

Final Report of the Education Focus Group (EFG) Submitted to the Awareness, Mainstreaming and Sustainability Working Group (AMSWG) of the Biodiversity Strategy and Action Plan (BSAP) on 26 August 2014

1. Title: *A Proposal for BSAP Education and Public Engagement in Hong Kong*

2. Relevant Aichi Biodiversity Targets (ABT):

Convention on Biodiversity Strategic Goal A and E: Target 1 and Target 19*

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Target 1

By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

Target 19

By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

* Retrieved from the official Convention on Biodiversity website on 20 June 2014. <http://www.cbd.int/sp/targets/>

3. Group leader: Mr. George C.K. Jor

4. Key experts / stakeholders involved in the discussion:

(a) Within the Steering Committee / Working Groups

Prof. F.Y. Wong, Prof. Joanna Lee, Ms. Yanyan Yip,
Mr. Samuel Kwong, Mr. Samson So,

(b) Outside the Steering Committee / Working Groups

Mr. Wilson Lau (Civic Exchange), Mr. Yamme Leung (WWF), Mr.
Paul Melsom, Mr. P.T. Chan and Irene Chung (Education Bureau),
Ms. Jenna Ho Marris and Mr. Martin Shaun (Eco Education Centre),
and Ms. Boman Ho (Grateful Green Group)

5. Date of submission of recommendations to the working group:

26 August 2014

6. Expected date for submission of revised recommendations to the working group

End of August 2014

7. Resources required to support the deliberation of the focus group

Please refer to the Summary of Recommendations (listing Strategies, Actions, and Matching Resources and Support) in the Appendix I

Content

8. Aims: Mainstreaming biodiversity education as a key for sustainable development

Objectives: a) To explore and/or propose action plans to enhance biodiversity education in primary and secondary schools;

b) to invite suitable academic units in the education and tertiary sector to help with the raising awareness on biodiversity

9. Scope

a) Biodiversity education in schools of Hong Kong

b) Biodiversity public awareness and public engagement

c) Threats to Hong Kong's biodiversity in the media as part of public education

10. Methodology

By meetings, interviews, Internet and library search, conversation with community partners, green bodies, Education Bureau, practitioners, academics and professionals, the focus group has collected useful information on existing status, knowledge gaps, and best practices in the field and then distill it into the writing and rewriting of the Final Report. In the lengthy, inclusive consultation process, as Meg Wheatley observes, "there is no power equal to a community discovering what it cares about."

11. Existing status, gaps identified and preliminary recommendations

Preliminary Findings and Recommendations	ABT
<p>1. <u>An Inventory of Existing Publications for Biodiversity Education</u></p> <p>Over the years, many local green groups, publishers, and Hong Kong Government departments including AFCD, LCSD, EPD, EDB, have produced lots of books and other educational materials related to biodiversity and environmental protection. According to the 17 March 2014 public lecture at the Science Museum by Prof. F.Y. Wong, former director of AFCD, there are over 200 such books. It is very important to have an inventory of these books for schools and the general public. We strongly recommend that an inventory on biodiversity-related books, magazines, leaflets, teaching kits, and other educational publications be produced as soon as possible. It takes time and lots of (wo)manpower to produce and update this inventory. Funding resources must be made available for AFCD/NGOs to hire researchers to collect the list of books and to annotate them. It would a most useful tool for academics and the public on biodiversity education. Specifically, the job requires</p> <p>a) careful, time-consuming research to sort out all potential linkages between biodiversity education and primary/secondary curriculum.</p> <ul style="list-style-type: none"> - Primary level: General Studies - Secondary level: Liberal Studies, Integrated Science, Biology, Geography, and Moral Education, etc. <p>b) categorization of all "ready-to-use" educational materials produced by Green Groups and other relevant bodies as "Inventory of Biodiversity Education reference for Teachers" on the basis of the results of a).</p>	<p>T1</p> <p>Short-term action</p>
<p>2. <u>An Inventory of Online Resources for Biodiversity Education</u></p> <p>By the same token, it is important to produce an inventory of online resources for biodiversity education. This can be done by sending a request letter to various green groups and NGOs, as well as government departments. Again, it takes lots of time and effort to produce and update this inventory for schools. Funding resources must be made available for AFCD/NGOs to hire researchers to collect data and to update the inventory on a regular basis. Specifically, the job requires online research to sort out potential linkages between biodiversity education and primary/secondary curriculum. It can even be linked to language studies on certain extent (e.g. WWF has provided materials to an educational company to develop web-based comprehension materials for studying English for both primary and secondary schools).</p>	<p>T1</p> <p>Short-term action</p>

<p><u>3. Convention of Biodiversity in the School Curriculum</u></p> <p>3.1 To date, coverage of biodiversity education is scattered in different subjects such as Biology, Geography, Moral and Civic Education, Liberal Studies, Chinese and English language courses in the existing curriculum of primary and secondary schools called “curriculum infusion” 滲透式課程. It is critical to establish the idea of biodiversity conservation and sustainable use as part of the core curriculum in all primary and secondary school systems in Hong Kong. Curriculum reform, however, has never been easy and it usually takes a long time. The 2016 Combined Science (Biology Part) Hong Kong Diploma of Secondary Education (HKDSE) Examination does not include any mention of the Convention of Biodiversity, BSAP, or Aichi Biodiversity Targets.¹</p> <p>A short-term remedy is to encourage teachers of different subjects to include programmes or activities related to biodiversity. For example, Chinese and English language teachers can include biodiversity-related books in their book report assignments.</p> <p>An interim remedy is to make optimal use of existing books, teaching kits photo exhibits and tailor-made worksheets, and learning materials created or published by green bodies such as the Hong Kong Bird Watching Society, WWF-HK, Kadoorie Farm and Botanic Garden (KFBG), Tai Po Environmental Association, Conservancy Association, the Conservation E3 Foundation, the Eco Institute, and the Grateful Green Group (a green NGO for environmental education), etc to reach out to students, teachers, and parents. Different target groups require different approaches. It is a good idea to sponsor green NGO-school partnerships in the format of extra-curricular green activities and school projects (保護生物多樣性學校計劃). Incentives must be given to support NGOs to give talks and workshops, guided field trips, and training programmes designed by recommended green bodies into schools; to give priority to biodiversity education projects in QEF, ECF, and other funding mechanisms, to organize inter-school exchanges and to share project outcomes on biodiversity with students, teachers, parents and other stakeholders; and to encourage individual students and student bodies to organize biodiversity awareness-raising campaigns.</p> <p>A local example with immediate and long-term effects could be the educational resources generated by the “Schools United to Save the Elephant” campaign started in 2012 by Celia Ho, the “elephant girl”, to raise Hong Kong school-children’s awareness of vanity consumerism, unsustainable abuse of wildlife such as “blood ivory”. “Buying is killing. No trading, no killing.” (Refer to the National Geographic October 2012 Issue on Blood Ivory and Celia’s Corner http://ecosysaction.org/celia's-corner/ and Last Hope for Elephants by Celia Ho http://www.youtube.com/watch?v=BePrnIOGjPk).</p> <p><u>3.2 School Talks, ECA and OLE and Guides to the understanding of HIPPO</u></p> <p>If Hong Kong is to raise the overall awareness and to mainstream the value and importance of biodiversity and its sustainable use, there must be government-funded school-selected talks by NGO speakers of environmental education. All primary and secondary students must be involved through school curriculum reforms, extra-curricular activities (ECA) and Other Learning Experiences (OLE) in a language intelligible and relevant to them.</p>	<p>T1</p> <p>Long-term strategy</p> <p>Short-term action</p> <p>T1 mid-term action</p> <p>T1 short-term action</p> <p>T19 long-term strategy</p>
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<p>Academic talks are necessary, but not sufficient. There must be field trips to urban parks and country parks, biodiversity conservation ECA activities.</p> <p>Biodiversity conservation and sustainable use is not just an academic subject, it should be part of life -- the very core of knowledge and skills of humanity's survival. Mainstreaming the value of eco-system services must be a central part of our collective consciousness and awareness of the life-support systems that we have unwittingly taken for granted at our own peril (未雨綢繆、居安思危). Awareness of risk management and pro-actions to protect our natural biodiversity should start at an early stage of every citizen in Hong Kong. The links between biodiversity and the long-term survival of society should be made obvious and accessible to all. Our younger generation must learn to think through the vulnerabilities of our society and to reduce the risks of biodiversity decline and its dire consequences as Prof. Edward O. Wilson of Harvard University described in his seminal works, <i>inter alia</i>, <i>The Diversity of Life</i> (1992) and <i>Creation: An Appeal to Save Life on Earth</i> (2006): To put it simply, Prof. Wilson used an acronym "HIPPO" to capture the 5 risk factors:</p> <ol style="list-style-type: none"> 1) <u>H</u>abitat loss (including unintended damage due to climate change, global warming and man-induced intentional economic activities) 2) <u>I</u>nvasive alien species 3) <u>P</u>ollution 4) <u>Q</u>ver-Population (this is related to all the other four factors) 5) <u>Q</u>ver-harvesting (over-fishing, hunting, over-gathering, poaching, etc). <p>Schools must be helped to teach the value of biodiversity conservation within the curriculum and be financed to arrange and select ECAs and programmes to advance students' understanding of HIPPO and ways to help to fight against them. Education in the schools and in the public domain should include 'What species have we already lost in Hong Kong?' They include the relative short and long term natural history of wildlife in Hong Kong including estimated time lines for localized extinctions of when the last tigers, elephants, leopards, lorises, flying squirrels, various turtle species and so on where they were last seen in Hong Kong and forward projections for the probable localized extinctions of the Chinese White Dolphin, porpoises, Barking Deer, other bird and fauna species if responsible conservation is not made a priority ahead of the continued effects of pollution and development in the Country Parks are not curtailed. "Who will benefit or suffer as such?" The point is: "If it is granted that biodiversity is at high risk, what is to be done?" (Wilson, E.O., <i>The Diversity of Life</i>, 1992, p.335)</p> <p>Once the master BASP of Hong Kong is established by 2015, it must be integrated into development of the school curriculum of Hong Kong.</p>	<p>T19 long-term strategy</p>
<p><u>4. Capacity Building and Delivery as regards teachers and teacher trainees and NGOs</u></p> <p>Once Inventories (1) and (2) are done, the next step should be equipping teachers to deliver content to students with help from external parties:</p> <p>4.1) Work with Education Bureau to organize training courses for teachers, i.e. one can post the courses onto EDB training calendar for interested teachers to enroll. The Government can provide free-of-charge venues for training. These training workshops/courses should be made compulsory for teacher</p>	<p>T1 Long-term strategy</p>

<p>optimize the use of resources developed by organizations such as TED Talks, HKBWS, EEMP, WWF-HK, KFBG, Civic Exchange, TPEA, Earthwatch Institute, The Conservancy Association, Eco Institute, Face-to-Face Media, Grateful Green Group, Gaia Institute, CUHK, Produce Green Foundation, and Conservation E3 Foundation, etc. There must be adequate funding support to enable, coordinate, disseminate, and optimize the educational output of environmental education networks. Institutional support from the government and/or the business sector is essential to run effective biodiversity education programmes by green bodies.</p>	<p>action</p>
<p><u>7. Public Education</u></p> <p>Working with green bodies, AFCD can organize roving exhibitions (road shows), public lectures, eco-film shows, engagement workshops, seminars, field trips, wildlife photo exhibitions and conservation essay competitions. There can be BSAP student ambassador schemes co-organized with schools. Support of LCSD, the Education Bureau, Environment Bureau, RTHK, and other government departments is critical. They can offer institutional support, publicity, and venues. For instance, it has been proposed that four lectures be organized in collaboration with the Hong Kong Science Museum at its lecture hall in January, March, May, and July 2014 as follows:</p> <ul style="list-style-type: none"> a) Status of Biodiversity and the Need of BSAP in Hong Kong b) Benefits of Biodiversity c) Biodiversity Conservation in Hong Kong, and d) Sustainable Use of Biodiversity in Hong Kong <p>It has been suggested that eight experts in the respective fields or profession be invited to give the public lectures, which would then be recorded and shared online. This is, however, far from enough. Selected NGOs committed to biodiversity education, including dedicated members of the EFG, should be given convenience in the booking of LCSD or Museum venues to run biodiversity exhibitions, workshops and seminars for the public free of charge. There should also be funding incentives for production of self-access biodiversity materials (such as Apps for Hong Kong Biodiversity, Hong Kong Animal Activity and Collection Cards). This is a fine example of the delivery of educational works to students, parents, and the community at large.</p> <p><u>Citizen Science Monitor Scheme</u></p> <p>Citizen Science schemes are useful forms of public engagement. Beach clean-ups, walks for endangered materials, planting local trees in urban areas and the countryside (as opposed to planting non-native species) are good examples. The Government can revive the AFCD volunteer nature warden scheme to monitor changes in the territory's environmental and biodiversity condition. Local residents in given areas can be encouraged to take up monitoring jobs as volunteers, it can involve citizens, say, in certain areas of Lantau. A bi-annual report could be submitted to the Central organizing body, thereby keeping a centralized record of the state of the areas selected for scientists, researchers, and government departments. Prof. Joanna Lee (GRM) of the Chinese University proposed a district-based volunteer-reporting eco-survey scheme. It is an excellent idea worthy of further studies by the Government and universities. The Open University of UK has successfully run eco-survey schemes such as The OPAL Tree Health Survey, The Big Seaweed Search,</p>	<p>T1 short-term action</p> <p>T1, T19 long-term strategy</p>

<p>and the OPAL Biodiversity Survey. For more information about these, go to www.OPALexplorenature.org and www.iSpot.org.uk</p>	
<p>8. <u>Publicity Materials</u> It is recommended that tailor-made publicity materials be produced to promote the biodiversity of Hong Kong. Funding should be set aside for Hong Kong Biodiversity Apps and short video clips for iPad, iPhone, Android handheld devices and mobile phones. This can help to raise the awareness of biodiversity and mainstream BSAP in the age of the Internet and mobilize people to help with conservation in the field.</p> <p>An AFCD biodiversity leaflet has been made and distributed through various channels to introduce the Convention on Biodiversity and the value of “ecosystem services”, that is, the benefits of biodiversity and life-support system. The leaflet invites the public to participate and help develop the BSAP of Hong Kong. The leaflet together with the Hong Kong Biodiversity Apps, <i>inter alia</i>, could help gather the views of members of the public. Examples of these Apps include the Apps of trees and birds of CUHK produced in 2009 by the CU Tree Project and Grateful Green Group. Both Apps are available at Apple Store and Google Play Store free of charge for the public. The Hong Kong Bird Watching Society has also produced in 2014 the “HKcBirds” to help identify 200 common species of birds in Hong Kong.</p>	<p>T1 T19 short-term action and long-term strategy</p>
<p>9. <u>A Natural History Museum of Hong Kong as a long-term Facility</u> To date, our society has yet to see a natural history museum of Hong Kong. A natural history museum of Hong Kong is a centralized education, research and training facility for Education for Sustainable Development (ESD) for schools and for the general public in the long run. Former Professor Emeritus of Marine Biology of the University of Hong Kong, Prof. Brian Morton, highlighted the value of a natural history museum in Hong Kong in his public lecture on “Marine Biodiversity and Conservation of Hong Kong: Past, Present, and Future” on 5 October 2013. We agree that this is a long-term key strategy for the success of the NBSAP process. We strongly recommend that the Hong Kong natural history museum be planned, built, and opened before 2020. Well ahead of Hong Kong, The Beijing Museum of Natural History was set up in 1962.⁴ The first natural history museum of Singapore will open its doors in 2014.⁵</p> <p><u>A Natural History Museum of Hong Kong as an interim Programme</u> Meanwhile, before the Natural History Museum of Hong Kong is built, the government can leverage on the natural history collections of the Hong Kong History Museum in Tsimshatsui and on the Woodside Biodiversity Education Centre (the revitalized “Red House”) in Quarry Bay. This can be done by expanding and integrating existing resources into a territory wide, focused, participatory and interactive programme to raise awareness and engage the public in biodiversity conservation and sustainable use. The government could simply re-position all existing visitor centres as well as the Hong Kong Wetland Park, Information centres of country parks to make them more biodiversity-oriented under a single theme. If that is done properly, a new natural history museum programme would make an excellent "outdoors</p>	<p>T1 T19 Long-term Strategy</p> <p>T1 T19 Short-term action</p>

<p>learning" platform for training, research and public education. This will not take up too much extra resources apart from existing ones and will be more effective on biodiversity research and education for sustainable development (ESD). ESD is an appeal to save life on Earth, not just resources management, but risk management on critical natural capital or biological wealth for the survival of human society in the long run.</p>	
<p><u>10. Leadership, Inter-departmental Coordination and Regional Exchange</u> 10.1 The onus of running the BSAP process currently falls on the shoulders of AFCD. Obviously, there must be a higher level of support and coordination among different departments or government bodies such as the Development Bureau, LCS D, the Environmental Bureau, the Education Bureau, RTHK, and so on. If the HKSAR government is determined to secure success of the city-wide BSAP process, it must ensure that there be an umbrella policy for inter-departmental cooperation initiative led by the Chief Executive and Chief Secretary. That would ensure coordination of various departments and facilitate connections of Hong Kong with other regions and neighbours such as Singapore, Guangdong, Macao, Taiwan, and other parts of China, the Secretariat of CBD, and the United Nations. Hong Kong can surely learn a lot and benefit from the best international practices of biodiversity conservation with strong leadership and determination for the first Hong Kong BSAP. A successful model of regional collaboration between Hong Kong and Taiwan on biodiversity education in schools is included in the Appendixes for reference. (Appendix VII)</p> <p>One of the most promising possibilities of collaboration between government departments is probably a joint effort of LCS D and AFCD for public education on biodiversity conservation. Since its inception in 1871, the Hong Kong Zoological and Botanic Gardens (HKZBG) has changed little for 140 years⁶. In January 2014, LCS D has commissioned The Kadoorie Institute of the University of Hong Kong to advise LCS D, before the end of the year, on the modernization and enhancement works of HKZBG. This is a great opportunity for LCS D and AFCD to work together to re-design and enhance HKZBG to promote Aichi Targets 1 and 19, namely, mainstreaming awareness of biodiversity, conservation values, and sustainable use. AFCD has a lot to offer to help enhance the HKZBG for the benefit of education of the public, such as expertise in biodiversity, taxonomy and conservation, knowledge of urban trees in particular, education on endangered animal and plant specimens, such as ivory tusks, emphasis on local flora and fauna instead of exotic ones only, activity programmes of urban parks and country parks, animal welfare, science books and pamphlets such as AFCD's latest publications, <i>A Photographic Guide to Common Urban Trees of Hong Kong</i> 香港市區常見樹木圖鑒 (2014) and <i>Treasuring Our Biodiversity 珍愛我們的生物多樣性</i> (2014). In the new HKZBG, it helps a lot to build in an open herbarium, a physical outlet and/or digital library of biodiversity and conservation works such as that of Hong Kong naturalist Mr. CY Lam's seminal work <i>天地不說話</i> (Joyful Books Ltd, July 2014), and other means of mainstreaming and spreading the word and value of biodiversity conservation.</p>	<p>T19</p> <p>Long-term Strategy</p>

10.2 Last but not the least, it has been noted that frontline officers and workers of government departments, such as the Police Department, EPD, FEHD, and do not have sufficient institutional support and knowledge of local wildlife in order to protect it from poachers and collectors and they should be educated in particular on the endangered species in the New Territories. With regular and continuous updates, even specialist liaison officers in each protected area should be regularly educated on the implications and importance of particularly rare and protected native species that may be at risk from harm such as illegal collectors of flora and poachers of fauna in Hong Kong. Illegal felling of endemic tree species such as incense trees (*Aquilaria sinensis*) and Buddhist pines (*Podocarpus macrophyllus*) must be dealt with as quickly as possible before they are driven to the brink of extinction.

10.3 Sharing Session with Decision-makers

There seems to be a huge knowledge gap about biodiversity conservation of Hong Kong among LEGCO members and senior government officials. Such a gap and lack of concern is not conducive to the success of BSAP and may lead to harmful decisions that cause a serious decline in the biodiversity due to habitat loss and unwitting development within our country parks. We strongly recommend that a sharing session be held between members of the BSAP Steering Committee, LEGCO members and heads of government bureaus on the importance and values of BSAP to the Hong Kong community as a whole.

12. Key sources of information.

Notes

1. Education Bureau webpage on Science Education – Biology
<http://www.edb.gov.hk/en/curriculum-development/kl/science-edu/ref-and-resources/biology.html>
2. Environmental Education Media Project. Available at <http://eempc.org>
3. Waking the Green Tiger. <http://www.facetofacemedia.ca/page.php?sectionID=2&pageID=107>
4. Official website of the Beijing Museum of Natural History
<http://www.bmnh.org.cn/Html/Article/20090107/544.html>
5. News of the first natural history museum in Singapore was released on 6 June 2012. Available on the Internet at http://newshub.nus.edu.sg/headlines/0612/museum_06Jun12.php
6. Karacs, Sarah, “Zoo’s Animals are ‘Trapped in 19th Century’”, *South China Morning Post*, 18 August, 2014, C2.

Selected References

Aichi Biodiversity Targets. Available on the Internet at <http://www.cbd.int/sp/targets/>
Agriculture, Fisheries and Conservation Department: Hong Kong Biodiversity Online.
<http://www.afcd.gov.hk/english/conservation/hkbiodiversity/hkbiodiversity.html>
Apps of Trees and Birds of CUHK
(The first ever “CU Trees App” and “CU Birds App” released on 30 June 2012 showcasing 50 species of birds over 160 species of trees, and 40 other species of plants found on the Chinese University campus for users of iPhone, iPad or Android mobiles. Available from the AppStore and Google Playstore for free and listen to the calls and songs of the birds.
<http://www.greeneducationcuhk.net/Default.aspx?tabid=58>
Convention on Biodiversity. Available on the Internet at <http://www.cbd.int>
CEPA Toolkit available on the Internet at <http://www.cbd.int/cepa/toolkit.shtml>
(Communication, Education, and Public Awareness Toolkit is a toolkit for national focal points and NBSAP coordination by Frits Hesselink, Wendy Goldstein, Peter Paul van Kempen, Tommy Garnett and Jinie Delta. 308 pages, n.d.)

Cities and Biodiversity Outlook: Action and Policy (A Global Assessment of the Links Between Urbanization, Biodiversity, and Ecosystem Services). Available on the Internet at <http://www.cbd.int/doc/health/cbo-action-policy-en.pdf>

Civic Exchange <http://www.civic-exchange.org/wp/>

Eco Institute <http://www.eco-institute.com.hk>

Environmental Education Media Project (EEMP) <http://eempc.org>

Green Education Group, CUHK. <http://www.greeneducationcuhk.net>

The Hong Kong Bird Watching Society (January 2013). *Hong Kong Headline Indicators for Biodiversity and Conservation 2012 Report*. Available on the Internet at <http://www.hkbws.org.hk/BBS/viewthread.php?tid=19256>

Hopkinson, L. (2012). *Developing a Biodiversity Strategy and Action Plan for Hong Kong*. A Civic Exchange publication available on the Internet at http://www.civic-exchange.org/wp/201212bsap_en/

Ho, Celia (Nov. 2013). *Last Hope for Elephants* (12-minute video available on the Internet at <http://www.youtube.com/watch?v=BePrnlOGjPk>)

Natural History Collections of the Hong Kong History Museum available at http://hk.history.museum/en_US/web/mh/collections/collections/natural.html

Produce Green Foundation. http://www.producegreen.org.hk/eng/index_e.htm

RTHK documentaries “Ocean Business” (海底交易)
<http://programme.rthk.hk/rthk/tv/programme.php?name=tv/oceanbusiness>

Science and Art of Trees, Birds, and Butterflies of CUHK Exhibition (A roving biodiversity exhibition held in March 2012). Available only in Chinese at http://www.cpr.cuhk.edu.hk/en/press_detail.php?id=1264&s=

Tai Po Environmental Association. <http://www.taipoea.org.hk/index.php>

TED Talks. <http://www.ted.com/talks>

The Conservancy Association http://www.conservancy.org.hk/index_e.html

Wilson, E.O. (1991). *The Diversity of Life*. Massachusetts, MA: Harvard Univ. Press.

Wilson, E.O. (1998). Ed. *Biodiversity*. Washington D.C.: National Academy Press.

Wilson, E.O. (2006). *The Creation: An Appeal to Save Life on Earth*. N.Y.: Norton.

WWF-Hong Kong <http://www.wwf.org.hk/en/>

WWF-Hong Kong Education Material List (44 items for primary and secondary schools in relation to environmental and biodiversity education, such as teaching kits, worksheets, teachers’ and students’ copy, exhibition packs, data, pictures, leaflets, games, wildlife ID kits, habitat introduction.)
http://www.wwf.org.hk/reslib/resources/edu_resources/

WWF-Hong Kong Inventory. (This was produced by joint efforts of Hong Kong Environmental Education Group a few years ago (see attached PDF file) in Appendix III.)
http://www.hkedcity.net/iclub_files/a/1/108/webpage/pdf_file/lwl_whole.pdf.

Appendix I

Summary of the Recommendations of the Final Report of the Education Focus Group for the First Biodiversity Strategy and Action (BSAP) of Hong Kong Submitted on 26 August 2014

Appendix II Example of NGO Seminars Relevant to Biodiversity Conservation

Beyond Fire-Fighting – A Strategic Plan for Conserving Nature with Dr Andy Cornish

at 7:30 pm on Wednesday, 13 November 2013. <http://www.bisous.com.hk/>

Bisous, 9F LKF Tower, 33 Wyndham St., Central

Media headlines regarding nature conservation in Hong Kong make for depressing reading. New discoveries and measures to increase protection for our rich natural heritage appear to be drowning under a tidal wave of habitat losses and new threats from development. Recent suggestions to build housing in country parks are a classic example.

One of the underlying problems is that Hong Kong has no master plan that lays out long-term biodiversity objectives. As a result, every conservation measure or threat tends to be viewed in its own right, rather than their ability to support or undermine the conservation of genetic, species or habitat diversity across the whole territory. However, all this is about to change now that Hong Kong has signed-up to the Convention for Biological Diversity (CBD). Hong Kong is required to set itself

long-term objectives for nature conservation, and a strategic plan for delivering them, and the process of formulating the plan – which has to be implemented in 2015 – is now firmly underway. Keep up to date via http://www.afcd.gov.hk/english/conservation/con_bsap/con_bsap.html

Dr. Andy Cornish has worked on local conservation issues for more than 15 years, including while teaching at the University of Hong Kong, and as the Conservation Director for WWF-Hong Kong. He recently released a study with the Faculty of Law at The University of Hong Kong entitled “A Review of Hong Kong’s Wild Animal and Plant Protection Laws.” As a member of one of the working groups formulating the Biodiversity Strategy and Action Plan, Andy will explain what the plan is all about, the process and how people can take part, and his aspirations for filling current gaps for the conservation and sustainable use of marine biodiversity.

Appendix III Example of NGO Seminars Relevant to Biodiversity Conservation

Public Lecture at The Chinese University of Hong Kong on Changing Biodiversity

Date: 20 March 2014 (Thu)

Time: 10.30 am - 12.00nn

Topic: **How Satellite Data Tell us Tales of Changing Biodiversity?**

Guest Speaker: [Dr Nathalie Pettorelli](#) (Research Fellow at the Institute of Zoology, Zoological Society of London, United Kingdom)

Venue: LT5, Yasumoto International Academic Park, CUHK, Shatin, N.T.

The ability to anticipate the impacts of global environmental change on biodiversity and ecosystem services is fundamental to designing appropriate and optimized adaptation and mitigation strategies: yet such ability requires the scientific community to access, among other things, reliable data on spatio-temporal changes in the distribution of abiotic conditions; information on the distribution, structure, composition and functioning of ecosystems; as well as evidence on the effectiveness of various management actions. The potential for satellite observations to provide access to some of this key data has been highlighted by many, having literally opened up the possibility of addressing questions on scales inaccessible to ground-based methods alone, and facilitating the development of an integrated approach to natural resource management, where threats and consequences can both be evaluated. In this talk, Dr. Nathalie Pettorelli will provide an overview of the possible applications of satellite data in biodiversity monitoring and conservation, and demonstrate how ecological knowledge and satellite-based information can be effectively combined to address a wide array of current natural resource management needs.

Sponsors: The British Council
Earth System Science Programme, Faculty of Science,
The Chinese University of Hong Kong (CUHK)

Contact Persons: Ms. Polly Lam (British Council) Polly.Lam@britishcouncil.org.hk
Ms. Sally Cheuk (Earth System Science Programme, Faculty of Science, CUHK) sallycheuk@cuhk.edu.hk
Mr. George Jor (Founder, the Grateful Green Group, Education Focus Group leader, Biodiversity Strategy and Action Plan, AFCD) georgejor@cuhk.edu.hk

Co-sponsors: The School of Life Sciences (SLS), CUHK
The Department of Geography and Resource Management (GRM)
The Institute of Environment, Energy, and Sustainability (IEES)
Agriculture and Fisheries Conservation Department (AFCD), HKSAR Government
Grateful Green Group (a green NGO for environmental education)
Civic Exchange

Coordinator-in-charge of the event at The Chinese University of Hong Kong (CUHK)
Prof. Teng Fong Wong, Professor and Director,
Earth System Science Programme, Faculty of Science, CUHK

Appendix IV

Environmental Education Materials Inventory by the Education Bureau (EBD) and the Hong Kong Environmental Education Group (HKEEG). (An 88-page document [環境教育的全方位學習](#)).

See the attached PDF file of environmental education materials in Chinese.

Appendix V and VI

Chinese and English Version of Notes Prepared by George Jor for the BSAP Engagement Forum – Panel Dialogue Organized by World Green Organization at the Zero Carbon Building on 14 June 2014. The focus is on how to raise public awareness on conservation with a new understanding of B.S.A.P. in terms of 1) **B**elonging, 2) **S**ense of Home, 3) **A**ssociation of life, and 4) **P**reparedness for Tomorrow.

Appendix VII: Successful Collaboration Between Hong Kong and Taiwan: A Report on the Science and Art of Trees, Birds, and Butterflies Exhibitions 2014: (In Chinese only)

Acknowledgement

The Education Focus Group, AMSWG, BSAP, would like to thank the following organizations and individuals for their help with and contributions to the inception report of the Focus Group. Any errors and omissions are naturally those of the author of the report and leader of the Focus Group.

Organizations:

Civic Exchange

Department of Geography and Resources Management, The Chinese University of Hong Kong

Eagle Owl on Lantau

Eco Institute, Ltd

Education Bureau, HKSAR Government

Environmental Management Association of Hong Kong

Grateful Green Group

Tai Tam Tuk Eco Education Centre

WWF-Hong Kong

World Green Organization

The Kadoorie Institute

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Dr. Winnie Wai Yi Law, Ms, Carol Lee, Ms, Joyce Chow (The Kadoorie Institute, HKU)

Priorities Chart

To recap, the ten recommendations are shown in the following grid in relation to the extent of their urgency and importance:

	Most	Important	
9.1 Natural History Museum as a Facility		10.3 Leadership, Coordination and Exchange	
10.1 Inter-departmental Coordination		4. Capacity Building and Delivery (4.1, 4.2, 4.3)	
3.1 School Curriculum		1. Book inventory	
6. Media and databases		2. Online Resource inventory	
8. Publicity materials		3.2 School-NGO partnership	
		5. Community partners	
		7. Public education	Most
Not			
Urgent			Urgent
10.2 Training of frontline workers		9.2 Natural History Museum as a Programme	
	Least	Important	

Timeline of the BSAP Recommendations for Education and Public Engagement

Time/Job	Nov- Dec 2013	Jan-Jun 2014	Jul-Dec 2014	Jan-Jun 2015	Jul-Dec 2015	...2020
1. Book inventory	>=====>	>=====>	>=====>			
2. Online inventory	>=====>	>=====>	>=====>			
3.1 School Curriculum				>=====>	>=====>	>=====>
3.2 School Activities	>=====>	>=====>	>=====>	>=====>	>=====>	>=====>
4. Capacity Building						
4.1 Teacher training			>=====>	>=====>	>=====>	>=====>
4.2 NGO school talks	>=====>	>=====>	>=====>	>=====>	>=====>	>=====>
4.3 Fund applications	>=====>	>=====>	>=====>			
5. Community partners			>=====>	>=====>	>=====>	>=====>
6. Media and Databases				>=====>	>=====>	>=====>
7. Public Education		>=====>	>=====>	>=====>	>=====>	>=====>
8. Publicity Materials		>=====>	>=====>	>=====>	>=====>	>=====>
9.1 Museum as a Facility					>=====>	>=====>
9.2 M. as a Programme		>=====>	>=====>	>=====>	>=====>	>=====>
10.1 Leadership	>=====>	>=====>	>=====>	>=====>	>=====>	>=====>
10.2 Staff Training				>=====>	>=====>	>=====>
10.3 Sharing Session with Decision-makers				>=====>	>=====>	>=====>