Climate-KIC

Climate-KIC is supported by the EIT, a body of the European Union

Climathon

Salvador

Rethinking waste via the circular economy & sustainable schools

THE CHALLENGE

Salvador committed to achieving carbon neutrality by 2050 at the C40 Cities Summit held in 2019. However, **Salvador faces a significant challenge on waste as currently almost all its waste goes to landfill.** Irregular waste disposal is discarded in green areas or on hillsides, especially in informal dwellings and disadvantaged communities. The issue of waste threatens the city's ability to meet the carbon neutral target because of the greenhouse gas emissions produced by the organic waste.

Organic waste accounts for more than 50% of the waste produced in Salvador, and **98% of that organic waste goes to landfill or to green areas and hillsides.** This produces significant amounts of methane and contributes to leaching which contaminates land and water near landfill and waste disposal sites.

KEY FACTS & FIGURES

- Population of Salvador: 2,872,347.[1]
- Organic waste accounts for over 50% of the waste produced.
- Currently 98% of organic waste collected by the municipality goes to landfill.
- Results of the pilot project over the last six months:
  - 320kg of organic waste was composted.
  - 129kg of GHG emissions avoided.
  - 100kg of compost produced.
  - 50 students engaged, and 5 educational activities developed.
- One-year milestone if the project is implemented in at least 10 schools will be 10,000Kg of organic waste composted, avoiding approximately 4,000kg of GHG emissions and engaging 25,000 people directly and indirectly.

[1] https://cidades.ibge.gov.br/brasil/ba/salvador/panorama" (Website). 2018. Retrieved 10 January 2020. 2019 Estimates of Population.

THE SOLUTION

Sustainable schools for a resilient Salvador

If Salvador diverts 50% of its food waste to composters instead of landfill, the city can dramatically reduce its waste-related GHG emissions besides increasing the circular economy of the city.

A local team has developed three nature-based solutions that would be placed in municipally-owned schools: school gardens, composting systems and reuse of rainwater. These projects would promote a sustainable circular system as the organic compost used on the garden will improve the quality of food grown at the schools, and the food waste is put back into the compost.

The school children will also benefit from important environmental education on the circular economy, climate change and nature-based solutions.

It is hoped that the project will help the community dispose of household waste and encourage adherence to the green property tax that discounts tax for buildings that use nature-based infrastructure.

The cost of organic waste management would be reduced because the schools take ownership, **and the healthy food from the school gardens would contribute to reducing inequality.**

THE BENEFITS

The project will bring a multitude of benefits to the city, including improving waste management, increasing local production of food, diminishing the urban heat island effect, reducing greenhouse gas emissions (as compost emits less greenhouse gas emissions than landfill), eliminating organic waste from schools, increasing green spaces in urban areas, increasing ecosystem regeneration and encouraging healthy eating.

Through this initiative, children are provided with an opportunity to further learn about how we can tackle the climate crisis and talk about the process beyond the school playground. Future generations become enablers of change in their local communities.

The success of the project will be measured by the amount of waste composted, the avoidance of GHG emissions, the compost produced, and the number of students engaged.

PROJECT LEADERS

The project is led by Adriana Campelo, the Resilient Director within the Secretary of Sustainability, Innovation and Resilience, and André Moreira Fraga, the Municipal Secretary of Sustainability, Innovation and Resilience of Salvador.

The local authority has already launched one pilot project at a municipal school in partnership with SOLOS Startup. It was such a success that it will be replicated in other schools across Salvador.

To develop the project further and create even greater impact, the municipality will partner with start-ups and the private sector to implement the composting and water reuse systems.

The funds from winning the Climathon Awards would be used to purchased materials for garden, composting and water systems.

The circular projects would be collectively managed by the schoolchildren and the community, and sustained by students, school staff participation and ownerships. Children are responsible for educating their peers on how to take care of the planting, harvesting and composting processes and are co-responsible for the project's maintenance. They will share this information with their families, promoting wider engagement.

The local authorities have developed a guide to urban and school gardens for citizens and the private sector to implement it independently. There's also plans for the project to be shared with other cities through networks such as C40 Cities, 100 Resilient Cities, International Conference on Information and Education Innovations, World Resources Institute and Cities for Forests.

CLIMATHON AWARDS

Run by Europe's Largest public-private partnership, EIT Climate KIC in partnership with Crowther Lab, the Climathon Global Awards called for cities around the world to engage in climate action and find new systems level solutions to tackle the worsening climate crisis.

With a vision to transform 100 cities into carbon neutral areas by 2030, the awards challenged cities with tackling major issues including air pollution, efficiency mobility and energy systems, and creating sustainable local economies. With a strong focus on 'systemic innovation', the most successful solutions must encompass both domestic and international governance, policy and the financial and market structures that influence behaviour.

The most visionary innovators have been chosen to attend the Climathon Global Awards Ceremony on 31 January in Paris during the ChangeNOW summit, where all finalists have the chance to win funding and expert support to make their ideas a reality.