

**For Discussion  
on 3 July 2017**

**Legislative Council Panel on Housing  
Performance of Environmental Targets and Initiatives in 2016-17**

**Purpose**

This paper aims to brief Members on the performance of the Hong Kong Housing Authority (HA) in respect of its environmental targets and initiatives in 2016-17.

**Background**

2. To enhance the quality of living for its tenants, HA established its Environmental Policy in 1999 to promote healthy living and a green environment. HA not only complies with relevant legislation and regulations, but also developed a strategic framework and implemented environmental management strategies for the promotion of sustainable development on multiple fronts, including planning and construction of new public housing estates, operation of existing estates and HA's own offices at work. With a view to addressing concerns over environmental protection and minimising impacts on the environment, HA has incorporated environmental initiatives throughout its planning and design, construction and demolition, marketing, and estate management activities, and developed relevant green procurement policies.

**Progress**

3. HA establishes annual environmental targets and initiatives at the beginning of each fiscal year, and reviews its performance quarterly, to effectively manage the overall implementation of its environmental policy. In 2016-17, HA set 42 targets covering six aspects, including energy efficiency, water conservation, greening, waste management, control of hazardous materials, as well as enhancement of environmental awareness and participation in environmental protection initiatives. Details of HA's performance are listed at **Annex 1**. The statistics on the environmental performance of the nine quantifiable targets as compared with respective key performance indicators are at **Annex 2**.

## **Way Forward**

4. Regarding the environmental protection works of 2017-18, HA has set pragmatic and progressive targets to gauge the performance for the year. HA will continue its efforts to achieve various environmental, social and economic targets, to facilitate sustainable development of the public housing programmes.

5. Members are invited to note the performance of HA in respect of its environmental targets and initiatives in 2016-17.

**Transport and Housing Bureau  
May 2017**

## **The Environmental Performance of the Hong Kong Housing Authority**

The Hong Kong Housing Authority (HA) has set 42 environmental targets for the fiscal year 2016-17 to promote sustainable development on various fronts, including planning and construction of new housing estates, the operation of existing estates and HA's own offices at work. These targets covered six aspects, including energy efficiency, water conservation, greening, waste management, control of hazardous materials, as well as enhancement of environmental awareness and participation in environmental protection initiatives. Among the 42 environmental targets, 39 of them were fully met, while targets on 'recovery of waste paper in existing estates' (item 21), 'recovery of plastic bottles in existing estates' (item 23) and 'recovery of used clothes in existing estates' (item 24) were not fully met. Details of HA's environmental performance in 2016-17 are set out below.

### **(A) Environmental Initiatives in Planning and Construction of New Housing Estates**

#### ***Energy Efficiency***

1. Regarding the building services installation in communal areas of new public rental housing (PRH) and subsidised sale flats (SSF) developments, HA set the designed average electricity consumption to not exceeding 24kWh per m<sup>2</sup> per Annum.
2. HA continued to adopt energy efficient equipment, including gearless lift with regenerative power, light-emitting diode (LED) bulkhead and environmental lighting controls in communal areas of domestic blocks.
3. HA adopted green design for building services equipment in both PRH and SSF developments, including solar-powered lights; and conducted carbon emission estimation and energy estimation.

#### ***Water Conservation***

4. HA used six-litre single or dual flush water-closet suite in all new building projects, to reduce consumption of flushing water.
5. HA provided Zero Irrigation System or other types of root-zone irrigation system in all new building projects, to reduce consumption of irrigation water.

## ***Greening***

6. For all newly completed planting works, HA met the target of planting a minimum of one tree per 15 public housing flats. All new public housing developments achieved at least 20% green coverage, and sites exceeding two hectares achieved 30% green coverage.
7. All the newly formed slopes were provided with green treatment.
8. HA arranged Action Seedling programmes in all new housing estates to engage local residents and community for early plant raising.
9. HA introduced communal planting areas or community farms during the design stage of all new PRH projects with site area larger than two hectares, to encourage PRH residents to participate in gardening and planting works in their own estates for recreation and education purposes.

## ***Waste Management***

10. HA continued to use various green materials and components, including pulverised fuel ash, ground granulated blast furnace slag, recycled rock fill, recycled subbase materials, recycled rock cores, recycled glass cum aggregates, and recycled marine mud, etc.
11. Regarding timber doors in new public housing developments of HA, apart from using softwood from only sustainable forest sources, at least 50% of all timber used was from sustainable forest sources, to meet the requirement of the *Building Environmental Assessment Method Plus (New Building)* on sustainable forest products.
12. HA required contractors to use timber from sustainable sources, and that no virgin forest products shall be used for temporary works during construction.

## ***Control of Hazardous Materials***

13. HA continued to implement asbestos abatement programme under the estate redevelopment programme, and commenced asbestos removal works in one public housing site to abate the remaining asbestos-containing materials.

## ***Enhancement of Environmental Awareness and Participation in Environmental Protection Initiatives***

14. To enhance the environmental performance of contractors on site, HA required contractors to submit and implement environmental management plans, and use environment-friendly equipment, machinery and construction methods under all new building, demolition, piling and civil engineering contracts.

### **(B) Environmental Initiatives in Existing Housing Estates**

#### ***Energy Efficiency***

15. HA conducted carbon audit in 14 PRH blocks of typical block types for monitoring carbon emission and benchmarking purposes.

#### ***Water Conservation***

16. HA evaluated the effectiveness of the rain water harvesting systems in all commercial centres and PRH estates where the system was installed.

#### ***Greening***

17. To promote a green environment and raise tenants' environmental awareness and participation in greening, HA organised community garden activities in 10 PRH estates; and collaborated with Estate Management Advisory Committees (EMACs) for the organisation of 10 tree planting days and 20 greening activities.
18. To enhance the quality of landscape and upgrade the existing landscape facilities, HA completed Landscape Improvement Programme in 20 PRH estates.
19. HA improved the appearance of 10 slopes at seven PRH estates by providing hydroseeding, stone pitching and toe planters.

#### ***Waste Management***

20. To promote waste separation at source and environmental management initiatives, HA implemented the Source Separation of Domestic Waste Programme and set up collection counters in all PRH estates, to collect domestic recyclables through an incentive scheme.

21. HA recovered about 26 652 tonnes of waste paper from PRH estates for recycling, representing 95.2% of the annual target of 28 000 tonnes. The drop in waste paper recycled was probably due to a change in residents' habit of reading printed newspaper.
22. HA recovered about 1 339 tonnes of aluminium cans from PRH estates for recycling, which was more than the annual target of 1 300 tonnes.
23. HA recovered about 1 362 tonnes of plastic bottles from PRH estates for recycling, representing 77.8% of the annual target of 1 750 tonnes. As the volume of plastic bottles recycled are measured by the actual volume of plastic bottles collected by recyclers, the drop in the amount of plastic bottles recycled was probably due to the drop in value of plastic material, which discouraged recyclers from collecting plastic products for recycling.
24. HA recovered about 901 tonnes of used clothes from PRH estates for recycling, representing 94.8% of the annual target of 950 tonnes. The drop in used clothes recycled might be due to HA's keen promotion in waste reduction and up-cycling within the estates, or the fact that tenants were making better use of their clothes, resulting in the reduction of used clothes available for recycling.
25. HA implemented various waste reduction and recycling initiatives in PRH estates, and lowered the domestic waste production of tenants to an average of 0.55kg per person per day, which was within the 0.70kg target.
26. HA promoted the recycling of glass bottles in various PRH estates.
27. HA promoted the Rechargeable Battery Recycling Programme in various PRH estates.

### ***Control of Hazardous Materials***

28. To maintain the remaining asbestos containing materials in existing PRH estates in satisfactory condition, HA continued to conduct the biannual condition survey; the registered asbestos contractor engaged by HA also continued to handle emergency repair works on underground asbestos cement water-mains for all PRH estates.

## ***Enhancement of Environmental Awareness and Participation in Environmental Protection Initiatives***

29. HA conducted the Green Delight in Estates programme in all PRH estates in collaboration with green groups, to enhance environmental awareness and promote environmental education.
30. HA conducted survey among PRH tenants to assess and review their environmental awareness.
31. HA continued to organise activities to promote environmental protection, to enhance awareness on environmental protection in the community.
32. Through various publicity channels such as EMAC newsletters and Housing Channel, HA promoted tenants' awareness and proactive participation in waste separation at source, waste reduction and environmental management initiatives.

## **(C) Environmental Initiatives in HA's Own Offices at Work**

### ***Energy Efficiency***

33. HA offices consumed a total of 34 850 777 kWh of electricity, meeting the target of not more than 35 900 000 kWh.

### ***Water Conservation***

34. HA Headquarters consumed 11 316 m<sup>3</sup> of water, meeting the target of not more than 13 610 m<sup>3</sup>.

### ***Greening***

35. HA arranged staff to participate in the Tree Planting Day to promote staff involvement in greening activities.

### ***Waste Management***

36. HA consumed 134 477 reams of paper, meeting the target of not more than 137 000 reams.
37. HA collected 81.6 kg of waste paper per staff in its offices, which is beyond the target.

38. For printing publicity materials, HA continued to use only environment-friendly paper.

***Control of Hazardous Materials***

39. HA controlled hazardous materials to minimise harm to environment by collecting all disposed mercury-containing lamps in HA Headquarters for special waste treatment.

***Enhancement of Environmental Awareness and Participation in Environmental Protection Initiatives***

40. HA continued to strengthen training and publicity on environmental protection, including incorporating the HA Environmental Corporate Video into the induction course for all new staff.

41. HA organised 22 seminars and two environmental campaigns, to enhance environmental awareness and knowledge among staff members.

42. HA organised three displays of environmental issues at HA Headquarters to promote environmental message to its staff.

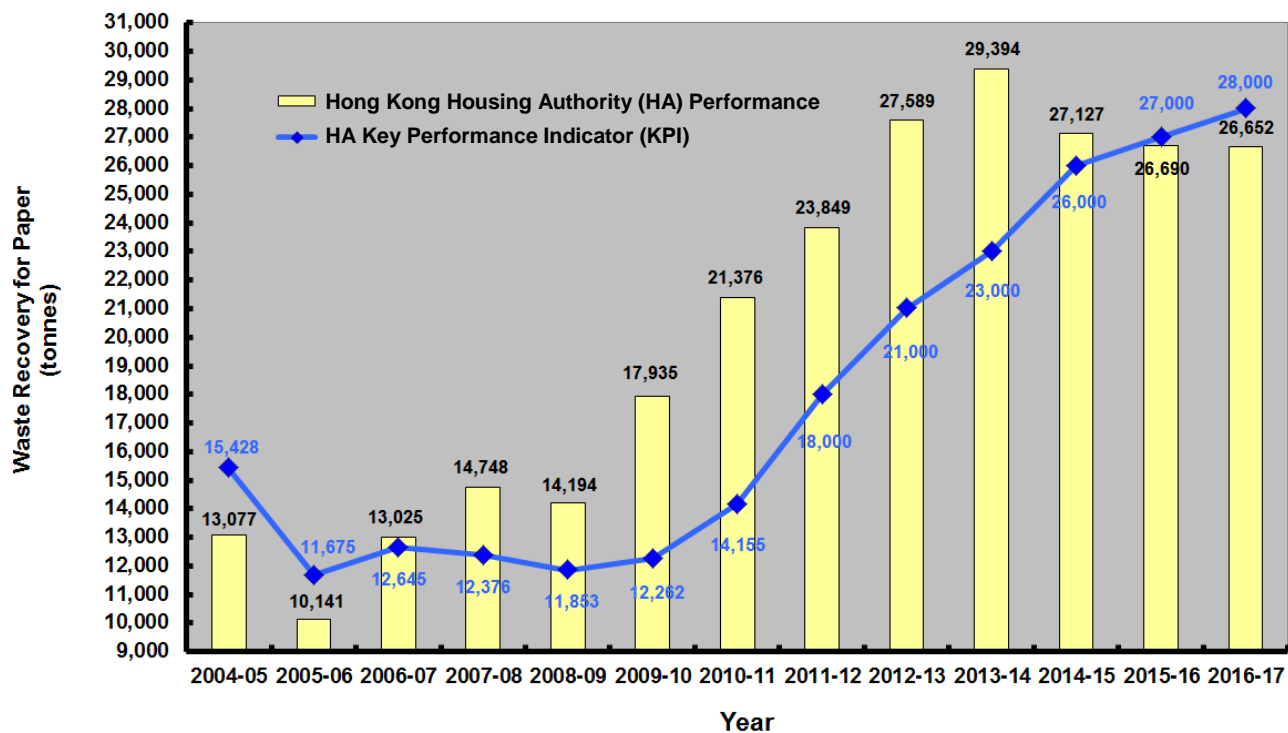
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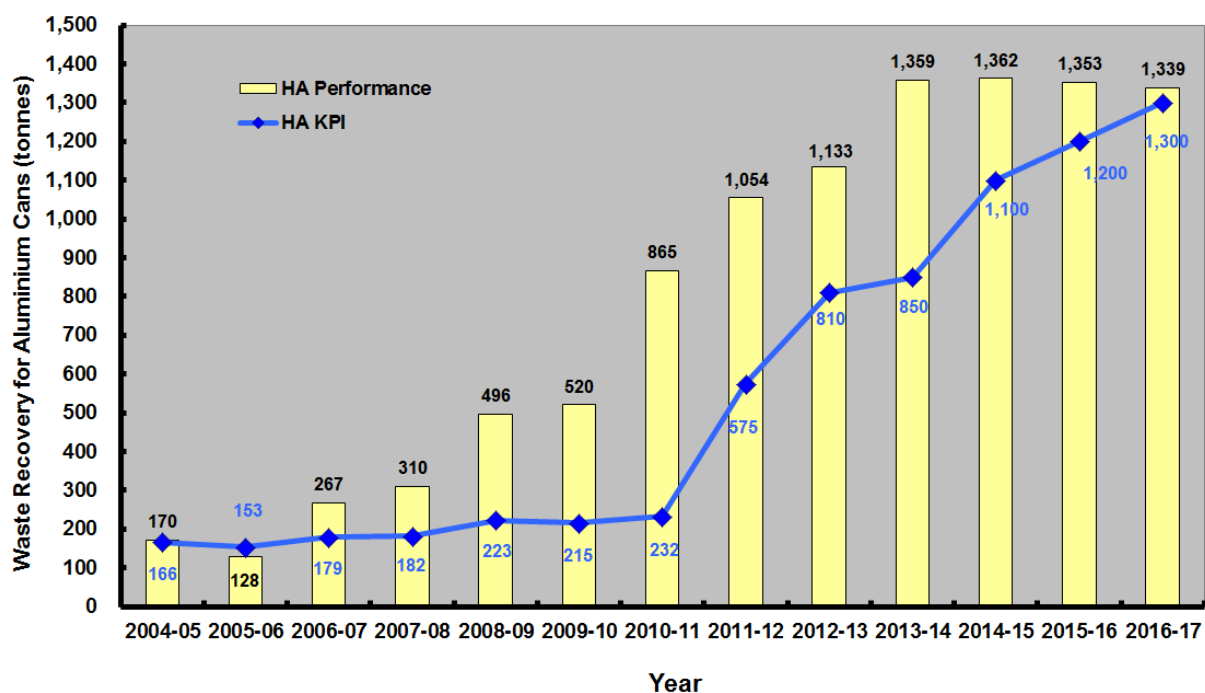
**Summary on the Statistics about the Environmental Performance for  
the Nine Quantifiable Targets**

**A) Public Rental Housing Estates**

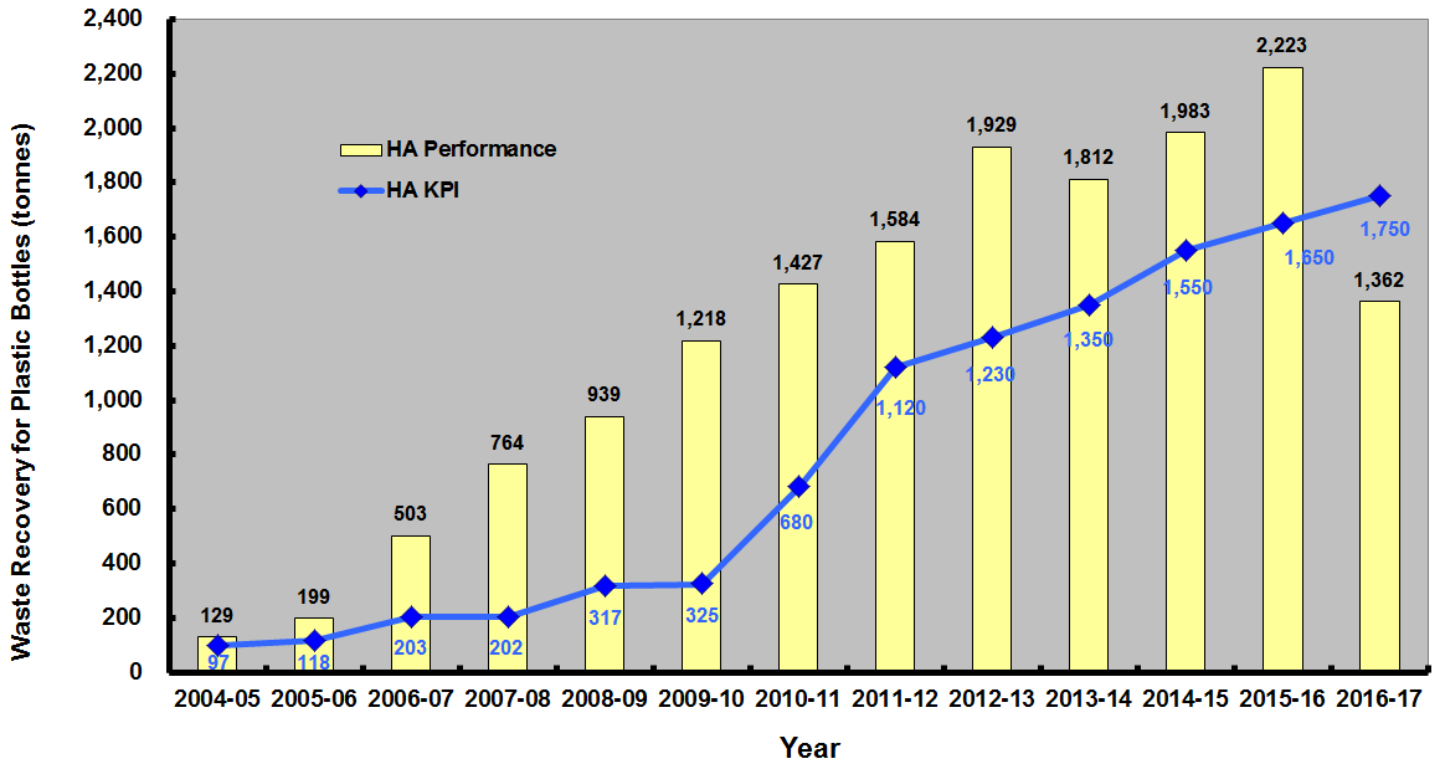
**(1) Domestic Waste Recovery for Paper**



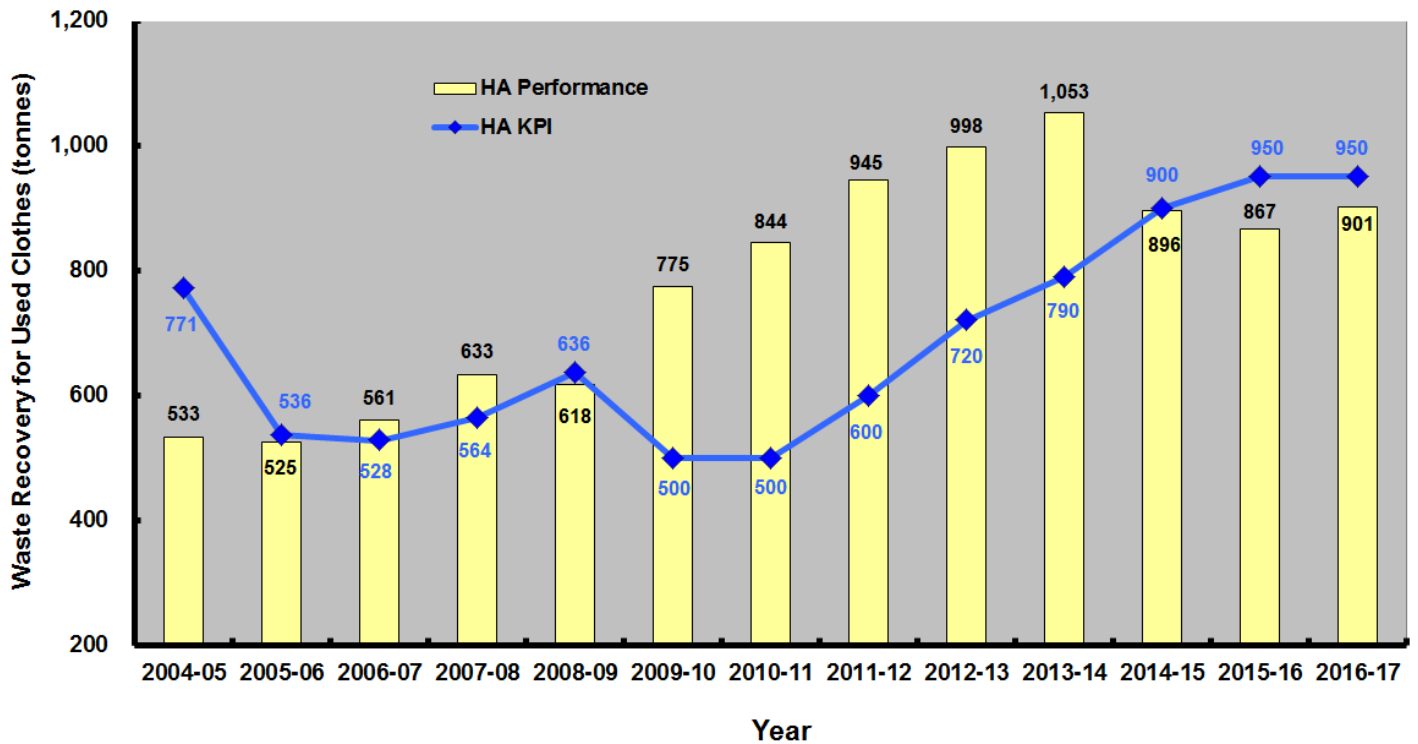
**(2) Domestic Waste Recovery for Aluminium Cans**



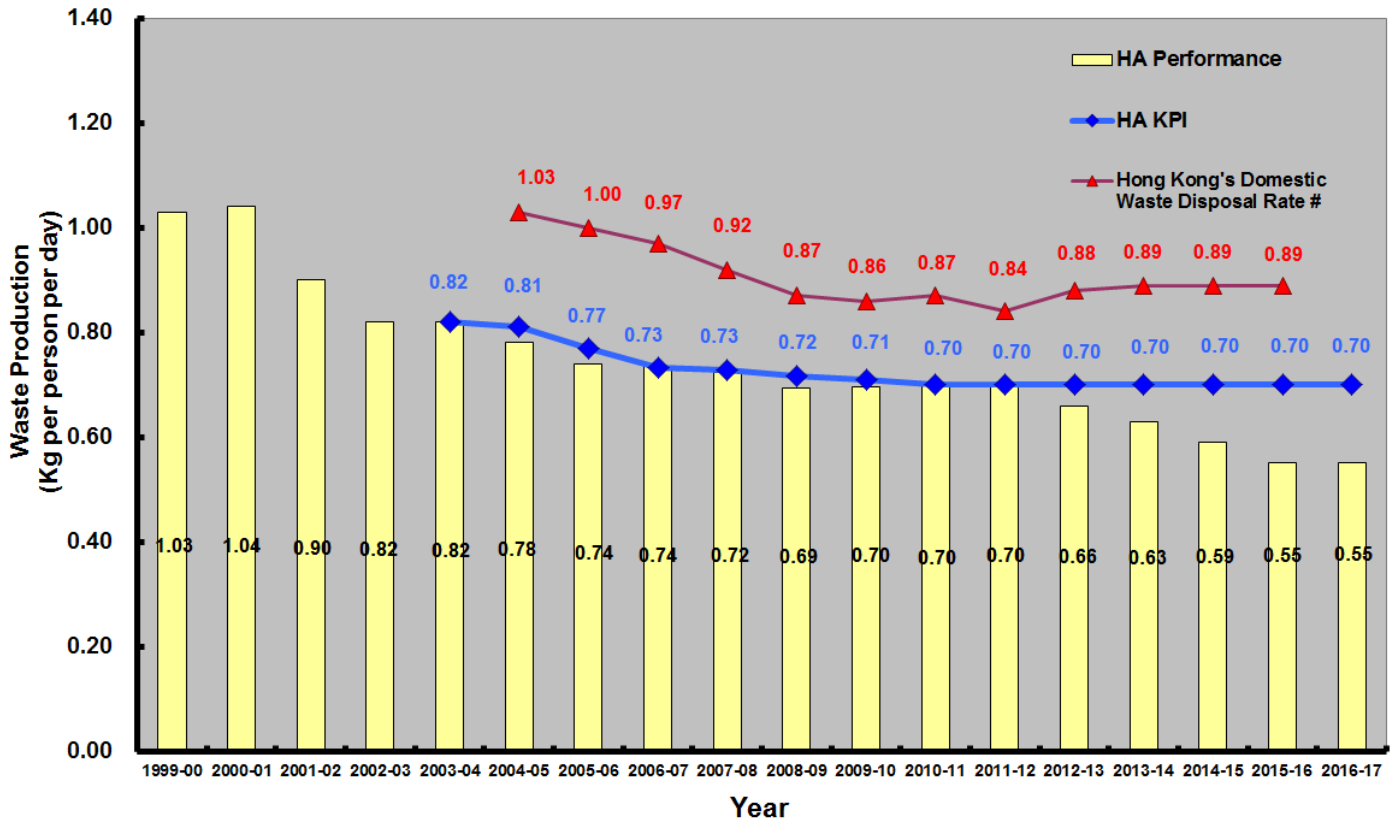
### (3) Domestic Waste Recovery for Plastic Bottles



### (4) Domestic Waste Recovery for Used Clothes



### (5) Average Domestic Waste Production

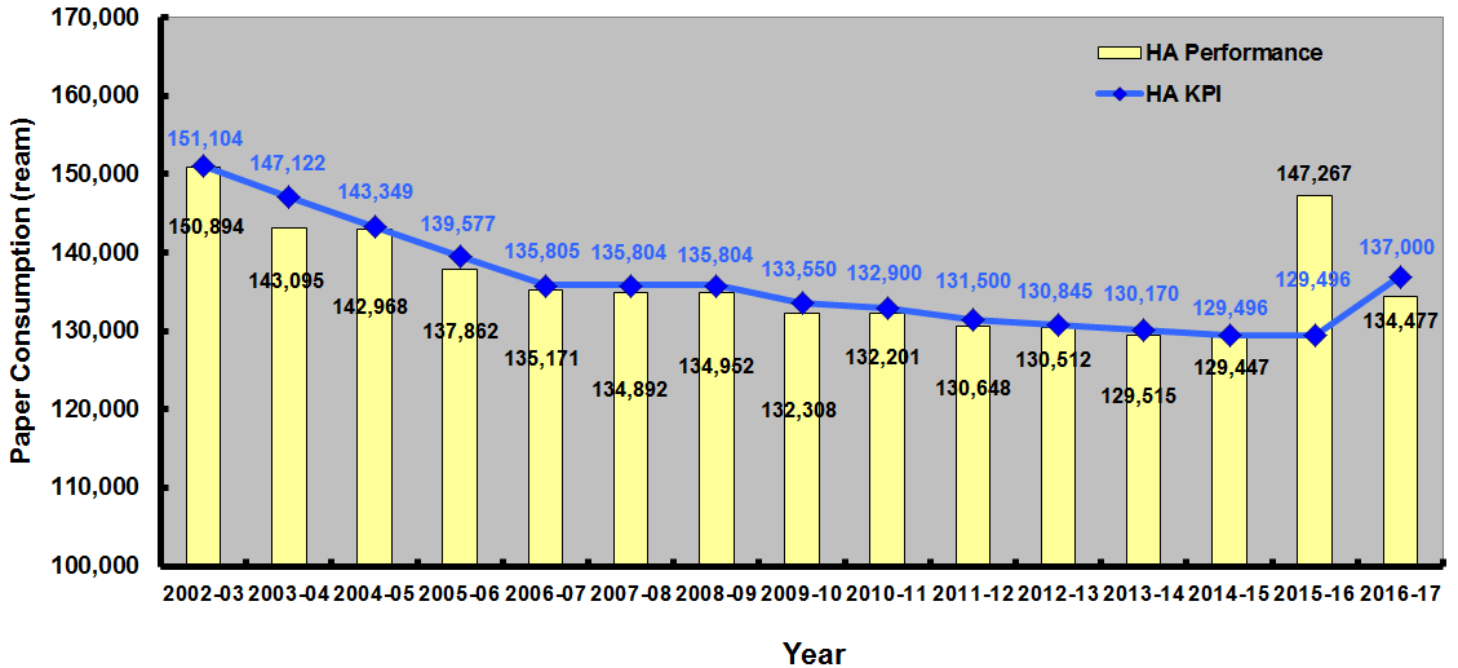


# Source: Environmental Protection Department (2016). *Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2015*.

Note: According to the classification adopted by the Environmental Protection Department, domestic waste refers to household waste, waste generated from daily activities in institutional premises (e.g. schools, government offices) and refuse collected from public cleansing services. The domestic waste production recorded by HA only covered the domestic waste generated in its estates, and waste collected in the common area of shopping centres.

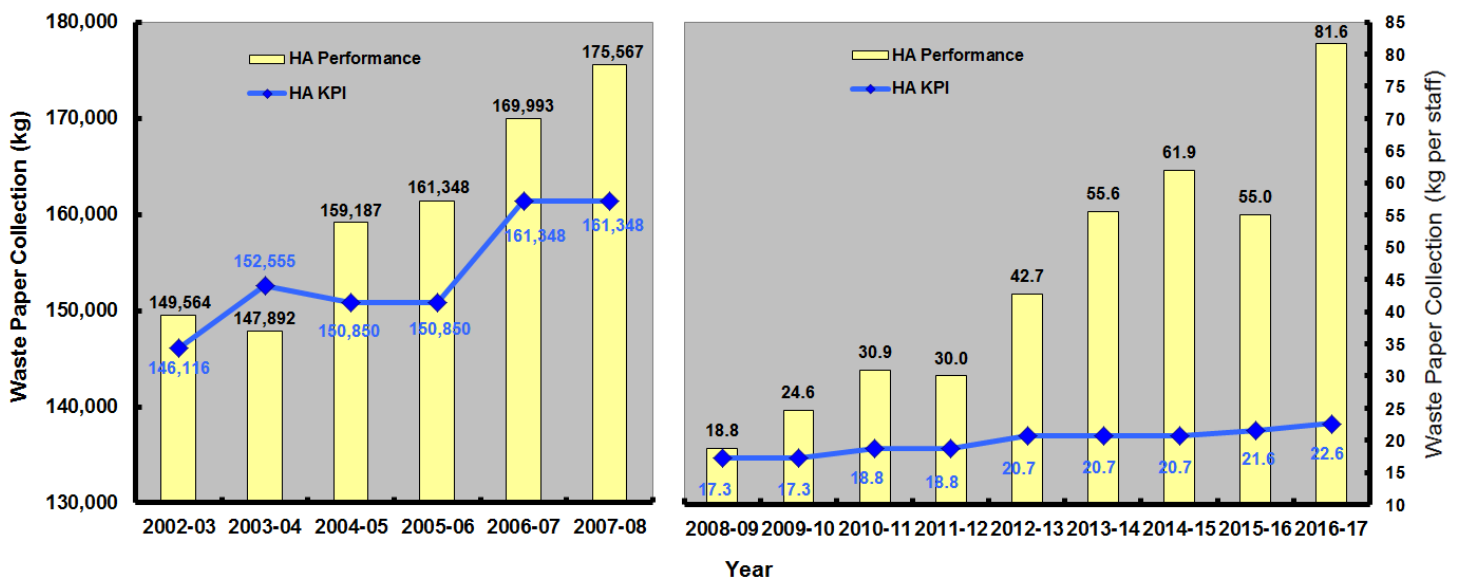
## B) HA Offices

### (6) Paper Consumption in all HA Offices



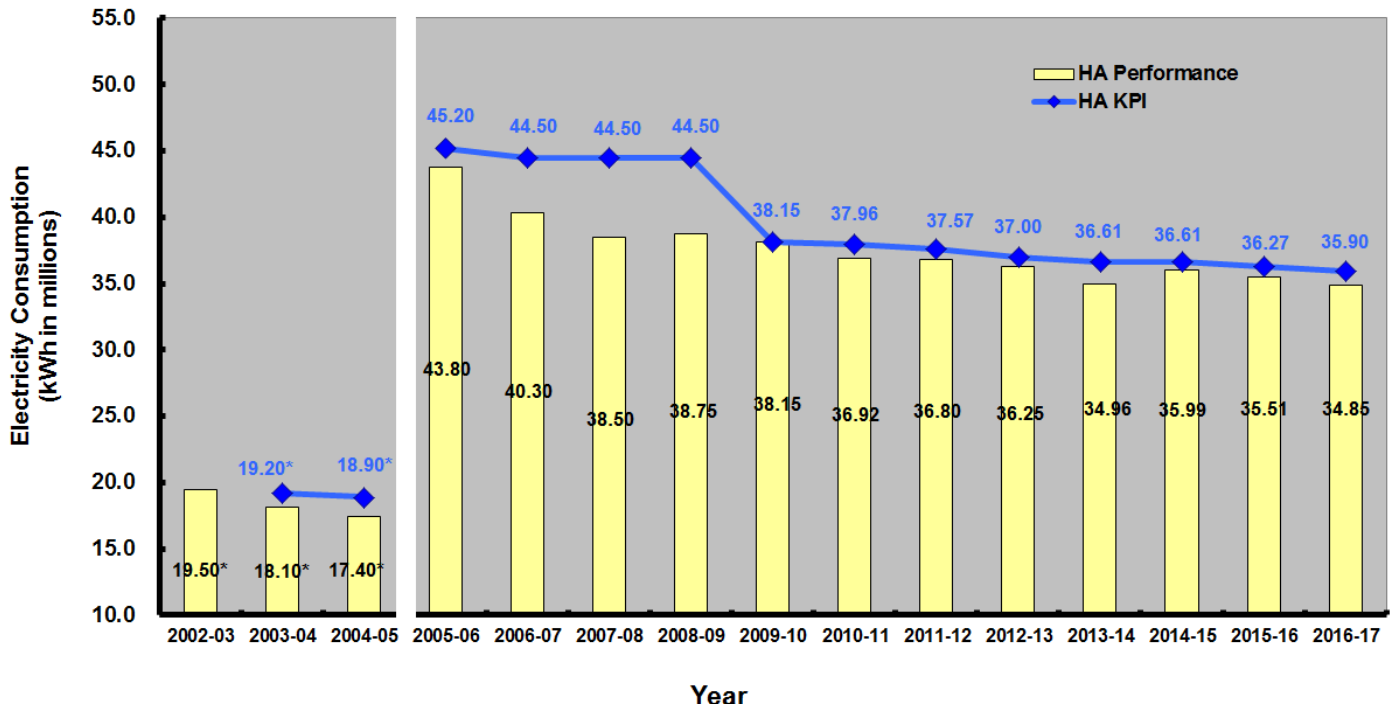
Note: Considering HA's increase in manpower and business activities in recent years, the Finance Committee of HA endorsed in 2016 the revision of the target for 2016-17, in order to take manpower expansion into account.

### (7) Waste Paper Collection in all HA Offices



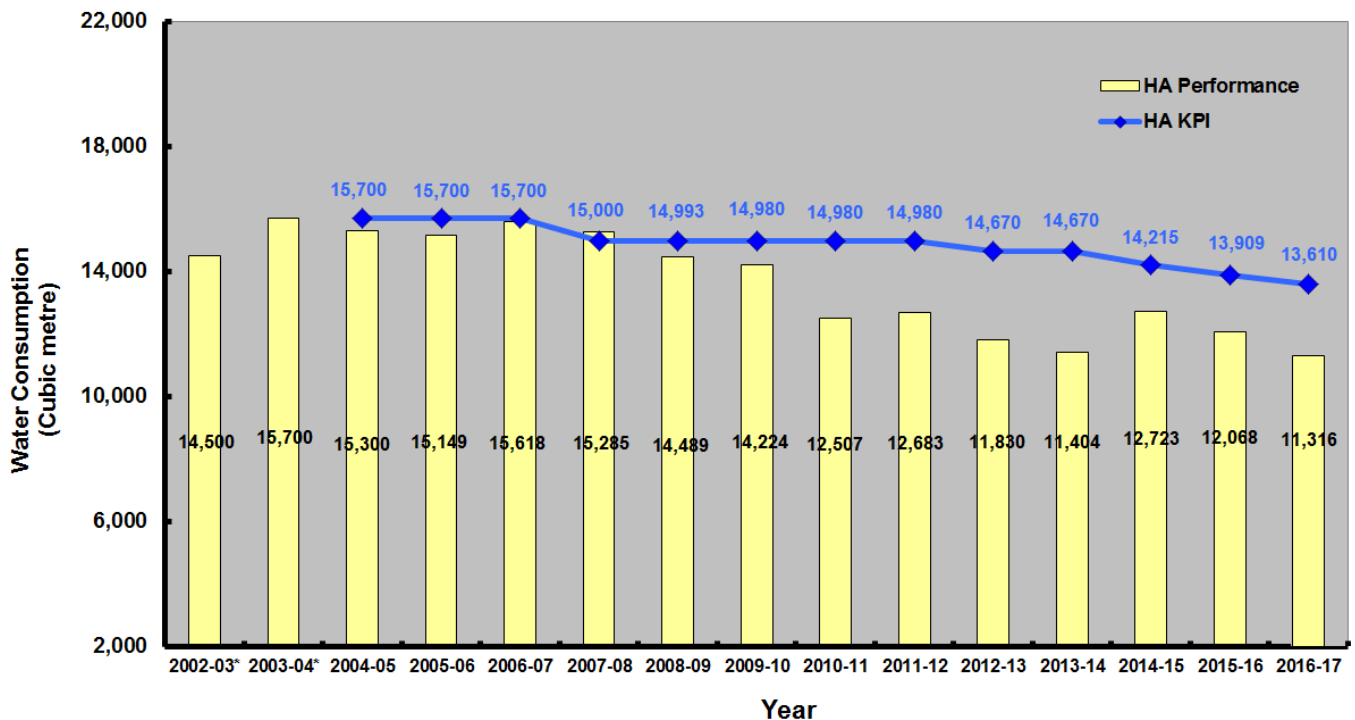
Note: Since 2008-09, waste paper collection has been calculated by weight per staff instead of overall weight.

## (8) Annual Electricity Consumption in all HA Offices



\* HA offices outside HA Headquarters (HAHQ) were not included in the HA KPI and HA performance. The corresponding KPI has been set up since 2003-04.

## (9) Water Consumption in HA Headquarters



\* No official target was set for water consumption in 2002-03 and 2003-04.

# Including HAHQ Blocks 1 to 4.