



# The Ozone Reparation Project (O.R.P)

Cycle 50  
Marco Luis

# The Issue

- The ozone layer is the common term for the high concentration of ozone that is found in the stratosphere around 15–30km above the earth's surface. It covers the entire planet and protects life on earth by absorbing harmful ultraviolet-B (UV-B) radiation from the sun.
- Since 1979, stratospheric ozone has decreased over the entire globe—between 4% and 6% per decade in mid-latitudes and between 10% and 12% per decade in higher southern latitudes. The levels dropped to record lows following the June 1991 volcanic eruption of Mount Pinatubo in the Philippines.
- The main cause of ozone depletion and the ozone hole is manufactured chemicals, especially manufactured halocarbon refrigerants, solvents, propellants, and foam-blowing agents (chlorofluorocarbons (CFCs), HCFCs, halons)
- Polar ice caps are melting as global warming causes climate change. We lose Arctic sea ice at a rate of almost 13% per decade, and over the past 30 years, the oldest and thickest ice in the Arctic has declined by a stunning 95%.



1 Ultra-violet rays split a chlorine atom away from the CFC (chlorofluorocarbon) molecule



2 The chlorine atom breaks up an ozone molecule, making a hole in the ozone layer

The molecules left behind are chlorine monoxide and oxygen ( $O_2$ )

AEP



# Solution?

- **Trees help reduce the potential adverse health and environmental effects of ozone by removing it from the air. Gaseous air pollutants are taken in primarily through the leaf stomata (pores), though some gases are removed by the plant surface.**
- **Trees remove pollution from the atmosphere, improving air quality and human health. In Los Angeles, trees remove nearly 2,000 tons of air pollution each year. In Chicago, trees remove more than 18,000 tons of air pollution each year. In Greater Kansas City, trees remove 26,000 tons of air pollution each year.**
- **more than 15 billion trees are lost annually to deforestation. in one year a mature tree will absorb more than 48 pounds of carbon dioxide from the atmosphere and release oxygen in exchange**
- **Bamboo is a notoriously eco-friendly material compared to traditional hardwoods. It has greater durability, hardness, and water resistance. In many cases, bamboo is also a more affordable material than other hardwoods.**
- **Bamboo is one of the fastest-growing plants on the planet, with some species can reach full maturity in just 90 days, and most taking just a couple of years. One bamboo species can grow a massive 35 inches per day (or 1.5 inches per hour).**





## Mission

**Inspiring humanity both in the air and on the ground, through the change that may not alter our lives today, but the change that will ensure a bright future for any and all preceding generations.**

## Location

**20039 West Lake Street, Chicago, IL**



# O.R.P Board Members



**Elon Musk**

*(Finance  
Committee)*



**Al Gore**

*(Chair)*



**Keanu Reeves**

*(Treasurer)*



**Johnny Depp**

*(secretary)*



**Leonardo  
DiCaprio**

*(Vice-Chair)*



# Organizations working in conjunction to O.R.P



- **Trees for the Future**

A Maryland-based nonprofit that works with communities around the world to plant trees. The founders, Dave and Grace Deppner, came up with the idea for Trees for the Future when they volunteered in the Philippines and saw the impact of illegal logging firsthand. Since 1989, the charity has planted over 191 million trees.

- **The Nature Conservancy: Plant a Billion Trees**

Founded in 1951, the Nature Conservancy is one of the best-known environmental charities. It has more than one million members and a staff of over 400 scientists. To date, [the Plant a Billion Trees campaign](#) has planted over 84 million trees.

- **The Green Belt Movement (GBM)**

A long-standing Kenyan charity that plants trees and empowers women and girls. GBM was founded by the Nobel Prize-winning Professor Wangari Maathai in 1977. Since then, GBM has planted over 55 million trees in Kenya. In addition to donating, for \$10, you can give the [gift](#) of planting a tree in Kenya to a loved one.