

**Performance of
HA Environmental Targets and Initiatives
in 2011/12**



Background

- In **1999, the HA established its Environmental Policy** to promote healthy living and a green environment.
- In addition to complying with **environmental legislation and regulations**, the HA have developed a **strategic framework** and implemented **environmental management strategies** for the promotion of sustainable development on various fronts including our planning and construction of new housing estates, our existing estates in operation and our office at work.
- With a view to **addressing environmental concerns, minimize environmental impacts**, we have incorporated environmental initiatives, and developed green procurement policies throughout our planning and design, construction and demolition, marketing and estate management activities.

Environmental Performance

- To **effectively manage** the overall implementation of the Environmental Policy, we have **established environmental targets and initiatives** at the beginning of each fiscal year and monitored their performance at each quarter.
- In 2011/12, we have set out **39 targets** covering aspects on energy efficiency, water conservation, greening, waste management, control of hazardous materials, and the enhancement of environmental awareness and participation.

Food Waste Recycling

- The HA is conducting a trial scheme on **food waste recycling** in collaboration with the EPD. Food waste composters have been installed at Tin Ching estate in Tin Shui Wai and Tsz Ching estate in Tsz Wan Shan to convert food waste into compost.
- In parallel, we have also collaborated with 3 green groups to conduct trial schemes on off-site food waste recycling in five public housing estates by transporting food waste to recycling plant outside the estates.
- We will continue to carry out review on these food waste initiatives.



(A) Initiatives in Estate Planning and Construction

Energy Efficiency

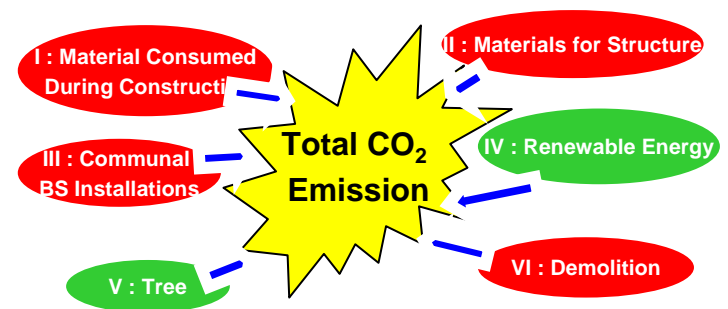
1. We obtained 70 Energy Certificates for newly completed public domestic blocks.
2. We explored and studied application of more energy efficient equipment by -
 - reviewing the performance of the trial light-emitting diode (LED) lighting system at Lam Tin Phases 7 & 8.
 - monitoring and reviewing the performance of the prototype LED bulkheads at Tsz Ching Estate, and
 - completing the environmental lighting controls using a 2-level lighting system at the communal areas of domestic blocks in 5 pilot projects.



(A) Initiatives in Estate Planning and Construction

Energy Efficiency

3. We explored and studied application of green design for building services equipment by -
- reviewing the performance of the first trial photovoltaic (PV) panel system at Lam Tin Phases 7 & 8
 - completing the second trial PV Panel system at East Harbour Crossing Site Phase 5
 - installing one to two solar or solar/wind hybrid lights in all new estates for educational purpose, and
 - conducting carbon emission estimation for all projects with domestic blocks at detailed design stage.



$$\text{Total CO}_2 \text{ Emission} = I + II + III - IV - V + VI$$

(A) Initiatives in Estate Planning and Construction

Water Conservation

4. We conducted research on materials and standards of water closet suites to reduce flushing water consumption.
5. We provided rain water harvesting system at Tung Tau Phase 9 and East Harbour Crossing Site Phase 5 to reduce irrigation water consumption.



(A) Initiatives in Estate Planning and Construction Greening

6. All completed planting works surveyed up-to-date met the minimum of 1 tree per 15 public rental housing (PRH) flats target, and all new estates achieved an overall target of 30% green coverage, with a minimum of 20% at planning brief stage.
7. We provided green treatment to all the newly formed slopes.
8. We engaged local residents and the community to participate in the Action Seedling programme for early plant raising in new housing estates.
9. We promoted community involvement in greening of new PRH by introducing communal planting areas in the master landscape layout plans of 3 new PRH in design stage.



(A) Initiatives in Estate Planning and Construction Waste Management

10. We enhanced the use of green materials and components by stipulating requirements -
 - to use pulverized fuel ash as partial cement replacement material in structural concrete with mass concrete pouring in all new building contracts, and
 - to use recycled rock fill in earthworks and recycled subbase materials in roadworks in all new building and civil engineering contracts.
11. We promulgated specification for using softwood timber from sustainable source for all cores of timber doors in new PRH projects.
12. We promulgated specification requiring contractors to use timber from sustainable source and no virgin forest products for temporary works during construction.



(A) Initiatives in Estate Planning and Construction Control of Hazardous Materials

13. We implemented asbestos abatement programme through estate redevelopment programme and asbestos removal works to 10 demolished building blocks, comprising 8 domestic blocks and 2 school blocks, to abate the remaining asbestos containing materials in HA managed properties.



(A) Initiatives in Estate Planning and Construction

Environmental Awareness and Participation

14. We enhanced the environmental performance of contractors on site by stipulating in all new building, demolition, piling and civil engineering contracts the requirements to -

- submit and implement environmental management plan
- ban the use of incandescent light bulbs for temporary lighting
- use generators with Quality Powered Mechanical Equipment labels
- install water recycling facilities, and
- restrict vehicle speed

We also continue to stipulate requirements to adopt hard paved construction in all new building and piling contracts, and to use precast concrete components in all new building contracts.



(B) Initiatives in Existing Housing Estates Energy Efficiency

15. We monitored and reviewed the performance of LED bulkhead light fittings in selected existing PRH blocks.



(B) Initiatives in Existing Housing Estates

Water Conservation

16. We installed water saving devices (e.g. sensor-controlled tap, sensor-controlled urinal flush valve) in the toilets of 21 shopping centres.



(B) Initiatives in Existing Housing Estates Greening

17. We nurtured a green environment and promoted tenants' awareness and participation in greening by -
- organizing tree planting days in 10 estates,
 - developing community gardens in 10 estates, and
 - providing greening activities in 20 estates through Estate Management Advisory Committees (EMACs).
18. We re-landscaped and upgraded the existing landscape facilities through -
- the Landscape Improvement Programme in 18 estates, and
 - setting up thematic gardens at Choi Wan (I) Estate and Sha Kok Estate.
19. We improved the appearance of 10 slopes at 5 estates by providing planters for shrubs and creepers, as well as applying hydroseeding on chunam surfaces.



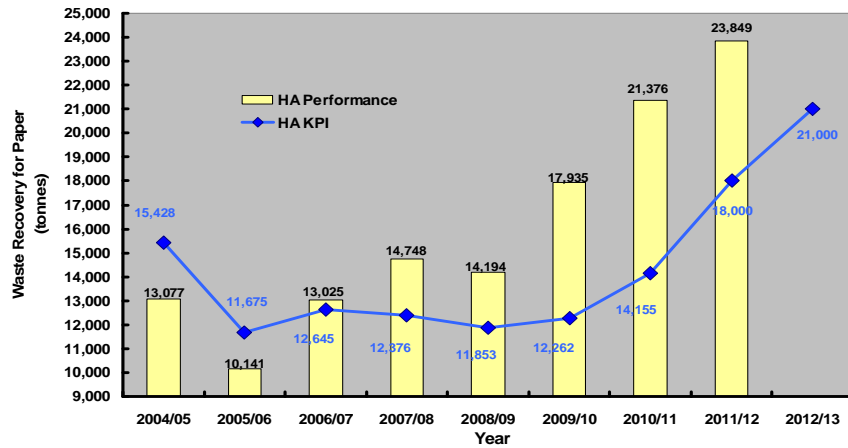
(B) Initiatives in Existing Housing Estates Waste Management

20. We promoted waste separation at source and green management initiatives by -
- implementing the Source Separation of Domestic Waste Programme in all estates, and
 - setting up collection counters in all estates for collecting domestic recyclables with incentive for exchange.
- 21-24. We recovered for recycling in PRH estates:
- about 23,850 tonnes paper
 - about 1,050 tonnes aluminium cans
 - about 1,580 tonnes plastic bottles
 - about 945 tonnes used clothes

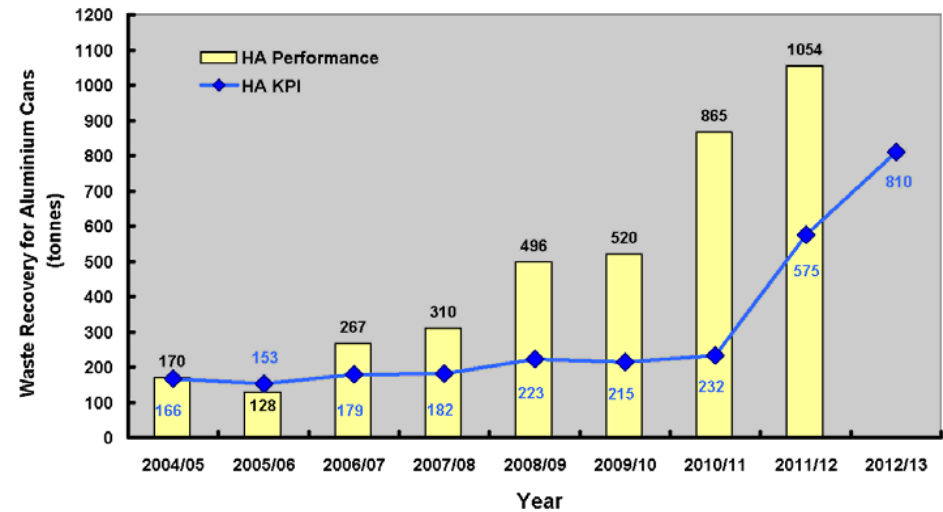


(B) Initiatives in Existing Housing Estates Waste Management

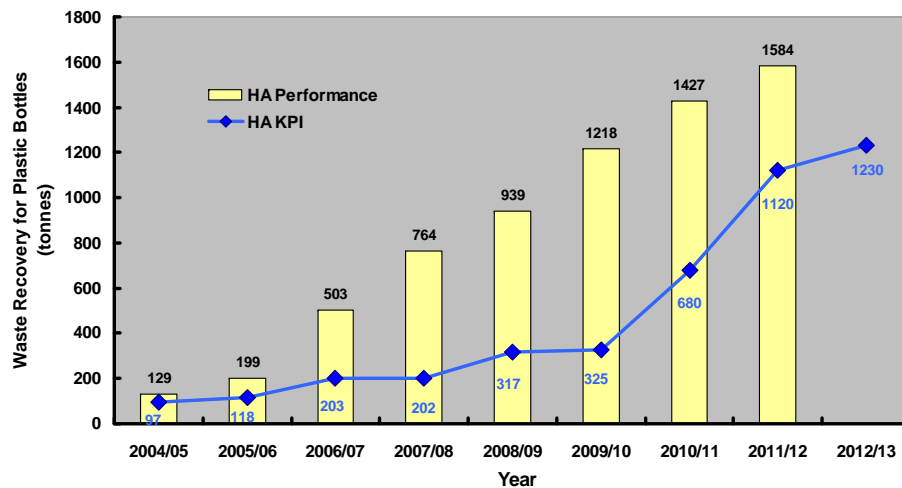
21. Paper



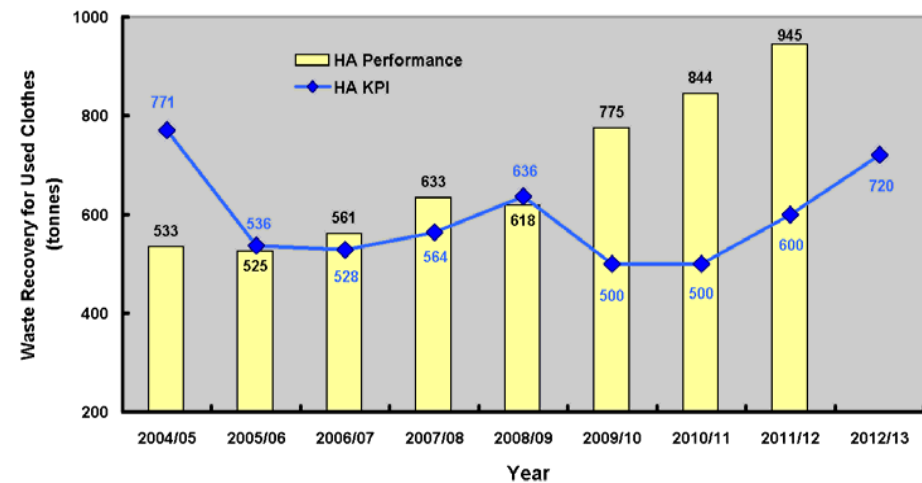
22. Aluminium Cans



23. Plastic Bottles

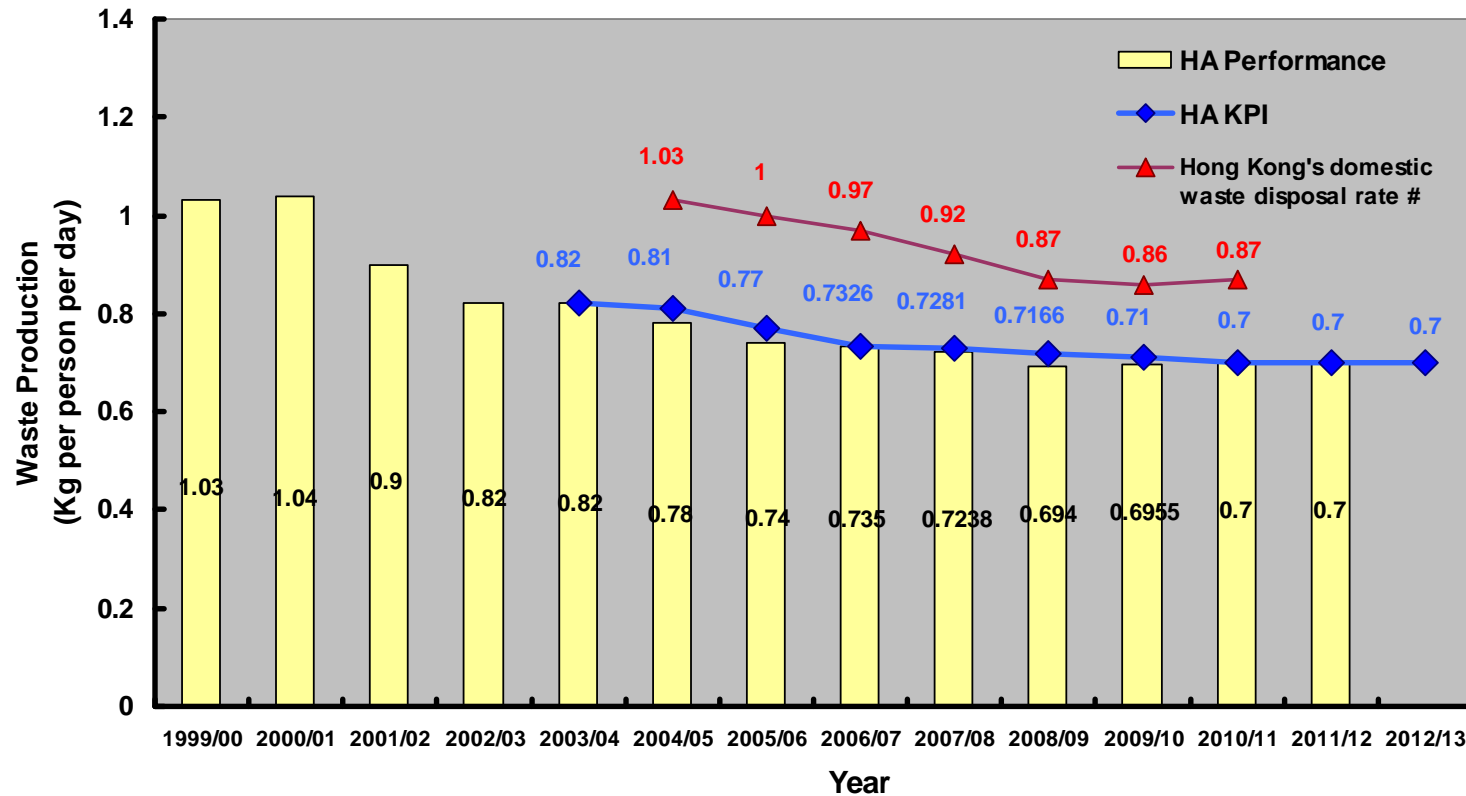


24. Used Clothes



(B) Initiatives in Existing Housing Estates Waste Management

25. We achieved the target 0.7 kg/person/day of average domestic waste production from our residents of in 2011/12 through the implementation of various waste recycling and recovery initiatives in PRH estates.



Source : Environmental Protection Department (2011). *Monitoring of solid waste in Hong Kong: Waste Statistics for 2010*

(B) Initiatives in Existing Housing Estates Control of Hazardous Materials

26. We maintained the remaining asbestos containing materials in existing PRH estates in satisfactory condition by -
- conducting two condition surveys per year, and
 - engaging a registered asbestos contractor for emergency repair of underground asbestos cement water-mains for all estates.



(B) Initiatives in Existing Housing Estates Environmental Awareness and Participation

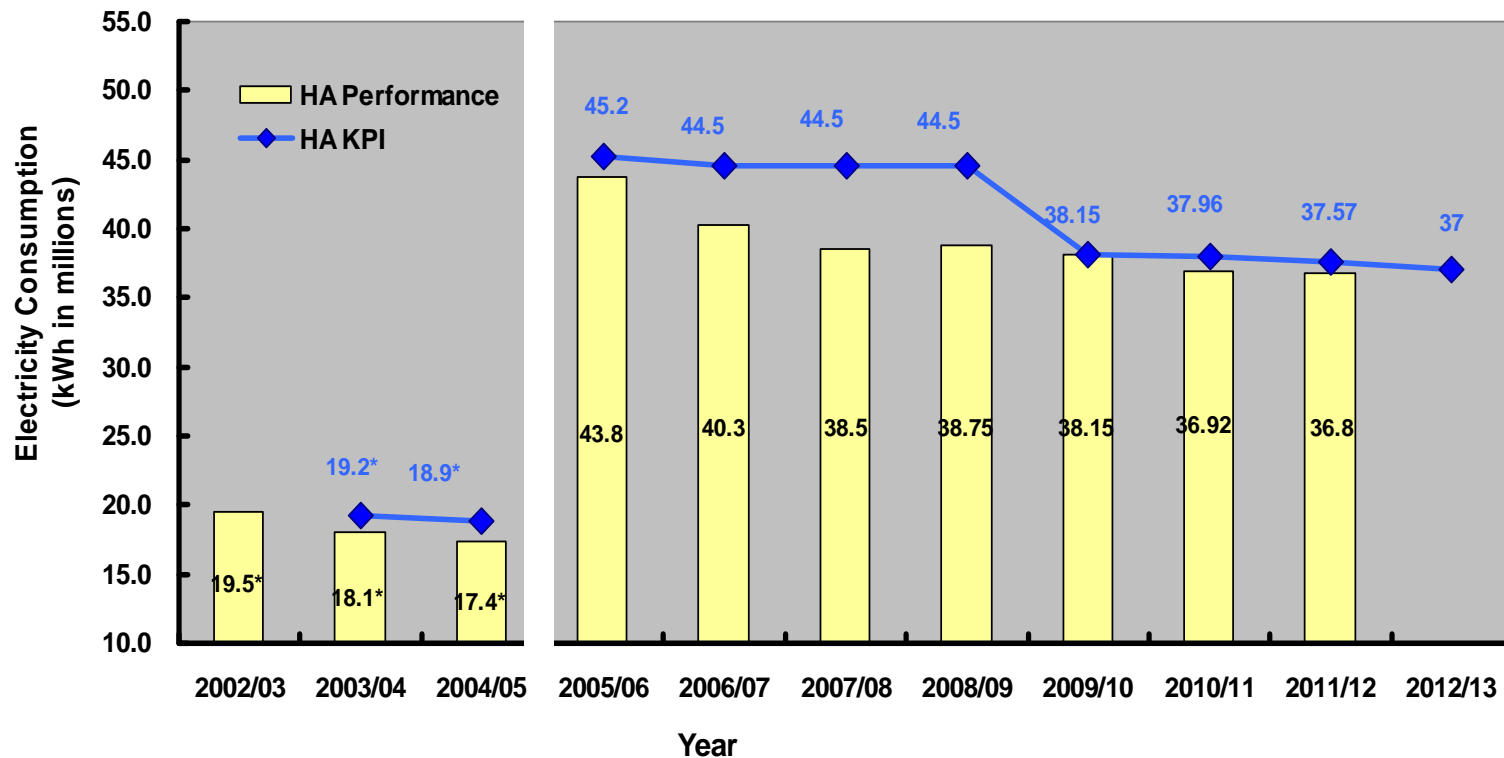
27. We collaborated with green groups to conduct the estate-wide environmental awareness campaign and education programme, namely the Green Delight in Estates programme in PRH.
28. We reviewed and monitored environmental awareness in PRH by post-programme surveys.
29. We continued to enhance community awareness on environmental protection by -
 - launching waste reduction and recycling campaigns in PRH estates, and
 - arranging joint programmes with green groups, non-governmental organizations and EMACs.
30. We promoted tenants' awareness and participation in waste separation at source, waste reduction and green management initiatives through various publicity channels.



(C) Initiatives in Office at Work

Energy Efficiency

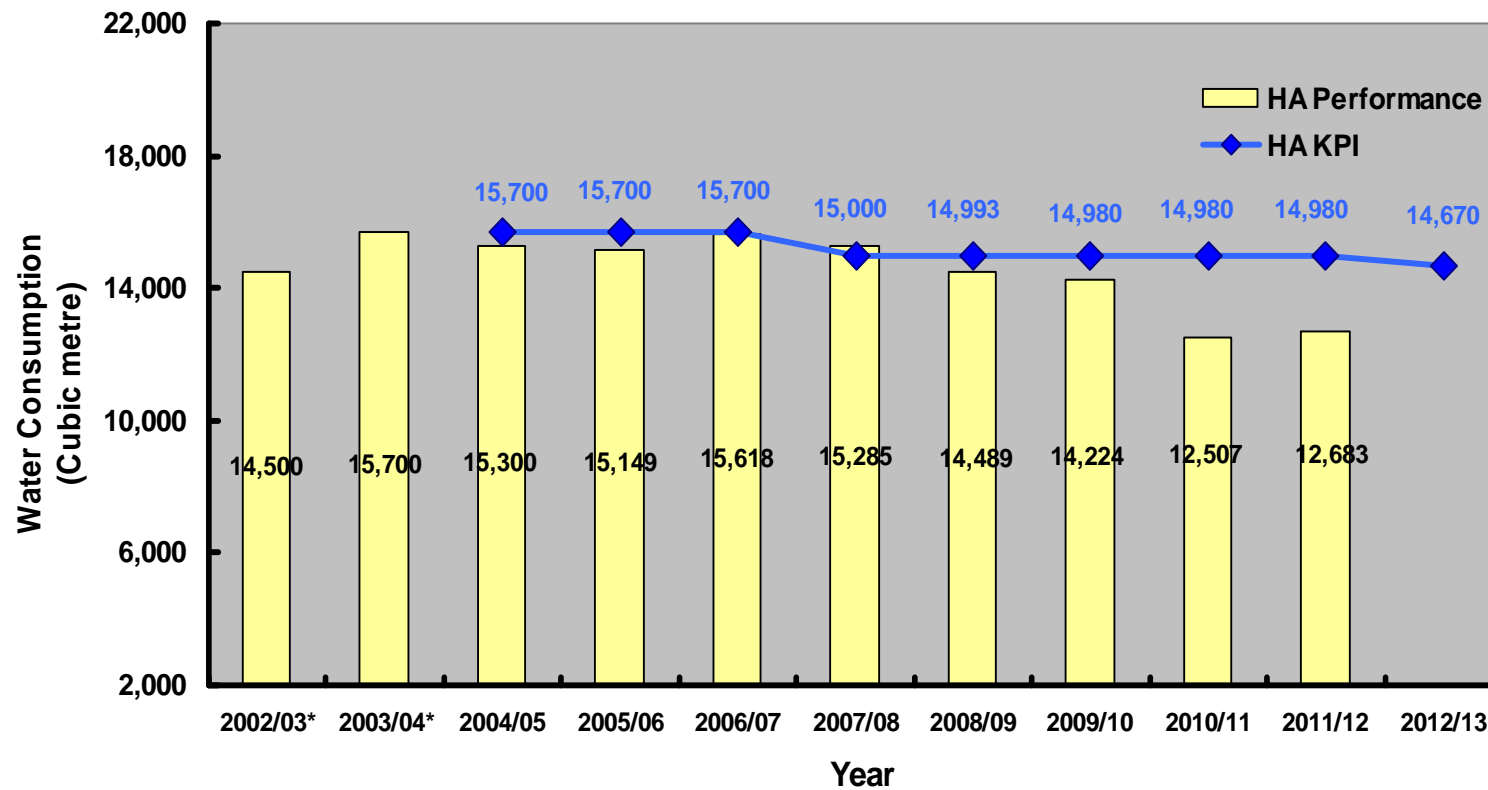
31. We consumed a total of 36,803,499 kWh of electricity in 2011/12, which was about 4.5% reduction from 2007/08 in the total electricity use of our offices.



*The HA KPI & HA performance have not included the HA Offices outside HAHQs. The corresponding KPI has been set up since 2003/04.

(C) Initiatives in Office at Work Water Conservation

32. We consumed 12,683 cubic metres of water in the HA Headquarters, which had been decreased by 17.0% as compared with the consumption in 2007/08.



(* No official target was set for water consumption in 2002/03 and 2003/04)

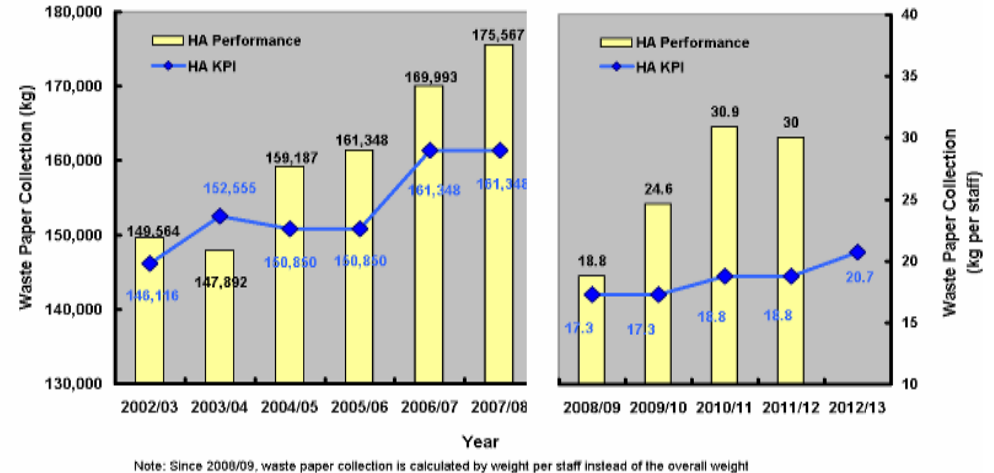
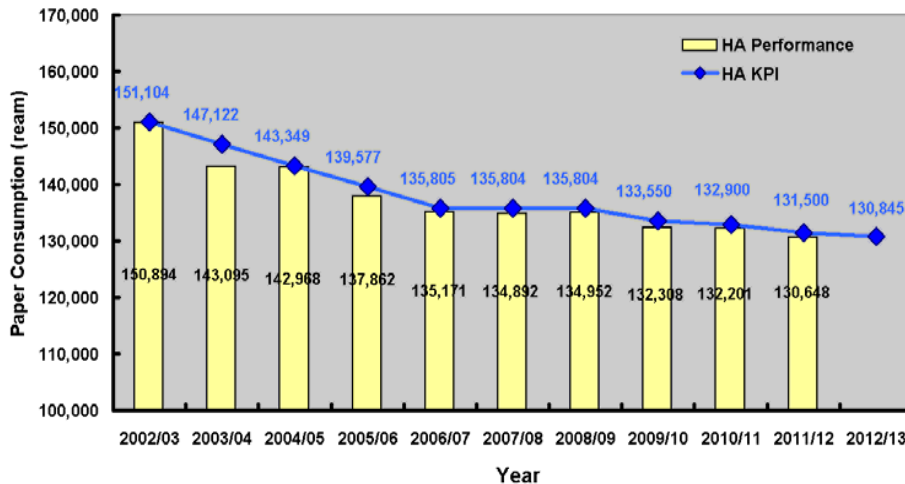
(C) Initiatives in Office at Work Greening

33. We promoted staff involvement in greening activities by arranging staff to participate in tree planting day.



(C) Initiatives in Office at Work Waste Management

34. We consumed 130,648 reams of paper representing a decrease of 3.1% as compared with the consumption in 2007/08.
35. We collected 30kg of waste paper per staff in 2011/12 in our offices, which is higher than the target of 18.8kg per staff.



36. We have been using environment-friendly paper as a prerequisite requirement in the printing of all publicity materials (except sales and marketing publications).

(C) Initiatives in Office at Work Control of Hazardous Materials

37. We controlled hazardous materials by collecting all disposed mercury-containing lamps in HA Headquarters for special waste treatment.



(C) Initiatives in Office at Work

Environmental Awareness and Participation

38. We followed up the HA staff survey on environmental awareness and strengthened our environmental training and publicity, including organising environmental quiz for all staff.
39. We continued to enhance staff environmental awareness and knowledge by -
- organizing seminars
 - displaying environmental issues at HA Headquarters, and
 - organizing environmental campaigns



Way Forward

We have set out challenging yet pragmatic targets to gauge our performance for 2012/13. We will continue our efforts to achieve various environmental, social and economic targets, with a view to maintain a sustainable public housing programme for Hong Kong.



Hong Kong Housing Authority



Thank You
