

Event report – Sustainability Week 2018  
Compiled by Gordon Brown – Facilitator  
Vision Zero Waste Seminar – 7<sup>th</sup> June 2018

Time: 09h00pm

Introduction:

The 8<sup>th</sup> annual Vision Waste Seminar would hear presentations by researchers, local government leaders and managers, practitioners, civil society, and technology providers, as they set out their thoughts and ideas on the problem case in respect of waste internationally, in Africa, South Africa and indeed in the City of Tshwane, and would share their approaches and proposals in how to begin to solve these problems under the theme of moving towards zero waste to landfill.

Cllr Mandla Nkomo , MMC for Human Settlement Services Development , City of Tshwane: Topic - Opening and Welcome

Cllr Nkomo welcomed delegates and provided context for the discussion from the perspective of the City. He highlighted the fact that while landfill sites were filling up quickly, no new landfill sites were being opened, and stated that moving away from the landfill paradigm was not an option and that the city already begun made great strides in this regard, with recycling collection services being offered to several districts and the establishment of a waste recovery plant, and a waste to energy plant within the City. Cllr Nkomo expressed his support of the objectives of the session and wished the group the best in their deliberations.

Matshepo Molala, Randwick City Council (Australia): Topic – Driving Behaviour Change

Target: 70% increase in recycling of municipal solid waste, 75% diverted from landfill, 40% reduction in litter, and 30% reduction in incidents of illegal dumping. Introducing the Randwick Food Waste Trial which had the highest number of participants in a City wide survey(n=8340), the majority of households (both trial and non-trial) support the service, trial participants were most supportive of the rollout. Feedback on communication suggested the communication material was adequate and informative. To meet the targets we need to engage our community, increase understanding of our waste profile, and understanding values, attitudes and community norms was an imperative. Selected appropriate behaviour change strategies, embarked on continuous improvement, sharing and learning from others.

Marko Nokkala, Senior Sales Manager, Valmet South Africa: Topic – Waste from a challenge to an opportunity for African Cities

Marco highlighted that a move towards zero waste starts with separation of waste which then triggers opportunity as materials have value. Waste that cannot be effectively separated, known as residue can still be of value however, through waste to energy (W-E) solutions which can work together with materials recovery strategies as the scale of waste minimises the issue of different businesses competing for waste streams. There is an opportunity to fast track small-medium size W-E project in SA due to projects below a certain scale not requiring a full EIA which adds cost and extends projects horizons. The key to successful implementation of such projects is partnership to ensure lessons are learned from the mistake of other markets, and to ensure best practices are followed. Municipalities own the waste and can therefore transact but one challenge remains the MFA which limits contracts to 4 years, when W-E scale projects require 25 years commitment.

Dr Susan Oelofse, CSIR: Topic – Challenges and Opportunities in Waste Management

The key to moving towards zero waste is for resources to be retained within the system through circular economy. Susan provided a review of the Africa Waste Management Outlook and highlighted the problem of a lack of collection of waste and resultant cost of illegal dumping and the negative impacts of open burning, and pointing an exacerbating trend for Africa, especially for rapid growth countries such as Nigeria and Egypt with waste generation driven ultimately by an increase in consumerism. In SA illegal dumping must be policed and funds currently being used to pay for the clean-up could be redirected to underpinning circular approaches to waste management. The opportunity for Africa is to develop a secondary resources economy worth an estimated US\$7.6 billion per year in secondary resources. A regional approach is needed to realise these benefits and the development of an Africa regional strategy for secondary materials management is recommended.

Nick Mannie, Aurecon: Topic - What does the 'Internet of Things' mean for waste and pollution?

IoT not limited to developed countries, 40% of worldwide IOT market value will emerge from the developing countries by 2020. Job creation will increase in the technological/digital space as the demand to connect physical items to electronics and to be able to gather data. A move to more connected smart cities will see municipal services change and become more efficient, with enhanced communication to households about recyclables and separation; efficient least cost materials recovery with embedded financial tools tracking transactions in a functional value chain. In this scenario of greater materials flows and a more effective waste economy the much needed alternative waste approaches such as large scale materials recovery facilities, large scale digesters and composters, and waste to energy technologies become totally feasible.

Victor Manavhela, NCPC: Topic – Industrial Symbiosis Programme and Progress in South Africa

Industrial symbiosis is a resource efficiency approach where unused or residual resources of one company are used by another, aiming to divert waste from landfill, while at the same time creating real businesses benefits for members. Established in 3 provinces, Western Cape (WISP), KZN (KISP), and Gauteng (GISP). GISP alone has generated a total economic value of R94.8m between April 2015 and March 2018. Calculation based on (a) value of landfill airspace savings, (b) value of recovered resources; and (c) externalities avoided. Based on the tonnages diverted in 2017/18 alone – the economic impact has been estimated at R89.5m per annum.

Sandra Mazo-Nix (USA), Climate and Clean Air Coalition Secretariate: Topic – Financing models for solid waste – a global perspective

Environmental impacts of municipal solid waste (MSW) are significant and becoming the fastest growing environmental pollutant. Solid waste sector is a substantial source of short-lived climate pollutants, particularly black carbon from waste burning, and methane from landfills (the third-largest source of global anthropogenic methane emissions). Financial impacts are also massive with waste management often the largest cost for cities accounting for between 20% and 50% of total municipal budgets. In addition there are major barriers to accessing the finance required to switch to best practice actions which are capital intensive in nature. The solutions begin with municipalities increasing or initiating new waste management revenue streams, and then to leverage these revenue streams to raise the finance to enable the infrastructure upgrades.

Introducing the CCAC Waste Initiative Approach: working with municipalities to facilitate this process, by providing technical assistance, capacity building, development of tools and resources, and through information sharing and networking. The initiative adds value by working directly with cities to trigger support from partners and by mobilizing experts. See presentation for resources.

Mthobile Kolisa, Group Head: Environment and Agricultural Management Services, City of Tshwane: Topic – Opportunities associated with City of Tshwane’s new Waste Strategy

Key objective of the City is to integrate its New Waste Strategy (NWS) into its current waste management services, and in so doing to trigger opportunities to (a) establish a sustainable waste management service in the City, (b) advance economic and job creation opportunities, and (c) to enhance community consciousness and action on issues of waste management and the environment. The NWS seeks fundamentally to flip the old waste hierarchy, while continuing to provide current waste collection and management services. The primary implementation strategy of the City is to form partnerships with the private sector to effect the necessary infrastructure investments required to make the change, and is currently actively seeking to resolve these partnerships. Opportunities include fleet leasing; build, operate and transfer (BOT), public private partnerships (PPP's), and other mechanisms. The City is also considering a W-E solutions using these models.

Jaishiela Rajput, CEO, Tomorrow Matters Now: Topic – Mapping waste value chains to divert waste from landfill

Panel Topic: What key strategies can cities implement right now to ‘leap-frog’ from no waste services straight to a best practice circular economy waste management system?

Strategy points from panel brain storm:

1. Formulate a master plan and engage with the community through leaders and through information campaign about the master plan setting out the key objectives and benefits to get their buy in
2. Engage with waste stream off-takers to set up removal of bulk waste and to revenue streams for valuable waste streams
3. Install all necessary infrastructure to create a mini materials recovery space with appropriate receptacles to receive the following waste streams (tip: engage the private to provide containers – could be a good marketing campaign for them)
  - a. separated dry waste materials
  - b. separated food waste
  - c. garden refuse
  - d. building rubble
  - e. residual waste for disposal
4. Recruit and train members of the community to operate the mini-recovery facility, keep it neat and sanitary, engage with the council and with other role players, and also to co-ordinate and collect from other central collection points such as schools
5. Engage schools so kids can bring recyclables to the schools. Coca Cola has a program with schools to promote recycling.
6. Set up and promote community composting. Engage with NGOs that can help with this task for the dissemination of the program and capacity building of the community to segregate organic waste.
7. Composting activities could extend to/integrate with community food gardens, or work with food markets (farmers' markets) to segregate organic waste. Establish relationships with farmers so they can take that clean organic waste for composting and use of the compost in their fields, perhaps in return for cash or produce
8. Once the master plan and necessary infrastructure and systems have been put in place an outreach programme to the community should be rolled out, educating households on the merits and direct benefits of participating in the programme

9. This should be coupled with a mass clean up to collect litter and illegal dumping going in and around the settlement and to initiate the materials from at scale, and to start with an obvious and visibly positive impact
10. Behaviour change is required. So do it right the first time. Start-stop actions is not supportive of behaviour change
11. Communication - keep the community updated on what is happening and what to do to assist in stances of service interruptions
12. Don't simply buy off the shelf technologies and expect it to be successful in Africa. Adapt it to local conditions
13. Need to maximise the job creation opportunities at all levels
14. Make it simple, convenient and reliable. Responsive to the needs of the community.