

**Advisory Council on the Environment
Nature Conservation Subcommittee**

**Nature Conservation Management Agreement Proposal –
Management Agreement on the Private Land
with High Conservation Value at
Fung Yuen Valley Site of Special Scientific Interest
in Tai Po, Hong Kong (2013 – 2016)**

Purpose

This paper invites Members' advice on a funding application submitted by the Tai Po Environmental Association (TPEA) under the Nature Conservation Management Agreement (MA) Scheme.

Background

2. Fung Yuen Valley is a forested ravine situated on a south-facing hillside northeast of Tai Po. The site is dominated by secondary woodlands but extensive areas of grassland and shrubland-grassland mosaic are also present on the more exposed areas of the hillside. The ecological value of Fung Yuen Valley is widely recognized due to its rich butterfly diversity and was designated as a Site of Special Scientific Interest (SSSI) in 1980. Fung Yuen Valley was also included as one of the 12 Priority Sites for Enhanced Conservation with an aim to better protect and conserve this ecologically sensitive area, in particular the land under private ownership within the site. The total area of the Priority Site is 42.7 ha, of which 3.4 ha or 7% is private land.

3. To maintain and enhance the ecologically important Fung Yuen Valley SSSI, the Agriculture, Fisheries and Conservation Department (AFCD) has been carrying out habitat management work in the Government land portion of Fung Yuen Valley SSSI since 2001. The major tasks include clearance of the invasive alien weed, *Mikania micrantha*, vegetation management to enhance habitat and plant diversity, enrichment planting of butterfly larval food plants and nectar source plants as well as maintenance of fire breaks to protect the SSSI from fire risk that may spread across from adjacent burial grounds.

4. The private land within the SSSI, however, did not receive any habitat management prior to the implementation of a MA project in 2005, and was under a

number of threats such as collection of butterflies, overgrowth of invasive alien weeds and habitat degradation.

Recurrent Subsidy to MA projects

5. The experience in the past years showed that it would be very unlikely for MA projects to be self-financing. Most of the activities being carried out under the MA scheme, for example engagement of landowners or tenants in conserving private land of ecological importance, various habitat management work (e.g. planting crops that attract bird species, clearing invasive species for the protection of the habitats etc.) or conducting surveys for monitoring purpose, are for the purpose of conserving and enhancing the natural environment rather than generating income. They are by nature almost inevitably not profitable. Also, in order to preserve the ecological values of the sites, income-generating activities conducted by the applicants (such as eco-tours and other educational activities) must be confined to within appropriate limits. It is therefore impracticable to expect the MA to become self-sufficient even in the long term. Considering the above, in 2011, the Environment and Conservation Fund (ECF) agreed to amend the ECF funding guideline to expressly provide continuing funding support to the MA scheme. Nonetheless, all MA applications will still be supported on a time-limited basis (generally not longer than 3 years) and each application has to be assessed on its own merits.

Previous MA Projects

6. Since 2005, MA project has been carried out at Fung Yuen by the TPEA with funding from the ECF. The project aims at conserving and enhancing the natural habitat of butterflies in Fung Yuen Valley SSSI through signing management agreements with local landowners. The MA project has successfully demonstrated its effectiveness in maintaining and enhancing the habitat quality of Fung Yuen SSSI for butterflies, conserving and enhancing the biodiversity of the area, as well as boosting the education value of the ecologically important site through active community involvement in the project.

7. Enhancing the habitat quality in favor of butterflies is the primary conservation goal of this MA project. Habitat restoration has been carried out by TPEA in order to attract more butterfly species to the area. The number of butterfly species has increased from 162 in 2005 to over 200 in 2012, which accounts for over 80% of the butterfly species recorded in Hong Kong. Some very rare butterfly species like *Pelopidas subochraceus* (近赭穀弄蝶), *Celaenorrhinus leucocera* (白觸星弄蝶), and *Caltoris bromus* (無斑珂弄蝶) have also been

recorded in Fung Yuen since the implementation of the MA project.

8. The area managed under the MA project (i.e. the Fung Yuen Butterfly Reserve) has also provided suitable habitats for other faunal groups in Fung Yuen. Ecological surveys carried out under the MA project have indicated that the site supports a diverse assemblage and proportion of other taxa groups such as dragonflies and damselflies (34%), birds (17%), amphibians (43%), reptiles (30%), mammals (35%) and fireflies (30%), showing that the MA project contributes not only to the provision of a suitable habitat for butterflies but other faunal groups are also benefited from the proper management of the habitats there.

9. Public engagement and education is one of the major programmes of the Fung Yuen MA project. Over the past years, TPEA has boosted stronger community involvement in the project through organizing various education activities such as exhibitions, eco-tours, volunteer activities, seminars, monthly butterfly festivals and annual butterfly carnivals. The project has drawn considerable media attention and over 300 media interviews, 700 talks and 1,500 eco-tours were held. Besides, more than 50,000 participants have visited the butterfly reserve since its operation in 2005.

10. In recent years, however, there have been increasing public concerns over the potential threats on the butterfly diversity and richness at the Fung Yuen area due to the nearby developments. Therefore, long-term conservation management of the Fung Yuen Butterfly Reserve is of paramount importance so that it could continue to serve its vital functions both as a refuge area for butterflies and other wildlife in the area and an outdoor education centre on biodiversity conservation for the public.

11. For the most recent approved MA project at Fung Yuen, ECF granted a total of \$5,035,876.65 to TPEA for implementing the project for the period from February 2010 to January 2013.

The Current Application

12. The present Fung Yuen MA project will end on 31 January 2013. In this connection, TPEA has submitted an application to seek ECF's support to launch a new MA project. The project will last for three years (from February 2013 to January 2016). The goal of the current application is to maintain the impetus of the previous MA projects and to further enhance the ecological value of the ecologically important private land at Fung Yuen.

13. For the long-term management and conservation of the Fung Yuen areas,

the applicant has proposed an updated management plan of Fung Yuen with extension of habitat management area, long-term ecological monitoring, and increased financial sustainability of the project.

14. Under the current application, the habitat management area will be expanded by 17% to cover more private land in the area so as to enhance the ecological integrity of the Priority Site. About 2 ha of land areas would be under active management and conservation in the proposed project. Stronger collaboration with local land owners would therefore be achieved. Habitat restoration of degraded farmlands including planting of butterfly host and nectar plants will be carried out in the extended area.

15. In the light of the public concern over the potential adverse environmental impact from a nearby residential development, long-term ecological survey on butterflies and other taxa groups as well as environmental assessment and monitoring will be conducted for this proposed project. The scientific information collected would help formulate long-term conservation and management strategies for the ecologically important area at Fung Yuen.

16. To deepen community ownership of nature conservation work and raise the financial sustainability of the project, the applicant has explored various means to seek alternative funding, such as private sponsorship and organization of income-generating activities. The project would generate revenues from daily entrance fees and sales of products (equivalent to about 2% of the total project budget) while the project team would also seek additional funding from Quality Education Fund (about 3% of the total project budget) for promoting public education on the conservation of butterflies and the nature in general.

17. According to the proposed budget, the applicant requests for a grant of \$7,774,266.15 (approximately \$2.6 million per year) to cover the increase in management areas and the strengthened biodiversity management programmes.

Recommendations

18. AFCD and the Environmental Protection Department have examined the application in accordance with the following vetting criteria for MA application—

- (a) the benefits that a proposed project will bring to the efforts in enhancing the conservation of the site concerned, better achieving the nature conservation objectives, and evaluating the effectiveness of this new conservation measure;

- (b) the sustainability of a proposed project including its resource implications, participation of the landowner(s) and local community, nature and enforceability of the management agreement concerned;
- (c) the technical and project management capability of the applicant organisation, as well as its track record, including the effectiveness of past projects, and its ability to comply with funding conditions;
- (d) whether the proposed project's schedule of implementation is well-planned and practicable, and the duration is reasonable;
- (e) whether the proposed budget is reasonable and realistic, and whether the project is cost-effective, with full justification for every expenditure item; and
- (f) whether the proposed project has alternative sources of funding, and whether it would be more appropriate for the proposed project to be funded by other sources

19. We consider that the proposed project is worth supporting as it will enable a host of conservation and education programmes to be run for the benefit of enhancing the biodiversity at the concerned site and promoting nature conservation to the public. We also consider it essential to maintain the momentum of the conservation efforts made by the previous MA projects. The two departments' assessment is at **Annex B** for Members' reference. In particular, we have conducted a detail assessment on the cost-effectiveness of the MA project as summarised at **Annex C**.

Advice Sought

20. Subject to Members' comments, the proposal will be submitted to the ECF Committee for funding support.

*Agriculture, Fisheries and Conservation Department
Environmental Protection Department
November 2012*

Annex A

**Summary of Application for
Nature Conservation Management Agreement Project**

Project Title	Management Agreement on the Private Land with High Conservation Value at Fung Yuen Valley Site of Special Scientific Interest in Tai Po, Hong Kong (2013 – 2016) 以管理協議方式保育鳳園谷具特殊科學價值地點內具高生態價值的私人土地 (2013-2016)
Site involved	Fung Yuen Priority Site
Size of Proposed Management Area	About 215,100 sq. ft. (2 ha)
Proponent	The Tai Po Environmental Association (TPEA)
Project Description	This project aims at conserving and enhancing the natural habitats of butterflies in the Fung Yuen Valley SSSI through management agreements with local landowners.
Key Conservation Objectives	<ul style="list-style-type: none"> • To reduce and minimize environmentally incompatible behavior on private land in Fung Yuen; • To enhance and maintain the habitat quality of private land in Fung Yuen; • To provide a refuge area for butterfly foraging, inhabiting, and breeding, so as to help increase the diversity of butterfly species; • To train volunteers in conservation programme; • To provide up-to-date ecological information and formulate strategies for long-term management in the area; and • To promote nature conservation awareness of the general public.
Duration	Three years (1 February 2013 – 31 January 2016)
Amount of Fund applied for	<p>Funding applied: \$ 7,774,266.15 (\$2,591,422 per year)</p> <p>(Note: Expected income generated from daily visitor conservation fee (\$ 150,000) will be ploughed back into the project account and the alternative funding to be sought (\$250,000) will be defrayed against the actual expenditure before calculating the amount to be reimbursed as the final payment. Hence, the expected final payment from the ECF fund will be \$7,374,266.15)</p>

Annex B

Evaluation of Application for Nature Conservation Management Agreement Project

Our views on the application received are set out below:

Management Agreement on the Private Land with High Conservation Value at Fung Yuen Valley Site of Special Scientific Interest in Tai Po, Hong Kong (2013 – 2016) (submitted by the Tai Po Environmental Association (TPEA))

Evaluation criteria	Comments	Supplementary Information from previous MA projects
Benefits that will bring to the efforts in enhancing the conservation of the site concerned and in better achieving the nature conservation objective	<p>The project would benefit the conservation of Fung Yuen areas by –</p> <ul style="list-style-type: none"> • reducing and minimizing the incidence of any irregularities and environmentally incompatible activities on the lands under private ownership; • maintaining and enhancing the habitat diversity and quality of private lands as an important site to butterflies through management agreements with landowners to prevent land degradation; • maintain and enhancing the conservation of butterflies as well as other associated wildlife; • enriching the knowledge on effective and efficient habitat management measures as well as providing up-to-date ecological information to formulate suitable long-term conservation and management strategies at Fung Yuen; • building communication channels with landowners and local villagers, and gaining their support in nature 	<ul style="list-style-type: none"> • It is worthwhile to highlight the benefits of the MA projects on the conservation of biodiversity at Fung Yuen Areas since its implementation in 2005. There has been a substantial increase in the diversity of butterflies at Fung Yuen since the implementation of the MA project in 2005. The number of butterfly species increased from 162 before the MA (2005) to over 200 at present, which represents about 30% increase and accounts for more than 80% of the total number of butterfly species in Hong Kong.

Evaluation criteria	Comments	Supplementary Information from previous MA projects
	<p>conservation; and</p> <ul style="list-style-type: none"> • promoting the importance of conservation to local community and general public. 	
<p>Sustainability including its resources implications, participation of the landowners and local community, the nature and enforceability of the management agreement</p>	<ul style="list-style-type: none"> • The present proposal requests for a 3-year funding (\$2,591,422 per year) from ECF. The expected revenue generated from daily entrance fees (\$150,000) will be returned to ECF to cover part of the cost, and alternative funding will be sought to support one of the education programmes. • The current proposal will be the fourth phase of the MA project which will continue the conservation management of Fung Yuen in accordance with a long term management plan. New elements (i.e. expansion of management areas and long-term ecological monitoring) will be included in this management plan to enhance the ecological integrity of the Priority Site. • The applicant has already entered into management agreements with local landowners in the current MA project. These agreements could be extended in the coming project. • Conservation and volunteer workshops, exhibitions and outreaching booths will be organized for schools and local community members to build up conservation capacity of the public. It is anticipated that TPEA have the capacity to carry on with these 	<ul style="list-style-type: none"> • Over the previous years, TPEA have organized many conservation education programmes, for instance eco-tours, exhibitions, volunteer programmes, and butterflies carnivals which attracted over 50,000 nature lovers visiting the Fung Yuen Butterfly Reserve.

Evaluation criteria	Comments	Supplementary Information from previous MA projects
	<p>activities to better promote nature conservation.</p> <ul style="list-style-type: none"> The project proponent strived to achieve financial sustainability in the proposal. Other alternative funding such as Quality Education Fund will be sought to enhance self-sustainability of the MA project. 	
<p>Technical and project management capability, and track record of the applicant. NGOs may seek assistance or support from other relevant professional bodies where necessary</p>	<ul style="list-style-type: none"> TPEA is experienced in carrying out environmental projects including natural and energy conservation projects funded by the ECF. They have gained solid experience and knowledge on nature conservation of private land at Fung Yuen over the past seven years. The proposed project is supported by the Chinese University of Hong Kong, the Hong Kong Bird Watching Society, the Kadoorie Farm and Botanic Garden, the Boys' Brigade and the New Territories School Association. 	<ul style="list-style-type: none"> Under the management of TPEA over the past years, the MA project provided encouraging results in particular increase in species and habitat diversity, stronger cooperation with local stakeholders, as well as better public awareness through conservation education.
<p>Whether the proposed project's schedule of implementation is well-planned and practicable, and the duration is reasonable</p>	<ul style="list-style-type: none"> Habitat and species management and/or conservation measures are scheduled year-round. Education, publicity and consultation activities are scheduled as appropriate. The proposed schedule of implementation is considered well-planned and practicable. Considering that long-term habitat management is required to maintain and enhance the conservation 	<p>N.A.</p>

Evaluation criteria	Comments	Supplementary Information from previous MA projects
	<p>value of the concerned site and longer term of management agreements would provide stronger incentive to engage interested stakeholders, the proposed duration of three years of habitat management is considered reasonable and necessary.</p>	
<p>Whether the budget is reasonable and realistic, and whether the project is cost effective</p>	<ul style="list-style-type: none"> • Please refer to the detail assessment at Annex C. • The exact amount of funding to be approved will be decided by the ECF Committee. 	<p>N.A.</p>
<p>Whether the proposed project has alternative sources of funding, and whether it would be more appropriate for the proposed project to be funded by other sources</p>	<ul style="list-style-type: none"> • Day Visitor Conservation Fee (\$20 per person per day) is required for visiting the Fung Yuen Butterfly Reserve. It is expected to generate \$150,000 over three years, which accounts for 2% of the total budget. • The applicant will continue to explore the opportunity of having corporate and private sponsorships as well as apply relevant government funding. In the current proposal, it is estimated that the alternative funding from QEF will be around 3% of the total budget. • The income generated from the above activities and the alternative funding to be sought is limited (5% of the proposed budget). Financial support from sources like the ECF is still required. 	<ul style="list-style-type: none"> • In the MA project (2010 -2013), TPEA has strived to seek alternative funding, e.g. TPEA has sought additional funding (about \$200,000 in total) from the Quality Education Fund (QEF) and corporate sponsorships for its education program. Also, over the past few years, the annual Butterfly Race was sponsored by some private companies.

Annex C

Assessment on Cost-effectiveness of Fung Yuen Project

Amongst other vetting criteria, we have assessed whether the proposed budget of the Fung Yuen project is reasonable and realistic, and whether the project is cost-effective, and found that:

- The proposed management area is increased by 17% (i.e. from 1.7 ha to 2 ha), and the proposed budget is increased by 54% (from \$1,678,626 per year to \$2,591,422 per year).
- Compared with the current MA project (2010-2013), the increase in budget is mainly due to
 - Increase in salary of project staff because of a high turnover rate of manpower due to lower than market rate salary offered in previous MA projects. The proposed budget is increased from \$2,556,724 to \$3,779,748 which is an increase of 48%. The manpower cost will be equivalent to 49% of the proposed budget.)
 - In the previous MA, TPEA faced difficulties in recruiting suitable candidates for the post of project officers as the offer was too low. Four project officers resigned within three years and approximately 20 interviews were held each time to recruit a new staff. Adjustment of salary had been considered in the previous MA project. However, since the MA project had been commenced, variation in labour cost was therefore not advised at that time. The proposed increase in staff salary is considered necessary because the stability of staff would enhance the management and execution of the project. The proposed staff salary is comparable to the same grade in the market. (Please refer to the comparison table below).
 - The project manager, supported by an assistant manager, will be responsible for planning, preparing, implementing, monitoring and reviewing the conservation and management programmes of the private land in Fung Yuen SSSI. By conducting detailed analysis based on the data as obtained from the past 7 years during previous MAs, he will also be responsible of looking into present improvement and situation, and planning for future goals and targets. He will also lead his team to establish and run the Fung Yuen Advisory and Management Committees, as well as carry out

continuous liaison with the local community, academes, and government officers.

- In view of the complexity in the implementation of the MA scheme as well as the responsibilities and knowledge and skills required for the duties to be discharged, it is considered necessary that the person-in-charge of this project should be ranked at managerial and professional grade. Should the post be filled by person with less experience or lower qualification as specified in the application, the funding should be adjusted downward by ECF.

Job Title	Education Background	Working Experience	Salary Offered in previous MA	Proposed Salary	Comparable Market Salary
Project Manager	Degree holder in a relevant discipline, e.g. ecology, nature conservation, wildlife biology or management.	5+ years of experience in a position that stewards the habitat management work of a nature reserve or a national park 3+ years of work experience at a supervisory level, able to demonstrate good management and supervisory skills	<i>Nil</i> (No project manager was recruited in previous MA project)	\$21,250 -\$33,250 (MPF included)	\$25,600-\$34000 (MPF included)
Assistant Manager	<i>Same as project manager</i>	3+ years of experience in a position that stewards the habitat management work of a nature reserve or a national park. 2+ years of work experience at a	\$18,900 (MPF included)	\$17,850 -\$26,775 (MPF included)	No comparable post in other MAs

		supervisory level, able to demonstrate good management and supervisory skills.			
Project Officer	Degree holder in Ecology, Environmental Science, Environmental Management, Geography, Biology or any discipline related to conservation	At least 2 years relevant working experience, preferably in organizing and leading outdoor activities related to nature conservation or appreciation, or education projects planning and implementation	\$10,500 (MPF included)	\$17,850 (MPF included)	\$17,850-\$19,615 (MPF included)
Causal Worker	Primary school educated with knowledge of written Chinese and basic English	At least 10+year relevant working experience of planting and manage the operation of a farmland	\$7,875 (MPF included)	\$9,975 (MPF included)	The Guide to Application of MA Projects sets the level of funding support of direct labour cost at a maximum of \$35 per hour. The increase in salary is mainly due to additional working days for maintaining the increased management area.

- Increase in rental payment as a result of increase of management area by 17%, inflation of property rental (The cost on this item is raised from \$801,000 to \$1,350,000, increase of 69%. The rental payment attributes about 17% of the budget.)
 - Having regard to the spirit of MA to involve private landowners, the applicant has negotiated with the landowners for a reasonable rent of the education centre and private land taking into consideration of the

overall inflation of property rental in recent years and expected soaring rental price once the nearby residential development is completed. The proposed rental payment of private land and education centre is comparable to the market rate.

Item	Rent in Previous MA	Cost in new MA application	Market Rate
Education Centre with exhibition area, house, gathering and visitor garden area. Storage area. (Size: 3,000 sq.ft.)	\$22,500/month (i.e. \$7.5/sq.ft./month)	\$30,000/month (i.e. \$10/sq.ft./month)	Over \$30,000/month (for entire complex of 3,000 sq.ft. within the SSSI). (Remarks: In 2012, the prevailing rent of nearby village houses ranges from \$9 to \$16 per sq.ft. per month).
Store Rooms (Size: 2,000 sq.ft.)	\$2,200/month (i.e. \$1.1/sq.ft./month)	\$2,500/month (i.e. \$1.25/sq.ft./month)	
SSSI site, Agriculture land (Management Area in MA Application: 212,100 sq.ft.)	\$21,001/year (i.e. \$0.01/sq.ft./month) (Remarks: Management area in previous MA project is 180,900 sq.ft.)	\$60,000/year (i.e. \$0.02/sq.ft./month)	\$0.04-\$0.06 sq.ft./month

- Renovation of conservation center to reinforce security due to frequent occurrence of burglary incidents. (The cost on renovation is raised by 200% from \$50,000 to \$150,000. It attributes about 2% of the budget.)
- In the previous MA, there were seven burglar cases, and a total loss of \$10,000 cash, two camera lens, one computer notebook and one binocular was reported. To reinforce security, TPEA proposes to

install surveillance cameras and adopt a guard dog. The installation of surveillance cameras together with the renovation of site management office would cost \$150,000 while the adoption of guard dog would cost \$400.

- A new initiative in organising international conference in nature conservation policy and sharing the experience of Fung Yuen, expecting over 150 participants. The conference will cost an additional \$50,000.

2. Given the amount of work to be undertaken by the applicant, the project is considered to be cost effective and the budget is deemed reasonable.

***Agriculture, Fisheries and Conservation Department
Environmental Protection Department
November 2012***