

Plastics, petrochemicals, pesticides ... All part of the POPs

The landfills are filled with POPs, or persistent organic chemicals, as what don't we throw away here in T&T? Those old plastic bottles of dish-washing liquid, cooking oil, car polish, half empty bottled drinks, empty paint and pesticide containers, they often get dumped with the rest of the household garbage. Petrochemicals are found in these and thousands of manufactured products that are composed of or contain input chemicals derived from crude oil or natural gas.

Pesticides, herbicides, rodenticides (for controlling rats), and fungicides, these too fall into the category of POPs and are almost all man-made. What these substances have in common is that they share a carbon-hydrogen 'backbone', making them 'organic' substances. Lipsticks, body lotion, detergents, fabric (polyester, nylons), and cleaning products are all common household items which have a prominent organic base component.

The 'persistent' part comes about when the molecular structures are so stable and new to the bacteria and fungi (the planet's waste processing organisms) that there are few or no naturally occurring mechanisms that allow their breakdown, making them xenobiotics.

Some of these 'new' man-made chemicals can also cause harm to us humans and to other organisms that are exposed. Several POPs can build up inside the body (bio-accumulate) and cause cancer, neural diseases,

reproductive issues and put strain on our livers, kidneys and immune systems.

Plastics are made from a string of repeating organic molecules eg styrene or vinyl chloride, which are linked on a molecular level (resulting in polystyrene, polyvinyl chloride-PVC, for example), with additives that give the structure, colour and form suited to their purpose. Though designed to be durable, plastics are still subject to physical breakdown processes (eg erosion via the movement of waves in the sea, or wind action) making the bits of plastic that hang around ever smaller. This durability can lead to the build-up of microplastics everywhere. Evidence is mounting that microplastics are harmful to human health.

Pesticides, herbicides

Mechanisation has allowed farming practices to become efficient, high-yielding and capable of supporting—at least in theory—our large global human population. Large single-crop farms (eg wheat, rice and sugarcane) have created other problems such as the need for vast

amounts of pest control mechanisms. Even with the best intentions, there have been unwanted consequences. Back in the 1940s, a generation of pesticides—organochlorines—was developed which proved quite effective in addressing the growing pest problem. They were used in large quantities during the Vietnam war and were still in common use in mosquito coils locally. Compounds such as diphenyl-dichloro-trichloroethane (DDT) (metabolised as dichloro-diphenyl-dichloroethylene or DDE) bioaccumulated in living things. The problem was that they didn't break down easily. Today, derivatives of DDT/DDE can be found in almost every living person across the globe.

The next generation of pesticides, organophosphates, had a much shorter lifespan, but is toxic to aquatic life, and largely replaced organochlorines. The third generation of insecticides, synthetic pyrethroids, is based on a naturally occurring pesticide extracted from the chrysanthemum plant, but these chemicals are also toxic to aquatic organisms.

People using these chemicals and products need to use them appropriately and dispose of them carefully.

The point we are at

Planet Earth balances many interconnected life supporting systems. Any disruption to these systems causes a cascade of consequences which in turn, requires nature to re-balance. In a certain regard, this is what is happening with climate change. Increased concentration of organic and other chemicals in the air that happen to prevent the loss of heat has caused the planet to gradually warm.

Volatile organic pollutants that don't readily break down are a large part of this group of chemicals—Greenhouse Gases (GHGs). The science indicates that global warming will mean more energy for storms and greater extremes in weather patterns. In addition, more diseases will appear due to the bioaccumulation of organic substances in living organisms.

What we can do

Take cloth or reusable bags to the grocery/markets. Request that takeout be supplied in biodegradable containers.

Recycling—repurpose or recycle anything we can. Old food and vegetable peelings can be turned into compost to support a garden or fruit trees.

Use natural pest control options where possible eg Neem oil, soapy water for mealy bugs, bay leaves for rice and beans to ward off weevils.

Use pesticides and other chemicals sparingly and leave enough time for any residue to wash off before harvesting.

Never burn chemicals, empty containers or products, as these may release toxic fumes. Rinse, fill with newspaper and dispose. The only approved landfill for toxic waste disposal in Trinidad is at Forres Park.

Have some local flowering plants in the yard that can provide nectar for the bees, as they are essential pollinators.

Buy produce that is local and in season as much as possible. This could save money and save the environment.

Never litter.

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MASSY HOLDINGS LTD.

NOTICE OF CHANGE IN SENIOR OFFICERS

The Company wishes to advise that Ms. Ambikah Mongroo was appointed to the position of Group Executive Vice-President, Executive Chairperson, Integrated Retail Portfolio, effective October 01, 2024.

By Order of the Board

Wendy Kerry
Corporate Secretary
September 19, 2024

This Notice is made pursuant to Section 64(1)(b) of the Trinidad and Tobago Securities Act, 2012