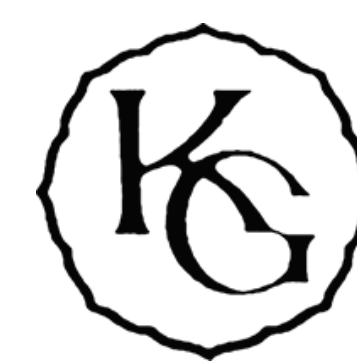


Breaking up with "PET-bottles"

Kyoto Gakuen High School

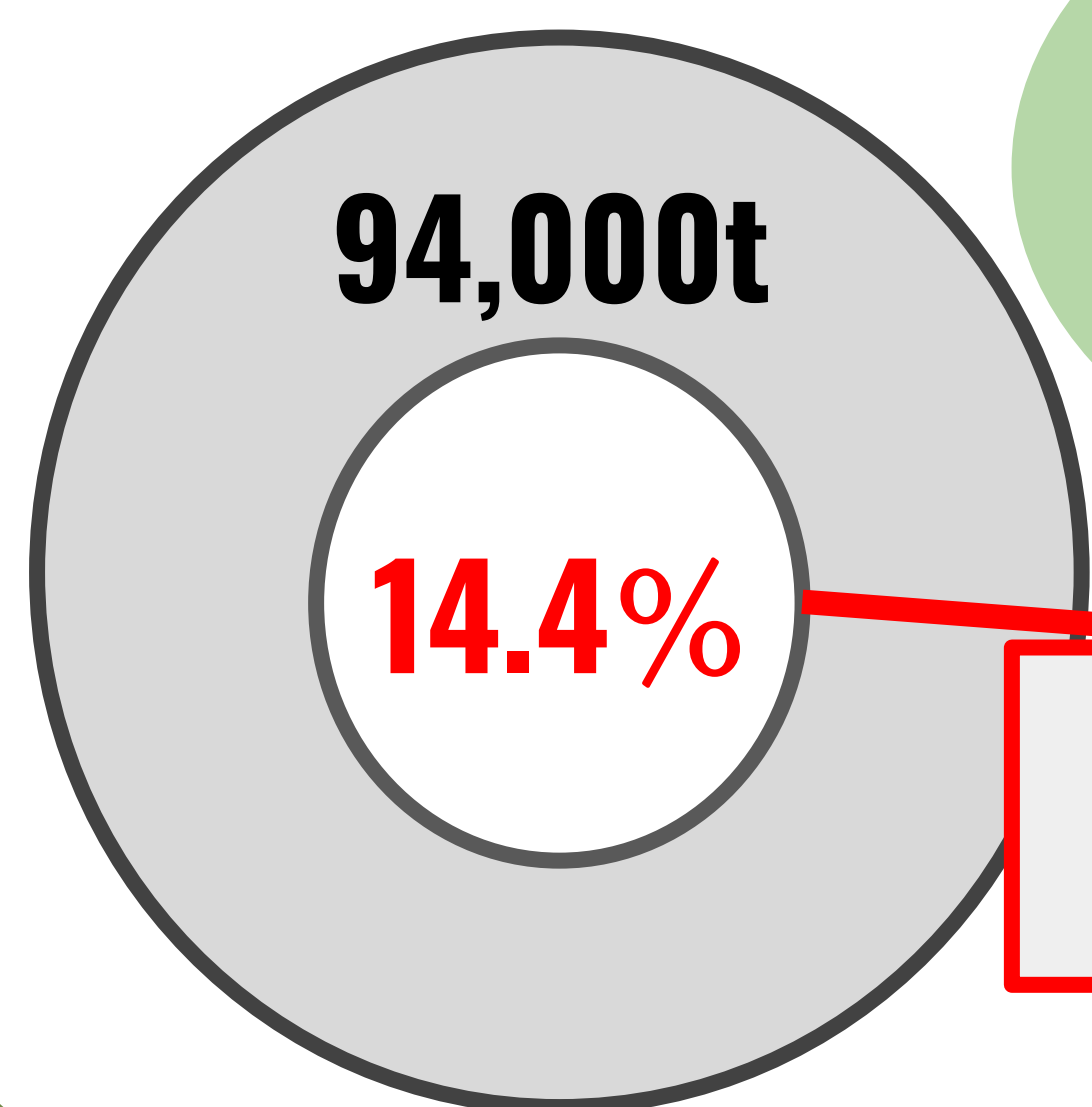
13 CLIMATE ACTION



THE GLOBAL GOALS

Our plastic obsession

Plastic waste in Japan (yearly)



Pet bottle consumption (yearly)
300-400 bottles / 40 B nationally

PET bottle waste

Source: 日刊食品通信 - Published 2016

Why big companies and consumers chose PET bottles over other options?

- **Strong** ⇒ there is less risk of breaking during transportation
- **economic** ⇒ Less money needed for container
- **Safety approved** ⇒ Consumers can buy food products without concern in health aspects.



◎ **PET bottles have grown to become a go-to item for beverage companies and buyers.**

Source: US Food and Drug Administration Source: The Washington Post - Published 2019 June 19 Simon Denyer

Will recycling be good enough?



Recycled in Japan

Not enough

Source: CNN (Japan finally announced a fee for plastic bags. Will that stop its obsession with plastic? - Published 2020 Emiko Jozuka)

Needed for creation

Fossil fuels

More than **99%** of plastics are made from fossil fuels (both natural gas and crude oil) and because plastic results in greenhouse gas emissions at every stage of its life cycle.

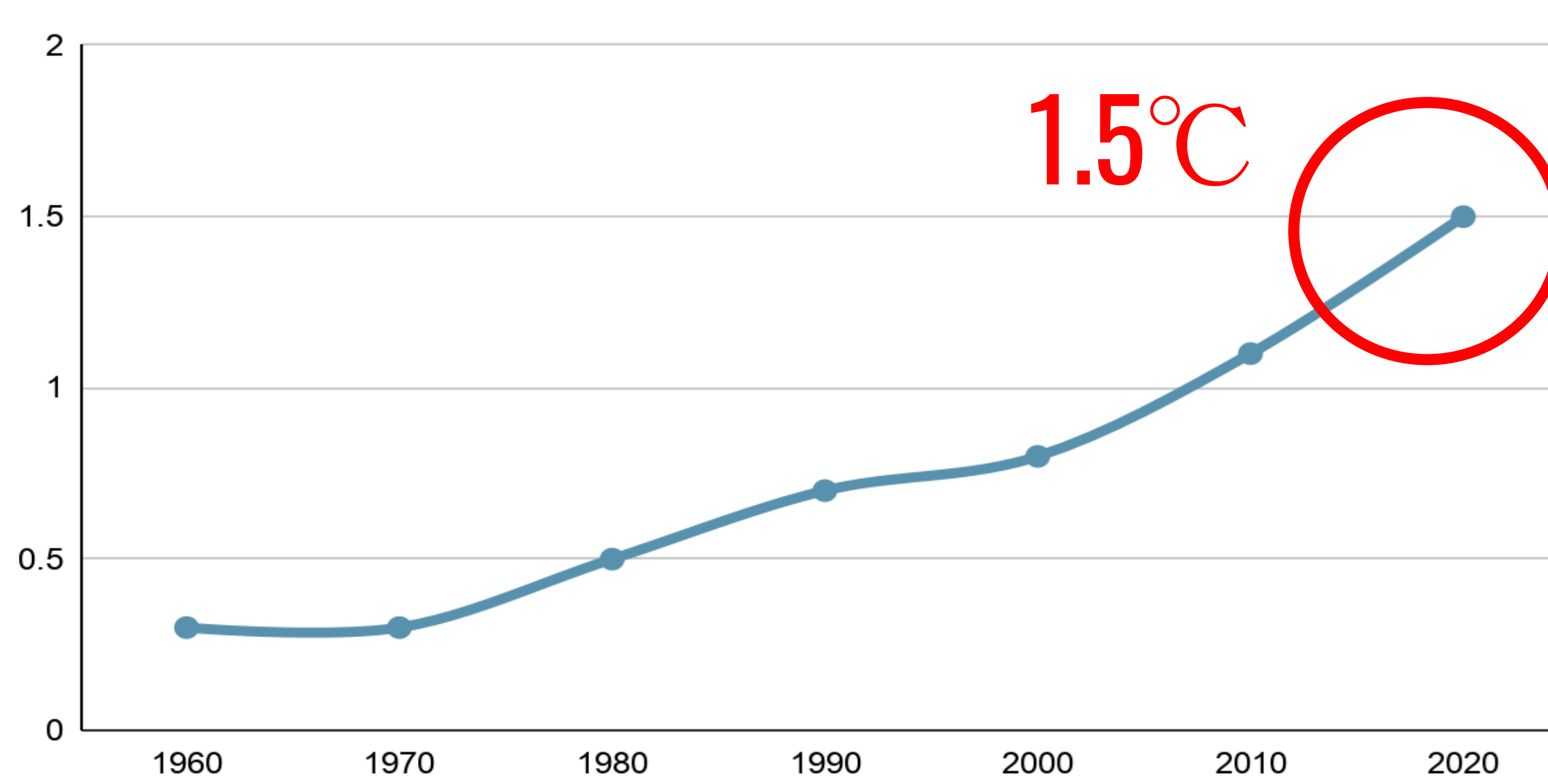


If we carry on like this, by **2030** emissions will reach **1.34 billion tons** per year.

The greenhouse gases emitted through plastic creation jeopardize our ability to keep the global temperature rise **below 1.5°C**



Global annual temperature



Source: Britannica - Published by Otto C Kopp

Impacts on the climate by CO2

Underdeveloped areas take the biggest hits

- decreases in the quality of crops
- Rising sea levels + secondary damage
- Food shortages
- Floods.

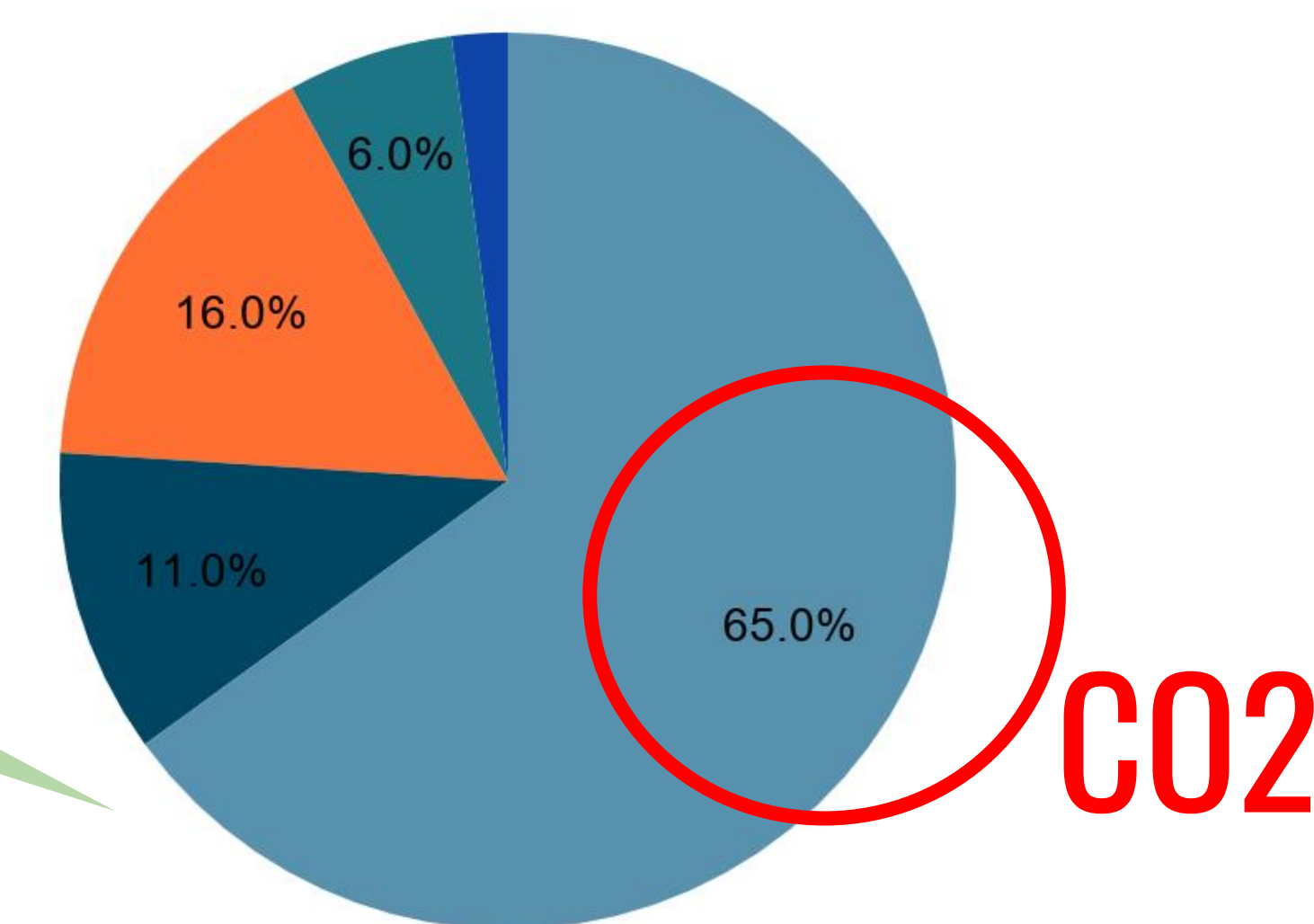


80% of CO2 is emitted by big countries such as China and America

The impacts on agriculture in these places will mean that women and children who work for farms may lose their livelihoods, and the economic disparity will get bigger and bigger.

Source: Regional Environmental Change - Published 2017 by Katharina Waha

Global Greenhouse Gas Emissions by gas



Carbon dioxide Carbon dioxide Methane Nitrous Oxide f-gases

Source: EPA Greenhouse gas emissions

Survey of

Kyoto Gakuen 1st year students

Will students be open to our idea? ↓

YES

Bring water bottle

- ▶ not wanting to spend money on PET bottled beverages

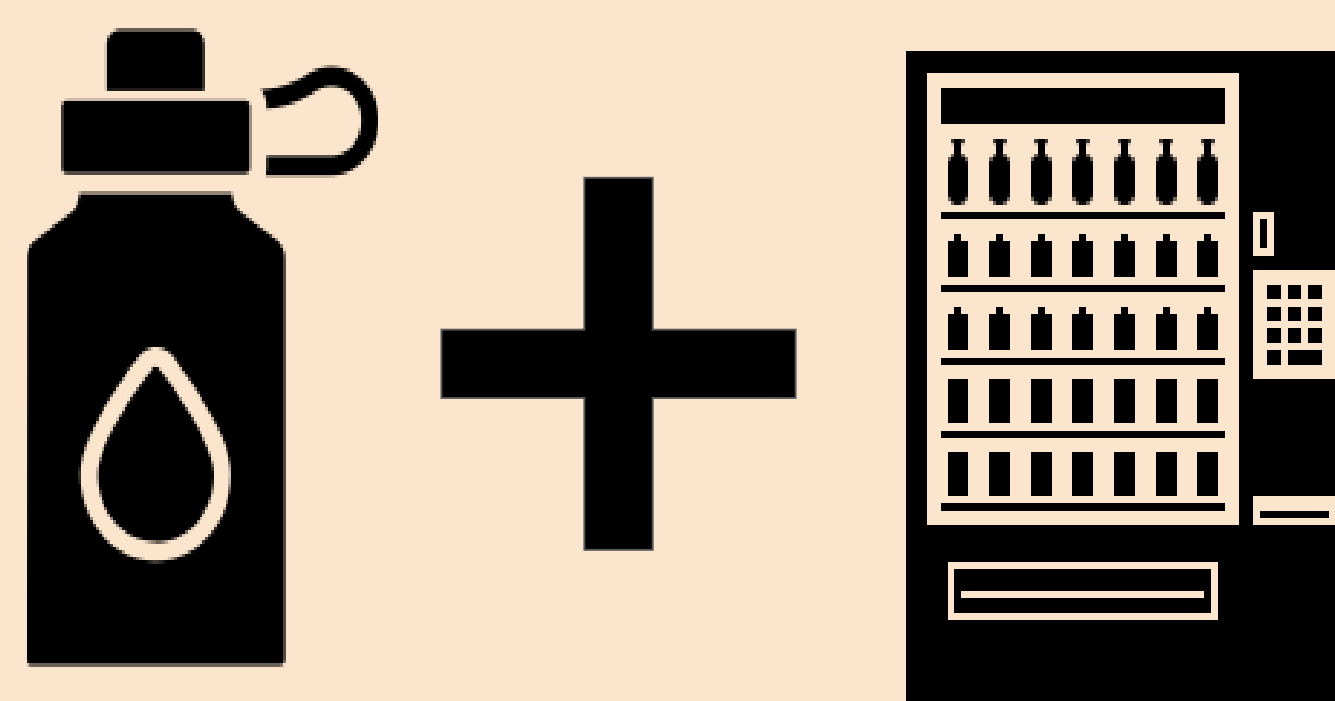
NO

Buy pet-bottle

- ▶ troublesome to prepare
- ▶ want to drink beverages other than tea or water.

Our proposal

◎ Replace the cup venter type vending machine to 'My bottle' only vending machines.



★ Start small: our school (High schools)

This will not only be good for the environment, but there are benefits for the companies we hope to work with, such as "Coca-Cola". Less money would be needed to make PET bottles and plastic cups.



If other schools work together, there may be a big improvement. We are going to build up a plan reducing plastic starting out with a local view using these findings, to eventually build up a sustainable green-community.

Our group discovered that we can encourage people to use 'My Bottle' by emphasizing that this will save them money, but that if we also work to make it easier for people to keep their bottle clean, we think they will be more open to a "MyBottle" culture.

Must think of ways to keep hygienic

FROM NOW ON

Finish base research

Get approval from school

Create proposal for company (wait for development)

Introduce new vending machine (To other schools as well)

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