

For discussion on  
27 May 2013

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Proposed Injection into the  
Environment and Conservation Fund**

**PURPOSE**

This paper seeks Members' support for injecting \$5,000 million into the Environment and Conservation Fund (ECF) with a view to generating investment income for long-term and sustained support for community green actions.

**BACKGROUND**

2. The ECF is a statutory trust fund established in 1994 under the ECF Ordinance (Cap. 450) to provide funding support for educational, research and other projects and activities in relation to environmental and conservation matters. Through subsidizing projects and activities initiated by eligible non-profit-making organizations, the objective of the ECF is to promote behavioural and lifestyle changes to protect the environment and achieve sustainable development. Over the years, ECF funding support has empowered various partners, including established charitable organizations and youth groups, district-based non-government organizations (NGOs), schools, tertiary institutions, etc. in undertaking various environmental projects.

3. Since 1994, the ECF has supported over 3,900 projects totalling \$1,668 million. A list of the funding schemes operated under the ECF with related funding commitment over the past few years is at [Appendix 1](#). Over the same period, the ECF has an average funding payout of about \$154 million per annum<sup>1</sup>.

**JUSTIFICATION**

**Proposed Funding Injection**

4. Since the establishment of the ECF in 1994, the Government has made

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<sup>1</sup> The figure represents the average annual payouts for regular funding schemes, and has excluded those for projects approved under time-limited funding schemes.

six injections totalling \$1,735 million, the latest two being \$1,000 million in January 2008 and \$500 million in May 2011. As at end 2012, the uncommitted balance of the ECF stood at about \$70 million. Taking into consideration the applications received and under processing, the uncommitted balance of the ECF is expected to be depleted by around mid-2013. As a long-term commitment to environmental protection and conservation, the Chief Executive proposes in his 2013 Policy Address to inject \$5,000 million into the ECF so that investment returns of the fund can provide long-term and sustained support for community green actions.

## **Major Achievements and Benefits of ECF**

5. The Environmental Protection Department (EPD) has recently conducted a review on the operations and effectiveness of the ECF as well as the achievements of ECF-funded projects. A gist of ECF's major achievements and benefits is set out below. Further details are at [Appendix 2](#).

### ***Raising public awareness and enhancing community involvement***

6. With ECF support, sustained and strategic environmental campaigns and educational programmes have been organized through the coordination of the Environmental Campaign Committee<sup>[2]</sup> for various key stakeholder groups. Through publications, promotional videos, seminars, various competitions and award schemes to spread green messages covering various environmental themes, these activities have attracted over 100,000 participants / audiences each year, and driven these participants to adopt green practices and lifestyle. At the community level, the ECF has successfully secured the participation of seven well-established charitable bodies / youth organization in Hong Kong<sup>[3]</sup> to become its strategic green partners and build up role models of green organization. These organizations would leverage their wide network totalling about 760 service units to promote behavioural and lifestyle changes in the community, and help in the long term development of a green culture across various segments of the community.

7. Through supporting demonstration minor works projects, the ECF has enhanced the general public's knowledge and awareness towards technologies in waste reduction and recycling as well as energy conservation. Up to end 2012, about

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<sup>2</sup> The Environmental Campaign Committee, a non-statutory body set up in 1990, is a close partner of the ECF in undertaking community-wide environmental programmes. Each year, the ECC submits a programme plan to the ECF Committee to seek funding for organizing sustained and strategic programmes for various key stakeholder groups.

<sup>3</sup> The seven charitable/youth organizations include the Tung Wah Group of Hospitals, Po Leung Kuk, Yan Chai Hospital, Sik Sik Yuen, Pok Oi Hospital, Yan Oi Tong, and the Hong Kong Federation of Youth Groups.

44% of the primary and secondary schools in Hong Kong have been granted ECF funding for installation of environmental facilities such as green roofs, energy saving installations and renewable energy facilities. These projects have catalyzed these educational bodies to set examples of green campus and enrich the environmental content in school education. The associated education activities have reached out to over 550,000 stakeholders. The ECF has also financed the provision of waste separation facilities in housing estates and supported community waste recovery projects. These projects, being visible programmes with direct interface with residents in the neighbourhood, have effectively heightened public awareness of the imminent waste problems, and enhanced public participation in waste reduction and recycling. Together with various government measures, the recovery rate of domestic waste has increased significantly from 14% in 2004 to 38% in 2011. Initiatives undertaken with ECF support to promote energy efficiency have demonstrated the benefits of energy efficient installations for a greener lifestyle. Up to end of 2012, energy efficiency projects approved under two ECF schemes for private premises and NGOs respectively are estimated to achieve electricity savings of over 179 million kWh per year and 9.54 million kWh per year, representing reductions of carbon dioxide emissions of about 125,000 tonnes per year and 6,678 tonnes per year respectively.

### ***Nature conservation***

8. Under the Nature Conservation Management Agreement (MA) Scheme, four priority sites of ecologically importance<sup>4</sup> have been granted funding support by the ECF, at a total funding commitment of about \$10 million each year. These projects have proven to be highly effective in meeting the objectives of conserving ecologically important flora and fauna, and significantly enhancing the species richness and diversity in the sites covered. They have also successfully raised the awareness of the public on nature conservation.

### ***Supporting research and development***

9. With climate change and environmental issues high on the international agenda and a global trend to transform into a low carbon economy, the industrial sectors need to keep abreast of latest green technologies in order to stay competitive. The ECF has continued to develop research capacity and encourage knowledge transfer to the industrial sectors by providing funding to support research projects on environment-related topics. Between 2008 and 2012, more than 60 research and technology demonstration projects were funded by the ECF, covering a wide range of topics including conservation of biological diversity, waste reduction and recycling,

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<sup>4</sup> These include the sites of Fung Yuen, Long Valley and Ho Sheung Heung, the Ramsar Site, and Deep Bay Wetland outside Ramsar Site.

air and water quality, use of sustainable energy, etc. Deliverables of these projects have shown to be of practical value to the industrial sectors.

### ***Regional and international policy and technology conferences***

10. Conferences organized with ECF funding support have brought together experts from various sectors including academia, researchers, industry practitioners, consultants, government officials, representatives of regulatory bodies, green groups etc. from both local and international institutions. Overall, the participants considered these conferences and related activities to be useful and effective in providing a platform for exchange of views and best practices on major environment-related issues such as climate change, sustainable development, solid waste management, green technologies, etc. ECF's funding support for these projects has also enhanced Hong Kong's position as a focal point for international conferences on environmental issues.

### **Expected Benefits and Way Forward**

11. Our vision for environmental protection is to build a livable, healthy and green city, where residents can directly participate in green mobilization. Hong Kong will succeed when our people take action. Over the years, the ECF has played an important role in the promotion of environmental protection in Hong Kong, and ECF-funded initiatives have effectively contributed to raising public awareness and deepening the community's involvement in green campaigns. As a long-term commitment to environmental protection and conservation, we propose to inject \$5,000 million to the ECF to generate investment returns for long term sustained support for community green actions. The proposed injection will help sustain the momentum of efforts and achievements made in promoting community participation in pursuing green living, and in enhancing the penetration of environmental programmes at the community level.

12. With the proposed funding injection, the major areas of projects supported under the ECF will be in line with the major environmental challenges. These areas include waste reduction and recovery (particularly food waste), energy conservation, research on environmental technologies, and nature conservation. In the few years ahead, the ECF will build on its existing network of funding recipients to deepen the impacts on behavioural changes. It is anticipated that the following areas will remain relevant for ECF support:

- (a) To complement the Administration's efforts in "waste reduction at source", we shall accord funding priority to initiatives that would

encourage the community to embrace **waste reduction, recovery and recycling** as a way of life.

- (b) Priority will also be given to initiatives which would help instill behavioural changes at the individual and household level to **reduce food waste generation**; and promote good practices of **food waste reduction and food donation** to charitable organizations by the commercial and industrial establishments.
- (c) We shall further collaborate with various strategic partners, in particular, charity, youth and green groups, to promote green messages in the community through initiatives targeted at achieving **energy efficiency and energy saving** for combating climate change
- (d) Greater emphasis will also be placed on encouraging collaboration between industrial and trade organizations on the one hand, and tertiary institutions and other support organizations in **environmental researches**, with a view to developing or introducing new and innovative technologies and practices to protect our environment and conserve resources.
- (e) Government has been attaching much importance to tackling **air pollution and climate change** impacts. We would encourage research and study of these subjects with a view to enhancing our capacity to tackle the issues. Our support for initiatives related to energy efficiency and renewable energy would also contribute to these issues.
- (f) We shall continue to focus on supporting projects which help conserve and protect our natural environment, and promote public awareness on **nature conservation**.

13. Furthermore, in order that efforts on environmental protection and conservation could be sustainable, we need the awareness and participation of every member of the community. This in turn calls for the acknowledgement by individuals in the community that each of us contributes to the problems for the environment, and that each of us must be prepared to contribute to the solutions. To facilitate a mindset change in the general public towards this direction, the ECF would continue to provide funding support for environmental education programmes on subjects related to the above priority areas, including environmental campaigns initiated by the Environmental Campaign Committee, which has been ECF's close partner in pursuing community-wide environmental programmes.

## **Management and Investment of ECF**

### ***Current Arrangement***

14. Under section 7 of the ECF Ordinance, the ECF Committee (ECFC) has been set up to advise and assist SEN in assessing the merits of funding applications and approving allocation of fund for current funding schemes and applications. A secretariat established under the EPD's Community Relations Unit (CRU) provides administrative support for the ECFC, including vetting of funding applications, monitoring of approved projects, arranging grant disbursements, monitoring of cash flow, and conducting projections for the cash flow requirements and project funding demand.

15. SEN is authorized under section 6 of the ECF Ordinance to invest any moneys of the ECF, and for this purpose, an ECF Investment Committee (ECFIC) has been set up to assist him in drawing up investment strategies. ECFIC comprises 12 members including the Director of Environmental Protection and the Director of Accounting Services or their representatives who are official members and other non-officials members. All funds in hand are currently placed in bank deposits with a tenor ranging from 24 hours to two years to provide a readily available source of funding in view of the cashflow requirements of ECF.

16. The terms of reference and membership lists of the ECFC and ECFIC are at Appendices 3 and 4 respectively.

### ***Proposed Future Arrangement***

17. With the proposed injection of \$5,000 million into the ECF, if approved, we need to make suitable arrangements to generate sufficient returns to meet ECF's cashflow requirements in the longer term. For this purpose, discussion with the Hong Kong Monetary Authority (HKMA) for assistance in earning investment returns for the ECF is currently underway. In consultation with the ECFC, the Administration will work out suitable and practical budgeting strategies with a view to sustaining the long term operation of the ECF with the investment returns generated each year.

## **Control and Review Mechanism**

18. As the trustee of the ECF, SEN is required under the ECF Ordinance to provide a report on the administration of the fund, with a copy of audited statement of accounts together with the auditor's report, for tabling before the Legislative Council

(LegCo) on an annual basis. The latest trustee report of the ECF is available at the ECF's website at <http://www.ecf.gov.hk/en/publication/index.html>.

19. The ECF has a well-established monitoring system to ensure that supported projects meet funding requirements as well as their planned objectives. Project proponents are required to set out targets and deliverables in the funding applications. For approved projects, proponents are required to submit regular progress reports to the Secretariat of the ECFC for review. Payments to the project proponents are made by installments upon showing satisfactory progress. The ECFC and the Secretariat may carry out inspections and surprise checks to examine the progress of the projects. Completion inspections are also conducted for some projects depending on the nature of activities and works involved. Final disbursement to the project proponent will only be made after satisfactory completion of the project as supported by a completion report together with a duly certified statement of account. For the sake of transparency, application procedures of various ECF funding schemes, papers and minutes of ECFC and its Vetting Subcommittees, and essential information on approved projects are uploaded onto the ECF's website at <http://www.ecf.gov.hk/>.

20. The above administrative arrangements for the ECF have been enhanced over the years to ensure the granting of public funds to various applicants is made on transparent, fair, accountable and effective manner. With the injection of \$5,000 million into the ECF, if approved, the ECFC will continue to regularly review the guidelines and administrative measures on invitation of applications, funding criteria and monitoring/reporting of funded projects, to ensure fairness and accountability on the use of funds.

## **FINANCIAL IMPLICATIONS**

21. We propose to make a one-off injection of \$5,000 million into the ECF in 2013-14. Administrative support for the operation of the ECF and secretariat support for the ECFC and ECFIC will continue to be provided by the EPD.

## **PUBLIC CONSULTATION**

22. We consulted the ECFC in February 2013. Members supported the proposed injection into the ECF. The ECFC will constantly keep the various priority areas under review, so as to meet prevailing needs of the community in the campaign for a greener environment.

23. Subject to approval of the LegCo Finance Committee on the proposed injection, briefings will be arranged for potential applicant groups so as to solicit

interests from these groups in pursuing worthwhile projects under the purview of ECF.

**ADVICE SOUGHT**

24. Members are invited to comment on the proposed injection of funds into the ECF. Subject to Members' views, we will seek funding approval from the Finance Committee in June 2013.

**Environment Bureau  
Environmental Protection Department  
May 2013**



**Funding Schemes Operated under the Environment and Conservation Fund**

<u>ECF-funded initiatives / funding schemes</u>	<u>Amount committed (\$ million)</u>					
	<u>2007-08#</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12#</u>	<u>2012-13 (up to Dec 2012)</u>
Environmental Campaign Committee Programmes	18.96	20.59	38.47	25.35	22.72	18.93
Environmental Education and Community Action - General Projects	0.68	1.42	7.34	6.11	23.21	3.6
Environmental Education and Community Action - Minor Works Projects	-	52.04	84.86	78.48	52.93	48.54
Nature Conservation Management Agreement Projects	6.82	0	9.63	0	14.79	7.77
Research, Technology Demonstration and Conference Projects	3.24	4.41	29.38	10.41	10.90	8.72
Waste Reduction and Recycling Projects	2.38	1.69	54.29	61.84	65.59	31.83
Energy Conservation Projects	-	-	84.09	232.70	132.31	105.98
Others (e.g. Public Education Programme under the "Policy Framework for the Management of Municipal Waste (2005-14), etc.)	2.95	3.63	42.25	13.24	13.45	3.3
<b>Total:</b>	<b>35.03</b>	<b>83.78</b>	<b>350.31</b>	<b>428.13</b>	<b>335.9</b>	<b>228.67</b>

Notes

# Injections of \$1 billion and \$500 million were made to ECF in January 2008 and May 2011 respectively.

**Summary of Achievements and Benefits of the  
Environment and Conservation Fund**

**I. Territory-wide education and community involvement campaigns**

The Environment and Conservation Fund (ECF) has contributed to raising public awareness towards the need for environmental protection through providing funding support for projects and initiatives geared towards enhancing community involvement, and proactively forming partnership with different stakeholder groups to help disseminate green messages and broaden the spectrum of audience of the green campaigns. A summary of these projects and their achievements is set out below.

*(a) Programmes of the Environmental Campaign Committee*

2. With ECF's funding support, the Environmental Campaign Committee (ECC) has organized sustained and strategic programmes for various key stakeholder groups. The activities and campaigns have attracted over 100,000 participants / audience each year, and driven participants to adopt green practices and lifestyle.

3. Under the **Hong Kong Green School Awards**, 180 primary and secondary schools (equivalent to 16% of registered schools) have attained green school status, which have set models of green leaders in the education sector, and more importantly, served as a base in the community for spreading green messages from students to parents and inducing behavioral change in the next generation.

4. At the student level, the number of **Student Environmental Protection Ambassadors** receiving training on a comprehensive range of environmental subjects has reached over 16,000 in the 2012/13 school year. These student ambassadors have taken up the mission of leading and organizing school-based environmental activities for their schools, reinforcing a peer influence of adopting green living habits among students.

5. Businesses are important partners in combating climate change. It is of note that the 298,000-plus companies in the commercial and industrial sectors in Hong Kong account for almost 50% of the total energy use in Hong Kong and therefore share a major part of Hong Kong's carbon footprint. To enlist local businesses in going green, the **Hong Kong Awards for Environmental Excellence**

(HKAAEE) provides an opportunity for benchmarking environmental performance, so as to raise awareness and share experience of green practices and to provide recognition to green leaders in businesses.

6. According to a survey conducted in end 2011, about 90% of the HKAAEE participants agreed that the scheme could enhance implementation of their environmental initiatives. Over 90% of the respondents agreed that participating in the scheme could improve their staff's environmental knowledge, and over 80% agreed that the scheme could lead their organizations to allocate more resources for carrying out environmental programmes. In addition, over 80% of the respondents agreed that joining the scheme could stimulate their staff to find out more opportunities for environmental improvement. Participation in the annual Sectoral Awards has grown by 110% since 2008 to over 770 in 2012. Over 4,100 environmental labels and certificates were presented to these companies for their achievements in waste reduction, energy efficiency, indoor air quality, products with environmental attributes, as well as carbon reduction.

7. Adopting a thematic approach on green campaign, the ECC implemented the **Combating Climate Change Campaign** in 2010 and 2011 to impart knowledge of the challenges of climate change and induce behavioral change through a variety of activities including public seminars, exhibitions, school talks, training for teachers, publications and videos etc. Under the training programme, around 100 teachers were trained up to conduct education related to climate change, and around 40,000 students were engaged in school-based environmental activities. The training programme has planted seeds among local teachers in teaching climate change in the school curriculum and facilitated experience sharing. In addition, 121 school talks, 46 school roving exhibitions and 8 thematic public seminars have reached over 45,000 attendants. According to the evaluation questionnaires, over 90% of the respondents agreed that the seminars/exhibitions were effective in helping participants to learn more about global warming and climate change, and encouraging them to care about the environment.

8. In 2012, the ECC launched a campaign, namely **Green Home Action**, to promote green living starting from practices at households. About 300 housing estates took part by organizing promotion activities for residents. A school competition organized under the same theme, namely the **ECC MTR Environmental Award for Schools**, has attracted creative and reflective entries. For instance, a champion entry reflected the insightful observation and awareness of a student by using a digital drawing of a fully loaded refrigerator to impress upon people not to buy excessively, thus wasting food that has passed the expiry date fit for consumption.

**(b) *Environmental Education and Community Action General Projects***

9. The ECF has also provided resources and empowered non-government organizations (NGOs) to undertake environmental programmes for diversified audience such as elderly, women, youth, the disadvantaged, professionals, trade associations, etc. From 2008 up to end 2012, the ECF has funded 90 educational programmes under the Environmental Education and Community Action (EE&CA) scheme, with total funding of \$40.9 million. An estimated 1.7 million participants have been / will be involved in these various projects, including those reached out through various promotion channels and mass media. Feedbacks on these activities were highly positive; over 85% of the respondents to post-project surveys considered that their environmental knowledge and awareness were enhanced, whereas around 80% expressed that they would put the knowledge into practice in their daily life and put across green messages to their families and friends.

**(c) *Community Waste Recovery Projects***

10. On waste recovery, from 2008 up to end of 2012, 54 waste recovery projects with funding support totalling \$84.42 million were approved under ECF. These projects are visible programmes with direct interface with residents in the neighbourhood that have heightened the public awareness of the imminent waste problems and enhanced public participation in waste reduction and recycling. Among the projects, a processing centre for waste plastic has, in a 34-month period, processed about 3,300 tonnes of plastic waste into value-added materials, which would otherwise be disposed of at landfills depleting valuable landfill space. Another processing centre for waste electrical and electronic equipment (WEEE) has processed about 650 tonnes (100,000 items) of WEEE in about 27 months. About 20% of these items have been refurbished to re-usable equipment, out of which about 10,000 items have been donated to the needies or sold. These two processing centres are signature projects that are well placed to demonstrate to the public how a circular economy works and to induce mindset and behavioral change in the community in stepping up recycling efforts.

**(d) *Moving towards a Green NGO Programme***

11. Over the past few years, the ECF has successfully secured the participation of seven well-established charitable bodies (viz., the Tung Wah Group of Hospitals, Po Leung Kuk, Yan Chai Hospital, Pok Oi Hospital, Yan Oi Tong, Sik Sik Yuen and Hong Kong Federation of Youth Groups) to become its strategic partners in

promulgating green messages and building up role models of green organization. With ECF's in-principle funding support totalling \$128.48 million, these organizations have each committed to launch a systematic greening programme within a period of two to three years for their transformation into Green Non-governmental Organizations (Green NGOs), and implement a series of projects and initiatives such as minor works projects to demonstrate green technologies as well as environmental educational programmes for their stakeholders. The seven Green NGOs would leverage their wide network totalling about 760 service units to promote green messages to over 17 million stakeholders (with overlapping recipients) in the community.

12. The commitment of these reputable organizations to participate in the Green NGO Scheme and adopt green practices in a sustainable manner is vital to the long-term development of a green culture across various segments of the community. Funding support from ECF not only helps them accomplish their goal in evolving into green organizations, but also bring benefits to the Hong Kong community as a whole.

*(e) District Council Collaboration Scheme*

13. The ECF has also successfully obtained the support of the District Councils (DCs) in collaborating with local community bodies to undertake initiatives on environmental protection since September 2008. By end of 2012, 17 DC Collaboration projects covering a range of topics including greening, organic farming, energy conservation and waste recycling, received total ECF funding support of \$28 million. Overall, these projects achieved very positive results with high participation rates. For instance, workshops organized under a project supported by the Tai Po DC to promote the district as an energy-wise and carbon reduction district successfully attracted the participation of 69 schools and NGOs, and reached out to some 48,000 participants.

*(f) Public Education Programme on Management of Municipal Solid Waste*

14. Since 2007 up to the end of 2012, 20 public education programmes covering a wide range of topics such as green procurement, green festive packaging, food waste reduction, etc. were approved, with funding granted totalling about \$8 million. The projects have successfully reached out to over 2,900,000 participants from different spectrum of the community through various channels, and effectively enhanced public awareness on issues of environmental protection.

**(g) Nature Conservation Management Agreement Projects**

15. Under the Nature Conservation Management Agreement (MA) Scheme, MA projects covering four priority sites of ecological importance, viz., Fung Yuen, Long Valley and Ho Sheung Heung, the Ramsar Site, and Deep Bay Wetland outside Ramsar Site have been granted funding support by the ECF, at a total funding commitment of about \$10 million each year. Very encouraging results for nature conservation were registered. For instance, the MA project at Long Valley has proven to be highly effective in meeting the objectives of conserving important freshwater wetland habitats, enhancing the species richness and diversity, as well as raising public awareness on nature conservation. The number of bird species in the area increased substantially from 221 in 2005 to 275 at present, which also accounts for about 54% of the total number of bird species in Hong Kong. New species of birds at the site were also identified. Encouraging results were also recorded in the MA project at Fung Yuen, where the project mainly consists of planting suitable larval food plants and nectar plants, vegetation management, species monitoring, visitor control and conservation education. The project has enhanced the conservation value of the site, e.g. the number of butterfly species recorded at the site increased from 162 to over 210. It has also successfully raised the awareness of the public on nature and butterfly conservation.

**II. Minor works projects to demonstrate and promote energy efficiency and conservation and waste reduction**

16. Various funding schemes have been operated under the ECF to support demonstration projects for enhancing the general public's knowledge and awareness towards green technologies in waste reduction and recycling as well as energy conservation, as set out in the following paragraphs.

**(a) Minor Works and On-site Meal Portioning projects**

17. As of end 2012, a total of 963 minor works projects involving 778 schools and 42 NGO premises were approved with a total ECF funding of about \$307.90 million. The environmental facilities, namely, green roof, energy saving installations and renewable energy facilities, have rendered tangible benefits in terms of greening the community, lowering indoor temperature below the roofs, saving electricity and generating clean energy. These are also visible projects in the community demonstrating the application of environmental facilities and promoting

wider acceptance and awareness on the potential benefits of such environmental enhancement measures.

18. More importantly, the ECF has leveraged the capacity of the funding recipients, i.e. schools and NGOs, to organize environmental education activities for its networks of stakeholders. The associated education activities have reached out to over 550,000 stakeholders. To evaluate the educational and demonstration effects of these projects, the Environmental Protection Department has commissioned the Kadoorie Institute to conduct a study. The findings of the study have shown that nearly all participants considered themselves to have benefited from the funded installations / facilities or the related educational activities. By self-rating on a five-point scale of 1-5 marks, the participants consider that their environmental awareness has increased from an average of 3.3 marks to 4.1 marks. Apart from improved environmental awareness, the other most commonly identified benefits include increased knowledge on renewable energy, waste separation, energy saving or better use of resources; and increased concern about environmental protection and social responsibilities.

19. In particular, about 44% of the total number of primary and secondary schools in Hong Kong has obtained funding for the environmental facilities, which have catalyzed these educational bodies to set examples of green campus and enrich the environmental content in school education. For example, with the introduction of liberal studies in the senior school curriculum which gives increased emphasis on experiential learning, the green facilities have turned schools in life laboratories that are better placed to instill environmental concepts and cultivate values and attitudes in the young generation in leading a green lifestyle.

20. On waste reduction, the ECF launched the "On-site Meal Portioning Funding Scheme" in December 2009 to provide subsidy for schools to adopt green lunch practice through meal portioning. Up to end of 2012, 94 funding applications amounting to about \$123 million were approved. When all these schools start to implement on-site meal portioning, it is estimated that the use of about 62,000 disposable lunch boxes daily could be avoided, reducing the number of disposable lunch boxes generated daily by 16%. In addition, on-site meal portioning facilitates students to adjust the meal portion as they need and to directly engage students to consciously make choices in reducing food wastage, which is estimated to be able to contribute to food waste reduction by up to 50%. Through continual efforts to promote green lunch practices, schools have increased awareness and the figure in 2010 reflected that 86% of schools were already using reusable or recyclable lunch containers.

**(b) Source Separation of Waste and Food Waste Recycling**

21. At the household level, the ECF has financed the provision of waste separation facilities in housing estates and enhanced the availability and visibility of such facilities with a view to imparting behavioural change. Together with various government measures, the recovery rate of domestic waste has increased significantly from 14% in 2004 to 38% in 2011. Over 80% of the population has waste separation facilities provided in their housing estates.

22. To further address the imminent waste problems, it is of note that at present, of the about 9,000 tonnes of municipal solid waste disposed of at landfills every day, over 3,500 tonnes is food waste and of which, 70% comes from domestic source. In this regard, the ECF has launched a new funding scheme since July 2011 to support housing estates to set up on-site food waste treatment facilities and organize related engagement activities on waste reduction and separation at source. The scheme has been undertaken in phases; the first batch of 11 housing estates obtained funding from the ECF in November 2011. These participants have set a paradigm of domestic food waste recycling for wider application in the local context and nurtured a culture and habit of waste reduction and separation. In view of the generally positive results from food waste recycling projects and in response to the public's expectation to fast-track food waste recycling in Hong Kong, the second phase of the funding scheme was rolled out in October 2012 to further promote food waste reduction and recycling.

**(c) Energy Efficiency and Conservation Projects**

23. Initiatives undertaken with ECF funding support to promote energy efficiency have proven to be effective in achieving the prescribed objectives of enhancing energy efficiency and reducing greenhouse gas emissions, as well as upgrading the energy efficiency performance of prescribed building services installations in eligible buildings. Up to end of 2012, energy efficiency projects approved under the two 3-year schemes for private premises and NGOs respectively, viz., the **Buildings Energy Efficiency Funding Schemes (BEEFS)** launched in April 2009 and the **Energy Conservation Projects for NGOs** scheme introduced in October 2009, are estimated to achieve electricity savings of over 179 million kWh per year and 9.54 million kWh per year, representing reductions of carbon dioxide emissions of about 125,000 tonnes per year and 6,678 tonnes per year respectively. Energy conservation education programmes carried out by the NGOs have reached out to 1.5 million participants and in turn engaged them in energy conservation.



### III. Supporting Research and Development

24. With climate change and environmental issues high on the international agenda and a global trend to transform into a low carbon economy, the industrial sectors need to keep abreast of latest green technologies in order to stay competitive. In this regard, the ECF has continued to develop research capacity and encourage knowledge transfer to the industrial sectors by providing funding to support research projects on environment-related topics. From 2008 up to end of 2012, more than \$56.25 million was approved for 64 research and technology demonstration projects. These projects cover a wide range of topics including conservation of biological diversity, waste reduction and recycling, air and water quality, use of sustainable energy, etc. The research projects carried out with ECF funding support have shown to be of practical value to the industrial sectors. A couple of these ECF-supported projects are cited below for reference:

- A project undertaken with ECF funding in 2009 has successfully developed a Close-Proximity vehicle for measuring tyre / road noise. Apart from measuring tyre / road noise, the vehicle also measures instantaneous air temperature, road surface temperature, driving speed, GPS locations and vibrations. The deliverables of the project have been demonstrated as useful for relevant government departments in assessing the acoustic characteristics of both road surfaces and tyres.
- Another project undertaken with ECF funding in 2009 to examine the sustainability of building-integrated photovoltaic (BIPV) applications in Hong Kong has developed a set of software useful for architects, engineers, manufacturers of photovoltaic modules, building developers, as well as researchers of BIPV technologies in assessing the environmental benefits of BIPV systems through examining environmental indicators such as energy payback time, greenhouse-gas payback time, embodied energy demand, energy yield ratio, cooling load reduction, annual solar radiation, annual energy output, etc.
- A project was undertaken with ECF funding in 2010 to evaluate the impacts of previous and ongoing vehicle pollution control measures on PM<sub>2.5</sub> pollution systematically through quantifying the reduction percentages of exhaust components and non-exhaust components of PM<sub>2.5</sub> during a 10-year period. The findings of the project have

provided a basis to help formulate and refine future roadside air pollution control strategies.

#### **IV. Regional and international policy and technology conferences**

25. From 2008 up to end of 2012, about \$9.29 million was approved for 11 conferences on various topics held / to be held in Hong Kong. These conferences have brought together experts from various sectors including academia, researchers, industry practitioners, consultants, government officials, representatives of regulatory bodies, green groups etc. from both local and international institutions. Overall, the participants considered the conferences and related activities to be useful and effective in providing a platform for exchange of views and best practices on major environment-related issues such as climate change, sustainable development, solid waste management, green technologies, etc. The media coverage, publicity, proceedings and publications arising from the conferences also helped promote public awareness on environmental concerns. ECF's funding support for these projects has practically enhanced Hong Kong's position as a focal point for international conferences on environmental issues. The achievements of a few conferences funded by ECF are provided below for reference:

- The **C40 Workshop** (Nov 2010) brought 1,580 delegates from 33 countries and different fields including government sector, business, research and education sector, civil society, etc. to share city strategies for addressing climate change, in particular, through adopting green transport and building technologies. It included 29 side events and attracted 2,340 participants; successfully raised public awareness about the urgency, scale, risks, opportunities and global nature of climate change; built capacity amongst local experts and professionals through exchange of best practices, expertise and experience with international counterparts; engaged various sectors of the Hong Kong community in climate change issues; and attracted wide media coverage (with 219 media items from local and international media sources) which helped promulgate green messages in relation to climate change to both local and international communities.
- The international conference **Shipping Dialogue: Reducing Emissions from Vessels in Hong Kong and the Pearl River Delta** held on in November 2011 included an Expert's Day, a Public Conference and a series of meetings with stakeholders. The Expert's Day alone brought

together over 70 international and local experts from the shipping industry, regulatory bodies, public health experts and academics to discuss how Hong Kong and its neighbours in the Pearl River Delta region could tackle vessel emissions in a coordinated and sustained way to achieve maximum public health benefits. The Public Conference attracted 88 participants. The conference has helped promoted greater understanding in regional governments of the industry's commitment to regulatory compliance, and greater awareness in the public of the extent of emissions from vessels.

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**Environment and Conservation Fund Committee**

**Terms of Reference**

- (a) To vet applications seeking funding support<sup>Note</sup> from local non-profit making organizations to undertake educational, research and other projects and activities in relation to environmental and conservation matters, as well as community waste recovery projects and to advise on their relative priorities for funding support; and
- (b) To advise the trustee on the exact amount of fund to be allocated<sup>Note</sup> for each project supported.

*Note: Under the existing arrangements, the Environment and Conservation Fund Committee has delegated the responsibility of and authority for vetting applications seeking funding support of not exceeding \$2 million, and advising on the exact amount of fund to be allocated for each of these supported projects to its various Vetting Subcommittees.*

**Membership List**

	<u>Name</u>	<u>Professional Background</u>
Chairman:	Dr Joseph LEE, SBS, JP	• Managing Director, The Wofoo Plastics Limited
Members:	Mr CHAN Jor-kin, Kenneth	• Managing Director, KC Surveyors Ltd
	Ms CHAN Sui-kuen, Agnes	• Partner / Regional Managing Partner, Hong Kong & Macau, Ernst & Young
	Ms FUNG Dun-mi, Amy	• Deputy Executive Director, The Hong Kong Federation of Youth Groups
	Mr LAM Chiu-ying, SBS	• Retiree
	Mr LEUNG Wai-kuen, Edward, JP	• Executive Director, The Hong Kong Playground Association • Yau Tsim Mong District Councillor
	Professor LO Man-chi, Irene	• Professor, Department of Civil and Environmental Engineering, The Hong Kong University of Science and Technology

<u>Name</u>	<u>Professional Background</u>
Ms WONG Wai-ching, Connie, JP	<ul style="list-style-type: none"><li>• Managing Director, The Wong Sun Hing Limited</li><li>• Kowloon City District Councillor</li></ul>
Mr. Douglas WOO	<ul style="list-style-type: none"><li>• Managing Director, Wheelock Properties (HK) Limited</li></ul>
Ex-officio Members:	Secretary for the Environment, or his representative
	Permanent Secretary for Education, or his representative
	Director of Agriculture, Fisheries and Conservation, or his representative
	Director of Environmental Protection, or his representative

**Environment and Conservation Fund Investment Committee**

**Terms of Reference**

- (a) To advise the Secretary for the Environment on the investment strategy of the ECF; and
- (b) To advise the Secretary for the Environment on matters related to the monitoring of the local and overseas investment of the ECF.

**Membership List**

	<u>Name</u>	<u>Professional Background</u>
Chairman:	Secretary for the Environment	
Members:	Dr Joseph LEE, SBS, JP	• Managing Director, The Wofoo Plastics Ltd
	Mrs CHAN NGAN Man-ling, Edith	• Chief Executive, Hong Kong Securities and Investment Institute
	Ms Elizabeth LAW, MH, JP	• Director, Law & Partners CPA Limited
	Dr YIP Chee-hang, Eric	• Chief Executive Officer, Verdant Capital Group Ltd
	Mr POON Chung-yin, Joseph	• Group Managing Director, TCC Group
	Mr LAM Chiu-ying, SBS	• Retiree
	Mr John TAN	• Head of Global Markets, Co-Head, Whole Banking, Standard Chartered Bank (Hong Kong) Limited
	Mr YIP Kwong-to, Plato	• Managing Director, P & S Investment Management (HK) Ltd
Ex-officio Members:	Director of Environmental Protection	
	Deputy Director of Environmental Protection (1)	
	Director of Accounting Services or his representative	