

# 5 countries that are affected by plastic and their implications.

### TOTAL PLASTIC WASTE CONTRIBUTED TO OCEANS IN 2010



05

#### **CHINA**

Per capita consumption of plastics more than doubled from 22 kg in 2005 to 46 kg in 2010.

#### **INDONESIA**

Four of Indonesia's rivers rank among the 20 most polluted in the world in terms of mismanaged plastic waste. This makes Indonesia the second-largest contributor to marine plastic pollution after China. It is estimated to emit around 200,000 tonnes of plastic

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PHILLIPINES

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#### **PERCENTAGE**

These 5 countries account 60% of the plastic pollution.

#### **STATS**

Interventions in these five countries could reduce global plastic-waste leakage by approximately 45 percent over the next ten years 01





Sri Lanka

.75

#### **FACT**

Annually approximately 500 billion plastic bags are used worldwide. More than one million bags are used every minute.



- o Plastic upsets the food chain by affecting every single organism.
- o The world's water is in great danger because of leaking plastics and waste.
- o Burning of plastic in the open air leads to environmental pollution due to the release of poisonous chemicals. The polluted air when inhaled by humans and animals affect their health and can cause respiratory problems.
- o The processes of making, storing, disposing of, and just being around plastics can be extremely harmful to living things.
- o Between 5.3 million and 14 million tons of scattered remains end up in the world's oceans every year, and much of it is improperly discarded plastic litter.



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### **Alternatives to Plastic.**



#### Milk Protein

Scientists indicate that milk protein can help produce a biodegradable plastic to make insulation, furniture cushions, packaging, and other products. Researchers are reconsidering casein, the main protein present in milk, into a biodegradable material that complements the compressibility and stiffness of polystyrene. The contemporary milk-based plastic doesn't crack easily, and it is less toxic.

#### Chicken Feathers

With the help of innovation, they can be a material useful to make a water-resistant thermoplastic. Chicken feathers are consist of keratin, a tough and durable protein like plastics. It can be found in hair and wool. The keratin-based plastic is proven to be more resistant to tearing than other plastics made from soy, starch, and other agricultural sources.



#### **Liquid Wood**

Liquid wood looks, feels and acts like plastics but unlike petroleum-based plastic, this is biodegradable and suitable for various product packaging. Some researchers use this as substitute to make toys, golf tees, and hi-fi speaker boxes.

#### **PCL Polyesters**

Polycaprolactone is a synthetic aliphatic polyester that's not created from renewable resources but could degrade after weeks of composting. The process is easy, but it is seldom used because of its manufacturing costs.

#### **PHA Polyesters**

Polyhydroxyalkanoate (PHA) polyesters are biodegradable plastics that resemble with man-made polypropylene. They are less flexible than petroleum-based plastics, and useful in in plastic films, injection-molded bottles, and packaging.

#### **PLA Polyesters**

Polylactic acid (PLA) is an aliphatic polyester and can be made from lactic acid. PLA can also be created from wheat or sugarcane. It has the ability to decompose within forty-seven days in an industrial composting site, and it would not release toxic fumes when burned. It is open to new packaging applications for green plastic, automotive parts, and coffee cups.



# How would convince people to reduce the usage of plastic



#### **SOLUTIONS**

- Shop friendly
- Get rid of bottled water
- Use reusable containers
- Try and recycle everything
- Creating awareness through workshops
- Advertising with visuals
- Marketing documentary
- Creating more solutions to reuse plastic
- Start with yourself and sharing experience with others
- Creating awareness on the impacts of plastic pollution