, the Paris Club – comprised of major creditor countries – initiated large-scale debt relief programs in the form of debt-for-equity swaps. From 1991 onwards, the Paris Club creditors allowed debtors to convert their public debt into local payments for social or environmental projects. Since then, debt-for-climate swaps have raised hundreds of millions of dollars for the environment.

We identified five case studies of debt-for-climate swaps, which constitute examples of swap-funded investments in either mitigation or adaptation projects. A good example among these is a dept swap scheme implemented by the Seychelles and a club of public and private debtors. This scheme enables the country to cancel EUR 21.6 million in exchange for domestic investments in the protection of its unique marine ecosystem. The specific objective is to support the Seychelles in increasing the marine protected area from 1% to 30% of its territorial waters by 2020.

Another good example is a swap between Italy and the Philippines, which was contracted in 2012 and involved the cancellation of EUR 2.9 million in Philippine public debt in exchange for investments in environmental protection and poverty reduction. The projects in the areas of conservation, reforestation, agriculture and sustainable resource management placed a particular emphasis on the participation of local communities. By 2019, the programme was estimated to have 17,000 beneficiaries, including local farmers and fishers from predominantly poor districts.



The architecture of debt-for-nature swap instruments

The architecture of debt swaps:

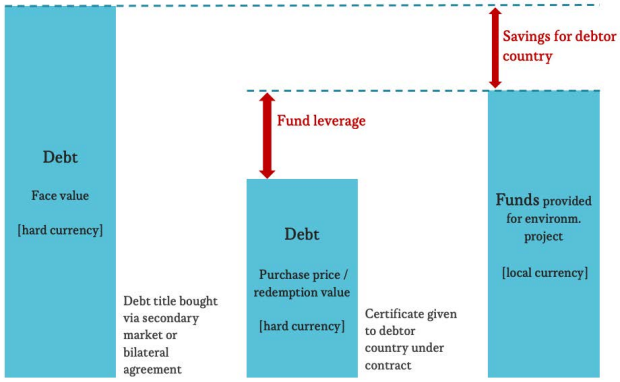
Swaps are either arranged directly between one debtor and one or more creditor governments (basic model) or facilitated by a third party, often an NGO (tripartite model). In the latter case, the NGO purchases the debt of an indebted country at a secondary market price and redeems the debt title with the debtor country in exchange for conservation efforts. The secondary market price ultimately depends on the probability of full debt repayment and is thus higher if full repayment is expected. Additional factors in the determination include the extent to which the outstanding debt service payments are already written off by the creditor government, as well as the overall economic situation and growth projections of the debtor governments.

After a mutual agreement is reached, the debtor government usually makes expenditures gradually (often into a dedicated fund) in accordance with the original repayment schedule of the initial debt. These expenditures can be channelled directly towards environmental projects or placed in a national trust fund, in which case the interest earned on the deposited money can also be used to finance environmental projects (e.g. via grants to local NGOs). Such funds allow for earmarking and can increase accountability, because they are governed by a committee comprised of representatives of governments as well as independent observers, such as national or international NGOs.

If debt titles are bought on the secondary market, the price is determined by the credit rating, debt situation and overall economic performance of the indebted state. On the other hand, if debt titles are bought back via bilateral agreements, there are no rules or restrictions on the discount rate by which the initial debt is reduced. Discount rates are negotiated between the participating governments on a case-by-case basis; past rates have mainly ranged from 0–50%.

Overall, debt swaps are more feasible when creditor governments are willing to sell titles at a price that is lower than face value, because only then is fiscal space created for the debtor government. However, as bilateral debt is predominantly held in US dollars and investments in local environmental projects are generally made in the local currency, preferable conditions can arise even at a discount rate of zero if this option would allow scarce hard currency to be saved.

Most debt swaps have involved bilateral public debt, but debt swaps can also be conducted in the case of multilateral public or commercial debt. Commercial debt can be bought on the secondary market by a donor country as a form of Official development assistance or climate finance. Multilateral creditors, such as the World Bank or the IMF, cannot provide debt relief per se because of their legal status, but donor countries can use their resources to pay off the debt held at such institutions.



Leveraging funds for environmental protection: an overview of issued and redeemed debt titles in exchange for investments in environmental protection

Challenges

- If the discount rate is low or even zero, no extra budgetary room is provided, which leaves the overall macroeconomic situation unaffected.
- If the debt swap volume is small, the positive impact on the debtor's economic situation is negligible and may even be outweighed by the costs of negotiating a swap and setting up a trust fund.
- Debtor countries must have sufficient funding to deposit into trust funds, and there is a risk of inflation if debtor governments print money to pay the agreed amount in local currency.
- One danger associated with debt swaps is that these could crowd out other forms of finance that are potentially more effective. Debt swaps should be a measure to supplement the ODA, not a substitute for other channels that could provide new aid.
- Climate-relevant debt swaps must compete with other sectors (health, education, infrastructure) for a limited amount of eligible debt.

Advantages

Debt-for-climate swaps are commonly referred to as 'win-win' agreements because they benefit both debtor and creditor countries. We identified the following opportunities and challenges for the involved parties:

For the debtor country:

- Debt relief and conversion lowers the overall debt burden on the debtor country and reduces the strain on the national budget.
- Since counterpart payments for environmental projects are generally made in the local currency, debtor governments conserve scarce hard currency, which they can then use to establish foreign exchange reserves.
- Debt relief can strengthen economic stability, improve the credit rating of a debtor and attract new investments.
- Environmental projects benefit from freed finance that would otherwise have gone towards the creditor's budget; this often produces economic and social benefits at a local level.
- Grants to environmental projects or local NGOs are typically distributed via a trust fund that is set up according to original repayment schedules. This long-term regular financing facilitates funding and thus the debtor's absorption of climate finance.

For the creditor country:

- From a financial perspective, the remaining debt claims of creditor countries increase in value through such swaps. Creditors can recover all or part of their debt and thus avoid the accumulation of arrears. Debt swaps are particularly beneficial if portions of the debt are already written off and full repayment is unlikely.
- Creditors must mobilise a lower amount of additional funding to meet their international climate commitments and can register the instrument as the provision of ODA at the same time. Since the nominal value of non-concessional debt can be registered as ODA, many creditor countries have used this instrument to boost their ODA numbers. Furthermore, creditor countries can raise their environmental credentials by mobilising co-financing through international funding institutions. A debt swap that is carefully designed can guarantee an adequate use of funds and carries a greater responsibility than does a single donation.

Why are debt-for-climate swaps an opportunity that the Caucasus & Central Asia cannot afford to miss?

Access to climate finance:

The countries of Central Asia and the Caucasus have limited financial resources available to invest in nature and climate protection. Prior to 2020, the Kyrgyz Republic, Georgia, Uzbekistan and Armenia experienced solid and robust economic growth, a rise in exports and a stabilisation of macroeconomic conditions. Inflation was under control and private investments had increased. Still, the GDP per capita is only around USD 4,000 in the Caucasian countries, USD 1,200 in Kyrgyzstan and USD 1,500 in Uzbekistan. In Tajikistan, GDP per capita is only roughly USD 800, making it the only lower-income country of the list and one of the poorest countries in Asia with a high risk of debt distress.

As some of these countries reached the threshold for classification as upper middle-income (Armenia, Georgia, Kazakhstan, and Turkmenistan) and lower middle-income (Uzbekistan and Kyrgyz Republic), they cannot easily access international finance in the form of ODA. Additionally, all countries of Central Asia and the Caucasus are subject to lending restrictions imposed by the IMF and have committed to reducing their public debt burden in the medium term. Limited foreign direct investment (FDI) and poor credit ratings exacerbate the struggle to obtain financial resources. All of the selected countries have received a speculative grade rating from Moody's, which classifies the countries as 'volatile' and 'dependent on the current economic situation' (Ba and B).

Potential for debt swaps:

Nearly all of these countries have a very high long-term public debt held in foreign currency, ranging from USD 3.6 billion in Tajikistan to USD 33.1 billion in Kazakhstan. Considering the respective size of the economies, public-debt-to-GDP ratios are particularly high in Armenia, Georgia, the Kyrgyz Republic and Tajikistan, at around 50%. In all countries except Turkmenistan, most public debt is denominated in foreign currency, which leaves these countries vulnerable to exchange rate depreciation. Nearly all public debt is medium and long term, with maturities of over 20 years.

For the majority of these countries, external debt represents a relatively high share of total public debt. In Armenia, Georgia, the Kyrgyz Republic, Tajikistan and Uzbekistan, external public debt accounts for roughly half of total external debt, while the share is much lower in Turkmenistan and Kazakhstan. Kazakhstan has the highest total external debt (USD 167 billion), of which USD 146 billion is from private-sector debt. Considering the size of the population and the economy, total external

debt is high in all countries except Turkmenistan. Multilateral debt accounts for between 4% (Kazakhstan) and 31% (Armenia) of external debt. Concessional debt as a share of total external debt lies between 1% (Kazakhstan) and 47% (Kyrgyz Republic), which ultimately reflects the probability of full debt repayment as well as the overall economic situation.

Debt-for-climate swaps thus have considerable potential in the countries of the Caucasus and Central Asia. Public-debt-to-GDP ratios are above 45% in four of the seven countries, which greatly exceeds recommended thresholds. Altogether, externally owed public debt amounts to USD 48 billion; this could allow for large debt-swap volumes, making a significant contribution towards global climate finance.

Feasibility of debt-for-climate swaps:

Therefore, debt-for-climate swaps offer a solution on how to increase the financing of climate actions in Central Asia and the Caucasus because they provide debt relief that is conditional on domestic investment in climate actions. Since debt reduction is already an integral part of the economic agenda, debt swaps align with the overarching financial policies of Caucasian and Central Asian countries. While conventional instruments of debt reduction generally impose far-reaching austerity measures that impede investments in environmental projects, debt swaps can relieve countries of their debt burden while financing much-needed investments in infrastructure, climate adaptation and sustainable development. Many countries of the Caucasus and Central Asia have announced investment programmes that would increase public debt in the absence of debt relief. Furthermore, despite recent improvements, vulnerability to external shocks remains high and debt-to-GDP ratios are still above the sustainability threshold.

From the creditor's perspective, entering into swap deals with the countries of the Caucasus and Central Asia has the potential to increase the value of their debt titles, since the present value of debt titles is less than half of face value. This approach would also eliminate speculative debt and provide opportunities to reinvest freed resources.

Although there have been a few cases of debt swaps in the region, examples of debt-for-climate swaps are limited. Most swaps took the form of debt-for-equity swaps without a linkage to environmental protection and were conducted with Russia. In 2002, for example, Armenia's USD 100 million debt was cancelled, and in exchange, Russia obtained shares in five state-run energy enterprises. Tajikistan also performed USD 250 million debt-asset swaps with Russia, an amount representing more than 30% of total external debt at that time. Together with debt relief provided by Pakistan (USD 13 million), the public debt-to-GDP ratio decreased from 64% to 40% within one year. Now, this is a time to bring debt swaps in these regions to a new level, linking them to climate actions.

How should debt swaps be designed for countries of the Caucasus and Central Asia?

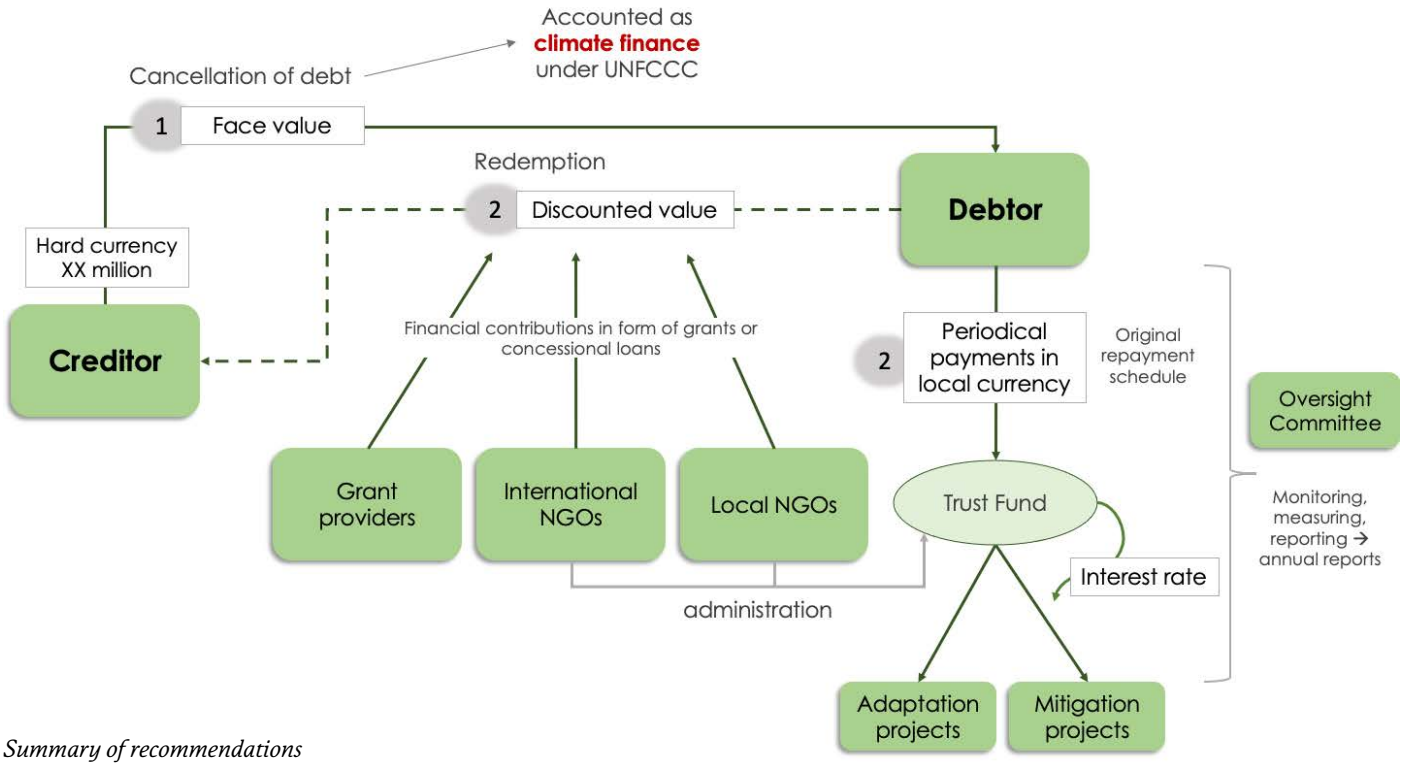
Environmental and fiscal improvements can only be realised when debt swaps are designed carefully, as indicated above. Keeping in mind the current institutional structures and experiences in the countries of the Causasus and Central Asia, we formulated three success factors for them which ultimately determine the overall effectiveness of the scheme. First, the swap's financial value to the debtor country must be maximised in order to build strong political will and secure national buy-in. Second, the ambition of the scheme must be aligned with the national climate goals, and a robust monitoring and reporting framework must be in place to ensure that the climate impacts are duly monitored and communicated. Lastly, transparent governance arrangements and a well-capacitated operator of the scheme are indispensable for success.

Recommendation 1: Financial structure of the debt-for-climate mechanism

The debtor country should take the following considerations into account when designing and negotiating the financial structure of a swap mechanism in order to maximise the financial values of such schemes:

- Seek to achieve a positive difference between the original face value of the debt and the redemption price to create fiscal space. This can be accomplished by either purchasing the debt title on the secondary market or bilaterally agreeing to apply a discount rate greater than zero with the creditor.
- Negotiate the cancellation of the outstanding debt service payments before making counterpart payments in order to provide extra budgetary room.
- Convert the outstanding debt payments into local currency payments so that hard currency can be saved.
- Schedule payments according to the original repayment schedule to ensure a constant and predictable funding stream.
- Reinvest the interest rate earned by the funds to provide additional capital for the mechanism.
- Conduct debt swaps only if the debt volumes are large enough to justify the lengthy negotiation process and high transaction costs associated with deal structuring and implementation.

Furthermore, additionality can be ensured on three fronts. First, debt swaps and the corresponding debt relief should be additional to creditor's ODA and not crowd out other ongoing investments in climate mitigation and adaptation. Second, climate-related projects funded by debt swaps should be additional to those already funded in debtor countries. While it is beneficial to have an existing vision for concrete climate objectives and measures and infrastructure in place to deliver them, payments originating from swap deals should not be used to legitimise cutbacks in governmental spending in other areas. Finally, it is essential to ensure finance additionality for the debtor country through debt relief.



Summary of recommendations

Recommendation 2: Ensuring climate and other environmental and social benefits

The design of the climate swap mechanism should correspond to national climate commitments. In particular, they should be fully anchored in and aligned with national climate change priorities and the objectives as outlined in the National Determined Contributions (NDCs).

In order to ensure the achievement of climate and other environmental and social benefits of climate swap schemes, it is important to start by determining a baseline scenario that can serve as an indicator of progress and final outcomes. This requires the development of indicators and specific defining targets for various steps of the implementation phase. To increase transparency, monitoring plans and methodologies should also be developed to enable regular progress tracking, reporting and communication to all stakeholders and to the public at large.

The involvement of independent actors, such as NGOs, has cultivated trust between debtor and creditor government and plays an essential role in encouraging the participation of civil society. While some international NGOs have gained extensive experience in facilitating debt-for-climate swaps, the contribution of local or regional NGOs is also important to provide crucial insight into local conditions.

Recommendation 3: Effective governance and implementation

Effective implementation and governance structures are essential to the success of the swap mechanism. This calls for the establishment of a scheme operator or the selection of one from existing organisations. This should be a financial institution with solid expertise in fund management and technical capacities to implement climate projects. This combination of financial and climate expertise rarely exists in developing countries and often must be developed from scratch, with additional technical assistance provided by international organisations. In addition, to ensure oversight and provide strategic guidance, a good practice is to establish a supervisory committee comprised of representatives of both the debtor government and the creditors as well as international and national NGOs.

To ensure the national ownership and longevity of the programme, it is crucial for the debtor government to play a leading role and be closely involved in designing and implementing a swap deal. At the negotiation stage, political support for the climate swap proposal at the highest level has proved to be a particularly decisive factor in ensuring that the deal is successfully executed. Climate-related projects should be anchored in national climate policies, and debt swaps should be embedded in a broader strategy for debt reduction.

Countries that regularly participate in swaps can use their cumulative experience to improve their organisational capacity and enhance the skills of their personnel. In any case, single swap arrangements are stepping stones to future debt swaps.

[1] For details, please see: Novikova, A., Olshanskaya, M., Dunkel, M. 2020. Lessons learned for international climate policy from the programming, implementation, and monitoring of the European Structural and Investment Funds in EU Member States. Berlin: Institute for Climate Protection, Energy and Mobility (IKEM).

[2] The EU cohesion policy is guided by the EU 2020 strategy for 2010-2020 and the Green Deal Agreement for 2020 - 2050. This policy, with its binding targets and indicators provide the framework for defining priorities and steering processes at national level. The EU climate policy setting or requesting its Member States to set national targets for energy efficiency, renewable energy, and greenhouse gas (GHG) emission reduction is an important part of the EU policy.

Partners:

AvantGarde Group

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IKEM

DAY 3

Tracking investment to meet 2030 energy & climate targets in Germany, Czechia & Latvia

National level I

Authors: Aleksandra Novikova (IKEM), Michaela Valentova (ČVUT), Agris Kamenders (RTU)

In 2020, EU Member States released National Energy and Action Plans (NECPs), which explained how each state would meet the 2030 energy and climate targets. From 2018–2021, the Institute for Climate Protection, Energy and Mobility (IKEM), Czech Technical University in Prague (ČVUT), Riga Technical University (RTU), and Climate & Company participated in the joint project Climate Investment Capacity 2030, which provided evidence-based information for the development and implementation of NECPs in Germany, Czechia and Latvia. The project results were co-designed with national policymakers, the financing sector and other stakeholders to address specific needs, share expertise and integrate findings into decision-making.[1] *The analysis covered the following aspects:*

- *investment needs to reach the 2030 climate and energy targets,*
- *investment maps to track public finance and private investment flows into climate and energy transition actions,*
- *capital raising plans to close the gap between the need and the current investment flows, and*
- *investment and policy plans for the most carbon-intensive industrial branches.*

To understand the status of Germany, Czechia and Latvia regarding the financing of 2030 energy and climate targets, we tracked and mapped the flow of investments in climate actions and the energy transition for the most recent years for which data were available. We used a bottom-up approach, tracking actual disbursements at technology level and aggregating them at sector level. This approach was introduced by the Climate Policy Initiative, which in 2011 began to track these flows at global level using the Landscape of Climate Finance diagram. The approach was used to assess domestic investment in Germany for 2010 and in France from 2015. Our investment maps provide a snapshot of the investment flows from the sources of capital through relevant intermediaries and financial instruments to the recipient technologies. We considered climate-specific investment in actual technologies targeting or resulting in greenhouse gas (GHG) emissions reductions, excluding 'soft measures' such as information campaigns. We compared the investment flows and the investment needs based on information in the relevant literature and supplemented these with our own estimates.

Germany[2]

The data on investment in energy transition and climate actions were assessed for 2016 and compared to a similar assessment conducted for 2010 by the Climate Policy Initiative. The investment map covered the whole economy.

Capital invested

Based on the climate-specific investment flows traced, there was a 16% increase in volume in 2016 (EUR 42.7 billion) relative to 2010 levels (EUR 36.7 billion). These volumes reflected the share of incremental investment in energy efficiency (EUR 8.5 billion), the total investment cost of renewable energy deployment (EUR 25.0 billion) and the total investment cost of non-energy-related mitigation and cross-cutting measures (EUR 9.3 billion). Relative to 2010 investment, the volume of flows to renewable energies decreased by 6%, while the volume of flows to energy efficiency increased by 18%.

Main investors

The private sector accounted for 83% of total investment (EUR 52.3 billion); the remaining 17% originated in the public sector (EUR 10.9 billion). Corporate actors were by far the largest private investors (EUR 35.2 billion), followed by households (EUR 17.2). In the public sector, the German government budget played the largest role (EUR 4.2 billion), followed by the EU budget (EUR 2.7 billion).

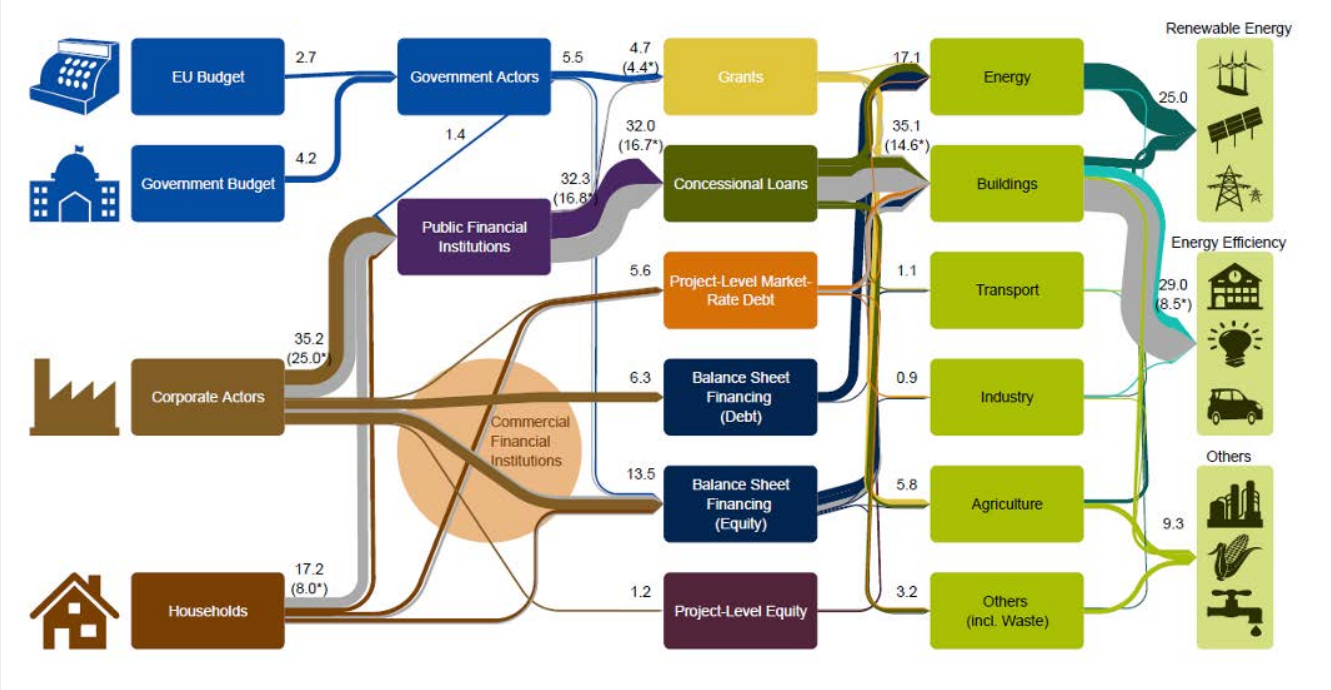
Financing instruments

In 2016, both low-cost debt (EUR 32.0 billion) and grants (EUR 4.7 billion) offered by public actors played an important role in driving climate investment. Germany is characterised by strong public promotional banks at federal level (e.g. KfW, Rentenbank, 16 state-level promotional banks and a large number of commercial banks). Altogether, public banks disbursed EUR 32.3 billion to support climate-specific investment. Due to a lack of data, there is significant uncertainty surrounding the EUR 26.6 billion delivered through other financial instruments, such as balance-sheet financing, project-level equity and market-rate debt, for which the estimates are indicative.

Remaining gap

Regarding the centralised energy supply sector, investment in renewable electricity generation and grid infrastructure was on track to reach the targets. This was not the case, however, for investment in renewable heat production. For energy-using sectors, investment was unlikely to be on track. Caution must be exercised when comparing investment needs with the recent investment, because estimates of investment needs depend on numerous assumptions and in particular on the factors included in the baseline and incremental cost definition.

The 2016 climate and energy investment map for Germany (in billion EUR)



Notes: All financial flows (except for those in grey) and figures (except for those with asterisks) represent total tangible investment (including public support) in the reduction of GHG emissions and an increase in carbon sinks, with two exceptions: blast furnaces and newly built power plants in the manufacturing sector and electrical appliances in the buildings sector. The grey flows and the numbers with asterisks represent incremental investment in the energy efficiency of buildings. Please see all notes in the respective report.

Czechia[3]

Similarly, we assessed 2017 data on climate-specific investment in Czechia. We covered two sectors: buildings, including renewable technologies integrated into them, and centralised renewable energy supply and infrastructure.

Capital invested

In 2017, EUR 612 million was invested in the decarbonisation of the buildings sector, including energy efficiency, renewable energy installations integrated in buildings, and fuel switch in buildings. Investment in the centralised renewable energy supply and infrastructure sector was estimated at only EUR 98 million – significantly lower than the investment levels before 2013. An additional EUR 100 million was invested in built-in PV installations, biomass boilers and heat pumps in the buildings sector.

The largest share of the investment volume flowed into energy efficiency (EUR 447 million). The latter exceeds the amount of the investment in renewable energy installations and infrastructure (EUR 202 million) and fuel-switching in buildings (EUR 61 million). Of the amount invested in building envelopes, 87% of the volume was invested in retrofits of existing buildings and 13% of it was invested in measures in new buildings.

Main investors

The main source of investment tracked was private investors, consisting of households and corporate actors, which contributed 60% of the total investment (EUR 419 million). The rest of the investment flowed from public sources, mainly from EU funds and Czechia's public budget, including budgets at national, regional and local levels. The main intermediaries assisting in the use of instruments were ministries and their agencies, as well as the capital market.

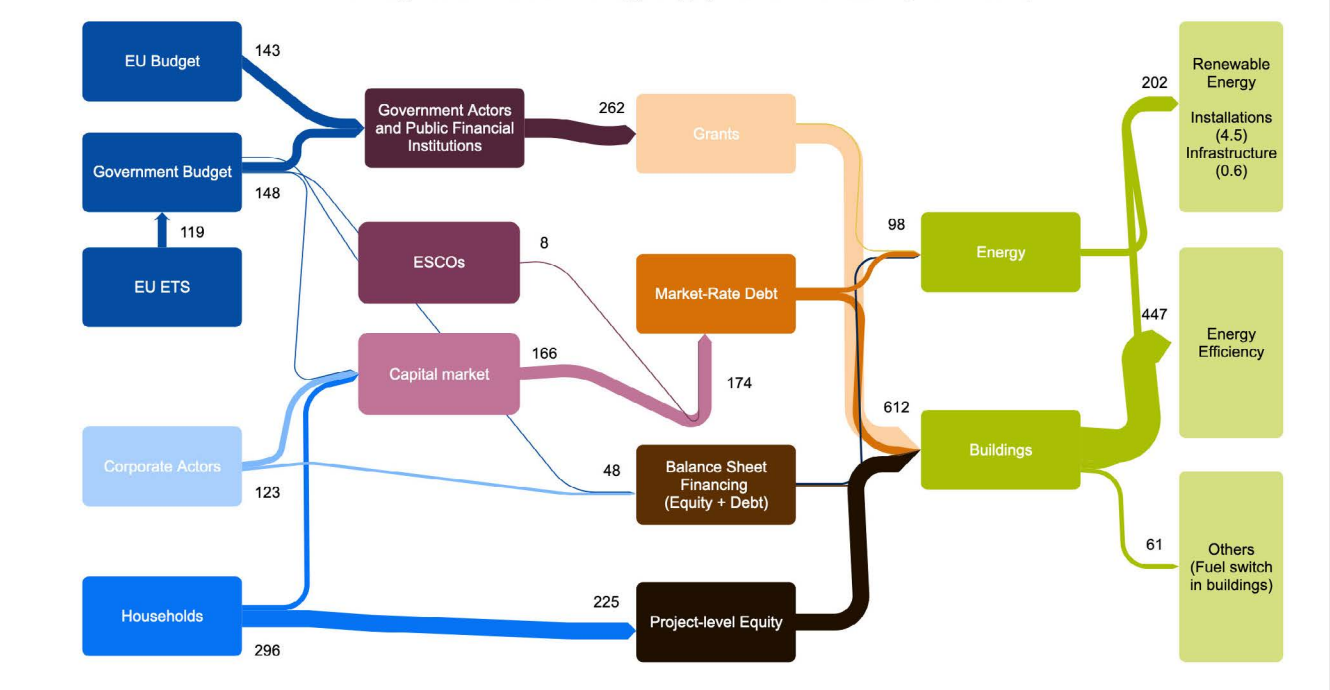
Financing instruments

Grants offered by public actors played an important role in driving energy and climate investment in Czechia. This was particularly the case in the buildings sector, for which direct subsidies (grants) represented 56% of total sector investment (excluding appliances), with 90% of flows from public sources.

Remaining gap

The investment volume in the retrofit of existing buildings was insufficient to decarbonise the building in line with the targets. The current renewable policy also does not appear to trigger sufficient investment in renewable energy. In the buildings sector, the level of investment would have to roughly double to reach the 2030 targets; in the case of the renewable energy supply, the investment would have to be six times higher than 2017 levels.

The 2017 climate and energy investment map for Czechia (in billion EUR)



Note: All financial flows represent total tangible investment (including public support) in the reduction of GHG emissions, except electrical appliances, for which incremental flows were tracked. Financing of intangible measures is excluded. Please see all notes in the report.

Latvia[4]

We also calculated climate-specific investment in Latvia for 2018. We covered two sectors: the centralised renewable energy supply and the infrastructure and buildings sectors, including residential, public, commercial and industrial buildings.

Capital invested

In 2018, at least EUR 231 million was invested in GHG measures in both sectors. Of this volume, EUR 190 million was invested in energy efficiency in the buildings sector, including in the thermal efficiency of new and existing buildings, fuel-switching to low-carbon energy carriers, and energy-efficient appliances. Roughly EUR 41 million was invested in renewable electricity generation, transmission and distribution, and renewable heat production and distribution accounted for in the energy balance of the energy transformation sector. The latter volume included EUR 21.1 million invested in the Daugava hydroelectric power station. The technologies and projects that received the greatest investment were thermal efficiency retrofits in the buildings sector; in the energy sector, the largest flow was into bio-energy projects.

Main investors

Of the total investment volume, the public sector was identified as the key investor, with EU funds contributing 42% and the national budget providing 29%. Notably, investment in the improvement of public buildings accounted for 42% of total investment, i.e. the public sector supplied a large amount of investment to improve the efficiency of its buildings with smaller shares channelled to other destinations. Only 29% of the total volume flowed from the private sector, mostly from corporations.

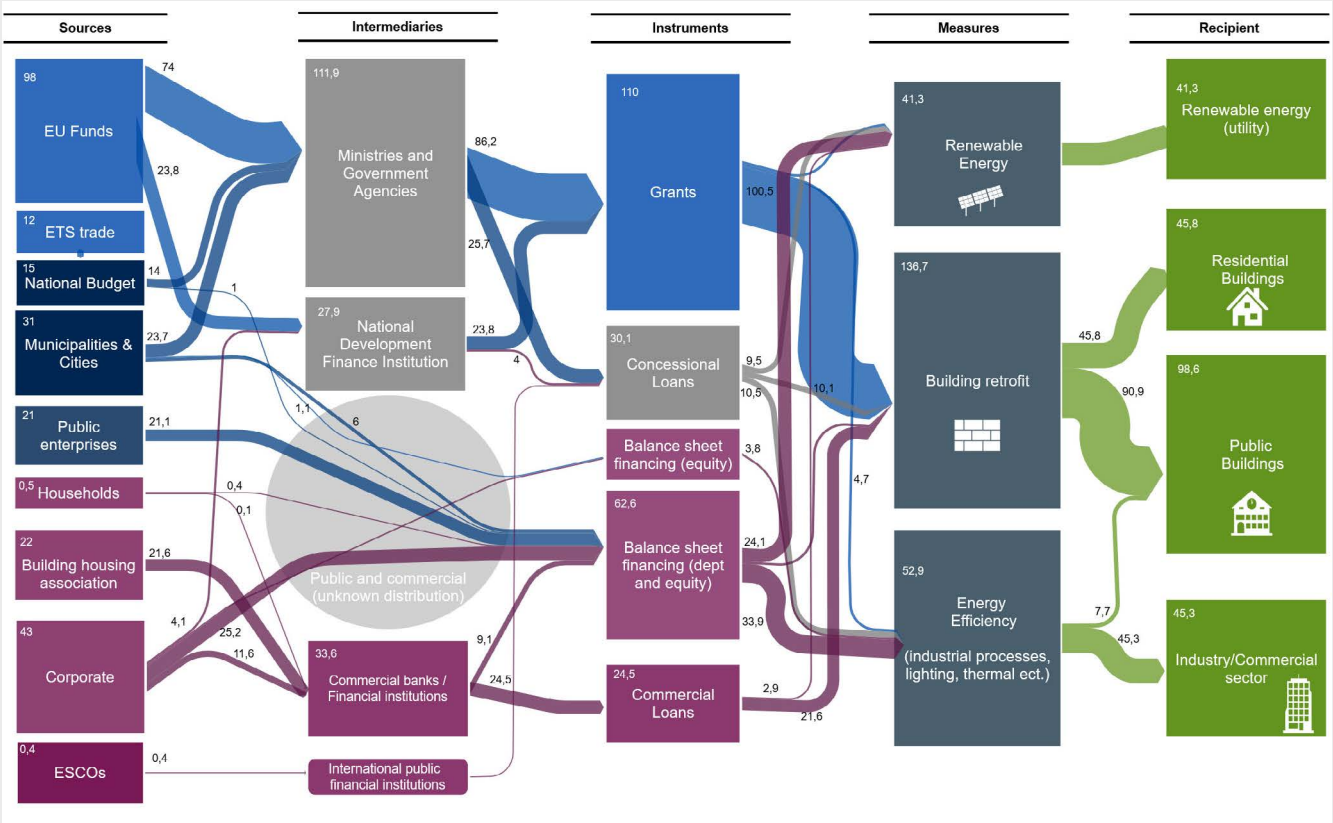
Financing instruments

EU funds played a significant role, with EU grants accounting for 42% of the climate-specific investment flows of Latvia. These grants supported a large share of the rest of public and private investment; the latter co-financing was provided most often in the form of balance sheet and commercial loans. There is currently no information available on investment made by any private parties in projects unrelated to the use of EU funds. This situation may change in the future due to the establishment of the first non-grant financial instrument to finance energy efficiency and renewable energy projects by the Latvian Development Finance Institution (ALTUM) and the Latvian Baltic Energy Efficiency Facility (LABEEF).

Remaining gap

Based on a comparison of the recent investment with the investment needed, it appears that Latvia is not on track to meet the 2030 energy and climate targets. Cumulatively for two sectors, Latvia must at least double its investment flows to reach these goals. The challenge is particularly critical for renewable energy: to meet its targets, Latvia must increase its investment by a factor of nine.

The 2018 climate and energy investment map for Latvia (in billion EUR)



Note: All financial flows represent total tangible investment including public support in the reduction of GHG emissions, with the exception of electrical appliances, for which incremental flows were tracked. Financing of intangible measures is excluded. Please see all notes in the report.

Lessons learned

We found that a map of energy and climate investment was a useful tool to understand how investment and investment patterns address domestic climate commitments. It is therefore a promising method to consider in the preparation of National Energy and Action Plans. The maps may help to identify a deficit or an excess of investment in sectors and/or in specific technologies. Overall, the diagrams could serve as a guide for an effective shift of financial incentives and an efficient design of policy instruments.

The comparison of national landscapes illustrates different pathways towards an energy transition. In Germany, the map indicates the central role of the KfW bank, the main public financial institution, in structuring the 'onlending' (intermediated lending) model through the local branches of private banks, increasing the significance of low-interest concessional loans and corporate actors as the main investors. According to the maps, the key role in Latvia and Czechia is played by investment supported with grants from the European Structural and Investment Funds (ESIF) and disbursed through government-owned financial institutions.

The EU Taxonomy of Sustainable Activities was not yet available when the maps were designed. The definitions of climate finance and tracking boundaries were determined by us for each country in line with key national strategies and plans. One of our conclusions was that there is a need for common definitions and methodologies, including a definition of climate finance and a determination of how and to what extent climate-related measures should be accounted for, as well as a method for calculating additional and incremental costs, which contribute to the energy transition beyond the business-as-usual case. The EU Taxonomy adopted in 2020 addresses some of these aspects, but many questions remain open, especially for transition activities. This was exemplified in our findings for the Czech heating sector, which realistically can only switch to natural gas in the short to medium term, until energy efficiency and renewable energy technologies can be scaled up.

There is a need to introduce systematic tracking of climate finance for governmental budgets at all levels, including for federal, regional and local government budgets, as well as for climate programmes by public banks and agencies. In all countries, data needed for an analysis of energy and climate financing in the public sector were mostly available but tend to lack systematic tracking. This could be implemented by introducing tagging and/or evaluation procedures.

We also identified a need to introduce private sector surveys or to evaluate and streamline existing ones. In all countries, we see a large share of private investment. The respective data are more difficult or even impossible to obtain, as private companies and commercial financial institutions lack reporting. This results in an underestimate of the total investment and an insufficient understanding of the structure of the private flows.

There is a need to better understand how to compare the current investment with investment needs. The investment needs assessments assume an optimal technology mix, a selection of the lowest technology cost, and a strictly incremental share of investment. In the real world, investments do not reflect these assumptions. Furthermore, the incrementality is understood by financing institutions, private investors and the public sector. The incrementality and/or additionality reflected in the EU Taxonomy also differs from what is usually calculated in an investment needs assessment, including the models used by the European Commission. Therefore, the gap between the investment need and the current investment may be larger than it is shown in current figures.

[1] The brief presents selected results of research conducted by these organisations and partners, with a focus on recent investment in the energy transition and climate actions in these countries. For more information and details, please see the project webpage and dedicated reports at https://www.ikem.de/en/portfolio/cic2030/.

[2] For further information and for references, please see the background study: Novikova, A., Stelmakh, K., Klinge, A., Stamo I. 2019. Climate and energy investment map of Germany. Status report 2016. Berlin: Institute for Climate Protection, Energy and Mobility (IKEM). Juergens, I., Piantieri, C., Hessenius, M., Rusnok, D., Berendsen, S. 2019. How to assess investment needs and gaps in relation to national climate and energy policy targets: a manual - and a case study for Germany. Berlin: Climate&Company.

[3] For more information and references, please see the following background reports:
Valentová, M., Knápek, J. and A. Novikova. 2019. 'Climate and Energy Investment Map – Czechia. Status Report 2017: Buildings and Renewable Energy Supply and Infrastructure'. Prague: Czech Technical University in Prague (ČVUT).
Valentová, M., Knápek, J., Mikeska, M., Vašíček, J. 2020. Investiční potřeba pro naplnění klimaticko-energetických cílů k roku 2030 v ČR. Budovy a obnovitelé zdroje energie [Investment needs for meeting the 2030 climate and energy targets in the Czech Republic. Buildings and renewable energy sources.]. České vysoké učení technické v Praze (ČVUT).
Valentová, M., Dunovski, D., Knápek, J. 2021. Capital raising strategy for Czechia: buildings and renewable energy supply. Prague: Czech Technical University in Prague (ČVUT).
Knápek, J., Valentová, M., Krejcar, R., Vašíček, J., Vecka, J. 2021. Klimaticko-energetické investice v teplárenství 2014–2030 (Climate and energy investments in the heating sector 2014-2030). ČVUT v Praze.

Disclaimer:

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DAY4

Lessons learned from financing energy efficiency in multi-residential buildings in Lithuania

National level II

Authors: Aleksandra Novikova (IKEM), Marina Olshanskaya (AvantGarde Group), Kęstutis Kupšys (LVOA), Rimantė Balsiūnaitė (AvantGarde Group), Mats Dunkel (IKEM)

In 2020, the European Commission launched the Renovation Wave initiative, which aims to double the renovation rate of European buildings in the next 10 years and contributes significantly to the decarbonisation of the EU building sector by 2050. Furthermore, it intends to improve energy and resource efficiency and reduce energy bills while improving the health, comfort and wellbeing of all Europeans, including those who can least afford the necessary investments. The question is how this goal can be achieved, as renovating the whole existing building stock to a very high level of energy and carbon performance entails high upfront costs. In different European countries, such costs can range from 1.5% to 3.5% of national GDP per year over the next 30 years.

While the initiative is new, the challenge is not: it has been discussed for more than a decade in several countries. Some of these countries have also made their best attempts to address it; these efforts do not appear to have resolved the issue, however, as the challenge remains. Nevertheless, such experiences may offer very valuable lessons on what worked, what did not, and what improvements can be made in the next steps.

One such experience is the financing of energy efficiency in multi-residential buildings in Lithuania over the last two decades, which has been recognised as a best-practice example both domestically and at a European level. The action was launched by the World Bank pilot project in 1996, with later funding provided from the national public budget, followed by even more funding from the European Structural and Investment Funds (ESIF) and finally by funds from a growing number of private financiers. While the action was designed to help countries meet their greenhouse gas (GHG) emission-reduction commitments, it generated other benefits in the form of jobs, support to small and medium enterprises, higher bank liquidity and a decrease in energy poverty. This process was not without its challenges, however, and some of these persist. This brief discusses these challenges, along with tested solutions and lessons learned, with a focus on energy poverty.[1]

Evolution of financing energy efficiency in Lithuania

The evolution in energy efficiency financing for multi-residential buildings in Lithuania represents a process of transformation over the course of 20 years – from a pilot through a basic grant-based programme to effective and efficient financial instruments. Private finance today contributes more than half of the programme funds; 20 years ago, this contribution was still zero (Fig.1).

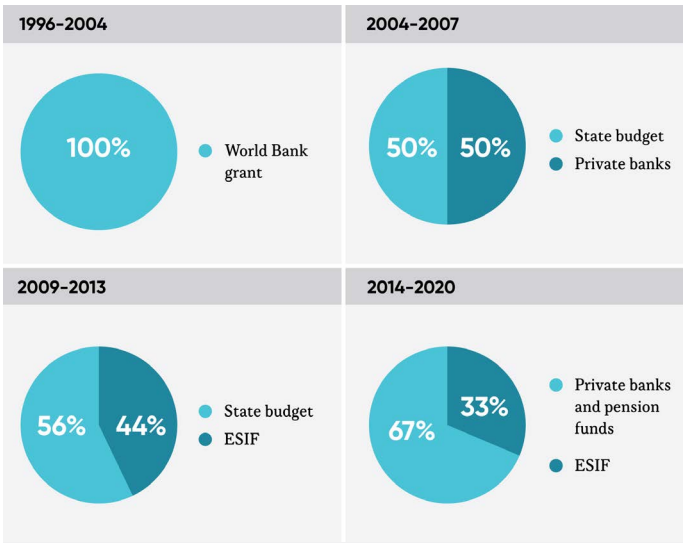

Fig. 1. Structure of funding sources for the multi-apartment building renovation programme

Energy Efficiency Housing Pilot and the 1st national Renovation Programme, 1996–2004

The first step in the evolution was the Energy Efficiency Housing Pilot Project that began in 1996. This project served as a testing laboratory for the implementation of residential energy efficiency projects in Lithuania. It paved the way for further national funded programmes by building up institutional capacities through the provision of technical assistance in the framework of the pilot. The pilot was established in cooperation with the World Bank, the Danish Ministry of Housing and Urban Development, and the Netherlands Ministry of Foreign Affairs. It was exclusively funded by public money and involved relatively limited financial resources: USD 28.6 million over the entire programme period of 1996–2004.

Based on its successful experience, Lithuania established its own national programme on energy efficiency in buildings after the pilot ended. Thus, in 2004, it adopted the Housing Strategy for the Multi-Apartment Buildings Renovation Programme, which was to be financed by the national budget. The programme combined commercial loans secured by a state-owned insurance agency with up to 50% in state grants depending on the achieved energy performance of buildings. The programme was very successful among apartment owners, which led to its termination in 2007. The relatively generous public grant scheme, and the limited public financial resources assigned, caused the programme to run out of public funding. In 2008, private banks stopped is-

suing renovation loans due to the crisis. The suspension of the programme highlights the difficulties that programmes face in an underdeveloped market environment that relies on generous short-term grant schemes.

Financing by the European Funds in the 2007–2013 European budget period

During the financial crisis of 2008, Lithuania faced many challenges. It was prevented from borrowing on the private lending market. The country was heavily dependent on energy imports. Lastly, poverty, including energy poverty, was high, and district heating bills were a heavy burden for low-income families living in so-called 'panel' buildings.

With its accession to the EU in 2005, Lithuania obtained access to the European Structural and Investment Funds (ESIF). Use of these funds required a disbursement of at least of 12% of this support to climate-related needs. The goal of the government was to utilise the available ESIF to address as many urgent national priorities as possible, along with the EU-defined climate actions. One such opportunity that the government recognised was the redesigning of the Multi-Apartment Buildings Renovation Programme and its financing from the ESIF. The institutional architecture of the new scheme relied on the JESSICA (Joint European Support for Sustainable Investment in City Areas) framework that was developed by the European Commission and the European Investment Bank (EIB) and managed by the latter. The country created a JESSICA Holding Fund with a total size of EUR 227 million in 2007–2013, with EUR 127 million from the ESIF and EUR 100 million from the national budget as co-financing.

The upfront costs of building retrofits were very high, as were the perceived risks of such an investment by the domestic financial sector: the returns were distributed over a longer period than the market could support. The scheme aimed to address this challenge by using lending with grant components. Loans allowed public financial resources to be reused in the medium to long term, whereas the grants based on actual energy savings provided an incentive to achieve 'deep' retrofits. The soft loans consisted of fixed interest rates below private market rates and a two-year grace period during the construction phase, with maximal minor self-financing and no requirement of a third-party guarantee or loan insurance. Grant components included a 100% grant for the preparation of the renovation documents and a 15% interest subsidy via debt write-off if energy savings amounted to at least 20%at least 20%. Furthermore it included an extra 25% write-off if energy savings reached a minimum of 40%. The scheme also included a 100% reimbursement for all renovations in apartments owned by low-income families. All financial measures based on grants were financed by the Lithuanian budget, with ESIF financing used for the loans.

The scheme aimed to simplify and standardise the implementation process as much as possible. It introduced an ESCO model relieving individual apartment owners from loan administration. This step led to a significant increase in the demand for loans. On average, the renovations achieved a 62% reduction in natural gas consumption of these buildings and thus significantly reduced heating bills. They allowed contracts to be offered to 300 companies, providing 14,000 jobs for renovation works, with 90% of materials produced locally. They also enabled local banks to expand into a new niche of financial products.

Improving the programme in the 2014–2020 European budget period

With the end of the 2007–2013 period, the JESSICA framework was revised and improved in order to attract more private capital, which integrated private actors more intensively into the lending processes. The renewed JESSICA II Fund of Funds, established in 2014 for the next EU budget period, used private actors not only as financial intermediaries to disburse public funds to private debtors, but also to raise half of its total of EUR 300 million on the private capital market from pension funds

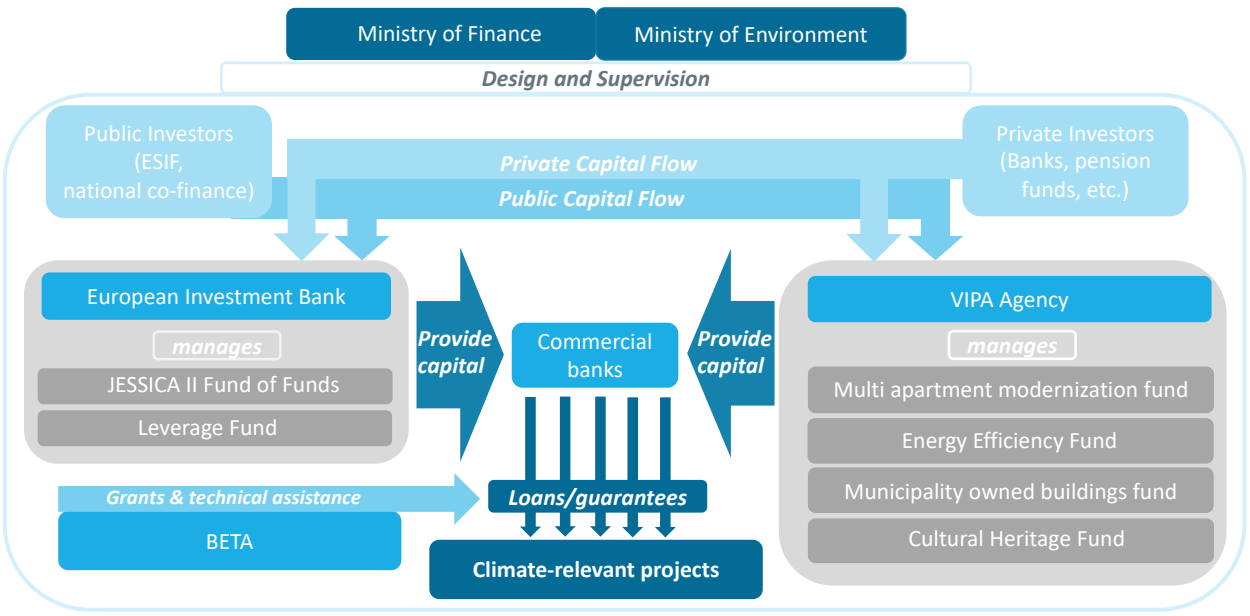

Fig. 2. The financial architecture in Lithuania, 2014–2020

Name	Fund manager	Financial instrument	Aims at energy efficiency in	Size (EUR million) public + private	Achievements	Date of reporting the data
JESSICA II Fund of Funds	EIB	Loans	Multi-apartment buildings	150 + 70	783 signed loans (EUR 202 mil), renovation of 11,896 households	early 2018
Leverage Fund	EIB	Guarantees	Multi-apartment buildings	100 + 500		early 2018
Multi-apartment Modernization Fund	VIPA	Loans	Multi-apartment buildings	74 + 293,5	802 signed loans (EUR 318 mil)	early 2021
Energy Efficiency Fund	VIPA	Loans/ Guarantees	Central government buildings, street lighting	32	60 signed loans (EUR 19.51 mil), 3 guarantees issued (EUR 1.61 mil)	early 2021
Municipality Owned Buildings Fund	VIPA	Loans	Municipal buildings	17.27 + 20	17 loans signed (EUR 4.61 mil)	early 2021
Cultural Heritage Fund	VIPA	Loans	Cultural heritage	5.2	5 loans signed (EUR 2.44 mil)	early 2021

and private banks. This allowed the entire programme to expand by a factor of two. The capital was channelled to several funds, including new ones, which were managed by either the EIB or the Public Investment Development Agency (VIPA) (Fig. 2). The actual lending scheme for multi-apartment buildings was only slightly adapted, without changing the conditions for low-income households.

The introduction of VIPA exemplifies the transfer of knowledge and know-how from European institutions like the EIB to national entities in the operation of complex financial schemes. VIPA is a state-owned Lithuanian institution founded in 2012 for these purposes; between 2014 and 2020, four of six funds were managed by it. The funds managed by VIPA exhibit a design similar to that of the JESSICA fund in 2007–2013 but target different energy efficiency projects. The funds disburse capital to commercial banks, which in turn disburse capital to relevant projects providing either loans or guarantees. As in 2007–2013, lending schemes financing energy efficiency projects in buildings were further supported by grants and technical assistance, with the latter now provided by the newly established Housing Energy Efficiency Agency (BETA).

The planned funds of approximately EUR 1.1 billion are intended to address the investment needs for building renovation in Lithuania, although they do not yet fully meet this need. According to government estimates, the investment needs for residential energy efficiency amount to EUR 1.4 billion, of which EUR 0.7 billion is in the public sector.

Challenges and solutions

As illustrated, over the last two decades, Lithuania accomplished a major transformation in the financing of energy efficiency in multi-residential buildings. It shifted from a publicly funded grant-only approach to one in which public funding is used much more strategically to de-risk private investment and provide essential technical assistance and financial incentives at scale. This addressed multiple national priorities, including energy poverty. Each of these strategic elements was a challenge; meeting these challenges has had a significant cumulative impact.

Programming for national priorities beyond climate

The history of financing energy efficiency in multi-residential buildings in Lithuania shows that the energy efficiency and GHG emission reduction programmes have been most successful when they were set up as development programmes rather than as pure climate finance instruments. Overall, the actions enabled the implementation of broader social and economic reform processes, which were essential for achieving longer term decarbonisation goals. At country level, massive ESIF-financed investment programmes in the energy efficient modernisation of residential buildings have laid the groundwork and prepared tenants for the gradual removal of subsidies and the liberalisation of heat tariffs. This 'difficult' policy has, in turn, created lasting incentives for consumers to engage in energy-efficient consumption; at the same time, it has saved a substantial amount of public money that would otherwise be directed towards subsidies and has improved the overall performance and competitiveness of the heat supply sector.

At household level, research indicated that the motivation for households to participate in the programme was related to various co-benefits rather than to GHG emission reduction or similar aspects. It therefore makes sense to promote the programme to households while appealing to their motivation factors. The latter were identified as aesthetic benefits, sound isolation, a possibility to control individual dwelling heating, an increase in asset value (15–25% as measured ex post), a reduction in flat repair costs, lower heating bills, and an extension of the building's lifetime (around 20 years as estimated ex post).

Constant improvements to the programme, reducing the burden on the public budget

The second factor in Lithuania's success is a constant improvement of the scheme, with a gradual reduction of inflow from the national public budget; this was intended to prevent the programme's termination in the event of a budget deficit like that of 2007. The low liquidity in the private lending market in 2008 was overcome by the utilisation of the ESIF, which provided capital to commercial banks for disbursement to apartment owners for building renovations. In 2014–2020, financial intermediaries not only disbursed loans to beneficiaries, but also provided for half of the scheme size.

Once the programme became very popular, the initially generous grant component financed from the national public budget was promptly reduced in order to prevent a funding shortage. The maximal interest subsidy via debt write-off was reduced from 40% of the total loan amount in the 2007–2013 period to 30% in 2014–2020. While the 15% subsidy was still financed by the Lithuanian budget, the rest was covered by funds from the Climate Change Programme, which was fed by the EU ETS revenues. The reduction in the total percentual allowance per renovation loan and the distribution over multiple funding sources caused a discharge of the national budget by 70%.

Redesigning technical assistance to boost both supply and demand for projects

The establishment of the JESSICA holding fund in 2009 indicated a major scale-up of the formerly nationally funded programme, thus ensuring a supply of well-designed soft loans for apartment renovations. However, for several reasons, this supply was not met by a large increase in demand for these loans. The diverse social status of apartment owners and their lack of energy efficiency knowledge prevented them from cooperatively taking decisions. They also lacked capacity for and expertise in commissioning a technical project, negotiating contract details and supervising the implementation. Their varying economic situations further discouraged some of them from applying for loans issued by commercial banks incorporating repayment obligations.

In order to stimulate the demand for loans, the Lithuanian government developed the 'EnerVizija' implementation methodology and established a designated agency (BETA) which delivered technical assistance to help not only in boosting supply, but also in creating demand for projects. The introduction of this methodology, with municipalities serving as a partner in multi-apartment building retrofits, led the number of completed projects to increase by a factor of five: from 479 completed projects between 2005 and 2013 to 2460 completed projects between 2014 and 2019.

Under 'EnerVizija', building renovations were initiated by municipalities, which appointed project administrators responsible for project implementation. Homeowners solely decided by simple majority if they wanted their building to be renovated under the investment scheme proposed to them by their municipality. Renovation loans were taken out centrally by the building administration company and repaid through each apartment's monthly building-management fees. This eliminated the burden that individual loans would impose on apartment owners and enabled building administration companies to assess the overall credit risk.

For the management of the construction projects, technical assistance was provided to municipalities by a consultancy which prepared technical documents. This simplified the supervision, contracting and management of projects for municipalities. The selection of building upgrades followed a standardised procedure based on a cost-benefit analysis, which took advantage of economies of scale from renovation projects comprising several similar buildings.

Replacing fuel subsidies with renovation subsidies for low-income households

The 'EnerVizija' methodology and the introduction of a 100% grant covering all upfront costs of technical documentation and project management resolved the barriers to borrowing applications; this led to a significant rise in demand for soft loans. However, the least-wealthy apartment owners still lacked strong incentives to participate in the loan scheme. Low-income families in Lithuania received state support for domestic heating expenses. As a result, these families do not profit monetarily from the energy-efficiency renovations.

In order to create incentives for low-income apartment owners, a 100% subsidy for families receiving supplementary assistance was introduced, covering all renovation costs. Simultaneously, in 2013, a law was passed that allowed for a cutback in domestic heat compensation for low-income families refusing to participate in the renovation scheme. The 100% allowance for all renovation costs and the potential cutback in domestic heat compensation successfully addressed the insufficient involvement of low-income apartment owners in renovation and led these owners to sign up for the programme.

Although the issue of including low-income households in the energy efficiency renovation programme was resolved, the problem of financing their contribution was not. Financing for these contributions was 100% covered by the grant from the national public budget at the beginning of the scheme and remains so to date. Therefore, we conclude that it is possible to enable low-income households to benefit from the energy transition at an organisational level, as demonstrated; however, these households are not the actors that will be involved in financing the renovations.

Lessons learned

We see a long-term planning horizon as one of the key success factors in building energy efficiency programmes. This factor allows the instruments to grow in prominence and become more mature, bringing private and financial sectors on board and addressing numerous barriers. It also helps to provide long-term signals to the construction and technology market; this will allow for capacity-building in terms of labour and technological availability, which is especially important for Lithuania, as an example of a small country.

We also learned that, even within this long period of time, not every policy area is suitable for a shift in traditional finance; grants to more innovative financial instruments that address energy poverty are one of such example. The design of the energy poverty programme requires an ex ante assessment, which should identify other programmes that can incorporate the pri-

vate sector as a principal financier and are able to be combined with the energy poverty programme. Ideally, this synergy between the programmes should lead to a redistribution of available funds towards the low-income groups so that the public money mainly plays the role of a facilitator, a catalyst, and a financier only as a last resort and with clear priorities and limits, which are calculated and known in advance to avoid a shortage in public resources and prevent programme interruptions.

In this regard, we see that it is useful to set up an energy poverty programme not as a pure 'climate finance' instrument, but more as a 'development finance' tool. Maximum alignment of climate objectives and actions with national socio-economic and environmental priorities – including economic development, population welfare, health and similar goals – is critical to ensure the buy-in, wider uptake, acceptance and demand for programme products. Such close alignment is particularly important during an economic crisis, like the present one in 2021, when national authorities are seeking to utilise every opportunity to address economic recovery related to COVID-19.

We further identified that workable implementation arrangements and the provision of additional technical support throughout all project preparation and implementation processes have been critical to the success of the Lithuanian Multi-Residential Building Renovation Programme, i.e. to the timely disbursement of funds and the achievement of intended results. The experience of the Member State offers abundant examples of successful and not-so-successful practices that either contributed to or jeopardised implementation. Lithuania provides an example of an effective and well-coordinated institutional system that was put in place to provide technical assistance to each stakeholder at every stage of planning and implementation, with a dedicated public agency. Therefore, our recommendation is to design and provide very comprehensive technical assistance that is an integral part of the renovation programme rather than an information policy or instrument parallel to it.

In addition, we see that standardisation and simplification of project management, in particular for those parts which relate to public procurement, are essential for private-sector participation in, and buy-in for, such schemes. One of the main bottlenecks we saw is the result of the fact that EU and many national regulations treat grant and non-grant instruments supported with public money as equal and subject them to the same set of rules defined in the legislation on state aid. It is too ambitious to expect that the financial market will sort this issue out on its own and produce many non-grant schemes; it will not, as we observed in other Member States in the previous EU budget period. Therefore, adjusting the rules and requirements for programming EU funds as non-grant instruments will allow for greater flexibility and more innovative arrangements (equity, guarantees, leasing, etc.) and will enable countries to gain greater leverage and secure more private-sector participation in financing climate actions.

Our final note is that it is still unclear how to design a programme which will address all priorities mentioned, including energy poverty and deep energy efficiency or GHG emission reduction at scale for all building types across all geographical jurisdictions. The programmes proved to be an effective instrument to scale up mature low-carbon solutions, such as energy efficiency in particular building types with very low performance. Even for these, the mid-term evaluation of the ESIF recorded that the actual energy saved was usually less than calculated, as the companies compete for the lowest costs of their work, but not for the deepest energy savings. One can conclude that similar large-scale renovation programmes could be an effective mechanism to scale up 'low-hanging fruits' and maximise their social and economic impacts. Therefore, it is useful to expand the selection criteria of bidding companies beyond renovation costs to include energy savings that have been proved ex post as well as more advanced and innovative solution.

[1] For further information and for references, please see the background study: Novikova, A., Olshanskaya, M., Dunkel, M. 2020. Lessons learned for international climate policy from the programming, implementation, and monitoring of the European Structural and Investment Funds in EU Member States. Research report for SNAPFI project. Berlin: Institute for Climate Protection, Energy and Mobility (IKEM).

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DAY 5

Germany: Legal barriers to the decarbonisation of dwellings occupied by low-income tenants and financial incentives to overcome these barriers

Regional and local level

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The thermal performance of dwellings occupied by low-income tenants is often below health and comfort standards. In Germany, this vulnerable group accounts for approximately 15% of the household stock, a percentage that is expected to rise due to the COVID-19-related economic crisis. While low-income tenants benefit from efficiency improvements to their dwellings, it is their landlords who must pay for the improvements, and the chance of passing the investment through to the tenants is low. Some locations are especially affected; Berlin is one such example. Most dwellings in Berlin (82%) are rented out; as a result, the split incentive in their renovation is a very common problem.

This brief presents work that the IKEM team is conducting to identify possible financing and legal solutions to overcome complex barriers to the energy transition. We employ a transdisciplinary approach, as the question touches upon technological, economic, financial, social, policy and legal aspects. The brief articulates a possible solution for energy efficiency in multi-residential buildings in Berlin, given its special circumstances and challenges[1]

Why address energy poverty in Germany?

The thermal performance of dwellings occupied by low-income tenants is often below health and comfort standards. This vulnerable group accounts for a significant share of household stock in Germany. In 2019, roughly 15% of households were affected by the risk of monetary poverty and thus could be classified as low-income households. These households rarely own the housing, but rather rent it; overall, 49% dwellings were rented in Germany in 2019. The number of low-income households has decreased over the past several years but is expected to rise again because of the economic crisis related to the COVID-19 pandemic. Some locations, including Berlin, are especially affected. Most dwellings in Berlin (82%) are rented out; as a result, the split incentive in their renovation is a very common problem. Berlin is a service economy, and it was significantly affected by the COVID-19 crisis: its GDP decreased by 1.4% in 2020 as compared to 2019.

Retrofitting dwellings occupied by low-income tenants gives rise to split incentives between the tenants and their landlords, a phenomenon referred to in the literature as the 'landlord-tenant dilemma'. While low-income tenants benefit from thermal efficiency improvements to their dwellings, it is their landlords who must pay for the improvements. For landlords, the value and economic benefits of thermal energy efficiency are of the essence, not energy-saving per se. High energy-performance dwellings have lower vacancy risks and a higher sale price, which influences the rental income of landlords. But due to numerous barriers, some of which are related to legal aspects, landlords have difficulties passing the investment through to tenants.

In light of the economic consequences of the COVID-19 pandemic, renovations have become doubly important for the European economy. As the EU aims to have an almost climate-neutral building stock by 2050, from now on both new and renovated buildings must be compatible with the climate goals for 2050. Buildings account for 40% of the EU final energy consumption and 36% of associated CO_2 emissions; given the higher share of rented dwellings in the stock, these, too, must be renovated. The recently adopted European Green Deal has only enhanced these ambitions, as it outlines a plan for the EU to become the first climate-neutral region by 2050. Additionally, investment in building modernisation can stimulate the economy, which is crucial to overcome the economic crisis. The construction sector already generates 9% of the EU's GDP and directly accounts for 19 million jobs. It is expected that additional investment in this sector will create new jobs and increase the EU's GDP, which would ultimately have a positive impact on low-income households.

The brief presents work that the IKEM team is conducting to identify possible financing and legal solutions to overcome complex barriers to the energy transition. We employ a transdisciplinary approach, as the question touches upon technological, economic, financial, social, policy and legal aspects. The brief articulates a possible solution for energy efficiency in multi-residential buildings in Berlin. For more details on our work to assess existing solutions and develop new solutions for the energy transition at the subnational level, please see our dedicated projects and publications.

What is energy poverty in Germany?

Poverty is a multi-faceted social phenomenon. There are different approaches to define poverty in general, and energy poverty in particular. Some researchers distinguish between relative and absolute poverty. Those affected by absolute poverty are unable to satisfy their basic needs; in other words, their physical existence is threatened. Poverty, in the sense of this definition, only exists when there is a risk of starvation or freezing. In the European context, such emergencies are, fortunately, rare occurrenc-

es. Relative poverty describes a social condition in which people, families or groups have so few resources at their disposal that they are excluded from the way of life that meets the minimum acceptable standard in the state in which they live, as defined by the European Council and the Council of the European Union in 2003. The European Commission recognises the at-risk-of-poverty threshold as 60% of national median equalised disposable income. The purchasing power standards are used for cross-country comparisons to account for differences in the cost of living across countries.

The definition of poverty is related to the definition of energy poverty but is not identical to it. Inclusive growth was a pillar of the Europe 2020 'strategy for smart, sustainable and inclusive growth', and it remains so in the context of the Green Deal. According to the European Commission's Recommendations of 14 October 2020 on energy poverty, energy poverty is a situation in which a household cannot afford key energy services to ensure a basic standard of living. The recommendations state that adequate warmth, cooling, lighting and energy to power appliances are essential services that underpin a decent standard of living and health, and that access to these energy services is essential for social inclusion. EU Member States establish the definition for energy poverty in a national context. The recommendations further identify energy poverty as a central element of the Green Deal, including its Renovation Wave initiative, and many other pieces of EU legislation and actions, such as the Energy Efficiency Directive, the European Buildings Performance Directive, the Electricity Directive, the Generation EU Recovery Package and the Cohesion Policy.

Germany, the world's laboratory for the energy transition, has long been criticised for not sufficiently addressing the challenge of energy poverty. Even today, it lacks an official definition of the phenomenon. Poor households in Germany are generally those who are only able to reach the socio-cultural subsistence minimum guaranteed under constitutional law. These are eligible for basic income support for job seekers in accordance with Book II of the German Social Code (SGB II) and for social assistance in accordance with Book XII of the German Social Code (SGB XII), or for benefits paid in accordance with the Asylum Seekers Benefits Act. In 2018, there were 5.6 million recipients of benefits under SGB II, representing the largest of these groups.

While a few definitions of energy poverty have been introduced by some German organisations, these definitions are not identical. Thus, the Consumer Office of Rheinland-Pfalz (Verbraucherzentrale Rheinland-Pfalz) defined energy poverty as a situation in which a household can pay energy bills to maintain the usual standard of living in Germany only by expending considerable effort or renouncing other basic needs. For example, the household may incur rental debt or short costs for nutrition, medicines, and education, such as the purchase of textbooks for children. The Consumer Office of North Rhine-Westphalia (Verbraucherzentrale Nordrhein-Westfalen), on the other hand, defines energy poverty as a situation in which a household must spend an above-average proportion of its income on heat and electricity or is no longer able to pay its energy bills at all. The feature common to both definitions is that the proportion of income spent on energy bills is higher for households affected by energy poverty than for the average household.

What challenges can be addressed with policies?

In recent years, climate change has led to a shift in attitudes towards energy efficiency. However, one of the greatest problems persists, namely how to convince decision-makers such as building owners, property investors and facility managers to improve the energy performance of buildings.

The social and economic theory reflected in policy making is that neither landlords nor tenants have sufficient incentives to invest money in thermal efficiency improvements to dwellings. This can be explained by the fact that, as potential investors in such improvements, landlords and tenants tend to have different interests. The landlord's rationale for investing money in such retrofitting is that energy efficiency may impact the selling price of a dwelling and the rental income streams generated. However, there are also risks related to rental income or vacancy which may be affected by the price changes. These risks are considered to be important factors in the landlord's investment decision.
Tenants, in turn, often face informational and financial barriers and uncertainty risks that prevent them from investing money in such improvements. Tenants are usually not motivated to finance the renovation because they do not own the property and are therefore not certain that the investment will be paid back fully in the course of their rental contract. From the landlord's point of view, however, tenants are the end consumers of the benefits of energy renovations, which gives the landlord the right to increase the rent.

In general, tenants cannot evaluate the real thermal quality of a dwelling; this is generally due to limited knowledge and technical understanding as well as to insufficient information on the efforts undertaken by the landlord to improve thermal performance. The tenant's willingness to pay is influenced by uncertainty regarding the length of the rental relationship. If the energy price increases, tenants often prefer to move to a more energy-efficient dwelling because of lower transaction costs.
Even if landlords manage to credibly transmit the information about energy savings, this does not mean that tenants are willing to pay the rent that covers total energy cost savings. They can still move and choose between alternative residences. For landlords, this means a higher risk of vacant dwellings and the possible losses related to it. Whereas tenants are protected by law from the unlawful termination of their contracts, landlords have no certainty that tenants will rent dwellings for a long-term period, even if contracts are of an indefinite duration.

Do current regulations address or aggravate the problem?

Tenancy law is of great importance for the energy modernisation of rental housing stock. In Germany, tenancy law is mainly regulated by the German Civil Code (BGB), which is a federal law. Since 2013, the German government has amended the BGB numerous times to create connection points to the energy transition, as the existing tenancy law provisions did not meet the requirements for rented living space in the context of ener-

gy efficiency and climate protection at that time. As a reaction to this, the law on the energetic modernisation of rented living space and the simplified enforcement of eviction permits (Tenancy Law Amendment Act – MietRÄndG) was enacted in 2013. The MietRÄndG legally defined energy efficiency modernisation for the first time. With this law, the co-responsibility of tenancy law for a successful climate protection policy was recognised by the Germany legislature. The law also aimed to reduce existing obstacles, such as the landlord-tenant dilemma, and to establish new incentives for energy modernisation. The main purpose of the reform was to simplify the implementation of energy efficiency modernisation. This was accomplished by restricting the tenant's right to rent reduction in the event of renovation measures. From this point on, a reduction of suitability would not be considered for the duration of three months insofar as this has been taking place because of a measure which served the purpose of energy efficiency modernisation in accordance with §555b no. 1 BGB, §536 sub-section 1a BGB. In addition, a general toleration of modernisation measures by the tenant was introduced in §555d BGB.

In 2015, the legislature tried to address the causes of rising rents on the secondary real estate market by enacting the Act to Curb the Increase in Rents in Overheated Housing Markets and to Strengthen the Bestellerprinzip in the Facilitation of Residential Tenancy Agreements (Tenancy Law Amendment Act – MietNovG; the Bestellerprinzip requires the party who appoints a letting agent to pay the agent's commission). The BGB now provides a framework for dwelling modernisation.

With the adoption of the Law on the Energetic Modernisation of Rented Housing and the Simplified Enforcement of Eviction Titles (Mietrechtsänderungsgesetz), the landlord who carried out modernisation measures within the meaning of section 555b number 1, 3, 4, 5 or 6 BGB (including energy efficiency modernisation) may increase the annual rent by only 8% of the costs incurred for the flat (§559 subsection 1 BGB). Moreover, the 'capping limit' on rent increases was introduced in subsection 3a of the same legal norm. In the event of increases in the annual rent in accordance with subsection 1, the monthly rent may not increase by more than EUR 3/m² of living space within six years, except for increases stipulated in accordance with section 558 BGB (rent increase up to the local comparable rent) or section 560 BGB (changing in operating costs). If the monthly rent before the rent increase is less than EUR 7/m² of living space, it may not increase by more than EUR 2/m² of living space. Violations of the capping limits can qualify as an administrative or even criminal offence under §5 WiStG (Commercial Criminal Law – Wirtschaftsstrafgesetz).

Berlin introduced the Law on Rent Limitation in Housing in Berlin (MietenWoG Bln) in winter 2020. The main task of this law was to introduce a state limitation on rents in Berlin for five years. Any rent that exceeded the rent effectively agreed on 18 June 2019 (the reference date) was prohibited. This referred, among other things, to modernisation rent increases. The Federal Constitutional Court, however, declared this law incompatible with the Basic Law and therefore void. Nevertheless, this did not solve the lack of incentives for modernisation, as the above-mentioned capping limits for rent increases are still valid. Therefore, the existing legal framework does not create incentives for any party to the rental contract to support the energy modernisation of dwellings, even when parties have the assets to carry out this modernisation. On the contrary, the legislature has created additional legal barriers preventing the landlord from any form of modernisation, as this has become economically unprofitable for them. For low-income tenants, the outlook is even worse, as an even lower rent-increase cap was established for cheaper dwellings. In order to achieve climate goals, a balance must be struck between the limits imposed by the welfare state principle, on the one hand, and the need for climate change mitigation, on the other.

Solutions

To address the energy poverty of tenants, it is therefore essential to provide financial incentives for the renovation of rented dwellings to correct the market imperfection aggravated by legal barriers. This is especially the case for economically struggling regions or regions with high legal barriers, as shown in the case of Berlin. In the absence of financial incentives addressing energy poverty at federal level, affected subnational governments at regional or local level must raise additional funds to provide financial incentives for renovations. For this, they could raise additional revenues through levies and taxes, obtain debt or involve third parties in the financing scheme.

As many examples in other countries have shown, a special levy for polluters, e.g. of CO_2 emissions, can help create an additional source of funding for local governments. However, special levies are problematic from a constitutional point of view and, under certain circumstances, may conflict with the constitutional principle of the tax state, according to which the state must essentially cover its financial needs through taxes. There is a danger of undermining the distribution of competences under fiscal constitutional law.

In addition, a special levy assigns a special financial responsibility to certain groups of citizens, which creates burden inequality. According to the case law of the German Federal Constitutional Court, a special factual justification is required for special levies in order to avoid conflict with the constitutional principle of the tax state. Thus, this instrument is complicated, and its application carries legal risks. Moreover, the introduction of special levies is time-consuming, as a (federal) law must pass through all parliamentary stages.

The other option is to raise municipal debt by either taking loans or issuing municipal bonds. However, this option faces legal barriers as well. The Basic Law of Germany generally prohibits balancing the budgets of the Federation and the German regions (Länder) through budget inflows from debt. It is highly controversial whether this rule also applies to municipalities. Nevertheless, at the Länder level, there are also restrictions on indebtedness for municipalities and municipal associations. These are usually laid down in the municipal and district ordinances (municipal constitutions), but sometimes also in the state budget ordinances or even in the state constitutions (e.g. Bremen). These restrictions regularly refer to loans, credit-like payment obligations (i.e. bonds) and cash credits. Loans are generally only per-

missible as a subsidiary means of raising revenue. This is usually the case only if other financing is not possible or economically inappropriate, if borrowing does not lead to a permanent loss of the municipality's financial capacity, and if the competent municipal supervisory authority approves the borrowing in general or in individual cases.

Two options represent a special class of public-private partnerships that could be created for the purposes of raising debt through the issuing of corporate green bonds for renovations.

1. First, the legally independent legal persons are not covered by the constitutional debt break and thus can issue green bonds for the Federation's purposes, even if they are financed by the Federation or the Federation is ultimately responsible for their liabilities. Such legal persons have their own budget and are not attributed to the Federation under budgetary law, even if they belong to the indirect federal administration. The taking out of loans by a legal person under public law is also not covered by the constitutional 'debt brake' if the legal person is financed by the Land, or if the Land is liable for its liabilities. This rule is even more applicable to the legally independent legal persons financed by municipalities. Thus, as it is generally forbidden to create debt obligations for municipalities, they can still establish legally independent legal persons that can issue green bonds for the retrofits of buildings. However, there are certain legal specifications to consider. Any legal person under public law may be treated as an integral part of the federal budget. If it does not perform any material tasks on its own but carries out predominantly or exclusively financial transactions for which the Federation is ultimately liable or for which it assumes the debt service, it is consolidated with the federal budget for the purpose of Art. 115 of the German Basic Law.

2. The second possible solution to the landlord-tenant dilemma is the promotion of green bond emission through credit institutes of private law. To create financial incentives, one party must take over a guarantee vis-à-vis the credit institute for the case of project renovation insolvency and vis-à-vis investors for the case that the credit institute cannot fulfil its financial obligations. Following the debt break principle, the municipalities are generally not allowed to take over any financial securities. Thus, the legally independent legal entity could take over this role. This scheme allows the municipalities to delegate their obligation to decarbonise the housing stock to legally independent legal entities and to the companies of private law. Even if the project becomes insolvent in the end, the state still fulfils its obligations for climate change mitigation.

Thus, the issuing of green bonds through credit institutes of private law is suitable for any municipality that can stimulate and motivate private institutes to issue green bonds through benefits.

Municipal green bonds and corporate green bonds are frequently used, especially in Nordic countries, which have been pioneers in using green bonds to mobilise capital for sustainability goals. Among the leading issuers of municipal green bonds are Kommuninvest (Sweden), KommuneKredit (Denmark), Kommunalbanken (Norway) and MuniFin (Finland). Below, we provide a case study of one Swedish company, Vasakronan, which issued corporate green bonds for municipal purposes. This could service as a replication prototype for Berlin.

Case study: Vasakronan (Sweden)

Background

Vasakronan is Sweden's largest real estate company, with properties in Stockholm, Uppsala, Gothenburg and Malmö. In 2013, Vasakronan was the world's first corporate green bond issuer, and it remains the largest corporate green bond issuer in Sweden, with SEK 5.2 billion in green bonds outstanding.

Project scope

Green bonds are issued under Vasakronan's EMTN programme. The proceeds from green bonds are used solely for investments encompassed by Vasakronan's Green Bond Framework. These include thermal retrofits of buildings, also in cooperation with municipalities and other stakeholders.

Financing structure

Vasakronan has committed to fulfilling a sustainability mandate with a focus on financial, environmental and social dimensions based on the principles in the UN Global Compact, including taking 'a precautionary approach to environmental challenges', undertaking 'initiatives to promote greater environmental responsibility', and encouraging the 'development and diffusion of environmentally friendly technologies', which provides a framework for the company's green financing programme.

Project implementation

The company has elaborated a sustainability programme with specific environmental, financial and social performance targets set as part of a plan each year, reporting in accordance with the Global Reporting Initiative. As a result of these initiatives, Vasakronan reduced the carbon emissions from its portfolio by 97% between 2006 and 2013 and reduced its energy use by 30% over the same period. In 2017, Vasakronan updated its Green Finance Framework. Vasakronan aims to take further steps towards mobilising debt capital markets for climate change and offering investors further insight into its sustainability strategy.

Conclusion

Addressing the landlord-tenant dilemma is important for Germany to achieve the climate goals set out in the EU Green Deal. Tenants are a vulnerable social group with limited assets to participate financially in retrofitting their dwellings. The existing tenancy law creates additional legal barriers aggravating the landlord-tenant dilemma. To finance the retrofit of rented dwellings populated by low-income households, regions and municipalities must raise additional financial resources. Best practices that have shown positive results of financing similar projects in other countries face constitutional barriers in Germany and must be transformed to be applicable here. The introduction of a special levy is a promising solution from a long-term perspective, but it is fraught with legal risks. It is not feasible in the short term because a law regulating this levy would need to pass through the entire parliamentary process. Municipalities are not allowed to take out loans or to take over financial securities, such as bonds. A possible solution is a new form of public-private partnerships. Municipalities could establish legally independent legal entities for the purposes of issuing green bonds and taking over financial guarantees if the bonds for municipal purposes are issued by corporate entities.

[1] For further information and for references, please see our dedicated projects on the assessment of legal and financing solutions for energy transitions in municipalities and regions:
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Associated projects:

ESRa Energiewende im Sozialen Raum

Interreg CENTRAL EUROPE Dynamic Light European Union European Regional Development Fund

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