

OUR ENVIRONMENT OUR HERITAGE

NATIONAL CHEMICALS MANAGEMENT STRATEGY



The use of chemicals has become indispensable in many development activities in Samoa particularly in agriculture, health, education and industry. According to the Department of Statistics, Samoa expended about \$60 million in 2006 for the procurement of chemicals as well as another \$122 million spent to import petroleum products. While there is growing national need for chemicals they can also cause health and environmental problems if not effectively controlled. This National Chemicals Management Strategy 2007-2017 (NCMS) provides a framework for the sustainable management of all chemicals through the various stages during their life-cycle - procurement, transportation, storage, distribution, use and waste disposal.

Chemicals are widely distributed in the environment. Therefore, there are many possible sources of exposure to these chemicals for humans. Chemicals can enter our body by ingestion, inhalation or by absorption through the skin and different chemicals will cause different adverse effects. In fact, not all chemicals absorbed into the body will cause adverse effects; however, it depends not only on the chemical to which one is exposed but also on the type/route of exposure and level/dose of exposure. Effects of chemicals can pose serious health defects in the respiratory system, liver, kidney, nervous system, immune and reproductive systems. Cancer is one of the leading causes of death due to exposure to chemicals. Hazardous chemicals not only have adverse effects on human health but can also disrupt ecological systems that exist in rivers, lakes oceans, seas, forests and soils. The discoveries of a growing hole in the stratospheric ozone layer, is evidence of the enhanced greenhouse effect, due to chemical contamination and pollution.

There is growing concern over the use of persistent organic pollutants (POPs) and persistent toxic substances (PTS) as exposure to such would cause significant public health and environmental problems. Of the 12 types of POPs controlled under the Stockholm Convention for POPs, eight are present in Samoa including aldrin, chlordane, dieldrin, DDT, PCBs, dioxins and furans and HCB (impurities). These chemicals are among the most dangerous that have ever been created - they are transported by air, water and migratory animals over long distances, often miles from their original sources. They dissolve in water, can easily enter the food chain, are absorbed readily in fatty tissues and can remain active for years before they break down. They are known to cause or contribute

to a number of major health problems in humans including immune system alterations; reproductive deficiency; neuro-behavioural impairment and various forms of cancers.

a. GOAL:

To reduce the risks to human health and the environment from chemicals through their sustainable management. A life cycle management approach is promoted at all stages of chemical applications - procurement, transportation, storage, utilization, treatment and disposal - focusing on the main user sectors of agriculture, health, education and industry.

b. OBJECTIVES:

1. Greater understanding of chemicals promoted
2. Capacity building on the effective and/or application of chemicals strengthened
3. Safe disposal and/or treatment of chemical waste improved
4. Sustainable management of chemicals enhanced
5. Regulatory framework to monitor and/or enforce the sustainable management of chemicals developed.

c. RELEVANT INTERNATIONAL AGREEMENTS:

Samoa is a party to the following MEAs dealing with the international management of chemical, implemented by MNRE:

Basel Convention on the control of trans-boundary movement of hazardous waste and their disposal.

Waigani Convention to ban the importation into Forum island countries of hazardous radioactive waste and to control the trans-boundary movement and management of hazardous Wastes within the south Pacific region (Waigani).

Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade.

Stockholm Convention on POPs.

d. MANAGEMENT APPROACHES:

There are number of principles that would guide the implementation of the NCMS in order to promote long-term sustainability:

Life cycle management approach - integrated activities which cover and link all aspects of chemical life cycle in Samoa including procurement, storage, transportation, distribution, utilization and waste disposal. Current management systems are sector-based where different stages of chemical life cycle are controlled without adequate consideration of possible linkages to others. This has often led to inadvertent substitution of one problem for another. With the increasing focus, there is an opportunity to



review chemical assessment processes to ensure that impacts of chemicals are routinely addressed at the earliest stage.

Risk-based principle - considers both the intrinsic hazard of a substance as well as the potential for exposure and the implementation of appropriate risk management strategies to reduce or control exposure. Risk-based approaches would allow continued safe use of some high hazard chemicals, as long as their applications and uses are controlled to restrict or prevent exposure.

Precautionary principle - states that lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. However there still needs for concern about threats of serious or irreversible environmental damage. Therefore precautionary measures should be taken such as increased research effort and creating alternatives to facilitate the most cost-effective approach to environmental impact assessment.

Polluter pays - establishment of accessible, affordable, and effective mechanisms, to ensure that those who procure, use, and dispose of chemicals must pay the full costs of any harms to human health and the environment that they cause, and that victims of such harms are quickly and fully compensated.

Good governance - concept that transparent, accountable, and honest governance is an important component of sustainable development and an essential element for the prevention and punishment of illegal traffic in hazardous and toxic materials.

Right to know - this is a specific aspect of public access to environmental information: the concept that the public has the right to know information regarding the risks to human and environmental health from chemicals including chemical accidents and waste disposal and treatment.



For more information contact our Environment & Conservation division - POPs section - 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.

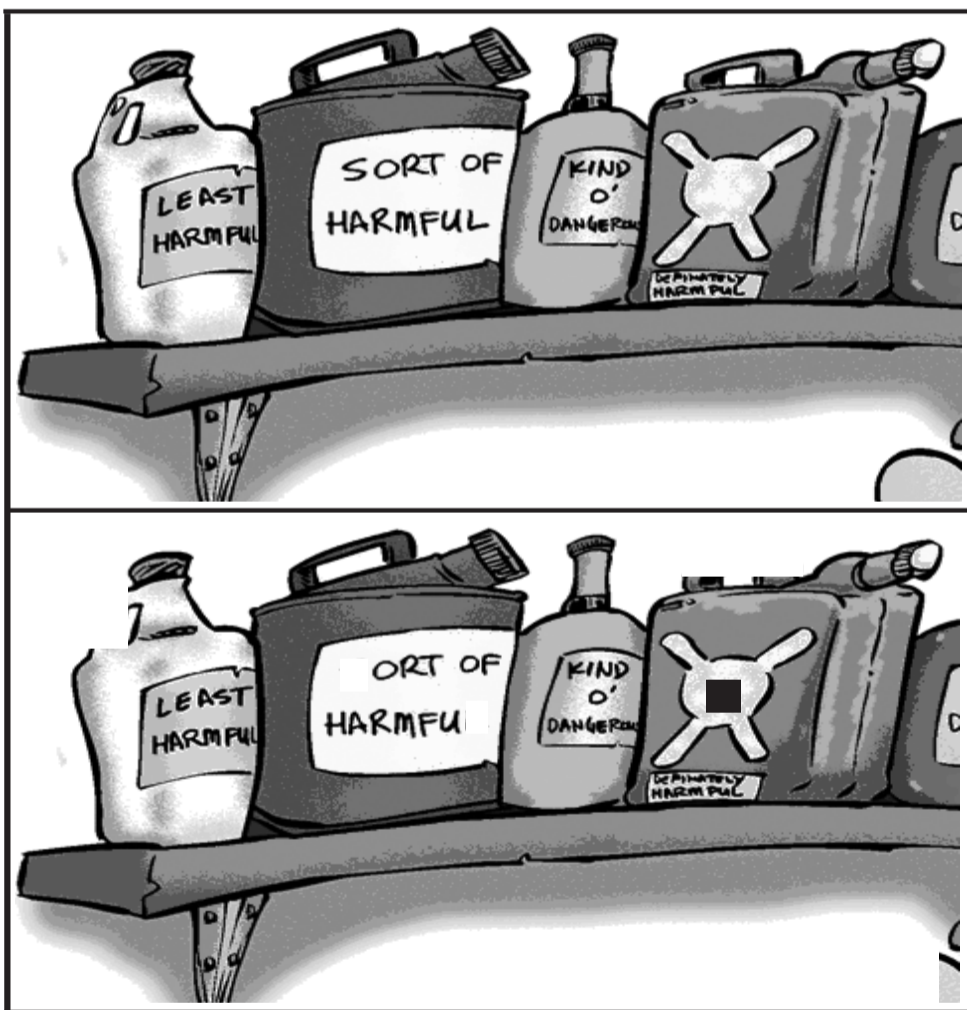
FILL-IN-GAPS

Fill in the blank spaces with an appropriate word

There is growing _____ over the use of persistent organic pollutants and persistent toxic _____ as exposure to such would cause significant public health and _____ problems. Of the 12 types of POPs controlled under the Stockholm Convention for _____ eight are present in Samoa including aldrin, chlordane, dieldrin, DDT, PCBs, dioxins and furans and HCB (impurities). These _____ are among the most _____ that have ever been created - they are transported by air, _____ and migratory _____ over long distances, often miles from their original sources.

FIND-THE-DIFFERENCES

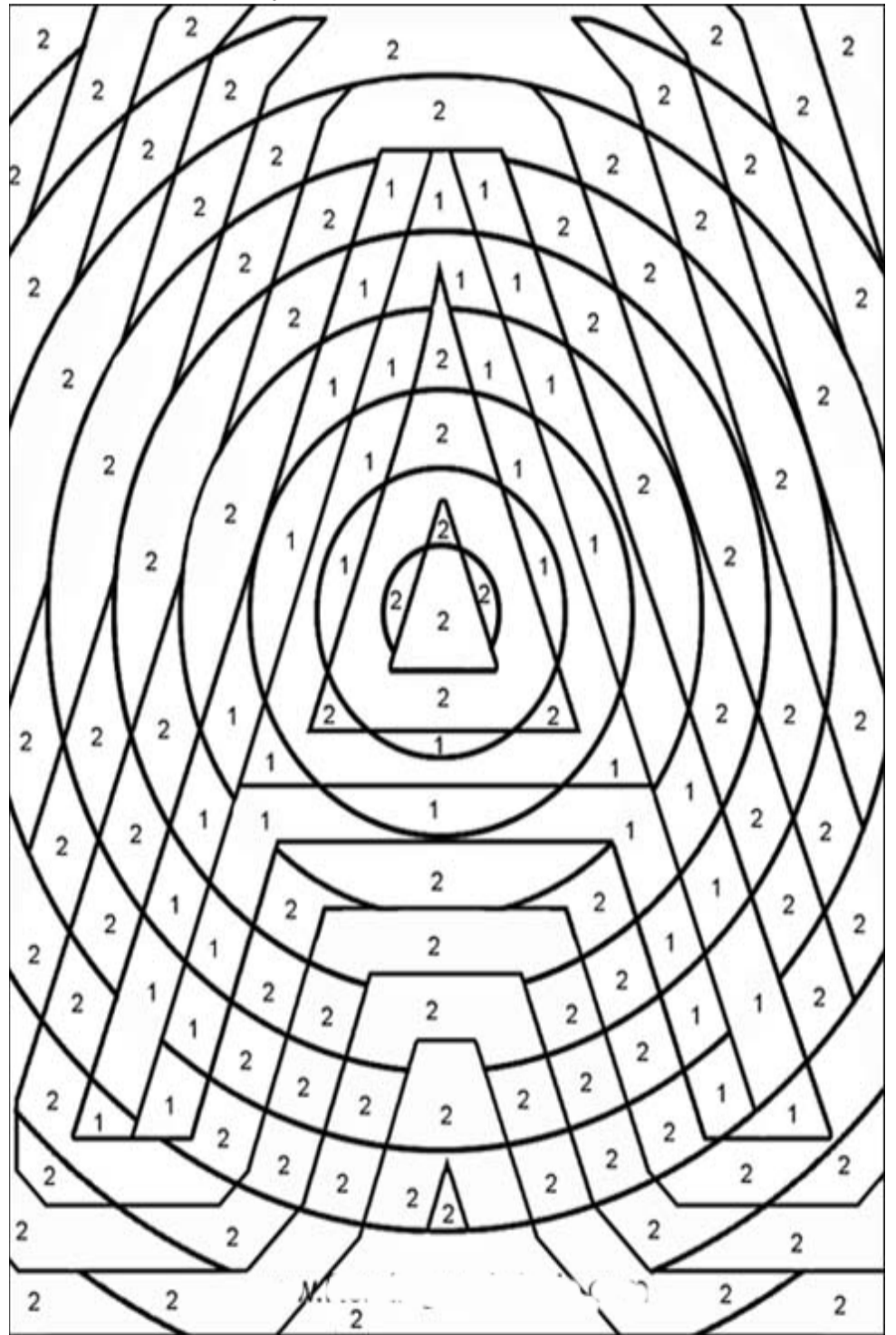
Can you find the six differences???



COLOR-BY-NUMBER

1 - yellow

2 - blue



CONGRATULATIONS

To our July winners - please uplift your prizes at our office next week - DBS Building - Level 3

- ★ Fogalele Hereme
- ★ Tyra Arp

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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