MARCO SPADA
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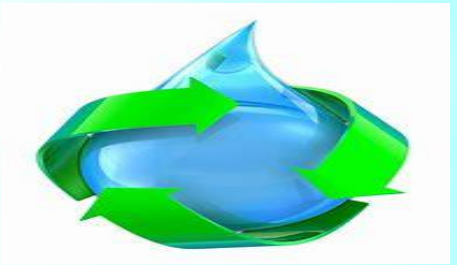
BIOL 105B

PLASTIC POLLUTION IN THE WATER



plastic and microplastic are still invading our natural environment, affecting the "plastisphere"

- (United nation environment program).

PLASTIC WASTE

produce 400 million tonnes yearly

1,100 million tonnes by 2050.

Almost 85 percent end in landfills, meaning specific space stored by piles or not manageable

98 percent of single-use of plastic is produced from fossil fuel (checkout bags, cutlery, food service, ring carriers, stir sticks, and straws)

greenhouse gas emissions will grow by 19 percent globally by 2040

(United nation environment program).

GLOBALLY

7 billion tonnes of plastic waste is generated GLOBALLY

Less than 10 percent has been recycled

9-14 million tonnes per year by 2040 enter in aquatic ecosystems (United nation environment program).

Canadians make over 3 million tonnes of plastic waste yearly;
only 9% recycled (Government of Canada, 2022).

PLASTIC IN HUMAN BLOOD

neoplastic in human blood. Through specific analyses to measure plastic particles less than **700 nm** (Leslie et al., 2022)

six types of SUP (single use of plastic) that Canada **banned** because they harm the marine environment: **checkout bags, cutlery, food service, ring carriers, stir sticks, and straws** (Government of Canada, 2022).

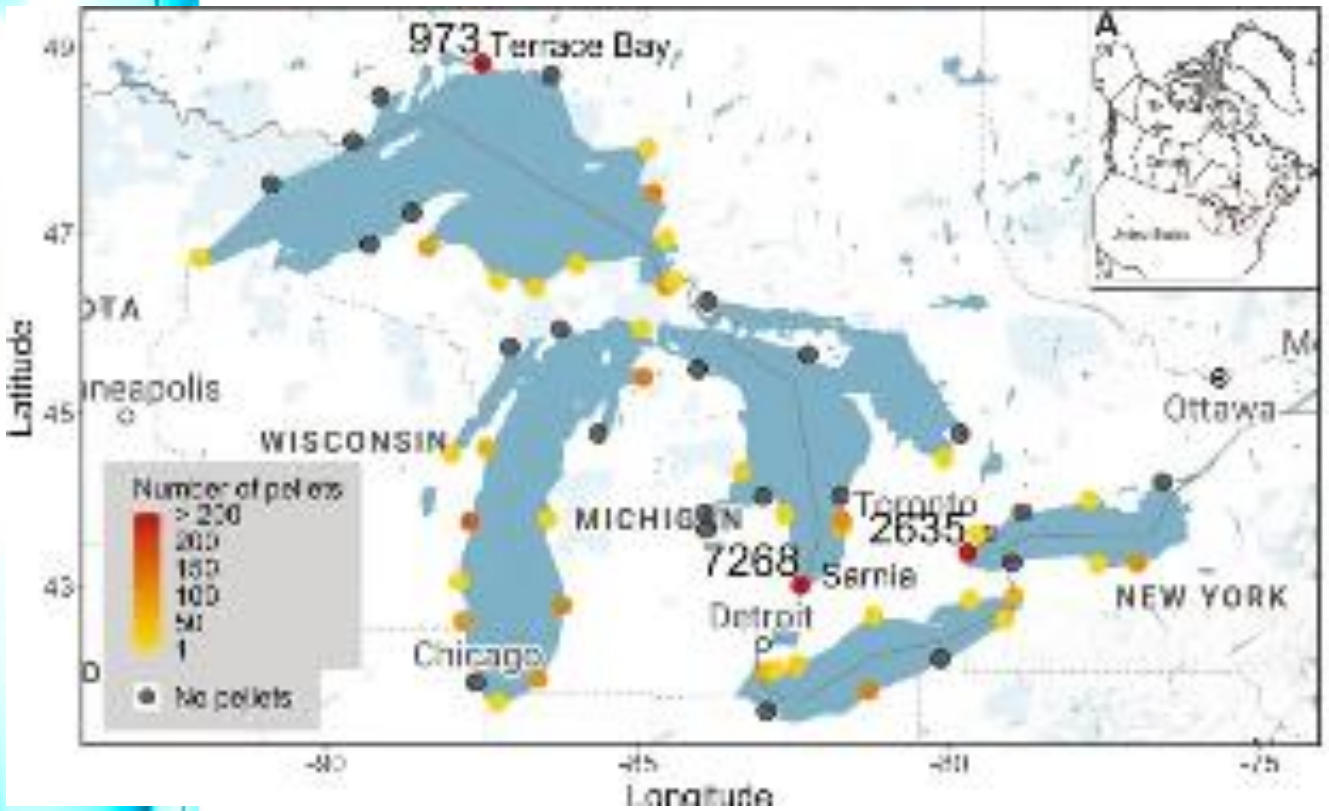
85,000 pieces of microplastics (smaller than 5 millimetres) in the Toronto harbour (Singh et al., 2021).

HOW affecting the FOOD CHAIN.

microplastic floating in the air
and then being spared
like **plankton in the water** (Park et al., 2016).

CANADA THROWS 10,000 TONNES OF PLASTIC POLLUTION INTO THE GREAT LAKES

damages marine wildfire because usually the SUP (single use of plastic) **traps the fish by ring carries**, **checkout bags** and nano plastic due to deterioration



Microplastic is a high risk of **eliminating many marine species necessary to maintain an eco-sustainable** environment (Singh et al., 2021).

We produce 300 million tons of plastic each year worldwide, half of which is for single-use items

- (Lindwall, 2020).

From Linear to Circular,

reducing, reusing, recycling, returning in nature and managing the residual

Canada and British Columbia are rethinking the economy from linear to circular, reducing, reusing, recycling, returning in nature and managing the residual

municipal activities because they report 506 kg of municipal solid waste per person (British Columbia)

Canada will reach $11 billion by 2030 of plastic throw away (Government of Canada, 2021)

From linear to circular,

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greenhouse gas emissions could reach 1.34 gigatons per year by 2030 (Lindwall, 2020).

effect of the circular economy of plastic will create 42,000 jobs by 2030

reduce global warming by lowering 1,8 million tonnes of greenhouse gas emissions per year

PROJECT SOLUTION

The project proposes a solution in Canada:
stop the production of 15 billion plastic checkout bags called single-use Plastic (SUP) (Government of Canada, 2022)

reduce global warming by lowering 1,8 million tonnes of greenhouse gas emissions per year

Reduce risk of throwing in the marine environment

Save money - plastic is managed in landfills losing $ 8 - 11 billion by 2030 (EnvironmentJournal, 2022)

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sustainable solution to **threat water called the**

Bacteria cellulose process biopolymers (B.C.)

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