

Waste Information Today

A Quarterly newsletter that is aimed at communicating the Department of Environmental Affairs (DEA) Branch: Chemicals and Waste Management projects

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Welcome to the 43rd issue of **Waste Information today**.

In this issue, we provide news on the DEA's response to the recall of meat-products potentially contaminated with listeria as well as the training of municipal officials and councillors on sustainable waste management practices and strategies to mitigate greenhouse gas (GHS) effects on the atmosphere. There is also an article that gives an update on the Stockholm and Rotterdam conventions and how food waste and food loss is causing environmental issues.

Please feel free to forward any comments to SAWIC on info@sawic.environment.gov.za.

We look forward to hearing from you.

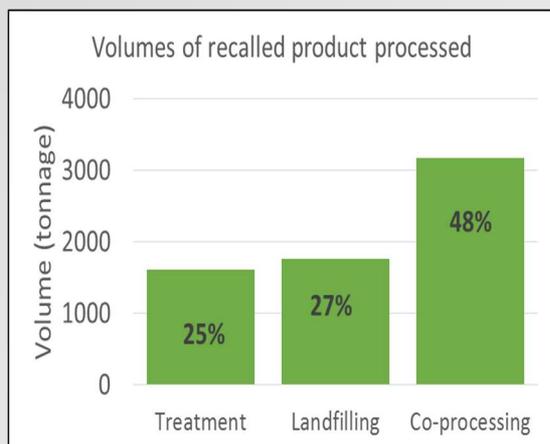
Regards,
Waste Information Team

DEA's response to the recall of meat-products potentially contaminated with Listeria

On the 7 March 2018, and in response to the recall of meat products potentially contaminated with Listeria, the Department of Environmental Affairs put measures in place to ensure that all contaminated products would be safely disposed of. The measures included a temporary lapse of the waste management license (WML) conditions of a number of health care risk waste (HCRW) treatment facilities, Class A landfill sites and co-processing facilities such that these facilities could accept the recalled products for destruction and/or landfilling.

The facilities were required to prepare and submit risk mitigation plans outlining the procedure that would be followed when dealing with this waste stream ensuring protection of staff coming into contact with the waste as well as ensuring adequate destruction and/or disposal of the recalled products. The waste management facilities were required to report to the Department on a weekly basis providing the volume of products accepted and managed on site.

The measures implemented by the Department ensured that there was enough capacity in the country to timeously destroy and/or dispose of the recalled products, and to remove, where possible, the possibility of the infected waste being accessed through waste picking activities.



In response to the Minister of Health's declaration on 3 September 2018 that the listeriosis outbreak was over and given that all the recalled products have been safely disposed of, the temporary lapse of the WML conditions has subsequently been withdrawn.

The Department wishes to thank the waste managers for their contributions towards ensuring environmentally sound management of the recalled products.

For any further information contact Dr Shauna Costley: scostley@environment.gov.za.

TRAINING OF MUNICIPAL COUNCILORS AND OFFICIALS ON SUSTAINABLE WASTE MANAGEMENT PRACTICES AND STRATEGIES TO MITIGATE GREENHOUSE GAS (GHS) EFFECTS ON THE ATMOSPHERE

Waste management in municipalities is one of the most important functions. At the beginning of 2018/19 financial year, the Directorate: Municipal Waste Support conducted a training needs analysis to all municipalities in the country in order to identify areas where municipalities need assistance in terms of technical skills for the implementation of waste management legislation, policies, standards, municipal by-laws etc. The Department developed a checklist that was sent to the municipalities regarding training needs in the order of priority. Local Government Support officials deployed in District Municipalities were instrumental in assisting municipalities to complete and return the checklist back to the Department of Environmental Affairs (DEA).

Training topics were identified from the responses received and subsequently; a training manual was developed for delivery of training support to municipalities.

Training topics identified included: National Domestic Waste Collection Standards as municipalities were still lacking in terms of waste service delivery in un-serviced areas, Implementation of Integrated Waste Management Plans, strategies to divert waste away from waste disposal facilities through alternative waste treatment technologies such as composting, biogas, pyrolysis, recycling initiatives and separation at source programmes. The on-going training is very useful for municipal officials who are new in the waste management sector to enable and ensure effective and efficient delivery of waste services as well as for reporting in terms of Outcome 10 and the National Waste Information Regulations, 2012. In addition, officials also get exposure in the calculation of greenhouses gas emissions for mitigation in the atmosphere. The target is to train 250 municipal officials/councillors by the end of the 2018/2019 financial year.

To date, over 194 municipal officials have been trained in Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Northern Cape and North West. Additional training sessions will be concluded in the last quarter of 2018/19 financial year.

Municipalities that have not been trained on the specific topics above may send their requests to the Municipal Waste Support Directorate on the emails below:

MMogotsi@environment.gov.za / SPDuma@environment.gov.za by no later than 31 January 2019.



Above: Ms Sindiswa Duma (DEA) facilitating councilor/municipal officials training.



Above: Mr Malcolm Mogotsi: Director: Municipal Support (DEA) conducting training.

Stockholm and Rotterdam Conventions

Introduction

The Stockholm and Rotterdam Conventions are global treaties and their primary goal is to protect the environment from adverse effects of hazardous chemicals. To achieve this goal, the Conventions require each Party to the convention to prohibit and/or take any appropriate legal and administrative actions required to minimize or prevent releases into the environment. These treaties are legally-binding agreements and they are implemented via national legislation, other regulatory measures, and national implementation plans.

Stockholm Convention

The Stockholm Convention on Persistent Organic Pollutants (POPs) entered into force on 17 May 2004. South Africa became a party on 4 September 2002. POPs are a group of chemicals that are widely used in agriculture and industrial practices and are unintentionally released from many anthropogenic activities. POPs are persistent and as a result resist degradation within the environment.

They have the ability to bio-accumulate and bio-magnify resulting in higher levels within living tissues than those in the surrounding abiotic environment. The Persistent Organic Pollutants Review Committee (POPRC), which is a subsidiary scientific body of the Stockholm Convention makes recommendations to the Conference of the Parties (COP) to list chemicals that, through rigorous scientific assessment, have been found to be Persistent Organic Pollutants (POPs).

Such recommended chemicals could be listed in either Annex A, B, and/or C to the convention.

- Annex A (Elimination): The production and use of chemicals in annex A must be eliminated
- unless there are specific exemptions;
- Annex B (Restriction): The production and use of chemicals in annex B must be restricted;
- Annex C (Unintentional Production): Measures must be taken to reduce the unintentional releases of chemicals in Annex C.

The POPRC has recommended the following chemicals to be listed in the upcoming Stockholm convention Conference of the Parties (COP 8).

- Dicofol is an organochlorine miticidal pesticide that has been used in agriculture to control mites on a variety of field crops, fruits, vegetables, ornamentals, cotton, and tea.
- Perfluorohexane sulfonic acid, its salts and PFHxS-related compounds are used widely in the production of fluoroelastomers and fluoropolymers, for the production of non-stick kitchen ware, food processing equipment. PFOA-related compounds, including side-chain fluorinated polymers, are used as surfactants and surface treatment agents in textiles, paper and paints, firefighting foams. PFOA has been detected in industrial waste, stain resistant carpets, carpet cleaning liquids, house dust, microwave popcorn bags, water, food, and Teflon. Unintentional formation of PFOA is created from inadequate incineration of fluoropolymers from municipal solid waste incineration with inappropriate incineration or open burning facilities at moderate temperatures.
- Pentadecafluorooctanoic acid, its salts and PFOA-related compounds have unique properties with a high resistance to friction, heat, chemical agents, low surface energy and used as water, grease, oil and soil repellent. It is widely utilized in a variety of consumer goods such as carpets, leather, apparel, textiles, firefighting foam, papermaking, printing inks, sealants, non-stick cookware.

Rotterdam Convention

South Africa is a Party to the Rotterdam Convention on Prior Informed Consent (PIC) of hazardous chemicals and pesticides in international trade since from the 4th of September 2002. The objective of the Convention is to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals (i.e., between exporting and importing countries) for managing chemicals that pose significant risks in order to protect human health and the environment from potential harm. It also seeks to contribute to the Environmentally Sound Management (ESM) of these chemicals when their use is permitted by facilitating information exchange about their characteristics, potential dangers, and safe handling and use by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties.

The Chemical Review Committee (CRC) is a subsidiary scientific body of the Rotterdam Convention and its primary responsibility is to review notifications submitted by parties, of chemicals that have been reported to cause adverse effects to human health and the environment. The CRC recommends chemicals that have met the set criteria to the COP for listing in Annex III to the convention. Chemicals, including pesticides and formulations listed under the Rotterdam Convention should be subjected to a procedure called "Prior Informed Consent" (PIC). The PIC procedure is a mechanism for formally obtaining and disseminating the decisions of importing Parties as to whether they wish to receive future shipments of those chemicals listed in Annex III of the Convention and for ensuring compliance with these decisions by exporting Parties.

In a nutshell, an exporting Party should first notify importing Party about their intent to export and seek a consent from importing Party before exporting can take place. The DEA is the responsible entity for issuing of import consent.

The following chemicals have been proposed for listing in Annexure III of the Rotterdam Convention:

For any further information contact Gordon Khaoue: GKhaoue@environment.gov.za.

- Acetochlor is used as herbicide on maize, and is known to be highly toxic to aquatic organisms and posing a high risk to birds and non-targeted plants. Acetochlor has been classified as a probable human carcinogen.
- Phorate is widely used to control insects on cotton, potatoes, coffee, beans and corn; and which is extremely toxic, causing lethality at low doses, and with studies showing poisonings and deaths amongst agricultural workers exposed to this active ingredient. It is very toxic both for target organisms and for mammals including human causing irritation of eyes, skin, respiratory system; miosis; rhinorrhea (discharge of thin nasal mucus); headache; chest tightness, wheezing, laryngeal spasm, salivation, cyanosis; anorexia, nausea, vomiting, abdominal cramps, diarrhea; sweating; muscle fasciculation, lassitude (weakness, exhaustion), paralysis; dizziness, confusion, ataxia; convulsions, coma; low blood pressure; cardiac irregularities.
- Hexabromocyclododecane (HBCD) is listed as a Persistent Organic Pollutant (POP) and is used for example as flame retardant and polystyrene foam insulation, known to be carcinogenic, neurotoxic and harmful for human development as well as toxic to both aquatic and terrestrial species. It is also has been classified as a category 2 for reproductive toxicity.
- Perfluorooctanic acid (PFOA), its salts and PFOA-related compounds is an industrial chemical and widely used in domestic non-stick cooking ware and food-processing appliances, surface treatment agents in textiles, paper and paints, firefighting foams and is known to be toxic to humans and the environment with links to major health issues such as kidney cancer, testicular cancer, thyroid disease, and pregnancy-induced hypertension.

Food waste and Food Loss – Environmental Issues



The National Organic Waste Composting Strategy (2013), initiated by the Department of Environmental Affairs (DEA) aims to develop and promote the diversion of organic waste from landfill sites for soil beneficiation and other uses through composting. Organic waste, according to the National Waste Information Regulations, comprises of food waste apart from garden and wood waste. What exactly is food waste and food loss? Food waste has come to be defined as food that is lost at the retail and consumer stages and refers to food suitable for human consumption that is discarded due to spoilage or expiry (FAO, 2013).

Food waste is therefore encountered from poor management and oversupply at the retail stage as well as from the wasteful consumer behaviour with quantities varying across the globe. Food loss occurs due to inefficiencies in the food supply chain, poor logistics and management practices, a lack of access to markets, and through natural disasters (FAO, 2013).

Global data on food loss and wastage indicates that food waste and loss quantities range between 15 and 25% of the total global food produced. It is estimated that food waste generated in South Africa is approximately 9.04 million tons per annum which is 31.4% of the total annual agricultural production sitting at 28.79 million tons per annum (Oelofse and Nahman, 2013). Vegetables and fruits together with roots and tubers make up more than 50% of the food wasted in South Africa while fish, seafood and meat make up only 6% of food waste (Oelofse and Nahman, 2013).



The almost one third wastage of all food produced in South Africa has environmental implications. Food waste cuts across the entire food supply value chain given the large amount of embedded resources lost at each stage. Current estimates indicate that greenhouse gas (GHG) emissions from food waste and loss has the potential to reach between 5.7 and 7.9 Gt CO₂e per year and therefore it is important to note that an understanding that all food production comes with its individual GHG emission factor can enhance the understanding of the nexus between food waste and GHG emissions (WWF, 2017).

In Sub-Saharan Africa and other developing countries, of which South Africa is part of, the greatest impact for the prevention of food waste lies at the early stages of the food supply chain where the most food waste and loss occurs and as such, the options for food waste prevention and management varies according to the stage at which food waste occurs.

For any further information contact Rishal Sooklal: RSooklal@environment.gov.za.