# Climate Investment Funds

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SUBMISSION BY THE EUROPEAN INVESTMENT BANK



Simon Brooks, CB Vice President

Ms Patricia Bliss-Guest Program Manager Administrative Unit Climate Investment Funds World Bank USA - Washington DC

Luxembourg, 5<sup>th</sup> April 2012

Dear Ms Bliss-Guest,

Please find attached the formal application from the European Investment Bank to become an Implementing Agency of the Climate Investment Funds. The application gives an overview of the Bank's climate-related work, and the benefits that we would bring to the CIFs.

The European Investment Bank is one of the world's largest multilateral financing institutions. Its mission is to support smart, sustainable and inclusive growth, which thereby makes a tangible contribution to development around the world. Climate Action is a key priority for the EIB. The EIB supports the EU's goals of low-carbon and climate-resilient growth inside and outside Europe. Overall, the EIB is one of the largest multilateral providers of climate finance among international financial institutions. In 2011, climate actions of approximately €18.5bn accounted for 31% of total Bank lending, of which € 2.2bn was in developing countries outside the EU.

We would be very grateful if you could ensure that our application is formally tabled for discussion at the next Trust Fund Committee Meeting commencing 30<sup>th</sup> April. We would appreciate the opportunity to attend the meeting to formally present our application.

Yours sincerely,

Simon Brooks

Cc: Commissioner Connie Hedegaard Commissioner Andris Piebalgs

# Annexes:

- EIB application to become an Implementing Agency of the CIFs
- Publications highlighting EIB's work in the field of climate action

# APPLICATION FOR THE EUROPEAN INVESTMENT BANK (EIB) TO BECOME AN IMPLEMENTING AGENT OF THE CLIMATE INVESTMENT FUNDS (CIF)

This note represents the formal application of the European Investment Bank to become an Implementing Agent of the Climate Investment Funds. In proposing to become a CIF Implementing Agent, the EIB is bringing considerable technical and financial expertise on investments for climate mitigation and adaptation both within the EU and in most developing countries. Furthermore, the Bank is uniquely placed to transfer knowledge and experience from its European operations to developing countries. The CIFs also provide the potential to leverage further financial resources from the EIB for sound climate investments in developing countries, in relation to both the Clean Technology Fund, and the sub-funds of the Strategic Climate Fund.

### Introduction to the EIB

The European Investment Bank is one of the world's largest multilateral financing institutions. Its mission is to support smart, sustainable and inclusive growth, which thereby makes a tangible contribution to development within and outside Europe.

As the Bank of the European Union, it uses its special expertise and resources to make a difference to the future of Europe and its partners, by supporting sound investments underpinning EU policy objectives. The EIB operates as a multilateral bank and raises the majority of its resources on the capital markets on favourable terms which it passes on to its borrowers. The EIB's shareholders are the Member States of the European Union. The Bank is financially autonomous.

In relative terms, EIB lending is channelled primarily to projects in the EU Member States, while in absolute terms a significant level of lending operations take place in developing countries outside the Union. The Bank contributes to the implementation of EU development aid and internal cooperation policies under a series of specific regional mandates in support of EU development and cooperation policies in partner countries, covering: EU Candidate and Potential Candidate Countries in the Enlargement Region; the Mediterranean, Russia and Eastern Neighbours; Africa, Pacific and Caribbean (ACP); the Republic of South Africa; and Asia and Latin America.

Very importantly, in October 2011, the EU authorised an additional EIB Mandate of up to €2 billion, with an EU budget guarantee, to support EIB financing operations in the field of climate change mitigation and adaptation across developing countries by the end of 2013.

The following text summarises the approach of, and some of the key actions undertaken by, the European Investment Bank (EIB) in relation to climate change.

# EIB's activities on climate

Climate Action is a key priority for the EIB. The EIB supports the EU's goals of low-carbon and climate-resilient growth inside and outside Europe. Within the EU, the EIB has gained considerable technical experience and expertise through the intensive promotion of climate action, partly complemented with EU budgetary funding.

Overall, the EIB is one of the largest multilateral providers of climate finance among international financial institutions. In 2011, investments for climate action of approximately €18.5bn accounted for 31% of total Bank lending, of which € 2.16bn was in developing countries outside the EU.

The EIB's climate action focuses both on low-carbon investments that mitigate greenhouse gas emissions and on climate-resilient projects that improve adaptation to climate change impacts. The Bank considers mitigation and adaptation measures to be complementary in the fight against climate change. Financing activities in these two areas are developed within the framework of the EIB's sector lending policies and approaches, particularly those concerning energy, transport, water, wastewater, solid waste, forestry, and research, development and innovation (RDI).

# The EIB strongly supports:

- Energy efficiency and renewable energy investments;
- Investments to accelerate the development and dissemination of low-carbon technologies and processes in all sectors (i.e. long-term R&D, early-stage commercialisation and demonstration; clean transport; carbon capture and storage);
- Afforestation and sustainable forest management, the multifunctional benefits of which include both climate change mitigation and adaptation;
- Lending that fosters resilience in sectors which are particularly vulnerable to climate change and to governments and local authorities that need to adapt to climate change (e.g. flood control and drought management measures in the water sector);
- Technical assistance initiatives in a wide range of areas for project development and implementation;
- Development of carbon markets.

The Bank is also supporting the European Commission in the UN Sustainable Energy for All initiative, and has participated in the Technical Support Unit of the Transitional Committee in charge of designing the Green Climate Fund.

The Bank has set a minimum annual target for climate action projects of 25% of its total lending.

# The EIB's climate activities outside Europe

The EIB has a longstanding experience (more than 40-year) of activity in developing countries worldwide. On top of the lending mandates under the EU-ACP (Africa Caribbean and Pacific) partnership agreements or decided by the European Council and Parliament, the Bank's Board of Governors has approved an additional EIB own-risk lending facility of €4.5 billion available over the period 2007-2013 for the financing of climate action projects outside Europe.

The EIB's climate activities cover clean technology, forestry, adaptation and renewable energy and energy efficiency. Indicative examples of activities and investment projects outside the EU include:

- Framework Loans, e.g. in Brazil, China, India, Central America, South Africa for mitigation, energy efficiency and renewable energy, including at small and mediumscale project level;
- Increasing climate resilience in the East African water and sanitation sector;
- Onshore wind farms on four islands in the Cape Verde archipelago;
- Reforestation of degraded land in Uganda;
- A post-2012 Carbon Fund supporting low-carbon projects in Asia, Africa and Latin America;
- Hydropower in Chile
- Interact Climate Change Facility (a co-financing facility together with AFD and the European Development Financing Institutions).

As can be seen from the above list, as well as a very diverse portfolio of operations, the EIB uses a broad range of financing instruments to support its climate actions, including sovereign and sovereign-guaranteed loans, sub-sovereign loans, non-sovereign loans, equity, guarantees, concessional financing and grant-funded technical assistance in various forms. Building on this broad range, the EIB has the ability to blend financing sources and to co-fund investments, to leverage significant additional public and private financing. The EIB also works closely with the European Commission and EU Delegations to identify opportunities in-country for blending grants and loans and for using other innovative financial instruments to help bridge financing gaps.

This range of financing instruments has been important in catalyzing climate change mitigation investments by the private sector. The traditional range of financing instruments is particularly appropriate for investments with positive rates of return and climate change mitigation benefits. However, when these benefits cannot be fully captured by investors, or client governments, the EIB can deploy innovative climate financing instruments which blend concessional funding with own financing to address market failures (notably in the adaptation sector), reduce risk, and leverage further investment.

Project sustainability, including financial sustainability, is core to the EIB operations. Lending discipline, return-to-capital objectives, rigorous due-diligence and environmental procedures, selective engagement rules, and frequent co-financing with the MDBs or commercial banks all support project implementation and sustainability.

Likewise, the EIB has considerable sectoral expertise and experience. The EIB has developed sector policies for energy, transport, water and waste water treatment, sustainable urban development, solid waste management, manufacturing of biofuels and research and development. Each of these policies includes the systematic identification of the need for, and possibilities to, incorporate climate change resilience and adaptation, and how the Bank can play a role to increase project quality. The EIB requires from project promoters, and is available to assist them in, a vulnerability analysis and pro-active measures to build in climate resilience in the project design and operation. In addition, as part of the standard project appraisal process, the EIB is doing pioneering work to measure the carbon footprint and the reductions in greenhouse gas emissions generated by the projects. It is also considering the progressive reduction of internal carbon footprint, as part of its corporate responsibility objectives.

# **Cooperation with other Development Banks**

The EIB cooperates extensively with the other Multilateral Development Banks (MDBs), as well as with European bilateral agencies, with regard to harmonising performance standards, carbon footprint calculations, climate risk management, reporting on investment and financial flows, and providing advice to UNFCCC policy makers. The EIB was part of the joint MDB input to the High Level Advisory Group on International Climate Action Finance, the input to the technical support group of the UN Green Fund Transitional Committee, and the joint MDB report to the G20 on mobilising climate finance.

Numerous projects and programmes are co-financed by EIB with other MDBs, including some of those already receiving grants from the Climate Investment Funds (e.g. the Ouarzazate Solar Power in Morocco).

Participation as an Implementing Agent in the CIF, the current major multilateral disbursement mechanism for climate funds, will complement the above work.

# Why is the EIB applying to become an IA now?

The EIB has been active in the CIFs, having been an Observer of the CIF Committee Meetings since 2010, and participating in two programming missions. The EIB also participates in discussions and preparations regarding the Green Climate Fund. It has always been an anomaly, however, that one of the largest public multilateral development banks is not a CIF IA.

With additional countries being asked to produce new investment plans, as well as existing investment plans being updated, and with the CIFs remaining the key multilateral financing vehicle until the Green Climate Funds are established, the EIB has decided to formally apply for IA status, so as to play a greater part, in coordination with other multilateral agencies, to help meet the financing needs of developing countries.

The EIB has approved the allocation of the extra staff resources for the preparatory work to become an Implementing Agent, and to undertake subsequent country programming.

In summary, becoming an implementing agency of the CIF would complement the EIB's existing tools and instruments, would optimise the Bank's collaborative work to tackling climate change, and would help to overcome investment hurdles, in particular those that are faced by the private sector.

European Investment Bank, Luxembourg

30<sup>th</sup> March 2012



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# Carbon Finance The European Investment Bank and

Carbon finance initiatives form an integral part of the European Investment Bank's response to the challenges posed by climate change. In line with European Union (EU) policies and international agreements, the Bank supports climate change mitigation and adaptation activities as well as initiatives that promote the carbon markets.

The EIB has established a number of market-based instruments to encourage carbon trading, in cooperation with other public and private financing institutions, at national and international level. By getting involved in carbon fund sponsorship, the EIB aims to promote the use of both public and private sector capital to support low-carbon projects.

EIB co-sponsored carbon funds focus mainly on the less-developed areas of the carbon market. They aim to help EU Member States and companies, as well as other institutions, to meet their carbon emission compliance obligations at EU and international level, in particular under the EU Emissions Trading Scheme and international agreements. In addition, they help support economies in transition and developing countries to raise finance for low-carbon investments.

With tailored objectives, structures, regional focuses and participants, EIB cosponsored carbon funds have all been designed to extend market capacity and complement rather than crowd out private sector participants in the carbon market. EIB carbon fund initiatives also

# Post-2012 Carbon Fund supports low-carbon projects in Asia, Africa and Latin America

The Post-2012 Carbon Fund has already contributed to the development of several projects in Asia, Africa and Latin America by purchasing future carbon credits to be generated through the use of wind energy, improved waste management and energy efficiency technologies.

Among the projects benefiting from the Fund are two recent solar cooker projects in north-western China with an aggregate emission reduction volume of some 450 000 t CO<sub>2</sub> beyond 2012. The projects contribute to the sustainable supply of power from renewable energy sources by reducing the use of fossil fuel. They also help improve living and sanitary conditions in the region by providing an easy facility for boiling drinking water and reducing health-damaging kitchen fumes.

# Sustainable landfill developed through the EIB-KfW **Carbon Programme**

The development of a new landfill site in Rio de Janeiro is being supported via the sale of 700 000 mt of carbon credits under the first tranche of the EIB-KfW Carbon Programme targeting SMEs. The Novo Gramacho project consists of landfill gas collection, control and utilisation, including purification of the biogas to natural gas and delivery via a dedicated pipeline to a nearby refinery operated by the national energy company Petrobras. The project aims to prevent free emissions of methane gas into the atmosphere, thus contributing to climate change mitigation.

seek to anticipate market developments and promote confidence in regulatory frameworks, in particular for the period beyond 2012 when the Kyoto Protocol expires.

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# Carbon funds co-sponsored by the European Investment Bank

The EIB has contributed to setting up a series of carbon funds designed to cover specific areas and carbon market players, where the Bank can help to support projects and markets which otherwise would not have been developed:

The Multilateral Carbon Credit Fund (MCCF) was created by the EIB and the European Bank for Reconstruction and Development (EBRD) to develop the carbon market in countries from Central and Eastern Europe through to Central Asia. The aim is to help these countries meet mandatory and voluntary emission reduction targets. The EUR 208.5m raised by the MCCF mainly serves project-based carbon credits, but also Green Investment Schemes:

The joint EIB/KfW (Kreditanstalt für Wiederaufbau) Carbon Purchase Programme includes a first tranche designed to help EU small and medium-sized enterprises (SMEs) that must comply with the EU's Emissions Trading Scheme. The second tranche of the Programme supports projects located in the poorest countries identified as the Least Developed Countries (LDCs) and Kyoto Programmes of Activities (PoAs). The EIB-KfW Carbon Programme II covers both Kyoto and post-Kyoto emission credits. The overall budget of the two tranches is close to EUR 190m:

Tailored to promote projects generating carbon credits from 2012 onwards, the Post-2012 Carbon Fund is an initiative developed by the EIB and four other public finance institutions (Caisse des Dépôts, Instituto de Crédito Oficial, KfW Bankengruppe and the Nordic Investment Bank). The objective of this carbon fund is to bolster confidence in the establishment of a regulatory regime beyond the Kyoto Protocol. The Post-2012 Carbon Fund has a budget of EUR 125m and is the first of its kind:

In cooperation with the World Bank, the EIB has set up the Carbon Fund for Europe (CFE), which is aimed at the EU Member States and the European private sector. With capital of EUR 50m, the Fund acquires emission credits from projects eligible under the Kyoto Protocol's flexible mechanisms, compatible with the EU's Emissions Trading Scheme (EU ETS). In addition, the CFE can invest up to 20% of its capital in Green Investment Schemes:

The first carbon fund in French-speaking Africa and first national fund co-established by the EIB, the Fonds Capital Carbone Maroc (FCCM) supports CDM projects by acquiring carbon credits over the period 2008-2017. The Fund is worth MAD 300m (over EUR 26m)

http://www.eib.org/projects/publications/the-eib-and-carbon-finance.htm



**European Investment Bank** 98-100, boulevard Konrad Adenauer L-2950 Luxembourg

(+352) 43 79 - 1

(+352) 43 77 04

www.eib.org

### **Information Desk**

**Communication Department** 

(+352) 43 79 - 22000

(+352) 43 79 - 62000



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# The European Investment Bank Promoting Climate Action

Climate change is one of the biggest environmental, social and economic threats. To avoid catastrophic consequences, significant reductions in greenhouse gas (GHG) emissions and strategies to adapt to climate change are needed.

The European Union (EU) and its long-term financing institution, the European Investment Bank (EIB), have made climate change mitigation and adaptation a top policy priority. The EIB supports the EU's goal of low-carbon and climate-resilient growth within and outside the Union. The EIB's financing in these sectors is one of the largest among international financial institutions: in 2010, the Bank invested almost EUR 21bn in climate action. The EIB's target for climate action is 20% of overall lending per annum, but in 2010 climate action already accounted for 29%.

Acting as a financial leader supporting innovative clean and climate-resilient technologies, the EIB is committed to catalysing investment with partners both within and outside Europe.



# The European Investment Bank

The EIB is one of the world's largest multilateral financing institutions. As the bank of the European Union it uses its special expertise and resources to make a difference to the future of Europe and its partners by supporting sound investments underpinning EU policy objectives. Set up in 1958 under the Treaty of Rome establishing the European Community, the EIB operates as a bank and raises the majority of its resources on the capital markets on favourable terms which it passes on to its borrowers. The EIB's shareholders are the Member States of the European Union. The Bank is financially autonomous and does not come under the EU budget.

EIB lending is channeled primarily to projects in the EU Member States. Outside the Union, the Bank contributes to the implementation of EU development aid and cooperation policies under specific regional mandates covering EU Candidate and Potential Candidate Countries in the Enlargement Region; Mediterranean, Russia and Eastern Neighbours; Africa, Pacific and Caribbean (ACP), and the Republic of South Africa; Asia and Latin America.

### Supporting sustainable growth

The EIB supports the implementation of a range of EU policy objectives including Europe's strategy for smart, sustainable and inclusive growth, Europe 2020, and the Union's climate objectives.

The EIB's climate action focuses both on low-carbon investments that mitigate greenhouse gas emissions and on climate-resilient projects that improve adaptation to climate change impacts. The Bank considers mitigation and adaptation measures to be complementary in the fight against climate change. Financing activities in these two areas are developed within the framework of the EIB's sector lending policies and approaches, particularly those concerning energy, transport, water, wastewater, solid waste, forestry, and research, development and innovation (RDI).

The EIB strongly supports:

- Energy efficiency and renewable energy investments;
- Investments to accelerate the development and dissemination of low-carbon technologies and processes in all sectors (i.e. long-term R&D, early-stage commercialisation and demonstration; clean transport; carbon capture and storage);
- Afforestation and sustainable forest management, the multifunctional benefits of which include both climate change mitigation and adaptation;
- Lending that fosters resilience in sectors which are particularly vulnerable to climate change and to governments and local authorities that need to adapt to climate change (i.e. flood control and drought management measures in the water sector);
- Technical assistance initiatives in a wide range of areas for project development and implementation:
- · Development of the carbon markets.



# Smaller limits apply to projects

and programmes under the African, Caribbean and Pacific

# The EIB's financing instruments

The EIB tailors its financing to the specific needs of the borrower and the project, in line with sound banking practice and procedures. Borrowers can be both public and private, from within or outside the EU.

The EIB's traditional financing instruments are medium and long-term loans with fixed or variable interest rates in euro or other currencies. For projects of at least EUR 25m<sup>1</sup>, the EIB provides individual loans covering up to 50% of investment costs. The remaining share and the working capital have to be provided from other sources. For projects under EUR 25m, the EIB provides indirect lending. These smaller loans are made available through intermediated loans to partner banks – so-called credit lines. These are put in place to support smaller projects in EIB-targeted sectors or activities such as investment in energy efficiency.

The EIB has also widened its range of financing facilities allowing the Bank to assume sub-investment-grade risk where appropriate to help finance renewable energies or other types of low-carbon projects. The Risk-Sharing Finance Facility (RSFF) is used to provide finance to research, development, and demonstration and innovation investments – areas that often involve greater risk and thus face more difficulties in obtaining funding. This innovative joint initiative of the EIB and the European Commission is aimed at private companies or public institutions with a higher than average risk profile.

Other financing instruments include equity funds through which the EIB indirectly participates in companies and projects promoting low-carbon investments in particular in renewable energy, energy efficiency and forestry. The funds can have different geographical coverage and are established with the private sector and a range of international financial institutions.

EIB financing may be accompanied by EU grants to finance investment promoting the reduction of energy consumption, pollution and  $CO_2$  emissions and by technical assistance to help build up the relevant administrative and institutional capabilities and to provide other technical support to promoters.

# Partnering on climate action

The Green for Growth Fund was launched in 2009 together with KfW to provide financing, including loans, equity and technical assistance, for sustainable energy projects in the Western Balkans and Turkey. Financing is provided through financial intermediaries and energy service companies (ESCOs).

In addition, the EIB has set up a series of other funds together with other institutions and the private sector to provide equity for investment in particular in renewable energy, energy efficiency and forestry: the Dasos Timberlan Fund (forestry), the Marguerite Fund or 2020 European Fund for Energy, Climate Change and Infrastructure and the DIF Renewable Energy Fund, to name but a few.

The Global Energy Efficiency and Renewable Energy Fund (GEEREF) is an innovative financing vehicle in the form of a fund of funds designed to promote energy efficiency and renewable energy in emerging markets outside the European Union. It is active in African, Caribbean and Pacific developing countries, but also supports initiatives in Latin America, Asia and the EU neighbourhood countries.

The Mediterranean Solar Plan focuses on investment programmes and projects that promote the widespread use of alternative energy sources in the Mediterranean region. The Bank is playing a key role in its design and the coordination of its implementation.

Managed by the EIB and funded by the Commission, ELENA (European Local Energy Assistance) assists local authorities in accelerating the development of their energy efficiency and renewable energy investment programmes. Eligible projects focus mainly on energy efficiency and renewables in buildings, urban transport and related local infrastructure. This initiative supports in particular the Covenant of Mayors initiative of the European Commission. Other initiatives such as the EU-Africa Infrastructure Trust Fund and the Water Project Preparation Facility can also finance technical assistance for climate action investments.





# Adapting water supply to climate change: the Disi-Amman Aqueduct, Jordan

The EIB has contributed EUR 100m to financing the largest water public-private partnership in the region: the construction of a 325 km aqueduct to carry water drawn from an immense aquifer beneath the Disi desert to Amman, Jordan's capital.

In the face of recurrent droughts, the project will double the current drinking water supply for Amman. This resource will primarily be used for drinking purposes as the Government has undertaken to end local commercial irrigation.

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# Bringing together strategic partners

As Europe's leading financial institution, the Bank is the natural counterpart for developing financial instruments to implement EU objectives. It acts as a catalyst for climate investments within and outside the EU, bringing together the different institutions, stakeholders and financing partners.

With the European Commission, the Bank has developed initiatives to finance climate investments via combinations of grants and loans. The provision of technical assistance for project preparation is also often offered in the framework of such initiatives.

The EIB also works closely with companies, countries and other international financial institutions to co-finance mitigation, adaptation and other climate-related projects. The EIB's considerable experience in financing renewable energy and energy efficiency investments make its contribution particularly valuable.

EIB carbon funds, all co-sponsored with a national or international financing institution, are an important example of the Bank's catalytic function. These market-based instruments help EU governments and companies meet their compliance obligations while supporting investment in climate friendly projects.

In addition, the Bank works closely with strategic partners on several technical assistance programmes to support project development by sharing expertise, financing and country knowledge and thus enhance the effectiveness of climate action. Technical assistance initiatives especially cover the EU as well as the Mediterranean region, the Western Balkans and the African, Caribbean and Pacific countries.

# **New metro lines in Vietnam**

The construction of a new metro line in Hanoi, Vietnam, aims to improve the quality of life in Hanoi by increasing the mobility of the city's 6.5 million inhabitants, alleviating traffic congestion and reducing overall greenhouse gas emissions thanks to the shift from private to public transport modes.

The EIB has provided a EUR 73m loan for this project, which comprises the construction and equipping of a new depot as well as the acquisition of new rolling stock to operate the line. The project is being co-financed by the EIB with the Asian Development Bank and Agence Française de Développement.

This new metro line is the first ever to be financed by the EIB in Asia, and the EIB will soon complete negotiations to finance a second one in Ho Chi Minh City.





# Mainstreaming climate action in the EIB's activities

Mainstreaming is about aligning the whole of the EIB's financing with the Bank's climate action strategy. Climate considerations are being progressively integrated into all of the EIB's operations and internal processes:

- Projects with climate change implications are assessed by the Bank to ensure that
  they incorporate and meet EU and internationally accepted climate policy requirements, employ best available technology and, therefore, support low-carbon and climate-resilient growth during their implementation and operation;
- The EIB screens projects in vulnerable sectors to ensure that climate risk considerations are taken into account in the project cycle. The Bank has also integrated adaptation considerations into some of its lending policies, and finances adaptation projects, notably for the water sector. This approach will be extended to the entire EIB portfolio:
- The EIB assesses the potential of relevant projects to generate carbon credits;
- The EIB can help public and private sector promoters to prepare and finance mitigation and adaptation projects via technical assistance programmes;
- The EIB has developed a methodology to measure greenhouse gas emissions generated by the projects financed by the Bank.

# The EIB's carbon footprint

The Bank's specialists have developed, in cooperation with an independent consultant, a comprehensive set of sector-specific carbon footprint methodologies to measure greenhouse gas emissions generated by the projects financed by the Bank.

These methodologies, addressing all the relevant sectors and project typologies and compatible with international GHG accounting practice, have been incorporated in the standard project appraisal process.

In addition to its induced footprint, the EIB considers the progressive reduction of its internal carbon footprint as part of its corporate responsibility objectives.

# Supporting innovative low-carbon and climateresilient technologies

Research, development and innovation are critical in the fight against climate change. Most technological breakthroughs are only possible with a solid base of amply funded research and development, and tend to be especially reliant on external financing due to the risks and longer-term payoffs involved.

The EIB plays an important role when either private finance or low-carbon technologies are under-developed. The Bank supports the development of new financial instruments for innovative solutions and technologies that might not be easily financed via conventional funding sources. The EIB's involvement can help lever other funding to allow the development, commercialisation and dissemination of existing or early-stage innovative clean technologies such as:

- Photovoltaics (PV);
- · On-shore and off-shore wind;
- · Concentrated Solar Power (CSP);
- · Sustainable biofuels such as second generation biofuels;
- Engine and fuel technologies including electric vehicles.

Building on the experience and expertise gained through projects within the EU, the EIB is uniquely positioned to transfer knowledge to its partners outside Europe.

In this context, the EIB is also increasingly focusing on new low-carbon technologies such as carbon capture and storage (CCS), which has been recognised as a key technology for  $CO_2$  emission reduction. Here the Bank is cooperating closely with the European Commission to support mechanisms for demonstration programmes of CCS projects within and outside Europe.

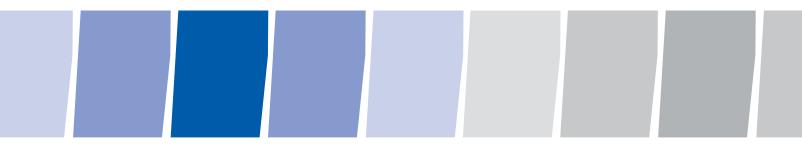
# Adapting transport infrastructure: the expansion of the Port of Rotterdam, the Netherlands

The European Investment Bank is supporting the expansion of Europe's largest port with EUR 900m funding. The Port of Rotterdam will be provided with nearly 1000 hectares of new port facilities directly on the North Sea. The project, which is expected to be completed by 2025, will accommodate continued traffic growth and contribute to improved transport links both within and outside the European Union. The reclaimed land will include road and rail access, harbour basins and 5 km of quayside, and will be protected by 12 km of seawalls, all of which have been designed to counter future climate change impacts including sea-level rise and increased storm waves. The Port of Rotterdam will therefore be able to provide climate-resilient harbour facilities for the world's largest ships.

# Innovation for mitigation: Evelop Belwind Offshore Wind

The EIB has lent EUR 300m to finance the first phase of Evelop Belwind Offshore Wind, the largest Belgian offshore wind farm with a planned capacity of 330 MW. The Belwind project is located on the Bligh Bank in the North Sea, 46 km off the coast of Belgium. The project aims at contributing to Belgium's target of a 6% share of electricity generated from renewable energy sources. The electricity will be transported inland by Belwind to the ELIA transmission grid and sold to the end-users, which can be schools, hospitals, families, industry or local authorities, to name but a few. Belwind is the first offshore wind farm for which the EIB is assuming the project finance risk. Altogether the EIB has provided nearly 50% of the liquidity, EUR 150m on project risk and EUR 150m guaranteed by the Danish Export Credit Agency.





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# **Contacts**

For general information:

# **Information Desk**

Corporate Responsibility and Communication Department

(+352) 43 79 - 22000

**(+352) 43 79 - 62000** 

# **European Investment Bank**

98-100, boulevard Konrad Adenauer L-2950 Luxembourg

(+352) 43 79 - 1

**(+352) 43 77 04** 

www.eib.org

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# The European Investment Bank Forestry and Climate Change

Forests are major carbon stores that regulate the global climate. Sustainable forestry can make a crucial contribution to climate change mitigation by managing these important carbon stocks, lowering emissions and providing a source of renewable energy. At the same time, forestry can facilitate adaptation to some of the effects of climate change such as soil erosion and increased flood risk and it offers great potential benefits in terms of biodiversity and soil fertility.

The European Investment Bank (EIB) has over 30 years of experience of financing afforestation and reforestation schemes within the European Union (EU) and around the world. It has provided some 25 direct investment loans and indirectly supported several thousand smaller projects through financial intermediation. As a long-term lender, the EIB is well suited to the economically and environmentally long-term character of this very important and truly multifunctional sector. During 2010, the EIB's forest sector project pipeline reached almost EUR 1bn, more than double that for 2009.

The EIB actively seeks to support European Union forestry policy, the main objectives of which include improvement of long-term competitiveness, environmental protection and fostering of intersectoral coordination<sup>1</sup>. The EU also aims to prevent deforestation and forest degradation within the Union and throughout the world in order to tackle climate change and reduce biodiversity loss<sup>2</sup>.



# **Preventing forest fires in Spain**

With a EUR 75m loan, the EIB has financed reforestation and the application of more effective measures to prevent forest fire, mitigate soil erosion and regenerate natural habitat in the Castilla-La Mancha Region of Spain. The 'Medioambiente Castilla-La Mancha' project has increased fire-fighting capacity through the purchase of fire-fighting equipment, the implementation of engineering works, the introduction of forest management techniques to minimise fire risk and the improvement of technical expertise. The project promotes improved forest ecosystem health and increased greenhouse gas sequestration and contributes to general nature protection objectives.

<sup>&</sup>lt;sup>1</sup> EU Forest Action Plan (2006)

<sup>&</sup>lt;sup>2</sup> European Commission's Communication on addressing the challenges of deforestation and forest degradation to mitigate climate change and biodiversity loss (2008)

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The EIB's forestry investments are technically, economically, environmentally and socially sustainable. Due diligence covers planting, management, use and ownership and is adapted according to the location and type of forest project. Conversion of natural forest to plantations and commercial logging in primary moist forests are excluded from the EIB's activities. The EIB's environmental principles include a strong commitment to avoid damaging critical habitats, many of which are forest areas. The EIB finances investments in afforestation and reforestation, fast-growing plantations, forest fire prevention measures and forestry funds.

# The Dasos Timberland Fund

The Dasos Timberland Fund is a private equity fund set up to finance projects that have a positive impact on climate change, soil and freshwater conservation and biodiversity. The EIB has invested EUR 30m in the Fund to cover projects in the EU and candidate countries applying international sustainable development principles. The Fund has an investment period of four years and aims to reach a total fund size of up to EUR 300m.





# European Investment Bank

98-100, boulevard Konrad Adenauer L-2950 Luxembourg

**(+352) 43 79 - 1** 

(+352) 43 77 04

www.eib.org

### **Information Desk**

Communication Department

(+352) 43 79 - 22000

(+352) 43 79 - 62000



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# The European Investment Bank

# **Promoting Renewable Energy and Energy Efficiency**

Renewable energy and energy-efficiency projects are at the heart of the EIB's energy investment efforts and contribute to making Europe's energy supplies more sustainable, competitive and secure. Their development and expansion are widely recognised as the best way to help the European Union (EU) achieve its energy and climate action targets by 2020<sup>1</sup>.

EIB lending for renewable energy has grown dramatically over the last few years to reach EUR 4.6bn in 2009. The share of renewable lending in the overall EIB energy portfolio tripled from below 10% in 2006 to nearly 30% in 2009. The majority of this lending is directed to wind and solar power generation.

EIB lending for energy efficiency<sup>2</sup> doubled to EUR 1.5bn in 2009 and is expected to continue to increase in the future. Energy efficiency considerations are mainstreamed into all projects appraised by the Bank.

Beyond sheer lending volumes, the EIB has developed other financing means, such as equity and carbon funds, to further support renewable energy and energy efficiency projects. The Bank also works upstream with project promoters providing technical assistance to develop projects. It is also managing and participating in several other initiatives or programmes related to energy and climate change, such as the Mediterranean Solar Plan (MSP) and the GEEREF



The European Investment Bank and African Development Bank have invested a total of EUR 45m in the design, construction and operation of onshore wind farms on four islands in the Cape Verde archipelago. The project will provide over 28 MW of electricity generating capacity. In addition to significantly reducing greenhouse gas emissions, it will increase access to electricity in Cape Verde, reduce the need to import fuel priced in foreign currency and help establish wind energy as a reliable source of non-polluting renewable power on the islands.



(Global Energy Efficiency and Renewable Energy) fund of funds, which is active in African, Caribbean and Pacific developing countries and also supports initiatives in Latin America, Asia and the EU neighbourhood countries.

<sup>&</sup>lt;sup>1</sup> These are: to reduce greenhouse gas (GHG) emissions by 20% compared to 1990 levels; to raise the share of renewable energy in final energy consumption by 20%; and to increase energy efficiency by 20% in comparison with projections.

<sup>&</sup>lt;sup>2</sup> To comply with the EIB's definition of energy efficiency, projects must result in:

an increase in energy efficiency of at least 20% from the baseline:

an increase in energy efficiency of less than 20% from the baseline provided that the energy savings cover at least 50% of the investment costs.

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# Sunray Montalto di Castro photovoltaic

In Montalto di Castro, Italy, the Bank supported the construction and operation of two photovoltaic power plants using a tracker system that follows the sun during the day and delivers up to 25% more energy than fixed systems. The renewable energy investments are financed by way of bonds issued by the promoter through a special purpose vehicle. The EIB was actively involved in structuring the transaction and, by purchasing half the bonds, is considered a cornerstone financier. The transaction has already had a powerful demonstration effect on institutional investors. The magazine Project Finance International honoured the transaction with the award "Bond Deal of the Year."

# Supporting early-stage technologies

In parallel to providing support for established technologies, the EIB strongly encourages the expansion of both underdeveloped markets and early-stage or evolving technologies such as solar photovoltaic, offshore wind, concentrated solar power and second-generation biofuels. The Bank requires the best available technology to be used in the projects it finances.

# Key financing instruments for energy efficiency and renewable energy

The EIB provides a large range of financing instruments from senior loans to equity for renewable energy and energy efficiency investments within and outside the EU.

The Bank has increased the volume of socalled intermediated lending, including framework loans, provided in these sectors. It works through financial intermediaries in the banking sector or through specialised energy agencies or energy service companies. The Bank also provides indirect financing to renewable energy and energy efficiency projects via investment funds. These can have different geographical coverage and are established with the private sector and a range of international financial institutions.

The EIB also makes use of risk-sharing instruments, combining loans with grants and providing technical support. This usually involves partnering with the European Commission or national authorities.

An EU energy efficiency fund is being launched together with the European Commission and other investors to provide finance for sustainable energy projects, including energy saving measures and renewable energy projects, developed at local or regional level. The fund, which will be managed by a professional fund manager, is part of a new European Energy Efficiency Facility that the European Parliament and Council of Ministers decided to set up using unallocated money from the European Energy Programme for Recovery.

Moreover, the Bank manages technical assistance programmes to support project

preparation and operation within and outside the EU. Managed by the EIB and funded by the Commission, ELENA (European Local ENergy Assistance) provides technical assistance to local and regional authorities for projects focusing on energy efficiency and renewable energy in buildings, urban transport and related local infrastructure. In the Mediterranean region, the Western Balkans and the ACP countries technical assistance in the field of energy efficiency and renewable energy is also increasingly being supported by the Bank.

# Facility for Energy Sustainability and Security of Supply

Outside the EU, the EIB complements the financing it provides in the different regions of the world under an EU guarantee with a dedicated multiannual Facility for Energy Sustainability and Security of Supply to finance projects to the tune of EUR 4.5bn. Eligible countries and regions are EU candidate and neighbourhood countries, Central Asia, African, Caribbean and Pacific (ACP) countries and South Africa, as well as Asia and Latin America.



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(+352) 43 79 - 62000

info@eib.org



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# The European Investment Bank and Sustainable Transport Lending

Sustainable transport lending is an illustration of the European Investment Bank's commitment to emissions reduction and improved energy efficiency. By promoting a shift from private to public transport and by investing in maritime transport, sustainable transport projects not only aim to improve air quality and reduce noise pollution, but also help to tackle climate change by enhancing energy efficiency and limiting greenhouse gas (GHG) emissions.

The EIB's approach strives for the most efficient, economic and sustainable way of satisfying transport demand. This requires a mix of transport solutions, covering all modes. In this context and in line with European Union (EU) policy, the EIB prioritises investments in railways, inland waterways and maritime projects (in particular the Motorways of the Sea) as these are intrinsically the most promising in terms of reducing greenhouse gas emissions per transport unit. The same applies to urban transport and intermodal hubs.

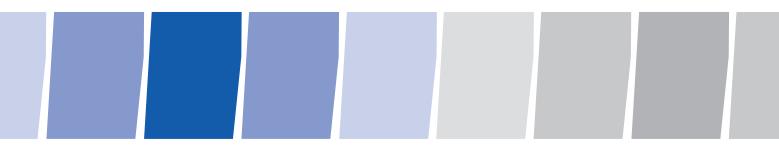
Moreover, the EIB promotes the development of cleaner and safer vehicles by increasingly focusing its lending to the automotive industry on research and development (R&D).

The EIB also finances sustainable transport projects in many regions outside the EU, where it seeks to apply the same quality standards as in the Union.



The Marmaray project is one of the world's most ambitious urban transport projects. A 76 km railway line will run across the densely populated Istanbul area. The new line will help relieve the city of its growing traffic congestion. A key element of this milestone railway project is the 1.4 km-long tunnel under the Bosphorus connecting Europe to Asia. The project is supported by EIB loans totalling EUR 650m. The rail system will carry 75 000 passengers per hour and link up with the municipal light rapid rail system and metro.

In parallel, the EIB is helping to build the first high-speed railway between Istanbul and Ankara, interconnecting with the Marmaray project. This project has received an EIB loan of EUR 850m to upgrade one of the most used rail corridors and thus benefit millions of domestic travellers and tourists.



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# **Promoting urban transport**

The promotion of public transport is intensively supported by the EIB. Urban transport projects include the construction, extension or rehabilitation of public transport infrastructure (metro, light rail or tramway systems), the acquisition of rolling stock, and the promotion of cycling and pedestrian networks.

The ELENA (European Local ENergy Assistance) technical assistance facility supports increased energy efficiency and integration of renewable energy sources also in urban transport. ELENA provides grants for the preparation of projects presenting innovative solutions or serving as a demonstration to others – e.g. high energy-efficiency buses, including hybrid buses, electrical or low-carbon propulsion systems to facilitate the introduction of electric cars, investments introducing new more energy-efficient solutions for improved freight logistics in urban areas. This initiative supports in particular the Covenant of Mayors initiative of the European Commission.

In the urban transport sector, EIB direct lending is complemented by the EIB-managed JESSICA (Joint European Support for Sustainable Investment in City Areas) initiative that assists with the allocation of

EU Structural Funds to projects forming part of an integrated plan for sustainable urban development and regeneration.

# Financing modal shift in Bucharest

The EIB has supported the extension and enhancement of the underground system in Bucharest since 1996. The construction of the new metro Line 5, the acquisition of rolling stock to operate it and the replacement of obsolete units running on the existing network are part of the most recent investments financed by the Bank with loans totalling EUR 395m. These investments have ensured the restructuring of metro network services and changes in mobility patterns, further contributing to the modal shift from private vehicles to public transport.

# Investing in maritime transport

The Motorways of the Sea<sup>1</sup> are a European Commission-approved network of projects concerning at least two ports in two different countries and offering an alternative to road transport, mostly via

roll-on/roll-off-based maritime systems but also sometimes via container shipping. The EIB fully supports the Motorways of the Sea and has financed several projects in line with this initiative including both vessels and port facilities.

The EIB also finances a significant number of port projects beyond this initiative, which usually include dedicated rail connections to the port hinterland and in many cases inland waterway connections.

# Vuosaari Harbour – Finland

The EIB has provided EUR 200m for this project, which comprises a new port on the eastern outskirts of Helsinki, replacing the existing West and North Harbours in the city centre that lacked the capacity to handle future cargo volumes. The main component of the project is the new 150 ha port area. A 19 km dedicated freight rail line has also been constructed to connect the port to the national rail network. The new port has removed most of the freight traffic and associated congestion from Helsinki city centre.

<sup>&</sup>lt;sup>1</sup> This initiative has three objectives: concentrating freight flows on sea-based logistical routes; increasing cohesion, and; reducing road congestion through modal shift.



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# The European Investment Bank Financing Water and Climate Change Adaptation

Water is the primary medium through which climate change influences human societies and ecosystems. Increased frequency of extreme weather conditions has severe impacts on the availability and quality of freshwater resources, giving rise to water-related natural disasters including droughts and floods. As the largest source of loan finance to the global water sector to date, the European Investment Bank (EIB) has identified integrated water resource management and adaptation to climate change as key objectives for future lending operations.

Anticipatory and precautionary adaptation to the consequences of climate change is more effective and less costly than forced, last-minute emergency action. The Bank's investments in the water sector are therefore aimed at the preservation of freshwater resources, sustainable water management, protection of marine and coastal zones and other adaptive measures.

The EIB finances water adaptation projects both inside and outside the EU. Although current EIB-funded adaptation projects are located mostly within the EU, the Bank also invests in projects located in emerging and developing economies throughout the world in close cooperation with the European Commission and other financing institutions. EIB water financing is conditional upon a thorough assessment of the project's social, environmental and economic aspects by the Bank. The EIB promotes projects that increase efficiency at technical, financial and institutional level. Agreed adaptation measures are incorporated into the project design and implementation and are subject to monitoring by the Bank.

# EU policies on water and climate change adaptation

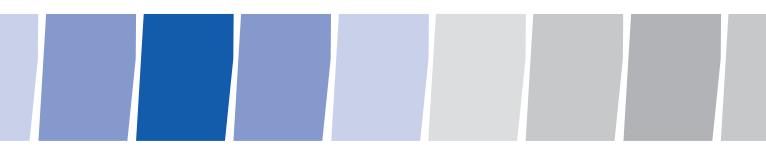
The European Union promotes cross-regional and cross-border water management among its Member States. It applies the same approach to the risk assessment and management of droughts and floods, including the establishment of trans-boundary risk maps and mitigation strategies. The collaboration of stakeholders across political and administrative borders provides a model for good practice that can also be promoted outside the EU.



# Increasing climate resilience for East African water and sanitation sectors

The EIB is developing a regional project for the Lake Victoria countries (Burundi, Kenya, Rwanda, Tanzania and Uganda) in close collaboration with UN-HABITAT. The integration of water and sanitation strategies

should help increase climate resilience in this sensitive region and preserve the lake's important function as a habitat and water resource for the future. The Bank is already funding water and sanitation works in Uganda's capital Kampala under the Water Project Preparation Facility together with other financiers. Further investment components are planned for Mwanza in Tanzania and Kisumu in Kenya.



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The Bank also offers technical assistance for projects that require improved preparation, as well as enhanced human capacities and implementation frameworks. This work is supported by measures to disseminate the good practice developed in the EU, such as the publication of the 2007 EIB flood risk management guide1.

Significant additional and innovative investments are needed to make the affected economies more climate resilient. Priority has to be given to the most vulnerable regions and populations.

# Water adaptation projects eligible for EIB financing:

- river basin water resources management programmes;
- coastal zone management including coastal defence measures:
- protection of water resources including groundwater;
- · dams for drinking water supply, irrigation and hydropower;
- irrigation and watershed afforestation including erosion protection;
- · floods and droughts risk management programmes;
- · augmentation of water storage (surface and subsurface) and supplies and water treatment;
- water demand measures and increase of system efficiency including leakage management;
- · marine and freshwater pollution abatement programmes, wastewater treatment and re-use.





The 25 km-long flood barrier at the mouth of the river Neva protects the City of St Petersburg and its five million inhabitants.

Designed to cope with floods of a 1000-year return period, the mobile barrier helps to address a major threat that has plagued the city since its foundation and at an increased frequency over the last decades. With a total cost of more than EUR 500m, this is one of the world's largest flood protection structures. The EIB is co-financing the project, while also providing advice on technical, operational and environmental aspects.



# Preventing floods in the Czech Republic

The Czech Republic was hit hard by six disastrous floods in the last decade, which resulted in 100 casualties and damage estimated at

EUR 5bn. A national flood prevention strategy covering the period 2002-2012 aims to increase protection for over 800 000 people and key infrastructure. The EIB is providing EUR 360m of the total programme costs of EUR 750m. The Bank also brings value added to the strategy through scheme selection from the overall programme and environmental due diligence.



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<sup>&</sup>lt;sup>1</sup> EIB Flood Risk Management Guide: http://www.eib.org/projects/publications/eib-flood-risk-management-quide.htm