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Panel on Environmental Affairs
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The German Chamber of Commerce Hong Kong wishes to share the German experience in dealing with the problem of municipal solid waste. As citizens of Hong Kong and a business group, we are concerned, that failure to deal with the waste problem in a timely fashion, could be potentially harmful to Hong Kong's living and business environment.

The landfills are reaching capacity and given the fact, that space in Hong Kong is scarce, this method of disposal cannot possibly be sustainable.

According to the European Waste Hierarchy, waste should be

1. Prevented
2. Reused/recycled
3. Disposed off

1. Prevention

To prevent waste, there is a clear responsibility for each society to look after its own problems. Such responsibilities include:

- Setting out a legal framework for waste reduction and recycling
- Providing the appropriate infrastructure for source separated collection, transport and waste treatment
- Providing waste treatment technologies, which suit the separated waste fractions most, such as residual waste and biological waste etc.

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2. Recycling

Currently the waste recovery rate in Hong Kong just is over 50%. Germany, in comparison, has one of the highest recovery rates in the world with some 70%. At the current rate, Hong Kong would need at least 20 years to achieve such level.

Recycling not only requires large recycling plants and appropriate technologies. The recycled products have to be of sufficient quality to be absorbed by the market. To enhance the recycling rate, it requires the people of Hong Kong to change their behaviour towards waste recycling significantly, either voluntarily or by way of legislation. This should apply to waste paper, packaging, biological waste, glass and metals. Enforcing recycling through legislation also requires the right infrastructure to be in place. There have to be collection and transport systems as well as recycling plants, which are not readily available and require space.

3. Disposal

In Western Europe, waste reduction is one of the major strategies to reduce the per capita waste production. But to safely prevent land filling, which is banned in the EU since 2005, in Germany today there are some 70 Energy from Waste plants treating some 20 Mio tons of municipal solid waste every year.

In Hong Kong's case, the deployment of an Integrated Waste Management Facility (IWMF) with a capacity of approx. 3,000 tpd would account for only 30 % of the total municipal solid waste and still requires approx. 6,000 tpd to be disposed of in landfills. To completely prevent land filling the recycling rate would have to increase by another 2.2 Mio tpy, bringing it up to 83 % in total which is unlikely to be achieved in the short term. Therefore, to reduce the need for land filling and its negative effects, waste treatment capacity has to be provided.

Waste incineration has undergone a drastic technological change throughout the last 20 years. Today, Energy from Waste (EfW) is considered to be a firm part of the European strategy for a sustainable waste management.

The incinerator technology today has improved significantly and is aiming at high energy recovery from the waste. Moreover, waste incineration produces less greenhouse gasses compared to landfills. Today, the environmental impact of an EfW plant falls back behind other polluting technologies, such as power plants, cement kilns and steel works.

The complete technological process has been optimized to produce high quality residues such as ash which can be used as construction material to substitute valuable natural resources.

Without these strong technological standards EfW plants would not have reached such high level of public acceptance throughout the world.

As regards the plasma arch technology, which has been proposed as an alternative to the moving grate incineration: To the best of our knowledge this technology has yet to be proven as reliable on a large industrial scale as is required to deal with Hong Kongs waste. Besides, rather than producing energy from waste, such plants require energy to operate and therefore contribute to a negative CO2 balance.

Conclusion

To reduce the volume of waste in the coming years to a sustainable level none of the known strategies covered here will suffice as a standalone solution. The most viable strategy appears to be a combination of all approaches including avoidance, reduction and recycling. Even in the most optimistic scenario, there will be unavoidable residual waste which has to be dealt with. If the success rate is less than the most optimistic scenario, one or two more incinerators of the same capacity would be required, assuming the overall volume of waste does not increase.

The German Chamber of Commerce Hong Kong welcomes the Hong Kong Governments initiatives in tackling the rather pressing issue of how to deal with municipal solid waste in the SAR. The Secretary for the Environment has issued a blue print for sustainable use of resources in 2013 with quantifiable targets and a time frame on objectives such as overall waste reduction, a higher rate of waste recovery, a waste charging scheme and methods of waste treatment. This is a step in the right direction and it is crucial that all members of the Hong Kong society become part of the solution to the problem dealing with waste.

Germany has rich experience in dealing with environmental protection issues, from stakeholder engagement to policy formulation to technical solutions and one of the most important lessons learned from the past is: dealing with municipal solid waste is a community effort.

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