



## SEGUNDO EJERCICIO (PARTE A)

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### (12 de diciembre de 2023)

#### **BUILDING WITH NATURE. THE SAND MOTOR**

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A quarter of the Netherlands lies below sea level. Our dunes and beaches provide essential protection against the sea. But wind, sea and currents erode sand from the coast, and the rising sea level is speeding up this process. Therefore, every three to five years, the Dutch government collects sand from deep in the North Sea and deposits it onto our beaches. We call this 'nourishment'.

However, the repeated nourishments with sand disrupts the balance of nature and life in the benthic zone. It is better for the flora and fauna to limit the amount and frequency of nourishment. Policy makers and coastal experts are therefore looking for alternatives.

"Building with Nature" is a design philosophy that has increased in popularity in recent years. It focuses on the use of natural processes to protect us from the forces of water.

The Sand Motor is a peninsula in front of the Delfland coast. It was constructed in 2011 by depositing 21.5 million cubic meters (gross) of sand. This is much more than would be needed for 'normal' replenishment. It was expected that the Sand Motor would have a lifespan of 20 years. We now know that it will be much longer. Under the influence of waves, sea currents and the wind, sand moves from the Sand Motor along the coast, both towards the north and the south.

The large quantity of sand makes the Sand Motor unique. The objectives are:

- Increasing coastal safety in the long-term
- Creating natural surroundings and a recreation area
- Developing knowledge and innovation for coastal management and maintenance

#### **INTERNATIONAL OCEAN GOVERNANCE**

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International ocean governance is about managing the world's oceans and their resources together so that they are healthy and productive, for the benefit of current and future generations.

Oceans are essential for humankind as climate regulators, as a source for nutritious and healthy food, and as an engine for development. The OECD estimates that ocean-based



industries contribute roughly €1.3 trillion to global gross value added. Oceans are also home to a rich, fragile, and still largely unexplored biodiversity, which provides a variety of important ecosystem services. For instance, oceans produce half of the oxygen in the Earth's atmosphere and absorb 25% of CO<sub>2</sub> emissions.

Oceans are under intense pressure from human activities. Overexploitation and illegal activities, climate change, and marine pollution are threatening our ocean's health and productivity. With the world's population expected to reach 9-10 billion by 2050, pressures will increase and global competition for raw materials, food, water and space will intensify.

### **THE CARBON CRIME OF OUR CENTURY**

Our carbon footprint is the estimated amount of carbon dioxide given off as we go about our daily lives. In Britain, the carbon footprint of the average person is 9,5t per year. Every time that person takes a return fly to New York, he or she produces about 1,2t of carbon dioxide. This means that someone who flies across the Atlantic and back twice a year will use up more than a quarter of their footprint.

Now that everybody is aware that carbon emissions contribute to climate change, it is hard to understand why air travel is still so common. In response to the problem, the European Union has introduced a program to try to limit the damage. It is called the European Union Emissions Trading System. The program requires not only European power plants and manufacturers to pay fees to the European Union if they produce excess emissions, but also Airlines. These have to pay for the carbon emissions generated by every plane that flies into or out of an EU airport. That includes flights whose origin or destination is outside of Europe.

While countries like Australia have accepted the scheme, others refuse to cooperate. A spokesperson from the American airline association said that the program would cost United States Airlines about \$3.1 billion over a period of eight years. Analysts estimate it would add about \$5 to the price of a typical trans-Atlantic flight, which may not seem excessive. However, the airlines say that this amount could be the difference between making a profit or a loss. The EU has given the international civil aviation organization one year to come up with an alternative plan to reduce the industry's carbon footprint. If it fails, the EU will begin collecting emissions fees for all flights in and out of its airports, including those that arrive and depart from non-European airports.

**NOTA: Los errores tipográficos, ortográficos o de cualquier índole del texto original, deberán ser resueltos por el aspirante.**