

# Event Recap: Celebrating the Winners of the SDG Multimedia Contest 2023

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The **SDG Multimedia Contest 2023** at Seneca Polytechnic was a showcase of thoughtful and relevant sustainability ideas, culminating in the recognition of three standout submissions. The event, which took place between noon and 2 p.m. at the Newnham Campus, highlighted implementable solutions to the issue of plastic waste, underscoring the importance of innovative thinking in environmental stewardship.

## Acknowledging the Winners

### First Place - Gelica Sara Guico



Points Balance-to-Value Conversion

Load Transit Card

pioneering the future of sustainable transportation by introducing "Points for Plastic: The Bus Tariff," an innovative initiative that rewards eco-conscious commuters with bus fare credits in exchange for recycling plastic bottles through a reverse-vending machine installed in bus terminals.

The "Points for Plastic: The Bus Tariff" initiative in Abu Dhabi, UAE is expected to have a positive impact on the plastic problem in Canada by serving as a potential model for similar recycling and public transport promotion initiatives globally, contributing to the reduction of plastic waste and promoting environmental sustainability.

11 SUSTAINABLE CITIES AND COMMUNITIES

**Sustainable Goals Achieved**

⇒ The initiative contributes to creating more sustainable cities by promoting public transport, reducing congestion, and improving urban mobility.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

⇒ Encouraging plastic bottle recycling and responsible consumption reduces waste and promotes a circular economy, which is vital for environmental sustainability.

**Canada's Green Opportunity**

Canada should adopt this solution to address plastic waste, promote public transport, mitigate climate change, protect biodiversity, enhance resource efficiency, support urban sustainability, and engage communities in sustainable practices.

RECYCLE, REWARD, RIDE

Source: Gupta, N. (2022, November 11). Thousands of plastic bottles recycled for free bus trips in Abu Dhabi. The National.

Gelica's winning entry focused on Abu Dhabi's "Points for Plastic: The Bus Tariff" initiative, suggesting its potential application in Canada. This concept proposes incentivizing recycling through transit credits, offering a dual benefit of reducing plastic waste and boosting public transportation usage.

Gelica won 2 tickets to a Toronto Maple Leafs vs. Winnipeg Jets game and a Certificate of Recognition.

## Second Place: Katrina St. Louis

KENYA: INNOVATORS IN SUSTAINABLE CONSTRUCTION

Nairobi-based engineer Nzambi Matee, the founder of Gjenge Makers Ltd., manufactures sustainable low-cost building materials made from recycled plastic waste.

Recycled bricks produced by Gjenge Makers Ltd.

Recycled bricks produced by Gjenge Makers Ltd. being used to pave a driveway

**ADVANTAGES OF USING RECYCLED PLASTIC BRICKS**

Lowers the cost of concrete

Addresses the problem of plastic waste pollution in landfills and

Reduced energy and water

Decreased Carbon Dioxide







In Kenya, Gjenge Makers make bricks out of **plastic waste** and sand

## CANADA'S PLASTIC PROBLEM



### Need to Reduce!

Plastic in landfills costs **\$8 million per year**, expected to increase!

### Need to Reuse!

Only **9%** of plastic is recycled **back into the economy!**



### Need to Recycle!



The Great Lakes have **10 million kilograms** of plastic waste!



Nzambi Matee  
Founder of Gjenge Makers



## BRICKS



### Cheaper!

About **25%** cheaper than conventional bricks

### No Absorption!

Conventional bricks have **35%** absorption!



### No Efflorescence!



**Prevents degradation** of the brick from salt!

### Better Strength!

Compression strength is **14.6%** higher!



### Opportunities!

Promotes a **circular economy!**

## SUSTAINABLE DEVELOPMENT GOALS



Innovative approach to construction materials for sustainable infrastructure development!



Aligns with the goal of making cities inclusive, safe, resilient and sustainable!



Reduces the environmental impact from conventional construction materials!



Promotes sustainable construction practices with a lower carbon footprint!



Repurposing plastic waste so it doesn't enter oceans and harm marine ecosystems!



Diverts plastic waste from landfills to promote sustainable use of terrestrial ecosystems!

### References:

De Young, Melissa. "Managing Microplastics: The Great Lakes Plastic Cleanup." *Water Canada*, 23 Aug. 2022. [www.watercanada.net/feature/managing-microplastics-the-great-lakes-plastic-cleanup/#:~:text=Modelling%20points%20to%20an%20estimated,during%20shoreline%20cleanups%20is%20plastic](http://www.watercanada.net/feature/managing-microplastics-the-great-lakes-plastic-cleanup/#:~:text=Modelling%20points%20to%20an%20estimated,during%20shoreline%20cleanups%20is%20plastic).  
Kulkarni, Prathik, et al. "Recycling of waste HDPE and PP plastic in preparation of plastic brick and its mechanical properties." *Cleaner Materials*, vol. 5, 2 July 2022, pp. 1–7. <https://doi.org/10.1016/j.clema.2022.100113>.  
Sahani, Kameshwar, et al. "Mechanical properties of plastic sand brick containing plastic waste." *Advances in Civil Engineering*, vol. 2022, 2022, pp. 1–10. <https://doi.org/10.1155/2022/8305670>.  
Wuennenberg, Laurin, and Cai May Tan. "Plastic Waste in Canada: A Daunting Economic and Environmental Threat or an Opportunity for Sustainable Public Procurement?" *International Institute for Sustainable Development*, 18 July 2019. [www.iisd.org/articles/plastic-waste-canada](http://www.iisd.org/articles/plastic-waste-canada).

Yossaria also presented a poster on Kenya's Gjenge Makers. She emphasized how recycling plastic waste into construction bricks could be a viable approach for Canada in managing plastic waste sustainably.

Yossaria received 2 tickets to the Toronto Raptors vs. Memphis Grizzlies game and a Certificate of Recognition.

The award ceremony, led by Seneca Business Dean Jeff McCarthy, was a highlight of the event. It not only celebrated the winners' achievements but also brought attention to the pressing issue of plastic waste management. The event, enriched with popcorn, cookies, and treats, provided a platform for sharing innovative solutions and fostering a culture of sustainability within the academic community.

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