



**Report on schools' overall performance
for the 2022 Hong Kong Awards for
Environmental Excellence (Schools Sector)**

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Introduction

As the technical consultant for the 2022 Hong Kong Awards for Environmental Excellence (Schools Sector), WWF-Hong Kong assessors conducted a total of 49 on-site assessments in 16 pre-schools, 15 primary schools and 18 secondary schools between June and July 2023.

Each assessment, conducted within the school campus, lasted approximately one hour. The assessments were conducted based on the criteria listed in the ***“2022 HKAEE (Schools Sector) Self-assessment Questionnaire (Pre-school Sub-sector)”*** and the ***“2022 HKAEE (Schools Sector) Self-assessment Questionnaire (Primary and Secondary School Sub-sectors)”***.

This report aims to share with the Hong Kong education sector an overview of the performance of the assessed schools in the 2022 Hong Kong Awards for Environmental Excellence. In addition, some feature examples containing best practices and recommendations are included, with a dual purpose to encourage continuous improvement among current participating schools, and invite non-participating schools to make reference of these cases and suggestions to embark their greening journey.

1. Pre-school Sub-sector

A/ OVERALL OBSERVATION

A total of 16 pre-schools were assessed on-site between 12 June and 13 July 2023. Some general observations are summarised below.

i. **Green Leadership**

All schools have formulated an environmental policy or adapted the environmental guidelines from sponsoring bodies, focusing on fostering the implementation of environmental education and adoption of environmentally friendly lifestyle among school members. The majority of the schools have made these policy and guidelines known to stakeholders through various channels, such as school curricular, newsletter and website, and reviewed them at least once a year.

All assessed schools have integrated environmental education into their annual school plan and have incorporated environmental issues and activities into the school curriculum plan. Each school has formed a team responsible for environmental management and education, comprising of teachers or staff supervised by the principal and supported by the school management.

Most schools have arranged training for teaching or non-teaching staff on environmental management and education. This training included briefings, workshops and visits organised by sponsoring bodies, the government, external organisations, tertiary institutions and HKAEE (Schools Sector). However, participation has primarily been limited to core members of the environmental team.

It was relatively uncommon for schools to sign latest sustainability/environmental-related charters from the government or professional bodies to demonstrate their environmental commitment.

Most schools compiled a summary of implemented environmental activities in the school report on a yearly basis. However, a comprehensive record of the performance and follow-up actions regarding different environmental aspects was less commonly observed.

ii. **Programme and Performance**

Resource Usage and Management

All schools have formulated guidelines for energy conservation and carbon reduction, water conservation, waste reduction and green procurement. They have also utilised corresponding resource-saving devices and waste management facilities, such as electrical appliances with grade 1 energy label, to assist in the implementation of these measures. Most schools encouraged students and staff to practise the 4R principles and save energy and water use by designating student ambassadors and implementing award schemes to promote the development of environmentally friendly habits.

Environmental performance was reviewed regularly in most schools, including comparison of electricity and water consumption. However, carbon audits were less frequently conducted in the pre-school sub-sector.

All assessed schools promoted the use of reusable utensils by encouraging students and staff to bring their own water bottles and use reusable utensils during staff lunch. Among those schools that provided lunch or snacks in the 2021/22 school year, all of them implemented measures to reduce food waste generation, such as preparing and portioning the food according to the individual needs of students. Still, only around half of the assessed schools have implemented any scheme or provided incentives to encourage students and staff to develop the habit of cherishing food.

Campus Environment

Extensive greening practices were observed in all pre-schools, ranging from the establishment of gardens or farming pots in schools with larger areas, to the utilisation of hydroponics or aquaponics tanks, as well as potted plants in smaller campuses. Students actively participated in planting activities on campus or engaged in the “One Person, One Flower” scheme as part of their environmental education.

Neither significant noise pollution nor indoor air quality issues were found in the assessed schools.

Environmental Education

All schools have integrated environmental-related topics or activities into their teaching plans, such as through storytelling using environment-themed picture books and creating artwork from recyclable materials. External organisations were also invited to lead interactive games, perform drama, and demonstrate organic farming on campus. With the easing of the pandemic situation, outdoor learning activities have gradually resumed, ranging from exploration at school garden or green space in the neighbourhood, to visiting the natural environment.

Evaluation of environmental education is often conducted during teachers’ meetings, based on the results of module assessment of students and teachers’ observations. Only approximately half of the schools have reviewed the overall environmental literacy of students, while even fewer, about one-third of them have evaluated that of teachers.

Environmental information is regularly disseminated to school members and their families through diverse channels, including environmental corner on campus, school websites, social networking platforms, or mobile apps.

iii. Partner Synergy

Students’ parents and family members were engaged through the organisation of parent-child activities, including various drawing, slogan creation and design competitions for the entire school or specific grade levels that promote environmental protection. In most pre-schools, parents and the Parent-Teacher Association played a supportive role, particularly in recycling and planting duties on campus. However, they were not the primary event organisers.

Under the pandemic situation, most schools were unable to conduct environmental activities for and with other schools, external organisations, or the public when social distancing measures were in place.

Schools usually requested school bus drivers to turn off idling engines, while it was less common for pre-schools to state green procurement specifications in their purchasing or tender documents.

B/ FEATURE EXAMPLES

1. The school designed and implemented school-based environmental education storybooks and education packs to strengthen students' understanding on wise use of natural resources and environmentally friendly lifestyles.
2. Teachers adopted an innovative approach to promote environmental messages by composing and creating animations.
3. Parents of students initiated a campus greening volunteer group to assist in the maintenance of the campus garden and provide suggestions for its re-planning and beautification.
4. The school organised a sharing session on campus and invited parents to participate, allowing them to experience the environmental education activities conducted for students and learn about the related environmental information.
5. The school supported the "Plastic Recycling Pilot Scheme" of the Environmental Protection Department by serving as one of the collection points in the Sha Tin district.
6. The school connected with a community organisation to set up a recycling station off campus, spreading environmental messages to the public.

C/ RECOMMENDATIONS FOR SCHOOLS

1. Support teaching and non-teaching staff in attending external environmental training to ensure they are well-equipped with up-to-date knowledge on different environmental issues, such as marine litter, plastic pollution, climate change, biodiversity and sustainable consumption, etc. Schools can adopt sustainable development / carbon neutrality as the theme of staff development days or arrange relevant training on those days.
2. Keep a regular record of water and energy consumption (by checking the bills or meters) as well as solid waste production, to provide objective data that could assist the school to monitor the effectiveness of conservation actions.
3. Organise more outdoor environmental education activities for students or offer recommendations for students and families to experience and explore nature (such as organising visits to urban parks or country parks, public beaches, etc).

4. Arrange students to take turns in serving as ambassadors to facilitate the implementation of environmental programmes and encourage their peers to adopt environmentally friendly habits. For example, they can assist in turning off all the lights when leaving the classroom, remind peers to bring their own handkerchiefs and cherish food, etc.
5. Conduct annual stocktake of environmental resources including teaching props made by teachers and environmental education materials produced by external organisations, and establish a catalogue for easy reference by all school members.
6. Promote “reduce” as the first priority instead of “recycling” in both daily operation and teaching.
7. Compile comprehensive documentation of environmental education activities, including all activity details, to facilitate the review of environmental education effectiveness and identify areas for further improvement.
8. Conduct regular evaluation of both students’ and teachers’ overall environmental literacy (covering knowledge, attitude and behavioural levels), at least once a year.
9. Encourage the Parent-Teacher Association or similar Parent Association to take the initiative to organise activities with environmental and/or sustainable lifestyle related themes.
10. Share experience and co-organise green activities with other schools and external organisations.
11. Adopt “Whole School Approach” to integrate education for sustainable development in school.

2. Primary School and Secondary School Sub-sectors

A/ OVERALL OBSERVATION

The assessments of 15 primary schools and 18 secondary schools were conducted on-site in school campuses from 9 June to 14 July 2023. Some general observations are summarised below.

i. Green Leadership

All schools have established environmental teams, consisting of well-structured teams that include teachers and staff responsible for different aspects, such as environmental management, environmental education and affiliation of students and parents.

Environmental policy was formulated, announced and reviewed at least once a year with inputs from school members. Support from school management and principal was demonstrated through the allocation of resources and budget for environmental hardware and activities.

Similar to the situation in the pre-school sub-sector, it was relatively uncommon for primary and secondary schools to sign the latest sustainability/environment-related charters from the government or professional bodies to demonstrate their environmental commitment.

All assessed schools have integrated environmental education into school curriculum plans. However, less emphasis has been placed on staff training; around 30% of the assessed schools have not arranged any training on sustainability/environment-related issues for their teaching and non-teaching staff.

ii. Programme and Performance

Resource Usage and Management

All schools have formulated guidelines and implemented measures on energy conservation, carbon reduction and waste reduction, with a wide adoption of energy-saving devices and waste management facilities. However, relatively fewer schools have put effort into water conservation. Renewable energy facilities, such as solar panels, are more extensive in primary and secondary schools than in pre-schools, due to larger space available on campus. To build sustainable lifestyle habits, schools commonly organised school-based competitions, activity days, or award schemes to encourage students and staff to practise resource conservation habits.

The promotion of reusable utensils often involved distributing a set of reusable cutlery at the beginning of the school year. However, due to the suspension of school lunch provision in some schools during the pandemic, scheme on the encouragement of food cherishing was also paused, particularly in secondary schools.

The majority of the schools adopted environmentally friendly/sustainable biological products, including FSC or PEFC certified paper, refillable stationery and biodegradable detergents, etc. Many of them also established green procurement and/or sustainable consumption of

biological resources guideline, with reference to recommendations from the Environmental Protection Department, sponsoring bodies, or non-governmental organisations.

Environmental performance was regularly reviewed in meetings of the environmental team. Energy data was closely monitored in the majority of the schools, while water consumption data received less focus, and even fewer schools conducted carbon audits. Some schools were equipped with real-time tracking system to support monitoring of resource consumption and display results to school members.

Campus Environment

Greening in primary and secondary schools includes organic farming plots, butterfly gardens, potted plants and aquaponic ponds. Students assisted in taking care of plants in school lessons or during extra-curricular activities.

Neither significant noise pollution nor indoor air quality issues were found in the assessed schools.

Environmental Education (EE)

Schools incorporated EE into their school curriculum in various formats, such as teaching in core and elective subjects or Life-wide Learning activities conducted both on campus and as outreach. These activities, including projects, talks, workshops and outdoor visits, aimed at enhancing students' understanding on the latest environmental or biodiversity-related issues, training up their planting or animal raising skills, and promoting recycling or upcycling, etc.

In addition to cross-curricular project studies or STEM activities, there was an increasing trend of integrating environmental education with other learning and teaching activities, such as mindfulness activity with positive education or religious elements, and horticulture therapy linking to life education, etc.

Due to the continued suspension of face-to-face classes to varying extents, schools have utilised online assemblies, cloud storage platforms, social network platforms and mobile apps to disseminate the latest environmental information to school members, in addition to ordinary channels such as school website and notices.

Activity or initiative-based evaluation was rarely conducted in primary and secondary schools to review the effectiveness of environmental education. Most of the schools also lacked a systematic approach to assess students' and teachers' environmental literacy. It is suggested that both qualitative and quantitative evaluation should be strengthened.

iii. Partner Synergy

Parents were often engaged through upcycling or planting workshops organised by the schools, while the Parent-Teacher Associations usually supported the collection and distribution of second-hand school uniforms and textbooks to minimise waste generation.

Under the pandemic restriction, it was challenging for schools to conduct environmental activities for and with other schools, external organisations or the public. Limited successful examples included environmental quiz competition for primary schools to explore green

facilities on campus through VR, school tour for other school representatives, and workshop or booth on school open day.

In terms of service or product suppliers, the majority of the schools has requested lunch caterer to provide reusable utensils in the tender document. School bus drivers were also requested to turn off idling engines.

B/ FEATURE EXAMPLES

1. Established communication platforms for students to share environmental ideas and engage in dialogue with the school management and different members, enabling students to participate in the formulation of environmental measures.
2. Adopted IoT real-time monitoring of energy usage data and solar power generation to review energy-saving performance and improve energy-saving measures.
3. Installed solar panels on the rooftop and participated in the feed-in tariff scheme, using the proceeds to organise environmental activities, maintain the school's environmental facilities, or establish scholarship for students to engage in environmental technology projects.
4. Integrated the concept of “Leave No Trace” into the school's culture and campus operations, such as using electronic teaching and online platforms for communication among school members, reducing the number of rubbish bins on campus, and encouraging “take your litter home” practices.
5. Implemented a project study on low-carbon vegetarian diet to help students understand different considerations and practices related to advocating environmental programmes.
6. Designed a school-based “Green Campus Environmental Practice Handbook” for senior and junior students respectively, which included monthly themes to encourage students to practise an environmentally friendly lifestyle in their families, schools, and communities in areas such as clothing, food, living, and transportation. Corresponding topics of teaching modules and lessons in different subjects were also indicated in the handbook.
7. Organised environmental competitions for primary school students in Hong Kong to promote biodiversity and sustainable living.
8. Shared environmental information and outdoor activity experiences with other schools by participating in the publication of an inter-school environmental newsletter.
9. Served as a collection point for the community's computer recycling programme to promote the reduction of electronic waste.

C/ RECOMMENDATIONS FOR SCHOOLS

1. Have at least three to five staff members from different ranks and functions in the environmental management group. The group formation should include principal or vice principal, curriculum development officer, staff responsible for school catering, procurement and facility management.
2. Invite different school members, especially students, to provide input in environmental policy formulation, implementation and review.
3. Support teaching and non-teaching staff to attend external environmental training to ensure they are well-equipped with up-to-date information on different environmental conservation issues, such as marine litter, plastic pollution, climate change, biodiversity and sustainable consumption. Schools can adopt sustainable development / carbon neutrality as the theme of staff development days or arrange relevant training on those days.
4. Keep a regular record of all water and energy consumption (by checking the bills or meters) as well as solid waste generation to provide objective data that could assist the school to monitor the effectiveness of conservation actions. In addition to energy and waste management, more attention could be given to and more measures for water resource management could be implemented.
5. Implement schemes (e.g. inter-class competition) or provide incentives to encourage staff and students to develop the habits of conserving resources.
6. Require lunch caterer to use “reusable” lunch containers instead of “recyclable” ones to truly reduce waste generation.
7. Improve the accuracy of green procurement policy execution and provide regular reminders to staff to maintain a conservation-oriented atmosphere within the staff community.
8. Develop a long-term (three years or more) environmental education plan, to ensure the coherence and sustainability of environmental education in the school.
9. Apply fundings from the government or external organisations, such as the “Environment and Conservation Fund” and “Quality Education Fund”, to install green facilities and implement environmental education projects.
10. Organise more environmental workshops, seminars, visits and other kinds of training for students, covering diverse environmental themes such as marine litter, plastic pollution, biodiversity and sustainable consumption, to provide opportunities for students to understand the correlation between their daily life actions and the environment.
11. Arrange an adequate number of outdoor learning activities for students to engage with nature, rather than solely visiting indoor venues outside the school. Recommended places

to visits include Geo Parks, Mai Po Nature Reserve, nature parks, country parks and public beaches, among others.

12. Compile comprehensive documentation of environmental education activities, including all activity details, to facilitate the review of environmental education effectiveness and identify areas for further improvement.
13. Conduct more systematic and holistic evaluations to assess the environmental literacy (knowledge, attitude and behaviour) of both students and teachers. This will provide valuable insights into the effectiveness of the school's environmental education. In addition to using questionnaires for quantitative evaluation, the school can also consider conducting qualitative evaluation through interviews and/or focus groups, or incorporating evaluation in students' learning activities.
14. Encourage the Parent-Teacher Association or similar Parent Association to adopt sustainable development as the theme of their activities.
15. Share experience and co-organise green activities with other schools and external organisations.
16. Organise environmental activities for the general public, such as game booths, eco-product DIY workshops, planting courses etc., to promote green living and further extend the school's impact on environmental sustainability in the community.
17. Adopt "Whole School Approach" to integrate education for sustainable development throughout the school.