



2021-2022

Environmental Sustainability - Carbon Neutrality Report

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Introduction

Anthropogenic activities, such as the use of fossil fuels, fertilisers, and deforestation, have led to an increase in greenhouse gas emissions, resulting in a rise in the Earth's temperature. This has had negative impacts on the environment, health, communities, and the global economy.

Through the Paris climate agreements, the international community set itself the objective of limiting the global temperature increase to below 2°C and committed to keeping it within 1.5°C. The European Union, accountable for 10% of global greenhouse gas emissions, has pledged to become the world's first zero-emission continent by 2050.

The fight against climate change has thus not only become a global concern but also a monumental challenge that requires collective action from individuals, citizens, and organisations. It calls for the adoption of concrete and measurable behaviours and actions to mitigate its effects.

The Commitment of La Biennale di Venezia

Journey to Carbon Neutrality

La Biennale di Venezia has made a deliberate decision to publicly disclose the environmental impact of its events, quantified in terms of their carbon footprint. Furthermore, it is actively committed to combating climate change by promoting a more sustainable approach to the planning and execution of its events.

Its objective is to achieve carbon neutrality by thoroughly assessing its impact and measuring, reducing, and offsetting the emissions associated with its Exhibitions and Festivals. The process we have adopted follows the internationally recognised standard PAS2060 set by the British Standard Institute and is independently verified by RINA, a third-party certification body.

As part of this approach, the 78th Venice International Film Festival held in 2021 became the first Biennale di Venezia event to be certified as having zero carbon impact (carbon neutral). It also gained the first recognition worldwide within its sector for achieving this significant milestone.

In 2022, the following events also achieved the same result:

- 59th International Art Exhibition
- 50th International Theatre Festival
- 16th International Festival of Contemporary Dance
- 79th Venice International Film Festival
- 66th International Festival of Contemporary Music

Actions Taken to Limit Our Environmental Impact

To put its commitment into action, La Biennale di Venezia has devised a plan of actions focused on reducing the emissions associated with its events, alongside offsetting activities.

The adopted actions include both management initiatives, which are under the control of La Biennale and directly influence the reduction of emissions, and awareness-raising activities targeting stakeholders, whose contribution is equally crucial to achieving concrete and lasting results.

Clean Energy

The Arsenal, Giardini, Ca' Giustinian offices, and the Lido for temporary installations during the Biennale Cinema have been exclusively powered by electricity from renewable sources since April 2022. This structural change has resulted in a reduction of emissions equivalent to over 1,100 tonnes of CO₂, based on a consumption of 4,320,686 kWh¹.

Materials and Logistics

Within this area, the adopted actions are guided by the principles of the circular economy, specifically:

- The carpets used at event venues, weighing approximately 3,900 kg, have been recycled or sold to be transformed into other products, such as mats.
- Plasterboards, totalling over 29,000 kg, have been collected and sent to a processing centre for the regeneration of secondary raw materials. In some cases, they are reused as they are.
- Totems have been purposefully designed for multi-year reuse, prolonging their life cycle.

The recovery and recycling of materials helps prevent the emissions that would be generated by the supply chains involved in producing the same quantity of material from virgin resources.

The handling of installations and equipment at event venues is carried out using electric forklifts, eliminating the emissions associated with diesel fuel usage. The boats used are all equipped with EURO 6 engines, further reducing emissions.

Food and Catering Service

As part of the catering service tender, prospective suppliers were asked to expand their vegan and vegetarian options. These food choices use ingredients that have a lower environmental impact compared to those of other supply chains².

The culinary offerings, available at all event venues, have been widely appreciated by the public.

Furthermore, the plates, cutlery, and disposable glasses provided to users are made from compostable materials, eliminating the generation of plastic waste.

Dematerialisation and Use of Environmentally Friendly Materials

The most effective way to reduce emissions related to the use of materials in manufactured goods

1 The emission factor applied is the ISPRA national mix

2 <https://ourworldindata.org/explorers/food-footprints>

is to forego them entirely. In this regard, we have paid special attention to reducing the use of paper materials. To this end, we have introduced the following measures:

- Paper tickets have been replaced by digital versions, and visitors are encouraged to avoid printing them.
- Print folders and paper folders have been phased out.
- The production of promotional materials (programmes, postcards, and short guides) has been reduced, along with the consumption of paper for office activities, especially in procurement processes.

La Biennale di Venezia is committed to shifting its merchandising towards products made from environmentally friendly materials.

- La Biennale tote bags (about 10,000 pieces) and those to be distributed during the 80th Venice International Film Festival (approximately 2,500) will be made from recycled plastic bottles (each bag contains material from 15 x 500ml bottles). In total, this amounts to over 4,600 kg of recycled plastic³.
- The bags distributed during the DMT festivals are made from organic cotton, certified with ecolabel fair trade standards.

Videoconferencing

To leverage the opportunities presented by digitalisation, we have made the decision to eliminate all off-site press conferences, both in Italy and abroad. Instead, we have transitioned to streaming conferences, effectively reducing the environmental impact associated with travel.

Separate Waste Collection

Plastic and paper waste are collected separately from general waste at all event venues.

Public Awareness

We have also encouraged the public attending our events to make responsible choices and adopt beneficial behaviours. On the website of La Biennale di Venezia, we have published a section dedicated to environmental sustainability⁴, featuring a decalogue of good practices aimed at reducing environmental impacts and promoting sustainable visits and stays in Venice.

When purchasing tickets, visitors are asked to complete a questionnaire that includes three questions regarding their reason for visiting Venice, where they are travelling from, and how they intend to reach the city.

Supplier Awareness and Assessments

Our sustainability objectives are communicated to existing and potential suppliers through disclosures, which are also published in a dedicated section of our website. These disclosures outline the criteria that La Biennale intends to adopt to develop and maintain an environmentally sustainable supply chain over time.

These criteria are applied in a differentiated manner based on the types of goods and services provided.

3 25 g of plastic per 500 ml bottle.

4 <https://www.labiennale.org/it/sostenibilit%C3%A0-ambientale>

While continuing our current initiatives, we intend to expand our plan in 2023 and 2024 by taking new actions. These include:

- strengthening environmental communications targeted at the public attending our events.
- raising awareness among participating artists in festivals and exhibitions.
- raising awareness among organisers of national participants in Art and Architecture Exhibitions and side events.
- fully dematerialising the contract cycle.

Carbon Footprint Reporting

Calculation Methodology

CO₂ emissions are calculated by taking into account the entire life cycle of the event, including its organisation, set-up, management, and dismantling phases. This calculation involves multiplying primary data, which represents the carbon impact factor for each source, by the corresponding conversion factor.

Primary data is gathered from the ticketing system, other management systems, and suppliers, while the conversion factors are derived from publicly available databases.

Main Sources	Emissions Calculation Driver (Primary Data)
Energy and fuel consumed at event-hosting sites	Quantity and origin (fossil/renewable) for electricity; quantity by type for fossil fuels.
Biennale headquarters and events organisation	Energy and water consumption (cà Giustinian), paper consumption, Biennale employee commutes, remote work energy consumption, business trips broken down by transport type (plane/train)
Furnishings and fittings	Type and quantity of material, sourced from recycling chains
Merchandising: promotional materials and prizes	
Furnishings and fittings - logistics	Journeys (round trips)
Travel and overnight stays - accredited persons	Journeys (round trips) broken down by transport type (plane/ train), number of nights
Travel and overnight stays - the general public	
Food services	Quantities of raw materials and goods used in the provision of services
Sanitation services	Relevant areas
Broadcasting and server usage	Amount of data exchanged
Waste/waste produced when installations are dismantled	Type and quantity of waste, broken down by disposal method (landfill or recycling /recovery)

Festivals and Exhibitions Results

The events analysed in 2021 (Film) and 2022 (Art, Film, Dance, Music, and Theatre) had a combined carbon footprint of **118,082 tonnes of CO₂**.

These events attracted a total of **834,191 visitors**. Therefore, the carbon intensity, calculated as the ratio between emissions and the number of visitors, was **140 kg of CO₂ per visitor**.

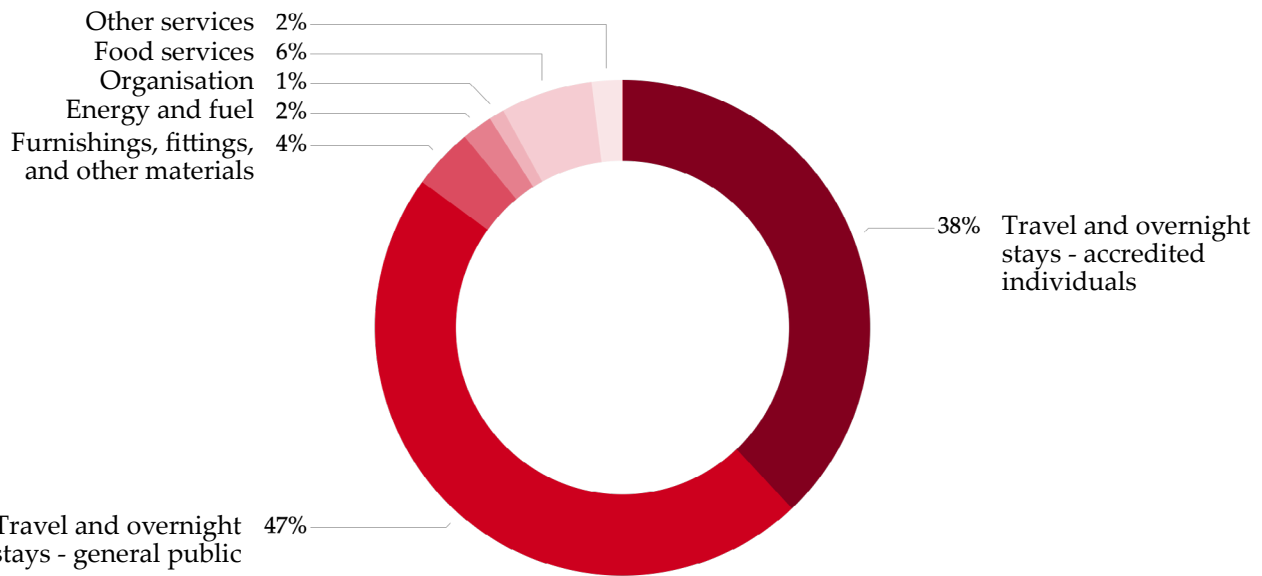
Event	Carbon Footprint (tCO ₂)	Visitors (no.)	Carbon Intensity
78 th Venice International Film Festival (2021)	5,355	6,529	0.82
16 th International Festival of Contemporary Dance	579	5,755	0.10
66 th International Festival of Contemporary Music			
50 th International Theatre Festival (2022)			
59 th International Art Exhibition (2022)	105,641	807,706	0.13
79 th Venice International Film Festival (2022)	6,507	14,201	0.46
Total	118,082	834,191	0.14

The breakdown of the emissions by source for each event is provided below. The data illustrates that people's mobility (including travel and overnight stays of the general public, accredited individuals, artists, and companies) is the most significant contributor, accounting for approximately 85% to 90% of all emissions. This varies based on the percentage who come from abroad and the use of the plane to travel.

The results for the 79th Venice International Film Festival, the only one that can be compared to a previous edition, have been positively influenced by the improved calculation methodology. This methodology took into consideration the responses from questionnaires completed by the general public. Only trips exclusively made to attend the festival were attributed entirely to the event, leading to a more accurate calculation of its impact.

78th Venice International Film Festival - 2021

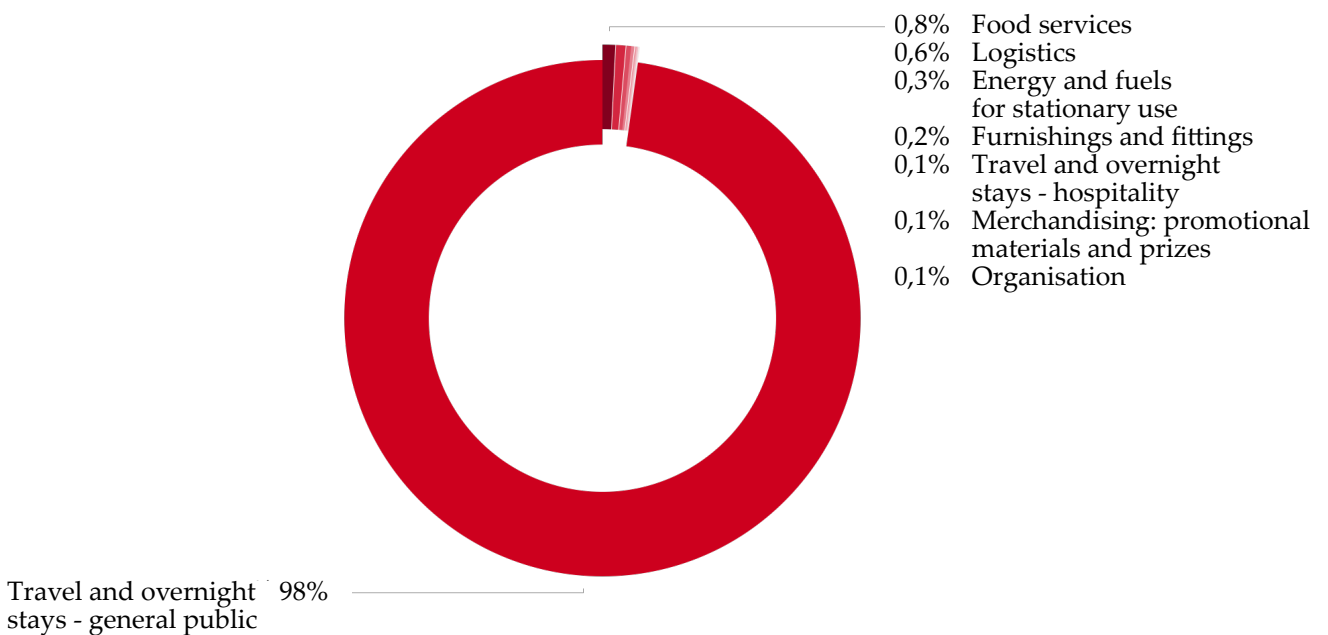
Source	Carbon Footprint (tCO ₂)	Carbon Footprint (%)
Energy and fuel consumed on site	96	2
Organisation	40	1
Furnishings and fittings	173	4
Furnishings and fittings - logistics	9	0.16
Merchandising: promotional materials and prizes	8	0.14
Travel and overnight stays - accredited persons	1864	38
Travel and overnight stays - the general public	2778	47
Local transport	11	0.2
Waste/waste produced when dismantling installations	25	0.46
Food services	300	6
GHG leaks from air conditioners	51	0.95
Sanitation services	0.01	0
Broadcasting and server usage	0.003	0
Total GHG emissions	5,355	100%



59th International Art Exhibition - 2022

Source	Carbon Footprint (tCO ₂)	Carbon Footprint (%)
Energy and fuel consumed on site	305.91	0.3
Organisation	56.83	0.1
Furnishings and fittings	180.55	0.2
Furnishings and fittings - logistics	597.81	0.6
Merchandising: promotional materials and prizes	54.74	0.1
Travel and overnight stays - accredited persons	86	0.1
Travel and overnight stays - the general public	103,539.94	98
Waste/waste produced when dismantling installations	0.83	0
Food services	808.51	0.8
Sanitation services	9.66	0
Broadcasting and server usage	0.166	0
Total GHG emissions	105,641	100%

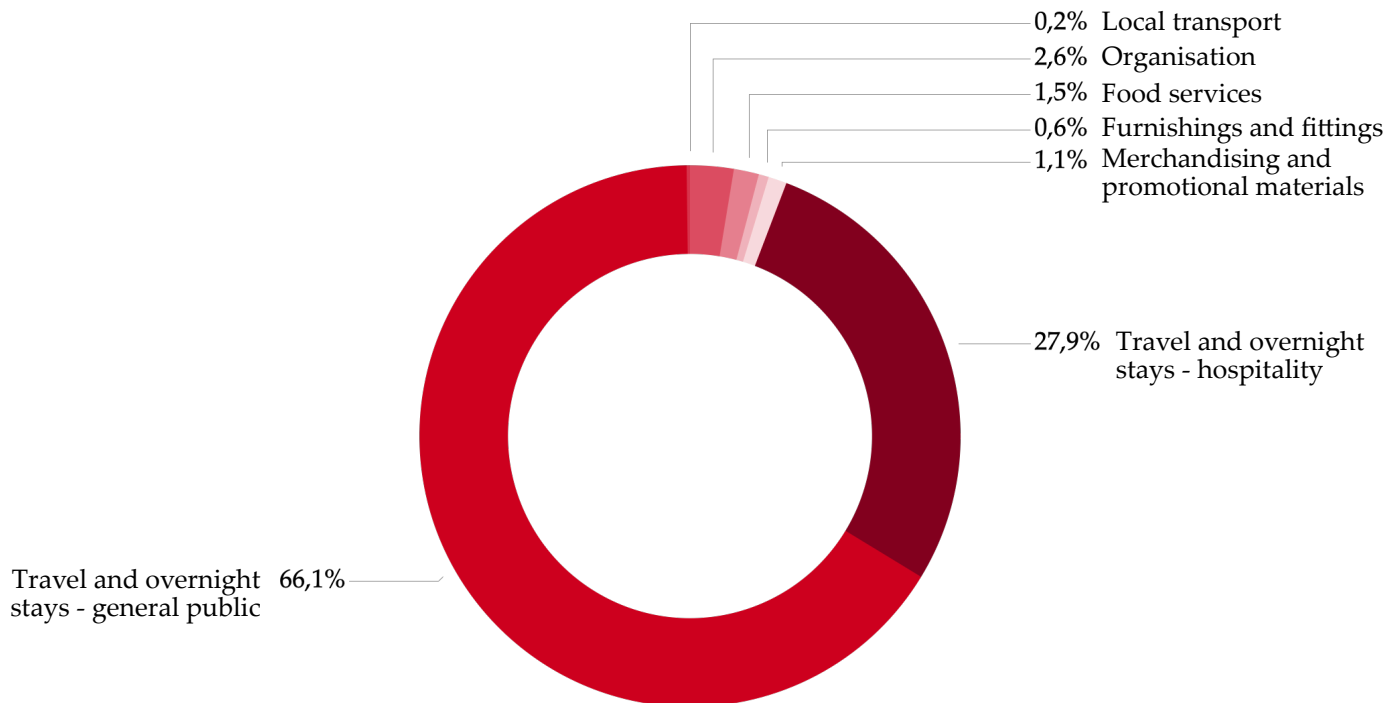
Carbon Footprint of the 59th International Art Exhibition



50th International Theatre Festival - 2022
 16th International Festival of Contemporary Dance - 2022
 66th International Festival of Contemporary Music - 2022

Source	Carbon Footprint (tCO ₂)	Carbon Footprint (%)
Energy and fuel for stationary use	0	0
Organisation	15.07	2.6
Furnishings and fittings	3.58	0.6
Furnishings and fittings - logistics	0.03	0
Merchandising: promotional materials and prizes	6.19	1.1
Travel and overnight stays - artists and companies	161.30	27.9
Travel and overnight stays - the general public	382.36	66.1
Local transport	1.26	0.2
Waste/waste produced when dismantling installations	0.29	0.1
Food services	8.62	1.5
Cleaning and sanitation services	0	0
Broadcasting and server usage	0.042	0
Total GHG emissions	578.76	100%

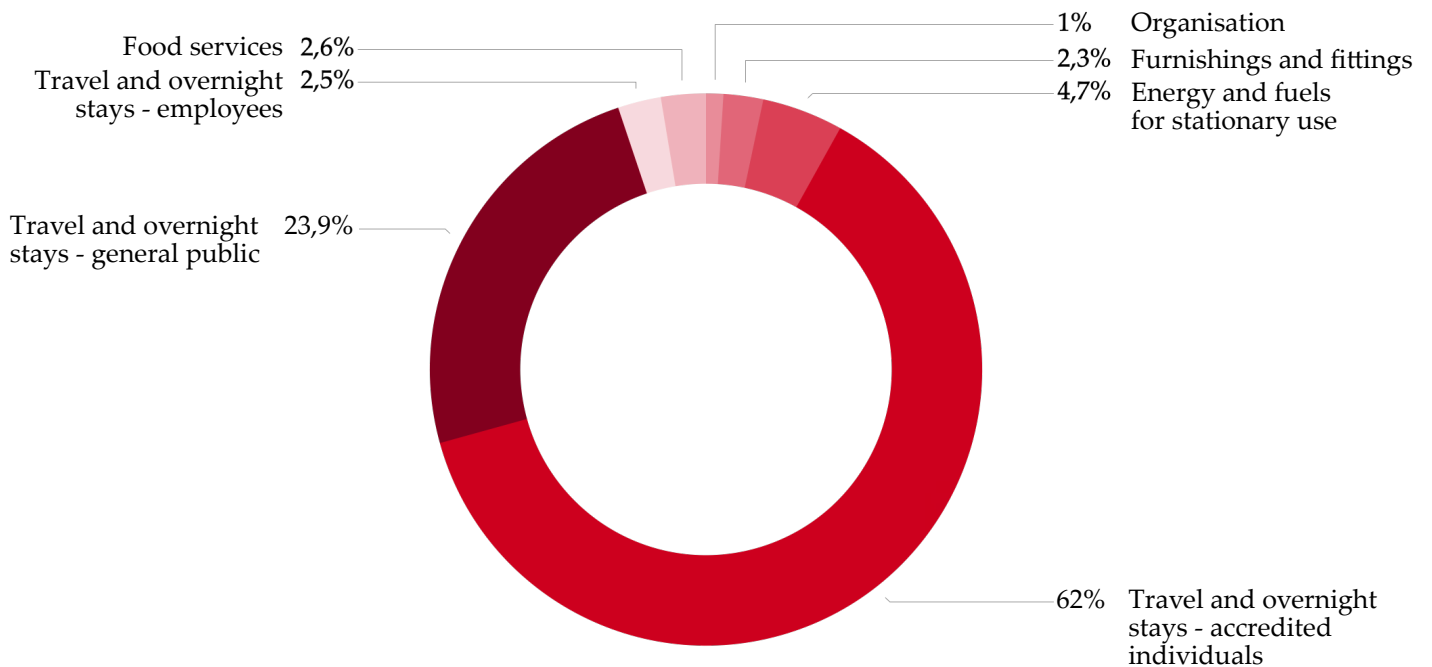
Carbon Footprint of the Dance, Music, and Theatre Festivals



79th Venice International Film Festival - 2022

Source	Carbon Footprint (tCO ₂)	Carbon Footprint (%)
Energy and fuel for stationary use	302.81	4.7
Organisation	65.60	1.0
Furnishings and fittings	150.11	2.3
Furnishings and fittings - logistics	11.07	0.2
Merchandising: promotional materials and prizes	13	0.2
Travel and overnight stays - accredited persons	4,036	62
Travel and overnight stays - the general public	1,157.50	23.9
Travel and overnight stays - employees	162.80	2.5
Local transport	14.08	0.2
Waste/waste produced when dismantling installations	6.50	0.1
Food services	167.50	2.6
GHG leaks from air conditioners	15.45	0.2
Cleaning and sanitation services	3.7	0.1
Broadcasting and server usage	0.36	0
Total GHG emissions	6,507	100%

Carbon footprint of the 79th Venice International Film Festival



Offsetting Projects

The carbon neutrality of events in 2021 and 2022 was accomplished through the use of an offsetting mechanism, which involves purchasing carbon credits from accredited markets. This process supports mitigation projects in developing countries that aim to decrease and reduce greenhouse gas emissions. The following projects were funded:

- Renewable energy from natural gas (India): construction of a new grid-connected power plant with a total capacity of 1147.5 MW, based on an efficient cycle technology combined with the use of natural gas, replacing the use of coal, which is considered the most polluting fossil fuel.
- CO₂ reduction for industrial processes (Colombia): AGA FANO S.A. is a company that produces liquid CO₂, currently using fossil fuels as a raw material. This project seeks to replace the practice by capturing the CO₂ produced during the alcohol fermentation process.
- Forest conservation (Tanzania): this project seeks to protect a portion of the forest on the Ntakata Mountains in Tanzania, resulting in support for eight villages comprising 17,000 people, and the biodiversity of the local area.
- Wind energy (India): this project produces clean energy through the installation of four latest-generation wind generators with individual capacities of 1.25 MW each, in two locations, Baramsar village (2.5 MW) and Soda Mada (2.5 MW), Jaisalmer district in the State of Rajasthan for a total installed capacity of 5 MW. Electricity generated in this way is fed into the RVPN grid under a power purchase agreement and subsequently all electricity generated is sold to the state-owned electricity company.
- Energy produced from biomass (India): this project involves generating electricity using biomass residues, such as rice husk and residues from crops in the local area, to produce and export electricity to the state-owned electricity company Maharashtra State Electric Distribution Co.Ltd (MSEDCL). The activity generates electricity in a sustainable way using biomass residues, helping to mitigate local greenhouse gas emissions and local and global environmental pollution. It also reduces the demand for electricity from fossil fuels.
- Energy produced from biomass (Cambodia): this circular economy project was designed to use rice husk, otherwise left to decompose, to produce electricity. The project involves the construction and operation of a 2 MW rice husk power generation plant adjacent to the Angkor Kasekam Roongroeung rice mill in Cambodia's Kandal province. The owner of the project, Angkor Bio Cogen (ABC), will sell the electricity to the rice mill. The rice mill previously used diesel to generate electricity to run the rice mill.