

A RAKWMA delegation participated in an Innovation Workshop organized by the Prime Minister of the UAE'S office and MEED. This workshop was arranged to try and explore innovative ways to address issues that are faced daily.





Issue # 9

## Plastic pollution: our disposable life

The following article was posted by Fauna & Flora and presents a really important message. Posted on: 09.11.17 (*Last edited*) 9 November 2017

The natural beauty of the Ras Al Khaimah beaches is being engendered by litter



Fauna & Flora International's Director of Science, Dr Abigail Entwistle, discusses the consequences of our global addiction to throwaway plastic.

Next time you're out and about and on the go, try and buy your standard takeaway lunch without gaining some plastic. Go on, try it...I do, and it's always difficult. Plastic wrapped sandwiches and salads. Plastic yoghurt pot. Plastic wrapped fruit. Plastic cutlery. Plastic soft drink bottle. Plasticlined hot drink cup...

How did we end up like this? In the 1950s as the new plastic technology emerged and the mass production of everyday plastic products began, it was heralded as saving us all time and energy. No more washing up. Just use plastic plates and throw them away! At least we know better now though, don't we?

Perhaps not. A colleague told me that during her recent stay on the west coast of the US, the hotels she stayed at (which were all midrange) used disposable plates and cutlery as standard in their restaurants.

I'm not out to demonise plastic as a material. It has many important uses and benefits for society; it plays a vital role in modern medicine, has allowed untold innovation, it improves food hygiene, and its low weight has reduced carbon emissions associated with the distribution of a wide range of items. Indeed, the much celebrated idea of a circular economy would allow all plastics to be recaptured, reused reprocessed and reducing the need for virgin plastic production (and hence the draw on fossil fuels from which they are made).

I could live with plastic that was designed to be reused multiple times rather than used once and thrown away, thus extending the useful life of this material. After an extended lifespan and multiple reuses it might even be then converted back to oil.

However, at present we are several steps away from a circular economy, and plastic production, use and waste is booming. Recycling is important, where it happens. But much of our plastic still ends up in landfills, where it will persist for centuries. More worryingly, lots of plastic escapes from any waste management and eventually ends up in our rivers and seas, where it will stay for centuries.

#### **Polluted seas**

There is growing evidence of the danger plastic may pose to marine wildlife, with many species known to be affected by this pervasive problem.

Fauna & Flora International (FFI) has been addressing marine plastic pollution for several years, and in particular has been instrumental in raising the profile of the insidious and less wellknown micro plastics.

These tiny particles are what is left when larger plastic items break up over time, but they also enter the ocean directly as socalled 'microbeads' (such as are used in facial scrubs), nurdles (raw pre-production plastic pellets), and the fibres from synthetic clothing that enter waterways from domestic washing machines.

Seabirds, marine mammals and sea turtles can accidently eat or become entangled in plastic devastating debris, with consequences.

Plastic litter in our seas is a pervasive problem. Credit: Kay Wilson/Indigo Dive Academy St. Vincent and the Grenadines.

There is also growing evidence of microplastics being eaten by a range of important species at the bottom of the food chain (including seafood species such as mussels and langoustines). This is particularly worrying given that these particles are thought to attract and concentrate background pollutants such as DDT, and concerns are now being raised about their potential to provide a vehicle for these harmful chemicals to enter the food chain.



#### A tide of plastic

The problem we face is twofold. First, it's hard to capture plastic so it doesn't pollute waterways and seas (and can be harnessed for re-use within a circular economy) – particularly in countries where effective waste management strategies are missing.

Second, the sheer volume of plastic being used every day presents an overwhelming challenge in itself; the scale of this waste is so vast that, even if only a small percentage escapes to the sea, the pollution load is enormous.

Even remote beaches are awash with plastic litter, which drifts in on ocean currents. Credit: Sarah Rakowski/FFI.

Last week Seas at Risk published a report highlighting the scale of disposable plastic use across Europe. The findings were shocking: 46 billion plastic drinks bottles a year. 16 billion coffee cups (which of course are lined with plastic, and cannot currently be recycled). 36.4 billion plastic drinking straws. The list goes on.

Single use plastics are one of the main sources of beach litter; perhaps because they are



designed to be used "on-the-go". If only 1% of these items are not binned or escape the waste management system, that's still 1 billion individual pieces of single use plastic that could enter European waterways or seas every year, and a similar problem is being described across many parts of the world. Looking for answers

So what should we be doing? Of course we must dispose of our waste responsibly. Make sure you your plastics recycle (and separate them properly when you do so), and when you can't then make sure they end up in a bin and not in the sea.

This means being careful about what you flush away (cotton buds and wet wipes, for instance, both contain plastic and both end up in our seas and should never be flushed).

It also applies to cigarette butts (a little known but important source of plastic pollution), which are often discarded on the street, where they can be washed into waterways and onwards to the sea.

Furthermore, we all need to collectively reduce our use of these single use plastics. They are

not necessary and alternatives do usually exist. Use your refillable drinks bottle. Remember to take your reusable cup when you get your coffee (it will be cheaper too, in many outlets). Ask for your drink to come without a plastic straw. All these are easy.

However we also need systemic change. Not so long ago, we were used to plastic bags being doled

out free with our shopping. Nowadays, many countries have put a stop to this, and yet we cope – it isn't that hard to live without them.

I hope that we will see a similar shift for other single-use items, with innovations and incentives that will make it easy to live without this amount of disposable plastic in our everyday lives.

Maybe the plastics we do use will be effectively captured and reused multiple times throughout their life, reducing the overall plastic footprint on our planet. I hope so. In the meantime I'm off to buy some lunch that comes in a paper, not plastic, bag...

#### WRITTEN BY

#### Dr Abigail Entwistle





### PROPOSED INCINERATION PLANT

Held an initial meeting regarding the required feasibility study that is required to investigate and report on the proposed incineration plant for the Northern Emirates. The meeting took place at the Al Jazeerah Landfill where the proposed plant may be constructed. It is envisaged that the proposed incineration plant will be able to incinerate approximately 500 tons of waste per day and by doing this generate electricity and release the burden on landfills.

### NEW CELL AT LANDFILL

After extensive research and an extended tendering process RAKWMA has awarded the construction of Cell 3 at the RAK WMA AI Jazeerah landfill to ENTAG. ENTAG will be responsible for installation of the lining for the complete cell while AI Hamra construction will manage all the required for earthworks. Once the third cell at the AI Jazeerah landfill is completed, it is envisaged that Ras AI Khaimah will be in a position to safely dispose of all waste that requires landfilling for the next 8 years.





### WMA WORKERS

RAK WMA workers were issued with mountain bikes recently as the distances that they need to cover while performing their duties at the RAK WMA landfills are really large and very time consuming and often dangerous due to the heat and conditions at the landfills. With mountain bikes the staff can more easily reach all areas of the landfills in much shorter times and this leads to a tremendous increase in efficiency and also has huge safety and health benefits for the staff concerned.



Sonia Nasser and Mateo Dugand recently addressed the Middle East Cleaning Technology Exhibition held in Dubai to inform delegates of the RAK Waste Management's integrated system of dealing with waste collected in Ras Al Khaimah. Other speakers at the exhibition included private sector and government representatives who also spoke on issues related to waste management.

# The Middle East Cleaning Technology Exhibition





### COOPERATION & SUPPORT LEADS TO SUCCESS

RAK WMA and other sections of Public Works meet regularly to discuss how issues related to operations may be approved. Meetings such as this are crucial to understanding the constraints that each section face and to addressing various ways to improve efficiency. It is only by addressing concerns and issues that improvements can be made.



#### WMA & CERES

Representatives from RAK WMA and CERES have visited the Umm Al Qwain Landfill site where construction is underway to improve the safe landfilling capacity of Umm Al Qwain. Visits such as this are important for many reasons, one of which is the fact that skills and knowledge transfer allows for continued advancement in the field of waste management so that all benefit.

#### USING RECYCLED MATERIALS

Mark Mcquire, executive Director of the Landscaping Agency has directed and overseen the development of the public park attached to the Showka Dam in the Southern region of Ras Al Khaimah using used tyres that RAK WMA supplied for the project. The park is now fully equipped and ready for the large influx of visitors to the region which is expected as the winter weather draws UAE residents and visitors to outdoor activities.





155 tons of tyres have been shredded and sent to Lafarge Cement factory for incineration during October 2017. RAK WMA is presently in in negotiations with various role players to find the best and most economically viable ways to recycle used tyres. Used tyres have for a very long time been simply discarded or landfilled although they have incredibly valuable recyclable materials but this is all about to change and companies are realizing the value of these used tyres.



