# WASTELINE : SUMMER / AUTUMN 2014

The Newsletter of the Hong Kong Waste Management Association
Web Site: www.hongkongwma.org.hk


**Message from the Editor:** This Newsletter requires your participation. We would like to hear your experiences in implementing good waste management practices in Hong Kong or overseas. If you have an interesting story to tell, please write to me at barry_adcock@sita.hk

## Charging for Waste
## Address by Guest of Honour before the AGM on 23 September 2014

The HKWMA was very honoured this year to be able to invite the Chairman of the Council for Sustainable Development (CSD), the Hon. Bernard Charnwut Chan, to talk to the members about waste charging. As Mr. Chan is an extremely busy man, he could only spare us an hour in the early evening. So that we didn't lose this great chance of hearing what Mr. Chan had to say the programme for the evening was re-arranged with the Guest of Honour's address coming before the Annual General Meeting (AGM) of the Association.



The Guest of Honour with the members of Exco

Mr. Chan was introduced by Kenny Wong, Deputy Chairman of the HKWMA and a member of the CSD working group on waste charging. He told the audience that Mr. Chan would explain the background to the Municipal Solid Waste (MSW) charging proposals being considered by the CSD.



Kenny Wong introducing the Guest of Honour

Mr. Chan started off his address with some good news; on the previous day, the CSD working group on waste charging had held a wide-ranging 3 hour long discussion and then magically reached a consensus at 6:00 pm. The working group would report back to the CSD in early October and a report had been promised to the Environmental Bureau in the 4th quarter of the year. Mr. Chan said that during his working group's consultations, it was very apparent that the various green groups in Hong Kong did not trust what the Government was telling them and so they were always asking CSD whether this exercise on waste charging was serious. Mr. Chan said that, yes, the Government was serious especially the Secretary for the Environment, Mr. K S Wong, who was very keen to see waste charging introduced. However, with approval for various proposed waste management facilities stalled in the Legislative Council, it was difficult to know what might happen in the near term.



Mr. Chan givng his address

Many people had asked whether charging could happen in Hong Kong. Mr. Chan said that twenty years ago it probably could not have but now that Hong Kong was running out of time to prepare alternative waste management initiatives before the landfills were full, a crisis was looming which was concentrating people's minds better than before. There was a need to get all stakeholders together and that took a lot of time. Mr. Chan gave an example of his previous experience with the regulation of charities which took six years to prepare a report because many Government departments were involved in the discussions and didn't appear to be really interested in expediting the matter. Accordingly, a proposal was put forward for a "half way house" transition period but this still remained on the shelf somewhere

within Government. Unfortunately, it would only likely be actioned if there were a great scandal involving a charity. However, in this case, with only finite life left in Hong Kong's landfills that should help to get waste charging moving.

Mr. Chan said that there was little disagreement on the charging rate. A behavioral change was required from all members of the Hong Kong public. The question was what level of charge would ensure that behavioral change. His own opinion was that a lower rate would be preferable to discourage fly-tipping, by which he meant not only truckloads of waste being tipped in quiet roads but also people living in old neighborhoods just throwing bags of waste off the roof into the street. However, green groups considered that higher charges would be more compelling. Mr. Chan said that he thought a consensus amongst most stakeholders was a charge of about HK$30 per month per household collected by charges for pre-designated bags, thereby enshrining the "user pays" principle.

On the charging mechanism there were more diverse views and eventually a consensus had been reached among the 30-odd working group committee members. The main difference of opinion had come between more idealistic green groups and the management companies of housing estates who had to look at the practicalities of collecting the waste. Hong Kong's problem was not a lack of ideas, but how to agree on which ideas were the best ones and how to make them work. The fairest method had generally come to be agreed to be individual charging per bag because this gave an incentive to people to waste less and therefore pay less. Whatever was done, however, this could not produce an overnight fix for waste reduction. In Taiwan, for instance, it took ten years to achieve 90% compliance. If we assumed that when the scheme was introduced in Hong Kong, there was only 50% compliance on day one, what could be done about the other 50%? The Environmental Bureau had identified some problems in that legislation would have to be introduced for waste charging and that the requirements would then become the law, not just a good idea. So how would compliance be enforced and fines be levied for non-compliance? This could only be done at refuse collection points where a Government representative would ensure that only authorized bags were disposed of. That would be okay for the few estates that had single dwellings but what about multi-storey tower blocks? How would the legislation interface between the Government and the public be arranged? The refuse collection vehicles that went to the estates just picked up 660 litre bins and tipped the contents into their truck to be taken to a transfer station or landfill. How could anybody control what was in the 660 litre bins at the legislative interface between the Government department (e.g. FEHD) and the building / estate management companies? How could the upstream relationship between householders and the building management be arranged? Maybe a hybrid system could be introduced where some estates could reach the threshold required but others with more blocks and more floors could not. So how to control all of them?

Mr. Chan said that to try and answer some of these questions trials were presently being carried out on seven estates in town. The results that had been received from them were very different from one another, so it was evident that there must be flexible methods of charging to accommodate all cases. More work needed to be done on this aspect especially to encourage the changeover from per building or per estate charging to per household charging by prepaid bags. Suitable incentives needed to be built into the system to ensure that this would happen. Mr. Chan said that whatever we decided on it must be workable. He was confident that the CSD's recommendations to the Government would be workable so Government should go ahead and adopt them. However, the Environment Bureau would still have to draft legislation which would lead to further consultation which would take more time even before the draft legislation could go to LEGCO for approval. Mr. Chan said that he was 70 to 80% confident that this time around Hong Kong could get waste charging introduced. He hoped that over the next few months, he would be able to become fully (100%) confident. He said the key to success was sufficient resources within Government to ensure that the legislation eventually adopted was fully enforced.

Mr. Chan finished his talk at 7:10 pm and said he still had a little time to answer questions. Mr. Louis Chan, past Chairman of HKWMA, noted that as SDC was only an advisory body to Government, from the experience of the recently introduced plastic bag levy, how was enforcement to be arranged further down the line? Was that part of the SDC's brief? Mr. Chan answered that "no, it was not".



Mr. Chan answering members' questions

Mr. Jude Chow, HKWMA Exco member, then noted that there was likely to be very strong resistance to waste charging from public housing estate tenants and that to save paying, they would fly-tip their waste somewhere else. Mr. Chan answered that if the problem was simple, it would have been solved twenty years ago. Estimates indicated that 6% of Hong Kong's waste was already fly-tipped so we needed to start education to introduce a change of mindset into the population and that this would take time.

Mr. Chan summed up that his main worry was not with the public but with Government departments having more work to do and becoming involved in conflicts with residents. For instance, the Housing Department for one was presently totally against any form of charging. However, as part of their brief, SDC were drafting proposed operational guidelines for Government consideration.



Mr. Chan with members of YMC and Exco

Mr. Chan was thanked for his very interesting and frank address and received a rousing round of applause from his audience.

***Reported by Barry Adcock***

## AGM Approves Changes to Constitution

The Association's Annual General Meeting (AGM) was held again in the Hong Kong Club, this year on 23 September. After a very interesting talk from the Guest of Honour, the Hon. Bernard Charnwut Chan, Chairman of the Council for Sustainable Development, the Association got down to the more mundane business of the AGM. Proceedings started at 7:25 pm with about 90 members and guests in attendance.

After the minutes of the 20th Annual General Meeting had been adopted, the Chairman for the last two years, Mr. Barry Lee, gave his report. He reported that it had been another busy and fruitful year for the HKWMA with two high spots in November 2013 : Hong Kong's hosting of the Seventh Two-Coast Forum and the Association's 20th Anniversary Dinner (see reports in the Winter 2013 / 2014 Edition of "Wasteline"). Over 300 delegates attended the Two-Coast Forum and 220 attended the Anniversary Dinner including the Secretary and Under Secretary for the Environment, Mr. K S Wong and Ms. Christine Loh. A new HKWMA booklet was also prepared and distributed on the occasion of the 20th Anniversary Dinner.



Chairman Mr. Barry Lee giving his report

As well as organizing these landmark events, the Association had successfully organized a series of seminars on waste management, had organized many technical visits and had maintained close liaison with Government and LEGCO on waste management related issues. The Chairman gave particular thanks to the Young Members' Chapter of the Association for all the hard work it had

put in to organize events in the past year. It was also rewarding to note that between 2012 and 2014 the membership of the Association had increased from 150 to over 200 members.

The financial report for 2013 / 2014 was reviewed by the members present and accepted without amendment. The balance of funds in the Association's accounts at the end of August 2014 was over HK$560,000.

For the first time since the formation of the Association over 21 years ago, a proposal was put to the AGM to make certain amendments to the Association's constitution. The Chairman noted that proposals had been circulated to all members at the end of August for their review prior to the AGM. To keep up with the changes that had taken place in the previous two decades, the major amendments proposed by the Executive Committee were summarized by the Chairman as follows :

**1** To expand the objectives of the Association;

**2** To increase the number of Executive Committee members from ten to a maximum of twelve;

**3** To extend the term of service of each Executive Committee Member from two years to three years;

**4** To require that a minimum of three (instead of five) Executive Committee Members shall retire at each future AGM with the vacancies being filled by the succeeding members elected at that AGM;

**5** To allow each Executive Committee Member to serve for a maximum of three consecutive terms instead of two terms unless he / she is the Chairperson or Immediate Past Chairperson;

**6** To clarify that an Executive Committee Member in the current year could be nominated for election to Chairperson in the coming year;

**7** To extend the term of service of the Chairperson from one year to two years;

**8** To allow a maximum of two Vice Chairpersons to serve on the Executive Committee;

**9** To allow the Executive Committee to invite up to a maximum of five Co-opted members to join the Executive Committee for a period of service ending at the next AGM but with the Co-opted members having no right to vote on motions raised at Executive Committee Meetings;

**10** To allow the use of electronic mail as an official means of communication;

**11** To allow the use of an electronic version of the Association's membership card;

**12** To clarify that an Organization Member is entitled to nominate a maximum of four representatives and an Institution Member two representatives;

**13** To clarify that Student Members do not have the same membership rights as members who had paid a subscription; and

**14** To clarify that the Executive Committee may grant, on a case by case basis, free membership to appropriate individuals.

Following the earlier circulation of the proposed amendments to members, only one suggestion had been received : that the HK$300 annual membership fee, which had remained unchanged for 21 years, be reviewed. In response to this suggestion the Chairman proposed to set up a taskforce to review the fee structure and make recommendations to the members for their approval in due course. The amendments to the constitution were then approved by the members by a show of hands.

In accordance with the constitution, five members of the Executive Committee had resigned on completion of their terms of office and offered themselves for re-election. With the size of the Executive Committee having been increased from ten members to twelve members in the approved amended constitution that left seven vacancies on the Executive Committee for the 2014 / 2015 session. At the closing of the nomination period on 15 September 2014, seven nominations had been received for the seven vacancies on the Executive Committee.

As the number of nominations equalled the number of vacancies, no election was required and, as a result, the Chairman announced the appointment of all seven nominated candidates to the Executive Committee for a term of three years. The committee for the next year would therefore be :

- Mr. Barry Lee, Immediate Past Chairperson;
- Mr. Kenny Wong;
- Mr. Lawrence Lau;
- Mr. Karel Haubourdin;
- Dr. Kaimin Shih;
- Mr. Louis Chan;
- Mr. Joe Ng;
- Mr. Victor Li;
- Mr. Barry Adcock;
- Mr. Jude Chow;
- Mr. Mark Venhoek; and
- Mr. Simon Cheung.

In accordance with the constitution, Mr. Kenny Wong was nominated as the Chairman of the Association for two years from 2014 to 2016. Upon there being no objection from the members, Mr. Kenny Wong became the new Chairman of the Association.

The formal business of the AGM was completed at 7:45 pm.

The new Chairman then made a short address to the members. He started off by thanking Mr. Barry Lee for all his hard work in the previous two years and paid tribute to the increase in membership during that period. Mr. Wong said he was honoured to be elected Chairman and hoped that he would be able to live up to the example of his predecessors. He reminded his audience that waste management was now a topic of great interest in Hong Kong as could be seen from the calibre of the evening's Guest of Honour. All of us in the waste management industry accepted that a wide range of measures was needed for effective waste management including charging, recycling, product responsibility schemes etc. as well as landfill extensions and incinerators. The new Chairman particularly welcomed the HK$1 billion fund set up by the Government to encourage recycling. It was clear that the Government had identified what needed to be done but unfortunately most of their initiatives were still mired in controversy in the Legislative Council.

Mr. Wong said that during his chairmanship the HKWMA would continue to act as a bridge between the Government and the various stakeholders in the waste management industry and that this work would be spearheaded by one of the new Deputy Chairmen. Meanwhile, the other Deputy Chairman would concentrate on developing the membership of the Association. All the other activities of the Association would continue as well and he was hopeful that more social events could be included, thanks to the energetic activities of the YMC. HKWMA was sending a delegation to the Two-Coasts Forum in Taiwan in November and would also continue to support other learned societies in Hong Kong.



Members of YMC
with outgoing and incoming Chairmen

The Chairman released the members at five minutes to eight to catch up with all old friends and enjoy the excellent cocktails and canapes provided by the Hong Kong Club



Members and guests enjoying the Club's fare

***Reported by Barry Adcock***

## Hong Kong Waste Management Association Session 2014-2016 Chairman's Message



It's my great honour to be elected as the new chairman of HKWMA at its 20th anniversary since its inauguration in 1994. Although I have only joined the association for several years, I have learned about the evolution and great success of HKWMA and I think I am very lucky to be part of it. As such, I must pay tribute to all the previous chairpersons and members who have laid solid foundation for the Association. With the tremendous success of my big brothers and sisters, I can feel the pressure, but pressure is a kind of good motivation for me to work harder!

Waste management has never been as such a high priority in HK, as you can see many of our citizens also feel about the need right now. Our guest of Honour of the AGM, Mr Bernard Chan, who is not a waste management specialist by training, also helps us to push for some important waste management initiatives. You can see he is very committed and knows all the issues on Municipal Solid Waste charging.

I think we all agree that HK is in urgent need of a bundle of measures including software and hardware, like MSW charging, recycling, awareness promotion & education, community action, Producer Responsibility Scheme (glass beverage bottles and WEEE), waste treatment facilitates like organic waste treatment facilities, extension of landfills and incinerator, sludge incinerator, etc. The current administration has been putting up huge effort in pushing through their policy initiatives, though many of them are still queuing in the LegCo. In addition to those in the pipeline, the Chief Executive Mr. CY Leung has announced the setting up of a $1b recycling fund in his Policy Address earlier this year, with an aim to further boost up recycling and divert waste from landfill. You may be aware that the Hong Kong Productivity Council was invited to be the implementation partner to run the fund. So please stay tuned for the funding details.

HKWMA will continue to take the leading role in the waste management field by actively responding to government's policy initiatives & consultations. I also understand that recently more stakeholders are interested in waste management in HK and I believe HKWMA are happy to share the most updated information with them and to act as a bridge between the government and the stakeholders In the new session I propose to elect 2 vice-chairmen, each of them to take care of waste management policy issue and membership drive respectively, and I am very pleased that my proposal is endorsed by the ExCo. By strengthening these two areas I have confidence that we are able to upkeep our leading role and expand our membership.

Surely we will continue to share information and intelligence with our members by organizing technical seminars, visits, training courses, etc., and the credits should go to our energetic Young Members Chapter. We will also organize social gathering to allow members and guests to mingle in a friendly environment, and the annual Spring Cocktail Reception and 20th anniversary dinner last year are perfect examples.

We are also planning to participate in some regional and international events, e.g. we will form a delegation to Taiwan in November 2014 to participate in the 2-Coast Forum, and we are a member of the Organizing Committee and a Supporting Organization of the International Conference on Solid Waste 2015. We also support the Environment Bureau's Eco Expo Asia to be held in October 2014. Of course we will continue to collaborate with our peer professional institutions, among others like HKIE EVD, HKGSA, CIWEM HK, HKIEIA & IMechE.

With the formation of the expanded ExCo together with new co-opted members, YMC and newly formed student chapters, we will iron out the details of our initiatives and programmes, which I will report to you in due course.

Thanks again for giving me a chance to serve you, and I look forward to meeting you all in the near future. Thank you very much!

***Kenny Wong***
***Chairman***
***(Session 2014 – 2016)***

## YMC Annual Report for Session 2012-2014

The HKWMA YMC committee serving the session 2012-2014 completed its 2-year term by 23 September 2014. This session was the 2nd term since establishing the YMC. At the beginning of 2012, we engaged 16 core YMC members with varying backgrounds ranging from consultants, contractors, EPD to university students. Due to its popularity and fun atmosphere, we were joined later by five more members in 2013 as observers. The number of YMC has thus increased to 21 in total. This group of young energetic members had made enthusiastic efforts to support HKWMA EXCO on technical visits, seminars, professional courses and continued to reach out to students and attract young professionals.

***Overall Review :***

*Technical/ Non-Technical Visits*

During the 2012-2014 session the YMC organized a total of 11 visits including one out-of-town visit to an Incinerator Facility in BaoAn, China and one non-technical visit to a Natural Network farm. Two of the visits, to the Sludge Treatment Facility in Tsang Tsui and the ASB BioDiesel Plant in Tseung Kwan O were each held twice as we had limited capacity and a large interest response rate. The visits are summarized as follows:

| Visits | Date | Year |
|---|---|---|
| Technical visit to Sludge Treatment Facility in Tsang Tsui | 17/11, 1/12 | 2012 |
| Technical Visit to Laputa Eco Construction Material Co. | 25/11 | 2012 |
| Technical visit to Incinerator facility in BaoAn, China | 13/4 | 2013 |
| Technical Visit to Dunwell Used Oil Recycling Facility in Yuen Long | 29/6 | 2013 |
| Technical Visit to Zero Carbon Building | 20/7 | 2013 |
| Technical Visit to Eco Park Visitor Center and St' James WEEE Facility visit | 5/10 | 2013 |
| Natural Network Farm visit | 26/4 | 2014 |
| Technical visit to ASB biodiesel plant in Tseung Kwan O | 24/5, 31/5 | 2014 |
| Technical Visit to Champway Technology Ltd | 2/8 | 2014 |

*Student Promotion*

One of the goals which was set out during the YMC establishment in 2010 is to encourage student membership. The YMC organized a second student competition "Waste to Wonder" in 2013 which was aimed at raising awareness of environmental protection and good waste management to tertiary students. Students were invited to submit their abstract report on innovative ideas and provide a video about it to enter the competition. In this particular event, we promoted HKWMA indirectly to students in 6 different institutions with posters set up on campus, emails to student groups and professors and networked with the students themselves. As a result we have had interested students joining the HKWMA YMC as observers..

Before the end of this session (2012-2014), several discussions were held about the development of the Student Chapter. A consensus was reached and actions were taken to build the foundations of the new Student Chapter of the HKWMA YMC. We foresee the Student Chapter will encourage student membership and gain better connections and reach to students with budding aspirations.

*Special Events*

The YMC during this session were fortunate enough to be able to share the joy of the HKWMA's celebration of its 20th Anniversary since its establishment in Nov 2013. It took place at a glittering event in the Royal Plaza Hotel in Prince Edward. Each YMC member had a role in this event and none was spared from helping to facilitate the event. The YMC's roles included preparing and sending invitations, registration, commemorative booklet preparation, video production, preparation of souvenirs and gifts and meeting and greeting high profile speakers as well as being the MCs for the night. The event was a great success due to everyone's support and hard work.

*Professional Course*

For the Professional Course on Waste and Environmental Management from April to June 2013, YMC served as helpers to manage course schedules, follow up on HKWMA members' registration and arrange the technical visits to the Chemical Waste Treatment Centre and the Sludge Treatment Facility. There were nearly 20 participants enrolled for the Professional Course which took place at the Hong Kong Productivity Council.

In addition, YMC has facilitated the Waste Management Series of seminars from January to May 2014. YMC served as helpers to manage the venue reservation and coordinate with the speakers. The series was successfully organized and served as an effective platform for the industry and young engineers to ineract.

*Seminars*

Throughout the 2012-2014 session, many seminars were held, such as Eco Friendly Tableware Seminar, Carbon Footprint Seminar, etc. YMC provided support for the preparation of the events as well as on-site support during the days of the seminars.

*Social Gathering*

Other than serving the HKWMA's events the YMC was also given the opportunity to organize their own social gathering. We prepared events to social network among ourselves and built strong bonds between us. Bowling night, dinners, happy hours gathering and Christmas gathering with green gift exchange were some of the highlights of 2012 -2014. The fun we had and friendship we built since the start of the YMC and kept, even with those no longer serving the YMC, have greatly promoted the passion and enthusiasm in the commitment to the Association. We hope this baton will continue to pass down unendingly to our successive members of the YMC.

***Financial Review:***

Financially, we are supported by EXCO as we organized the activities as a supporting role to HKWMA. The expenditure summed up to $21,107 from various events, while an income of $700 was recorded due to some no-shows for technical visits. The financial summary is presented below:

| Task | Activities (Coordinate by YMC) 2012-2014 | Date | | Expenditure | Remarks | Credit | Remarks |
|---|---|---|---|---|---|---|---|
| 1a | Visit to Sludge Incineration Facility at Tsang Tsui | 17-Nov | 2012 | HK$1,100 | Coach Fee | HK$200 | 2 no-show |
| 2 | Visit to Laputa Eco Construction Material Co. | 24-Nov | 2012 | HK$1,200 | Coach Fee | - | - |
| | | | | | | | |
| 1b | Visit to Sludge Incineration Facility at Tsang Tsui | 1-Dec | 2012 | HK$1,100 | Coach Fee | - | - |
| 3 | Food Waste Processing Seminar | 6-Dec | 2012 | - | - | - | - |
| 4 | Two Coast Forum | 7-Dec | 2012 | - | - | - | - |
| 5 | Eco-friendly Tableware Seminar | 11-Dec | 2012 | - | - | - | - |
| 6 | Carbon Footprint Seminar | 17-Dec | 2012 | - | - | - | - |
| 7 | Visit to Incineration Facility in Baoan | 13-Apr | 2013 | RMB 700 | Souvenir, SIMS card | - | - |
| 8a | Professional Course in Waste and Environmental Management | 6-Apr | 2013 | HK$1,702 | Photocopy fee | - | - |
| 8b | Professional Course in Waste and Environmental Management | 6-Apr | 2013 | HK$1,580 | Catering Service | - | - |
| 8c | Professional Course in Waste and Environmental Management | 6-Apr | 2013 | HK$1,400 | Coach Fee | - | - |
| 8d | Professional Course in Waste and Environmental Management | 6-Apr | 2013 | HK$1,000 | Coach Fee | - | - |
| 9 | Student Competition 2012/13 | Apr-Jul | 2013 | HK$760 | Poster | - | - |
| 10 | Spring Cocktail Reception | 22-May | 2013 | - | - | - | - |
| 11 | Korea Study Mission Sharing Session | 29-May | 2013 | - | - | - | - |
| 12 | HKGSA Inauguration cum Seminar on Waste Management | 11-Jun | 2013 | - | - | - | - |
| 13 | Visit to Dunwell Plant | 29-Jun | 2013 | HK$1,800 | Coach Fee | HK$200 | 2 no shows |
| 14 | Visit to Zero Carbon Building | 20-Jul | 2013 | HK$460 | Coach Fee | HK$100 | 1 no-show |
| 15 | 20th AGM | 23-Sep | 2013 | - | - | - | - |
| **Sub-total of 2012-2013** | | | | HK$12,802 | | HK$500 | |
| 16 | Two Coast Forum 2013 @ HK | 22-Nov | 2013 | - | - | - | - |
| 17 | 20-year HKWMA Anniversary Dinner | 22-Nov | 2013 | - | - | - | - |
| 18 | EcoPark Visit | 5-Oct | 2013 | | | - | - |
| 19a | Waste Management Series 1 | 15-Jan | 2014 | | | - | - |
| 19b | Waste Management Series 2 | 21-Feb | 2014 | | Venue fee shared by 4 co-organizers | - | - |
| 19a | Waste Management Series 3 | 3-Mar | 2014 | HK$3,015 | | - | - |
| 19b | Waste Management Series 4 | 24-Mar | 2014 | | | - | - |
| 19a | Waste Management Series 5 | 14-May | 2014 | | | - | - |
| 20 | Natural Resources Farm | 26-Apr | 2014 | HK$1,800 | Entry Fee | - | - |
| 21a | ASB Visit - 1 | 24-May | 2014 | HK$1,000 | Coach Fee | - | - |
| 21b | ASB Visit - 2 | 31-May | 2014 | HK$1,000 | Coach Fee | HK$200 | 2 no shows |
| 22 | Visit to Champway Technology Ltd | 2-Aug | 2014 | HK$1,490 | Coach Fee | - | - |
| **Sub-total of 2013-2014** | | | | HK$8,305 | | HK$200 | |
| **Total** | | | | HK$21,107 | | HK$700 | |

**Conclusion**

As the Convenor of YMC for the session 2012-2014, I am honored to have worked with the young energetic members of YMC to support HKWMA. I believe all of us have earned great experience and gained valuable friendship through the commitment. I am pleased to know that many YMCs have decided to continue and serve in the next session 2014-2016. Although there will be new thinking and ideas, the YMC will always welcome more young people to join. I wish all success to HKWMA, HKWMA YMC and the establishment of HKWMA Student Chapter in the next session.

***Report contributed by Kitty Lee***

## Hong Kong Green Strategy Alliance Spring Reception – 8 April 2014 at HKPC Building

To celebrate the Year of the Horse in a friendly atmosphere with the green sector, a Spring Reception was jointly organized on 8 April 2014 at the HKPC Building by the Hong Kong Green Strategy Alliance (HKGSA), the Hong Kong Environmental Industry Association (HKEnvIA) and the Hong Kong Productivity Council (HKPC) with the support of the Hong Kong Waste Management Association and the Environmental Division of the Hong Kong Institution of Engineers.

Around 250 participants from the government, enterprises, academia and R&D institutes attended the spring reception with all of them enjoying the friendly chatting as well as the simple "wasteless" food and beverages. At the end of the reception all the food had been consumed and hence no food waste was generated!

We were so honoured to have the presence of Mr K.S.WONG, Secretary for the Environment of the HKSARG. Secretary Wong shared with the audience his experience on his recent trip to Europe to look at their waste management policies and practices. HKGSA Chairman W.K. Lo then reported his findings from the same study mission to Europe on thermal waste treatment technologies. Last but not least HKEnvIA's Daniel Cheng introduced various initiatives of the Association aimed at helping to upgrade the environmental industry in Hong Kong.

Although the reception started at 6:00pm the majority of the guests stayed beyond 8:00pm as they all enjoyed the reunion of the green family in the Year of the Horse!




Kenny Wong, Vice Chairman of HKWMA and MC of the Spring Reception




KS Wong,
Secretary for the Environment of HKSARG



Making a toast!

*(left to right : Kenny Wong (HKWMA), Joseph Poon (HKPC), Anissa Wong (EnB), Daniel Cheng (HKEnvIA), KS Wong (EnB), WK Lo (HKGSA), TY Ip (HKIE)*



Happy reunion of the green community!

***Reported by Kenny Wong***

## Site Visit to Natural Network Farm in Sheung Shui

On 26th April, HKWMA YMC organized a visit to the Natural Network Farm in Sheung Shui. The event was well-attended by 30 members. It was the first time YMC had organized a non-technical visit. To be more descriptive, this event was more like an Eco-outing with hands-on activity on composting. Co-organized with Natural Network, the event of the day started out with an ice-breaking game in which everyone in the group was required to name a waste reduction method or slogan.



***Organic waste collection***

Then, under instructions, everyone was split into four groups and went to the wet market at Shek Wu Hui to ask for food waste. Two of the groups went to vegetable stalls and the others went to fruit stalls to ask if the hawkers had any rotten products which were going to waste which they could collect. As all the YMC members were very polite, and explained that the purpose of the exercise was to make compost in support of environmental friendliness, the hawkers were very kind to offer what they had.





***Farm environment***

The guys in the group took up the hard work, which was to carry the heavy bags of rotten veggies and fruit for about a 20 min walk from the wet market to the farm site.

The farm itself is self-sufficient. The staff there were all very passionate about saving the earth and being environmentally friendly. They grew their own food and made their own furniture out of what was available around their farm. As part of their everyday life they walked at least 30 min to the farm. When our members were there, many school kids were there too to gain some hands-on farming experience.

***Composting***

As everyone settled down, there were several steps to start off with before making compost and the work was split up among different people. Some were responsible for cutting the collected food into smaller pieces to facilitate the composting, some others went to collect weeds and branches or mowed the grass. Instructors explained the steps to take to make good compost which were to make the compost in layers, just like baking a cake: wet then dry then add some coffee powder which was of no use after making coffee. There were also other natural additives used as agents to provide extra nutrients and maintain the appropriate N and P ratios. The compost takes about 3weeks to first start to mature and it needs to be turned over several times. It took quite some time and energy to get the pile done.









***Treats after work***

Everyone was exhausted after all the work and the heat. It was quite refreshing when the farm's representatives handed out refreshments---bread, butter and lemongrass which was collected from the farm itself. Then, to make toast, the hungry workers set up their own fire. Tree branches were used as barbecue forks to hold the bread to the fire. It was just like a camp fire. Everyone had so much fun under this kind of environment in the natural breeze.



***Experience sharing***

This farm is a non-profit place which provides tours for educational purposes Mr. Mok Ho Kwong, the Director of the organization said it was not easy to make money but the main goal was to let more people understand and appreciate the importance of living in harmony with the environment and saving resources.

Everyone seemed to be very impressed and enjoyed this outing. Although it was not a technical visit, by having a hands-on experience with the waste, close contact with the natural environment and the sharing of knowledge with the farm's staff, all the members gained a wider perspective on protecting the environment and appreciating nature.

At the end of the visit the YMC presented a Certificate of Appreciation to Mr Mok and his staff. The group pictures with Mr. Mok wrapped up the day's event





***Reported by Kitty Lee***

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The Newsletter of the Hong Kong Waste Management Association
Web Site: www.hongkongwma.org.hk

## Waste Management Seminar Series
## Solid Waste Engineering - Where We Are And What Are We Looking For?

This further seminar in the Waste Management Seminar series was held at the headquarters of the Hong Kong Institution of Engineers (HKIE) on the evening of 14 May 2014. As with the previous seminars in the series, this one was jointly organized by HKWMA in co-operation with the HKIE Environmental Division and Young Members' Committee and the Hong Kong Branch of the I Mech E. The seminar was delivered by Dr. Kaimin Shih, Associate Professor, Department of Civil Engineering, the University of Hong Kong and a member of the Executive Committee of HKWMA.

Dr. Shih began by telling his audience of about 80 that his talk was based on what HKU taught its students in the Environment Materials Group about resource recovery and pollution prevention. For the first two weeks, they taught them about waste generation, collection and transfer and that waste was a consequence of material consumption (for instance, a chimpanzee throwing away a banana skin). However, the functions of human society in providing food, energy, buildings and consumer goods, among others, all generated waste. Not much waste was generated from long-life goods like bridges and other infrastructure; more was generated from medium-life goods like paper and clothes but most came from short-life goods like food and packaging.

By studying history, it could be found that waste generation started about ten thousand years ago when communities settled down after the end of their nomadic life as they developed skills to grow crops and domesticate animals. One of the first laws about waste management was introduced in Athens in about 500 B.C. and required that all waste generated in the city had to be dumped at least one mile away from the city walls. This law had two main aims, the first being to avoid odours and pests etc. causing a nuisance to the city inhabitants and the second was to keep a clear view of the approach to the city in case of war and to make the city walls more effective in its defence. Otherwise, in general, nobody bothered too much about waste management and just endured the nuisance. Action was only taken in case defence was compromised. People's knowledge of hygiene was very poor until research in the 19th century developed the science of micro-biology which recognized bacteria. This research began in the 17th century when it was made possible by the invention of the microscope.

In the modern day, there was a series of tools that might be used for waste management. Among the main ones were collection, volume reduction, recycling and recovery, thermal treatment and final disposal (usually at landfill).

Collection was now not a small business. Professor Shih gave the example of Waste Management, a company in the United States, which employed 43,500 people and in 2013 had a revenue of US$14.4 billion. Although waste management had not previously been regarded as a professional calling that was now changing. Dr. Shih noted that it was complicated to optimize the cost of waste collection. It was certainly not a simple job.

Volume reduction could be achieved, for instance, by compaction of waste in transfer stations but it was not possible to compact solid or liquids, only the voids. Therefore there was a need to know the properties of a particular waste to design effective compaction for it.



Dr. Shih giving his talk

In the generally-accepted waste management hierarchy now developed with environmental protection and sustainability very much in mind, a standard pyramid could be drawn with a large base of waste avoidance and a small tip of final disposal. The best incentive to encourage waste reduction was charging for waste disposal. One problem with this initiative was that it could encourage illegal disposal of waste. The purpose of waste charging was to promote recycling, especially if the recyclables were collected free of charge. The quantum of

the charge had to be set carefully to restrict illegal disposal. The aim of the charge was to change peoples' behavior in the way they regarded and dealt with waste. Separation or sorting of waste was not effective at the landfill when all the different waste streams had been mixed together. It was much better to separate waste into its different components at the place where it was produced i.e. "at source".

Problems had also been identified, however, with pollution from unprofessional recycling operations, for instance, the recovery of valuable materials from waste electrical and electronic equipment (WEEE) by hand in China. Any pollution arising from such operations was dangerous and irreversible as Professor Shih showed by an example of a landfill in China. The process could be improved by mechanizing it and using trommels and cyclones to separate and recover waste under more controlled conditions.

How could the recovery of valuable materials be done better? Professor Shih gave the example of the recovery of lead from cathode ray tube glass. Traditional methods consumed a lot of energy so research was now underway to break down the glass by chemicals or x-rays, among other methods, to adjust the crystal structure and reduce it by using iron at carefully controlled temperatures to stop the extracted lead melting back into the glass.

Thermal treatment of waste was used extensively throughout the world and was the key process chosen by the Hong Kong Government for future waste treatment. However, any form of thermal treatment needed to deal with the flue gas and in particular the heavy metals included in it. The question had been asked as to whether the ashes from incineration could be reused after the organic materials had been combusted. This had been the subject of research at HKU for 15 years. The metals persisted throughout the thermal treatment process and could not be got rid of. To make them non-reactive and benign they could be fixed in spinel phases to make them effectively inert. Spinel formation increased the ceramic hardness and chemical resistance and helped form safer more useful products, not subject to leaching of heavy metals and other toxic compounds. Work was now underway to try and develop techniques for spinel formation in fluidized bed sludge incineration and moving grate municipal solid waste incineration.

When it came to final disposal, a range of solutions had been considered. In a wide-ranging study in the 1970s by the United States Environmental Protection Agency (USEPA), consideration was given to where was the best place to site landfills to overcome the growing phenomenon of "not in my back yard" (NIMBY) resistance. In the heyday of the space race they looked at firing waste into space, but decided it was too expensive; about firing it into the interior of the planet but recognizing that it would find its way back to the surface eventually; or disposing of it at sea where it was bound to cause too much pollution, so the study concluded that we were left with landfills. However, with modern linings and properly engineered and operated gas and leachate collection and treatment systems, landfills were safe and were also indispensable. The main worries about landfills were the emission of greenhouse gases generated by the decomposition of the waste and the possibility of landfill leachate polluting the groundwater regime. These aspects of landfilling had to be the subject of continued close attention.

The homework Professor Shih gave his audience was to try and work out the true cost of products in terms not only of the materials they were made of but the energy consumed in their production, the amount of water used and the amount of carbon dioxide generated in their manufacture. The example he used was a very simple kitchen toaster disassembled into its individual component materials to assess its true cost to the environment. The impact could be reduced by choosing more environmentally friendly materials, for instance polypropylene instead of polyethylene or iron / steel instead of chromium and nickel etc.

The organizers thanked Dr. Shih for his interesting talk and the audience showed their appreciation in the normal manner.

***Reported by Barry Adcock***

## Technical Visit to ASB Biodiesel Plant in Tseung Kwan O

On two consecutive Saturday mornings , 24 & 31 May 2014, members of HKWMA and YMC received a warm welcome from the staff of the ASB Biodiesel Plant and were given a highly informative and interactive tour of the treatment facility.

ASB Biodiesel is a new privately-held waste treatment facility which commenced its operation in Hong Kong on 23 October 2013. ASB Biodiesel's plant uses multi-feedstock technology for highly efficient processing of waste feedstock such as used cooking oil, waste animal fats and grease trap waste. ASB Biodiesel collects waste oil and other feedstock from the catering industry in Hong Kong and some nearby countries . Most of their products are currently exported to Europe directly as many European countries have to use B5 biofuel (containing 5% biodiesel) by law.



The happy visitors at the plant with Mr. Vazquez of ASB

On both visits Roberto Vazquez, the Chief Technology Officer of ASB Biodiesel, first gave all the visitors an engaging presentation about the plant's operation and the international trend of biodiesel use and then guided them to look at the treatment facilities, laboratories and control room.



Presentation of Certificate of Appreciation to Mr. Vazquez by Kitty Lee, Convenor of YMC

The most interesting part of the visit was the discussion on the way forward for biodiesel. The ASB Biodiesel factory is capable of producing 100,000 tonnes of low-carbon transportation fuel per year. This production can fulfill the demand of all diesel vehicles in Hong Kong if all of them switched to using B10 fuel, ie. regular diesel fuel blended with 10% biofuel. This is definitely an option worth exploring for Hong Kong going forward to be a greener and waste-free city.

***Reported by Ronald Ho***

## Reduce Waste for a Greener Future Funfair

The "Reduce Waste for a Greener Future" Funfair, organized by the Hong Kong Green Building Council Limited, was held on 26 to 28 September 2014 at The Domain, Yau Tong. The Hong Kong Waste Management Association, the Construction Industry Council, Hong Kong Organic Waste Recycling Centre Limited and TioStone Environmental Limited, as supporting organizations, set up publicity booths for the three days with some mini-games aimed at promoting public awareness on waste reduction at source, waste management and end treatment. Our chairman, Ir Kenny Wong, was invited as the Guest of Honour at the opening ceremony on the first day of the Funfair.














The Funfair was successful in attracting numerous members of the public, including youngsters, students, families and elderly to enjoy and explore, with the help of volunteer staff, the booths from the different organisations. There were different mini-games to arouse the public's interest in waste reduction and management.



Having the four different organizations' booths located alongside one another generated a synergistic effect that attracted greater public attention to the diverse horizon of waste reduction and recycling that was on show. We attracted a lot of families with small kids and students. Waste management is not only a policy issue, but also a community issue. The Funfair successfully engaged the community to stimulate the public to start thinking about waste management in Hong Kong and conveyed the message on waste reduction and recycling practices.




At HKWMA's booth, we aimed to introduce our Association, local waste management facilities and practices to the public, as well as to compare different waste management policies in Hong Kong, Taipei and South Korea. To further familiarize the public with waste management facilities in Hong Kong, there was an interactive game to match various waste management facilities with their locations on the map.

***Reported by Matthew Wong***

## Technical Visit to Champway Technology Limited

YMC organized a technical visit to Champway Technology Ltd at Eco Park on 2 August 2014. The visit was well attended by 25 participants. Ms Sindy Ho from Champway welcomed the visitors and gave a detailed introduction about the company and its services.

Champway is the only waste oil recycler and biodiesel producer in Hong Kong that is under the direct governance of the HKSAR Government. They collect waste oil and turn it into fuel, ie. Waste to Energy. The sources of waste/ used oil are mainly from restaurants and the Grease Trap Waste Treatment Facility in West Kowloon Refuse Transfer Station. The waste oil can be any kind of lipids such as: vegetable oils, animal fats, grease trap oil, waste cooking oil, etc, which can be turned into biodiesel. It is a very sustainable way to generate renewable energy. Interestingly, however, the used oil is not free: Champway needs to pay the restaurants a certain amount for the used oil in addition to the used oil collection service they provide for them.

The collected waste oil needs to go through a number of treatment processes including heating, filtration, etc. The biodiesel produced is tested to meet stringent international standards before it can be sold d for use in vehicles.



Stages in the conversion of
Used Cooking Oil to 100% Biodiesel

During the visit, participants raised many questions which showed their interest in as well as their appreciation of this recycling business.



The visitors with Ms. Sindy Ho during their site tour



Ms. Sindy Ho with her Certificate of Appreciation presented by the YMC

From the tour, it was understood that generally it is challenging for the environmental industry to run a business in Hong Kong as the operation cost is high while the profit is usually not directly proportional to the benefit the business brings to the city. But with their unfailing vision and mission to bring greener energy to Hong Kong, companies in the environmental industry survive and continue to develop. It is to be hoped that there will be more support given to the local environmental industry in Hong Kong in the future to help Hong Kong become a greener city.

***Reported by Kitty Lee***

## HKWMA Gives its Support

From May to November 2014 HKWMA has been pleased to support the following events which are not reported elsewhere in this edition of "Wasteline" :

- HKPASEA : SN799 on 2 May 2014 Forum on "Municipal Solid Waste Treatment Technology and Future Development"
- Consul General of the Netherlands Business Roundtable discussion on Hong Kong waste management on 4 June 2014
- Eco-Asia Conference at Asia World Expo on 29 to 31 October 2014
- Canadian Consulate Environment and Green Building Mission Partnering Seminar on 31 October 2014
- Green Council "Hong Kong Green Awards 2014"
- CIWEM HK Social Event : Oyster Shucking and Social Gathering – 30 October 2014
- Federation of Hong Kong Industries Eco Mission to Japan, 23–27 November 2014
- CIWEM HK Social Event : Exploring how professional skills can better serve our community - 25 November 2014

## Upcoming Events

- HKGSA Discussion Forum on New Environmental Law in Mainland China – 22 November 2014
- Federation of Hong Kong Industries Eco-Mission to Japan from 23 – 27 November 2014 to study Recycling and Renewable Energy
- CIWEM HK Social Event : Exploring how professional skills can better serve our community – 25 November 2014
- Seminar jointly organized with HKIE Env. Div. and HK Poly U on "Management Options for Energy – from – Waste Air Pollution Control Residues" : 10 December 2014, HK Poly U
- 10 Jan 2015 - Technical Visit to Hong Kong International Airport on Waste Management Practices and Facilities
- HKIE Environmental Division Annual Seminar at HKCEC on 17 April 2015 on "The Future Directions and Breakthroughs of Hong Kong's Environmental Industry"
- International Conference on Solid Waste 2015 : "Knowledge Transfer for Sustainable Resource Management" – 20 to 23 May 2015. Go to https//arcpe.hkbu.edu.hk/conf 2015 for details

*and watch out for more details soon on these planned site visits :*

- *24 Jan 2015 (date tbc) – Food waste management forum*
- *Mid Feb 2015*
  *Food Waste Conversion Plant at Park Island*
- *March 2015*
  *Animal Waste Composting Plant at Ngau Tam Mei*
- *April 2015*
  *Sludge Treatment Facility*
- *June 2015*
  *Chemical Waste Treatment Centre*
- *Sept - Oct 2015*
  *Hong Kong Organic Waste Recycling Centre*