



 **Belém - Pará**



**Extreme Weather Event:**  
Strong Winds and Heavy Rain  
**Period:** June 19 to 23, 2025

**Monitored Waste Pickers Organization:**



Cooperativa de Trabalho dos Catadores de Materiais Recicláveis - CONCAVES

## Context

On **June 20, 2025**, the **Concaves Cooperative** recorded **strong gusts of wind followed by heavy rain** at its **Sorting Center** in the city of Belém, in the state of Pará. A video of the incident was shared **on the project's WhatsApp group**, which monitors the climate impacts on the cooperatives together with the waste pickers. The Concaves warehouse suffered **partial roof damage, was flooded by rain, and had its activities temporarily halted**.

According to the **National Institute of Meteorology (INMET)**, on the day of the incident, **wind gusts of up to 46.08 km/h** were recorded, which explains the roof damage. Between **June 19 and 23**, **accumulated rainfall was 112.8 mm**, representing **55% of the expected monthly average**, or more than half of the rainfall forecast for the entire month.

With the roof damage and constant rain, Concaves' activities remained **suspended until Monday of the following week**, in order **to contain the damage and reorganize** the production space.

**CONCAVES**, founded in 2004, collects, sorts, and processes recyclable materials in **Belém (PA)**. Recently, **the cooperative's selective collection contract was not renewed by the municipal administration**, which aggravated its financial vulnerability and directly affected its members.

## CONCAVES Characteristics:



**Foundation:**  
June 2004

**No. of Waste Pickers:** 17



**59%**  
are women



**66%**  
of its board members are women



**100%**  
of the waste pickers are black or mixed-race people



**40 tons per month**  
of average production

**BRL 20,000.00**  
of average monthly revenue



**BRL 1,800.00**  
of average monthly income per waste picker

Reverse Logistics Partnership:



*"It was frightening. The wind started suddenly and threw the waste drums into the middle of the avenue. The tiles came loose on both sides of the shed due to the force of the wind, and the plywood boards on the border with the Guamá River were blown away. Then the rain came, and since the gutters are full of holes, it started raining inside the cooperative like a waterfall. Work stopped immediately, around 4 p.m., and we were only able to resume the next day, after cleaning everything up. We have faced other strong winds, but this was the worst."*

Report by Débora Bayer, President of CONCAVES



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## Extreme Weather Event Indicator (EWE):

The Extreme Weather Event highlighted in this bulletin is not characterized solely by the volume of rainfall, but by the **combination of strong wind gusts, persistent rainfall, and structural vulnerability** at the CONCAVES Sorting Center, where its production activities are carried out.

In Belém, the accumulated rainfall in June 2025 was 246.2 mm, **above the historical average** of 205.8 mm (period between 1991 and 2020). The heaviest rains occurred between June 19 and 23, totaling **112.8 mm of precipitation**, which represents **55% of the monthly average**.

In addition to the rain, wind **gusts of up to 46.44 km/h were recorded** between June 19 and 22, coincidentally on the same days as the heavy rains. This was the period with the strongest winds of the month.

According to the **Beaufort Scale**, a tool used to classify wind strength, these gusts are classified as **“Moderate Wind.”**

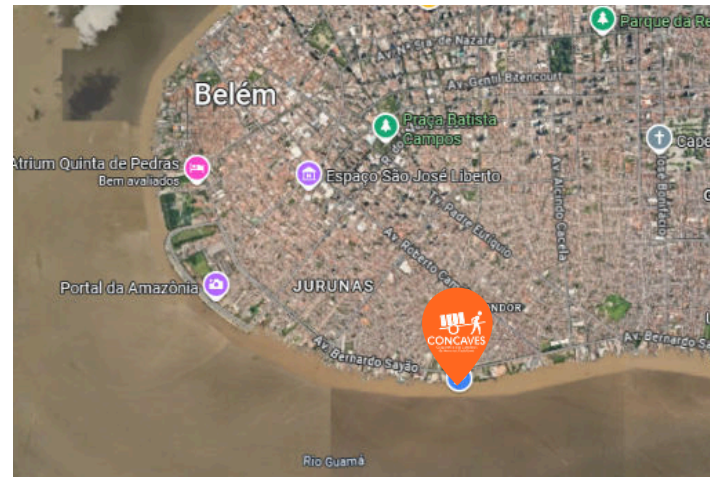
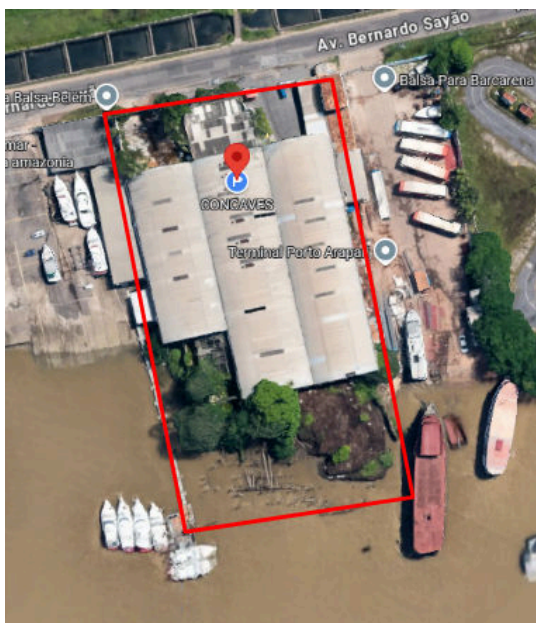


Image 1: Aerial photo showing CONCAVES in the municipality of Belém, on the banks of the Guamá River. Source: Google Maps, 2025

The wind that hit the cooperative reached more than 46 km per hour. It may not seem like much, but according to the **Beaufort Scale**, which is used to measure wind strength, this is classified as a “moderate gale” and can already cause damage, such as blowing off roof tiles, breaking tree branches, and soaking everything (equipment and materials) inside the workspace.

→ Learn more: [Beaufort Scale - CEMTEC/MS](#)



Although **rain and wind, analyzed separately**, are not considered extreme events at these levels, the **interaction between meteorological factors and the fragility of the Concaves warehouse structure** aggravates the impacts. In the Project Initial Assessment Questionnaire, the cooperative had already pointed out the **precariousness of the roof**, with metal tiles covering only part of the structure and the south side completely open to the Guamá River, without any protection against the elements.

Image 2: Satellite image of the CONCAVES warehouse, highlighting its south side facing the Guamá River. Source: Google Maps, 2025



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## Main Impacts on the Monitored Waste Pickers Association



### Partial details

Part of the metal roof was torn off by strong winds, leaving internal areas exposed to rain.



### Internal flooding

Parts of the warehouse were flooded, hindering access, storage, and movement of materials internally.



### Impacts on production

During the weather event, the entire operation was halted for safety reasons. The morning after the event was spent cleaning and reorganizing the space, delaying the resumption of activities.



### Impacts on sales

In the sale of cardboard, there was a discount on the value of the material that represented approximately a 14% reduction in value because it was wet. Plastic, which could not be processed the day after the event, had its sale postponed by two days, affecting the payment schedule.



### Leaks

Constant rain and the poor condition of the gutters caused leaks in the side walls of the warehouse.



### Interruption of operations

Selective collection, material reception, sorting, pressing, weighing, and internal and external cargo transportation activities were temporarily suspended.



### Health problems reported

Workers reported cold and flu cases after exposure of adverse conditions.



### Dislocation of equipment

The force of the gusts displaced waste drums, posing a risk of accidents and disrupting the work environment.

## Climate Adaptation and Coping Strategies:

### Support for workers



On days when cooperative members were unable to attend work, Concaves, through its Social Assistance and Health Fund, guaranteed the payment of half a day's wage, as guaranteed for in the statute, based on the apportionment of monthly income.

### Preparedness



Waste pickers did not receive alerts or training to identify risks or adopt emergency procedures in extreme weather situations. They did not receive information about the existence of prevention and contingency plans for such events.

### Immediate Response Actions



**Reduction of loss:** Relocation of big bags and containers with cardboard to dry areas of the warehouse.

**Contact with authorities:** The competent authorities were called to report the situation.

### Towards adaptation



CONCAVES is in dialogue with municipal authorities and potential market partners for support towards renovation of its recycling warehouse, with priority given to the areas most vulnerable to weather events.

The Near Real Time Monitoring of Extreme Weather Events project is developed by WIEGO with support from Mãos Pro Futuro Program and aims to develop a monitoring system that links extreme weather events to impacts on workspaces, working conditions, and livelihoods of waste pickers in six cities in Brazil: Belo Horizonte, Belém, Brasília, Florianópolis, Manaus, and Salvador.

For more information, write to: [sonia.dias@wiego.org](mailto:sonia.dias@wiego.org)

### Source:

EPAGRI/CIRAM. Monitoramento climático e hidrometeorológico de Santa Catarina. Disponível em: <https://ciram.epagri.sc.gov.br/agroconnect/> Acesso em: 15 maio de 2025