

# OUR ENVIRONMENT OUR HERITAGE



## PERSISTENT ORGANIC POLLUTANTS (POPS)

The Ministry has taken some considerable steps in the right direction on reducing and eliminating POPs production, use and elimination from within the country. These include the ban on the importation of POPs pesticides, the installation of effective waste management programmes such as the establishment of the main landfill for hazardous body parts only, collection and appropriate disposal of waste associated with release of POPs and with the POPs in PICs chemicals for disposal away from Samoa.

### WHAT ARE PERSISTENT ORGANIC POLLUTANTS (POPS)?

Persistent organic pollutants are organic compounds of natural or anthropogenic origin that resist photolytic, chemical and biological degradation.

They are characterised by low water solubility and high lipid solubility, resulting in bio-accumulation in fatty tissues of living organisms.

POPs are transported in the environment in low concentrations by movement of fresh and marine waters and they are semi-volatile, enabling them to move long distances in the atmosphere, resulting in widespread distribution across the earth, including regions where they have never been used.

POPs in other words are a set of chemicals that are toxic, persist in the environment for long periods of time, and characterized by low water solubility and high lipid solubility thus bio-accumulate in fatty tissues as they move up the food chain. Because they are semi-volatile, they circulate globally via the atmosphere, oceans and other pathways, thus those released in one part of the world can travel to regions far from their source of origin.

### THE IMPACTS

The persistence of these chemicals in the atmosphere and bio-accumulation in fatty tissues has caused detrimental impacts on human health and the environment throughout the world.

Within Samoa no evidence has been documented linking such environmental and human health issues to contact with any of the POPs released locally.

Humans can be exposed to POPs through diet, occupational accidents and the environment (including indoor). Acute or chronic exposure to POPs by humans either can be associated with a wide range of adverse health affects such as cancer, damage to the nervous system, reproductive disorders and disruption of the immune system in infancy and early childhood.

Animals can be exposed to POPs through foraging, diet and the environment. Studies of POPs impact on the wildlife include endocrine disruption, reproductive and immune dysfunction, neuro-behaviour disorders and cancer.

**PROTECT SAMOA FROM  
PERSISTENT ORGANIC POLLUTANTS!**

### EFFECTS IN SAMOA'S ENVIRONMENT

The main sources of dioxin release into Samoa's environment are limited to:

- incinerators
- vehicle combustion
- forest fires
- backyard burning

The major source of dioxin unintentional release to Samoa's environment is by burning organic matter in the presence of chlorine. This source of release is thus significant and must be reduced under the *Stockholm Convention*.

The high number of diesel vehicles in the country is a positive note since chlorine in diesel fuel release less dioxins (although also other air pollutants) compared with unleaded gasoline and leaded gasoline.

The Ministry is implementing its actions to minimize the release of man-made releases such as incinerators, vehicle combustion and backyard burning through its public awareness programmes as a main focus.

### STOCKHOLM CONVENTION

Samoa is party to the Stockholm Convention on Persistent Organic Pollutants (POPs) negotiated and agreed by countries of the world in 2001. Samoa signed the Convention in May 2001 and ratified in early 2002. The Convention obligates parties to undertake measures to reduce or eliminate releases from production, use, stockpiles and wastes of the twelve chemicals identified as most persistent.

The Convention initially targets a group of twelve chemicals commonly known as the "dirty dozen" for priority actions to reduce and eliminate from production, use, storage and disposal. The "dirty dozen" are:

- aldrin
- chlordane
- dieldrin
- DDT
- hexachlorobenzene (HCB)
- heptachlor
- mirex
- polychlorinated biphenyls (PCBs)
- polychlorinated dibenzo-p-dioxins
- polychlorinated dibenzo-furans
- toxaphene

### SAMOA AND THE STOCKHOLM CONVENTION

The Convention under Article 7 provides a mechanism for the parties to meet the obligations through the development of National Implementation Plans (NIPs) to reduce and eliminate releases from production, use, stockpiles and wastes as well improving public awareness on the impacts of such chemicals both on human health and the environment.

To support the development of NIPs, article 13 of the convention regarding Financial Mechanisms is the Global Environment Facility (GEF) Enabling Activity (EA) which is providing assistance to developing countries including Samoa to develop its NIPs.

Samoa has been able to access this GEF-EA through the United Nations Development Programme (UNDP) to develop its NIPs using the guidelines as articulated in the following process.

- Establish Enabling Activity Project Coordinating Mechanisms.*
- Capacity Building in Support of Project Implementation.*
- Assess National Infrastructural and Institutional Capacity.*
- Prepare Initial POPs Inventories.*
- Set objectives and priorities for POPs and POPs reduction and elimination options.*
- Prepare draft implementation plan for meeting Samoa's obligations under the Stockholm Convention.*
- Review and finalization of implementation plan.*

The Assessment of POPs in Samoa report was produced by Pacific Environment Consultants Ltd (PECL) as part of the Enabling Activity for developing the National Implementation Plan for Samoa under the Ministry (MNRE).

The first actions for the NIP included the establishment of the Multi-sectoral National Task team and building capacity with PUMA as a lead agency and other partners to support the project implementation. Once the organizational component was settled, the technical process of conducting the assessment and development of the plan were contacted to PECL to facilitate while in close consultation with the NTT.

For more information contact our -  
Environment & Conservation Division -  
POPs Unit - DBS building - Level 5 -  
telephone 23800.

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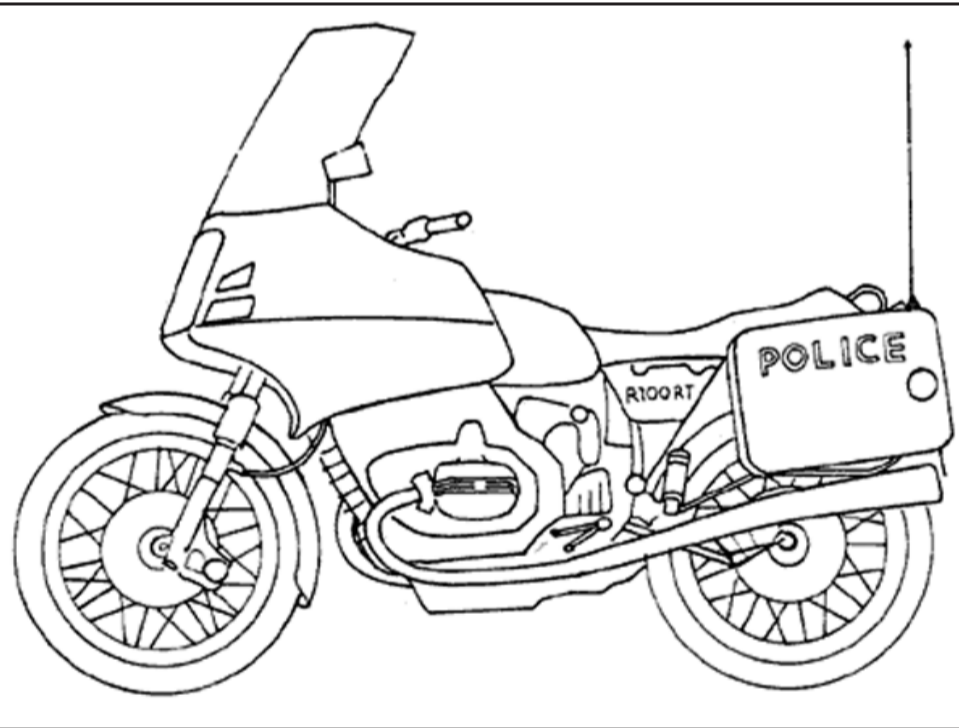
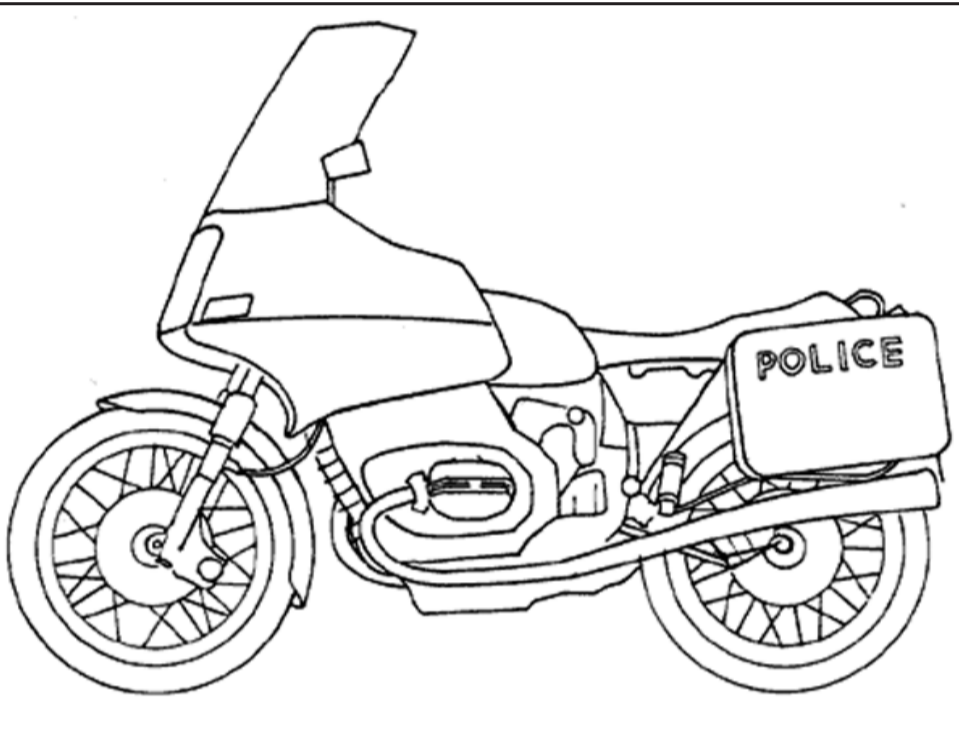
## Children's Corner



Children aged 9-14 are invited to answer the following corner. The name of 3 students with top scores at the end of every month will be posted under the "Children's Corner" for special prizes. "Children's Environmentalist Star Award 2010" will be given to 10 students with top total scores at the end of the year.

### FIND-THE-DIFFERENCES

Can you find the 6 differences?



### ANSWER TRUE OR FALSE

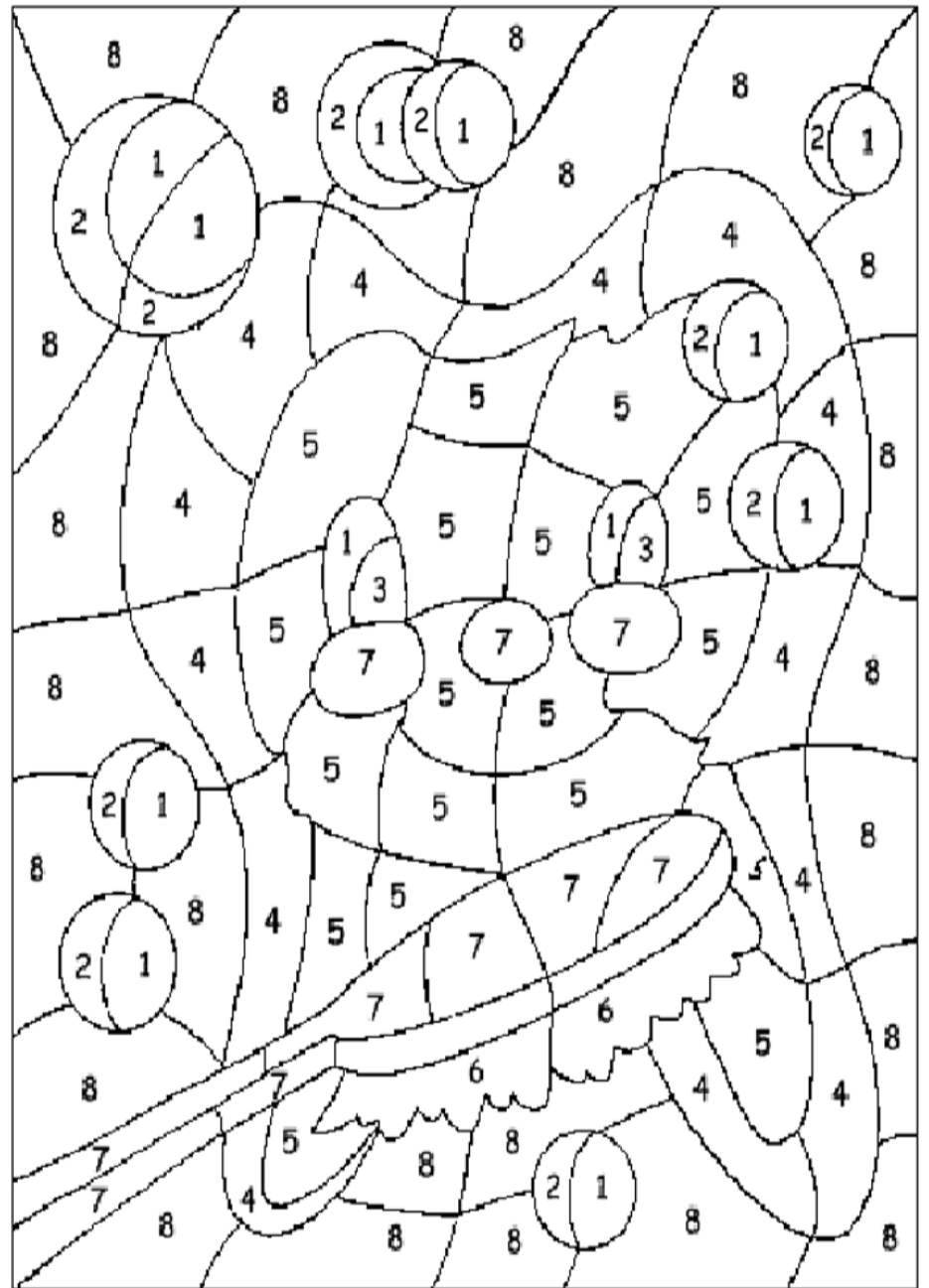
1. Samoa ratified to the Stockholm Convention in 2002.
2. Persistent Organic Pollutants are toxic chemicals.
3. Humans and environmental organisms are not exposed to POPs around the world.
4. Samoa is not affected by POPs.
5. Humans can be exposed to POPs through diet.

### STAY TUNED KIDS!!!

For our July Children's corner 3 winners.....

### COLOR-BY-NUMBERS

Color the picture below by numbers



- |                |            |
|----------------|------------|
| 1 - light blue | 5 - white  |
| 2 - dark blue  | 6 - yellow |
| 3 - black      | 7 - red    |
| 4 - brown      | 8 - green  |

### ACKNOWLEDGEMENTS

We wish to acknowledge and thank the following companies for sponsoring prizes for our children's corner

- **SAMOA STATIONERIES LTD**
- **MCDONALD'S RESTAURANT**
- **AH LIKI'S WHOLESALE**

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