



European  
Investment  
Bank

*The EU bank*

Climate action that makes a difference  
in the Pacific, Caribbean and Indian Ocean

# Small islands, big impact

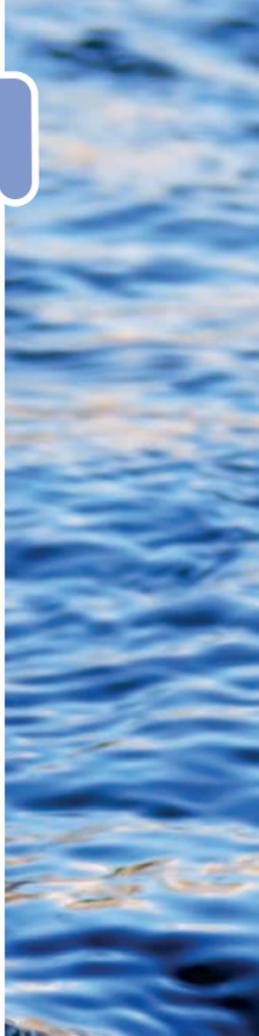


# Message in the **investment**



Global warming threatens the very existence of small islands, and not only due to rising sea levels. Extreme weather events are becoming more frequent and are projected to grow in ferocity. Water infrastructure is easily put out of action by storms, while tidal surges and slow-setting sea-level rises cause salt-water intrusion and the salinisation of groundwater. Tourism – the fuel of the economies of many small islands – is hurt, devastating livelihoods long after the winds die down. All this may potentially make small islands uninhabitable even before the sea overwhelms them.

The European Investment Bank **helps** small island developing states **adapt** to the impact of these extreme events and **mitigate** their own greenhouse gas emissions.





# The EIB **at a glance**



The EIB is the world's **biggest multilateral climate-action financier**, with EUR 20.7bn in financing in 2015.

- The EIB committed EUR 4.5bn globally between 2011 and 2015 to projects that aim to help economies to adapt to climate change
- Our global target: more than 25% of all lending for climate action (nearly 27% in 2015)
- In parallel, we are increasing our climate target to 35% of lending in developing countries by 2020

The Bank is working to increase that investment and has adopted a climate policy that makes adaptation a key element of climate projects.



# solar now

In 2003, the Cotonou Agreement between the EU and 78 members of the African, Caribbean and Pacific Group of States entered into force. The agreement aims to reduce and eventually eradicate poverty, while contributing to sustainable development.

From 2003 onwards, the **EIB** has **provided around EUR 1bn** to more than 50 projects in 20 small island nations under the Cotonou Agreement.





# All over the world

1. Cape Verde
2. Seychelles
3. Maldives
4. Réunion
5. Timor-Leste
6. Solomon Islands
7. Vanuatu
8. New Caledonia
9. Cook Islands
10. French Polynesia
11. Saint Lucia

# Saving the coral reef

## in Cape Verde



In addition to adapting to climate change, inhabitants of small islands are trying to limit their own impact on the climate.

One of the most effective ways of doing this is, of course, by using more renewable energy sources such as wind. On four Cape Verde islands, wind farms have been set up in one of the largest wind projects in Africa, with EUR 45m in funding from the EIB and the African Development Bank. The wind farms will help reduce greenhouse gas emissions on the archipelago, which is a biodiversity hotspot – its coral reef is considered to be **one of the world's ten most important**.

This public-private partnership was awarded the “Best Renewable Project in Africa” prize at the Africa Energy Awards 2011 in Johannesburg.



On a perfectly windy day, the 30 wind turbines produce up to 41% of the energy consumed on the island of Santiago, home to the capital of Cape Verde, according to the operator, Cabeólica.



# Fighting droughts in the Seychelles



One of the climate-change impacts seen in the Seychelles is increasing drought. In the past the Seychelles had an annual three-month rainy season. But now the droughts are getting longer.

The EIB loaned **EUR 26m to upgrade and expand water systems** on three of the largest islands, to improve the efficiency of the water systems and increase resilience to climate change by diversifying and integrating resources that respond differently to drought conditions.

Thus, less of the precious resource is lost and backup resources can be tapped in case of serious droughts.





Due to granite rock there is basically no groundwater in the Seychelles, with most of the intake of water coming from streams into water treatment plants such as that pictured.

# Solar microgrids in the Maldives



Were it not for government subsidies, electricity in the Maldives would cost the consumer 20-25 times more than in Europe, because getting oil to the distant islands is expensive. Oil imports add up to close to 35% of the Maldives' GDP, making the island nation **one of the most oil-dependent countries** in the world.

The EIB is helping finance a EUR 175m project to install solar photovoltaic plants, energy storage systems, more efficient diesel-engine generators and upgraded distribution networks on 160 islands there.

To be adapted to potential climate-change impacts in the Maldives, with the **entire territory less than 5 m above sea level**, the solar systems will use modules mounted on structures 3-4 m high so as not to be affected by sea level rises, and to be able to withstand hurricane-force winds.





A bridge on a Maldives island covered with a roof made of solar panels.

# Climate change-resilient highway in Réunion



A EUR 500m EIB loan to build a new six-lane highway in Réunion is expected to provide safety from the sea for locals and tourists. The more climate-resilient road will ensure connections all year long in contrast to the existing road, which is exposed to major natural risks such as falling rocks and high seas.

Special attention is being paid to the project's environmental aspects, including the **creation of artificial reefs and ecological corridors** to preserve terrestrial ecosystems, and the installation of a water purification and treatment plant to preserve marine ecosystems.





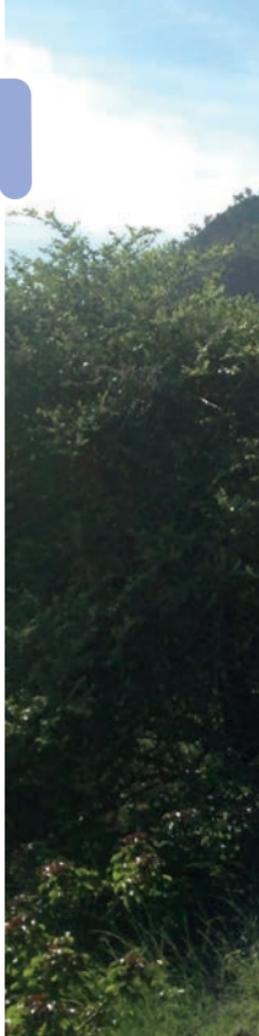
Two lanes of the highway will be reserved for public transport, and easing traffic jams will hopefully have a positive effect on the fuel being burned as well.

# Increasing road resilience in Timor-Leste



While the island of Timor-Leste is not small, it is especially vulnerable to climate change.

The EIB and the Asian Development Bank have jointly approved a EUR 164m project to rehabilitate and upgrade two important roads there. On one of them, it currently takes three to four hours to cover a distance of under 50 km, and without four-wheel drive in the wet season, a lot longer.





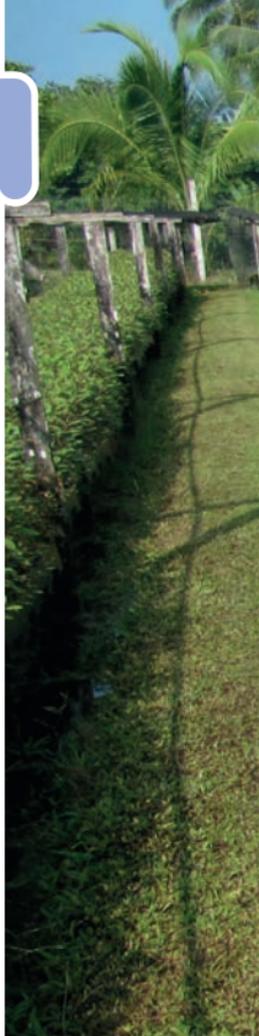
One of the better sections of the road in Timor-Leste, used by children to get to school.

# Sustainable forestry in the Solomon Islands



In the Solomon Islands, the EIB has invested in the **first sustainable forestry operation in the Pacific** region, certified by the Forest Stewardship Council. With substantial illegal deforestation and logging of the natural rainforest rampant on the islands, the EIB provided Kolombangara Forest Products funding to replant close to 3 750 ha of poor quality tropical hardwoods and replace their ageing equipment.

The EIB is doing more in the Solomon Islands. One example of climate-change mitigation is financing the feasibility study of a major shift in how the islands are powered. The goal of the **Tina river hydro project** is to produce enough hydroelectricity during the rainy season to completely meet the needs of the entire main island, instead of the current burning of diesel.





The investment in Kolombangara showed the broader industry that sustainable forestry operation is economically feasible in the region.

# Vanuatu **retractable** **wind turbine generator**



When Cyclone Pam hit the South Pacific island republic Vanuatu last year, 320 km/h winds destroyed infrastructure, creating water shortages and shutting down telecommunications. The cyclone wiped out thousands of buildings, displaced 3300 people and killed 16. For Vanuatu, the cost of rebuilding was devastating. But **one vital facility rode out the storm.**

The turbines of the ingenious wind farm operated by Engie were folded over and lashed to the ground. After the storm passed the operators cranked the turbines back up and got on with the production of electricity.





One of the EIB-financed retractable turbines at Devil's Point.

# Cyclone-proof wind farm

in New Caledonia



In New Caledonia, an EIB credit line provided to local banks helped set up an Eole wind farm employing tilting towers. These survived the up to 280 km/h winds of Cyclone Jasmine, a category 4 storm (with category 5 being the worst) in 2012, and continues to produce 9.4 GWh a year, saving more than 2 000 tonnes of oil from being burnt every year.

The EIB also participated in **setting up 10 000 solar panels** 40 km from the capital, Nouméa.





The photovoltaic farm near the capital of New Caledonia has been able to power up to 1 000 homes in the Helios Bay region.

# An airport in the Cook Islands



The Cook Islands comprises 15 islands, almost 90% of the combined territory of which is less than 5 m above current sea level.

The EIB has been providing **technical assistance** in the Cook Islands to assess options for relocating some infrastructure to decrease the potential impact of an extreme storm.

One of the dangers is that the main airport's fuel storage – just between the runway and the ocean – could overflow onto the tarmac when the sea surges, and make it impossible for flights to either touch down or take off. If the airport were to be shut down for any length of time, the country's major industry – tourism – could collapse, with dramatic consequences for many islanders. More importantly, the airport is the only viable way of getting help to the island after a natural disaster.



A Cook Islands stamp showing the Rarotonga Aerodrome in the 1900s.

# Innovative air conditioning at a hospital in Tahiti



The 430-bed Centre Hospitalier de Polynésie hospital accounts for 4% of total electricity consumption in French Polynesia, an island country where 40% of energy is used for air conditioning.

Now, the hospital will implement an innovative alternative, with the help of a loan from the EIB. They will pipe in water from 900 m beneath the surface of the ocean, flowing in at 5-8 °C, and use that water to cool the air that is circulated through the hospital. The system, with a total cost of EUR 25m, is expected to halve the hospital's electricity costs, an equivalent of more than EUR 3m in savings annually.

This is not the only EIB project in French Polynesia. The EIB has facilitated credit lines to small and medium-sized projects with clearly demonstrable environmental benefits, one of which was **Tahiti's first photovoltaic farm**, covering 7 000 m<sup>2</sup> and reducing oil consumption by 350 tonnes a year.





EIB-financed photovoltaic farm on the roof of a Carrefour supermarket in Puna'auia, Tahiti.

# The dam in Saint Lucia



In Saint Lucia, the John Compton dam on the Roseau river forms a water reservoir used by most of the inhabitants. However, Hurricane Tomas (2010) and a severe, unnamed storm in December 2013 caused landslides, reducing the capacity of the water reservoir by almost a third and leading to heavy siltation of the water.

To overcome the shortage, **water is rationed** during the hot season, which in turn hurts tourism, the eastern Caribbean island's main source of income.

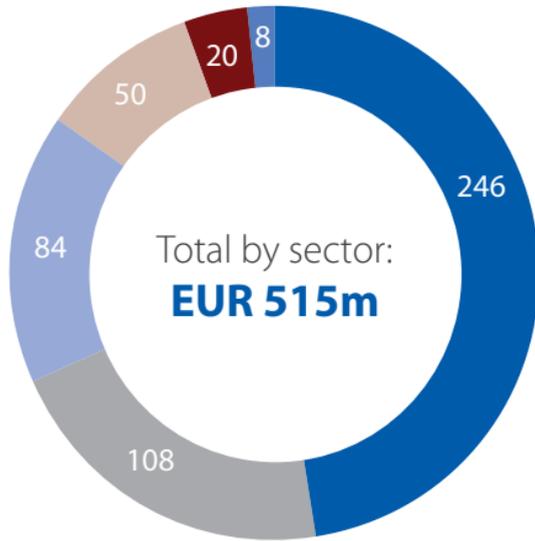
The EIB has launched a programme with the Caribbean Development Bank to help adapt infrastructure – including this dam – to climate change.





The John Compton dam was completed in 1995, a year later than planned, since Tropical Storm Debby intervened. Now, extreme weather events are disrupting the reservoir's operations once again.

# Some figures



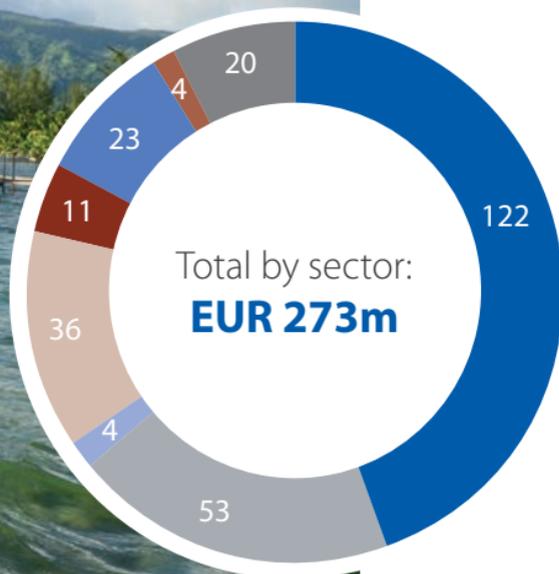
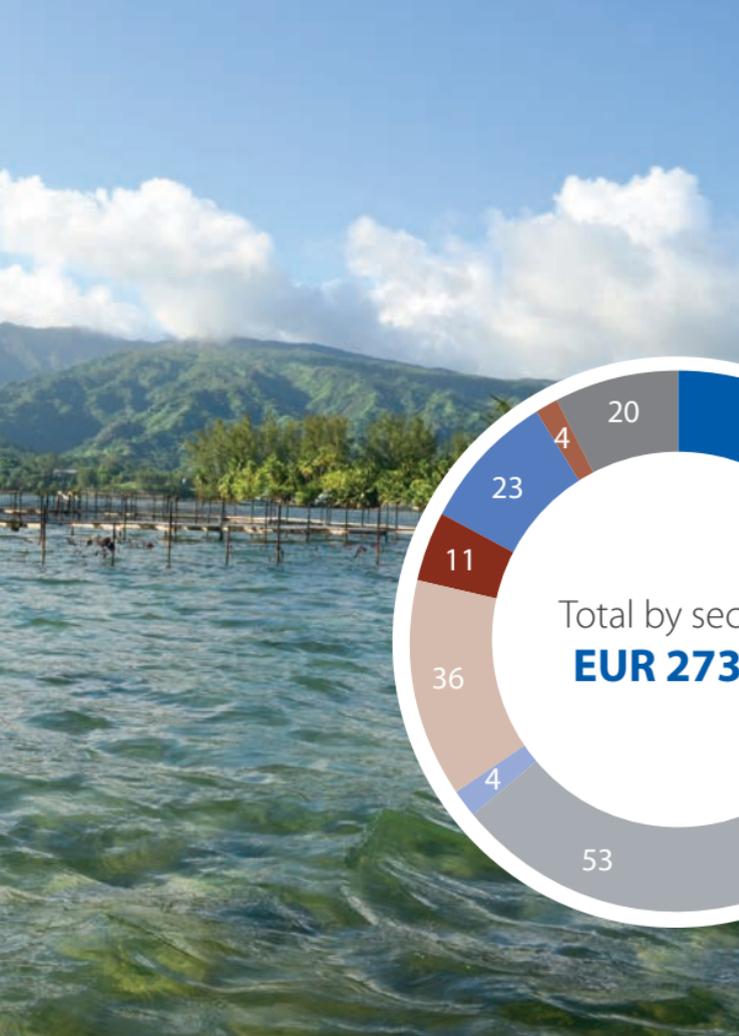
## Caribbean

### Lending under the Cotonou mandate (2004-2015)

Breakdown by sector – in EUR m

- Credit lines
- Transport
- Financial services
- Energy
- Services, including tourism
- Telecommunications





# Pacific

## Lending under the Cotonou mandate (2004-2015)

Breakdown by sector – in EUR m

- Credit lines
- Transport
- Financial services
- Energy
- Services, including tourism
- Telecommunications
- Agriculture, fisheries, forestry
- Health



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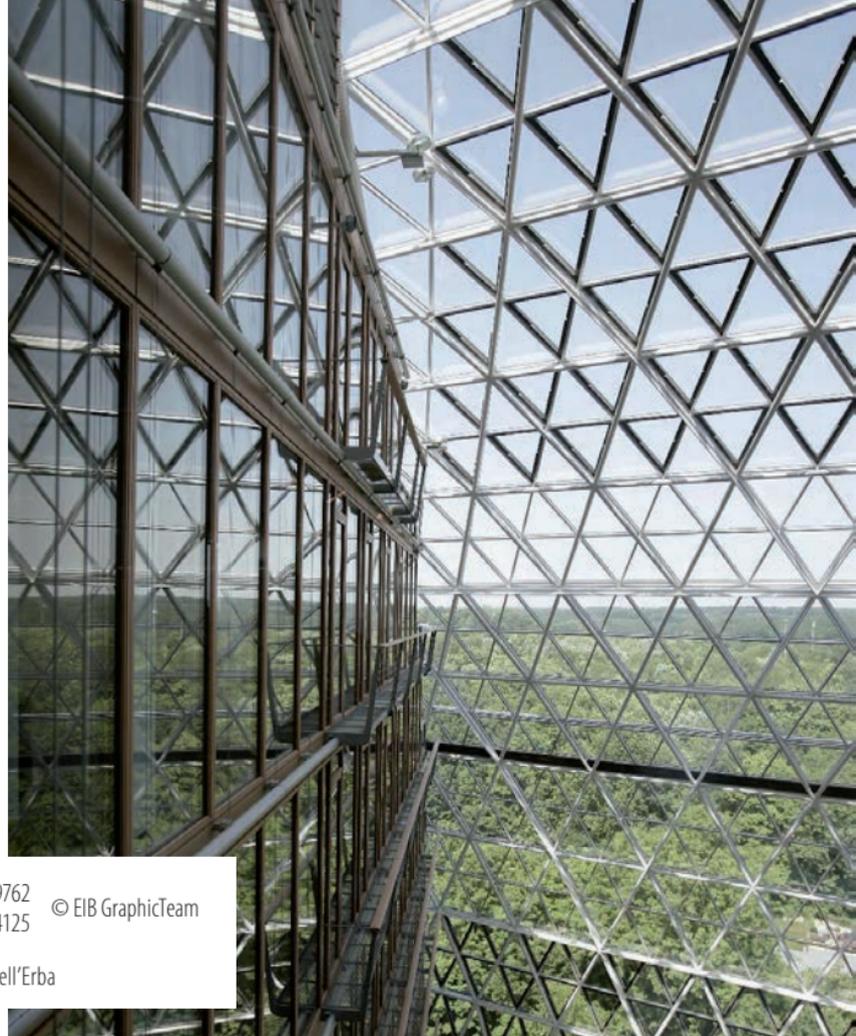
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