

Environment and Conservation Fund

**Nature Conservation Management Agreement Proposal –
Wetland Management Programme for Fishpond**

Purpose

This paper invites Members' advice on two funding applications submitted by the Hong Kong Bird Watching Society (HKBWS) under the nature conservation management agreement (MA) Scheme, namely the "Fishpond Conservation Scheme in Ramsar Site 2013 – 2015" (**Attachment 1**) and "Hong Kong Got Fishpond - Eco-fishpond Management Agreement Scheme 2013 – 2015" (**Attachment 2**). Members are invited to provide advice on each application based on the individual merit of each proposal.

Background

2. The fishponds located in the Northwest New Territories are the largest stretch of continuous and contiguous wetland remaining in Hong Kong. They are of intrinsic ecological value, providing important feeding and roosting grounds for a diverse assemblage of bird species, in particular ardeids (herons and egrets). They are an integral part of the Mai Po and Inner Deep Bay wetland ecosystem, supporting over 50,000 waterbirds each year.

3. In the past, fishpond operators in the Deep Bay area adopted traditional farming practices such as removal of weeds on pond bunds, regular drain-down and sun drying of fishponds. Fish are harvested to provide economic returns while the drained ponds and the exposed pond bunds provide suitable feeding and roosting habitats for birds. Under the traditional farming practices, fish farming coexists in harmony with bird conservation.

4. This ecologically friendly practice, however, is no longer the preferred way of fishpond operation nowadays. Most of the fishponds in the Deep Bay area are now under intensive commercial management and the operators seldom drain down and dry their fishponds. The water is typically kept at such a level that it has

become too high for wading birds to forage or roost in the fishponds.

5. Besides, in order to protect the fish stock from predation by fish-eating birds (in particular Great Cormorants), fishpond operators may employ various means to deter the birds from entering their fishponds, including at times the use of nets and hooks in ways that are considered illegal, thus creating an acute conflict between bird conservation and fish farming.

Recurrent Subsidy to MA projects

6. 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 and each application has to be assessed on its own merits.

7. Moreover, in the recent meeting on 4 December 2012, when considering the proposed enhanced framework for dealing with MA applications, ECF agreed that in order to observe the principle of accountability for the use of public fund, in particular in relation to the potential public interest over projects receiving sizable funding support, all MA projects should observe a funding cap of \$10 million for each project lasting a period of three years. Moreover, to deepen community ownership and uphold a greater sense of ownership in budget control of the project, a 5% contribution to the total budget has been set as a reference point for the amount of alternative funding to be sought by the MA applicants. The project proponent should demonstrate that they had made their utmost efforts in seeking alternative funding.

The Pilot Project

8. With a view to maintaining the ecological integrity of Deep Bay wetlands, restoring the ecological functions of fish ponds therein through wise use of the wetland, and preserving the traditional fish farming as part of the local cultural heritage, the HKBWS proposed under the MA Scheme a Pilot Project in November 2011 in two Priority Sites in the Inner Deep Bay area, namely “Ramsar Site” and “Deep Bay Wetland outside Ramsar Site”, designated under the New Nature Conservation Policy (NNCP). The Environment and Conservation Fund (ECF) granted a total of \$4,988,200 to HKBWS for implementing the project on 700 ha of fishponds from January 2012 to February 2013.

9. The key conservation objectives of the Pilot Project are to restore and enhance the conservation value of commercial fishponds in the Deep Bay area and to build up a more positive relationship between fish farming and bird conservation. Under the Project, fishpond operators are required to adopt a traditional and ecologically sustainable operation regime to manage their fishponds to provide suitable feeding and roosting habitats for birds.

10. In return, operators who fulfill the requirements of the agreement can receive a management fee (at \$4,500 per ha per year), the amount of which is based on cost of electricity, equipment and labour in conducting drain-down and other traditional fishpond maintenance work. Meanwhile, the HKBWS is allowed to conduct bird surveys on drained ponds to provide up-to-date ecological information of the fishpond habitats. The project is hence a win-win solution that promotes wise use of the wetlands.

Results of the Pilot Project

11. According to HKBWS’s 1st Progress Report of August 2012, of the total of 166 fishpond operators invited, 138 had joined the Pilot Project (83%), rendering some 660 ha out of 700 ha registered fishponds (94%) engaged (see **Annex A**). As at end of December 2012, 529.9 ha (80%) of engaged fishponds had been drained-down as required. Such high level of participation has enabled the project to achieve its objectives effectively.

12. Bird surveys conducted by HKBWS have shown that fishponds after draining supported a significantly higher abundance of waterbirds than they did

before draining, including the major target species like the egrets (i.e. ardeids), Black-faced Spoonbill and shorebirds. There was an average increase of 10-fold in abundance of waterbirds when fishponds were drained (total mean abundance increased from 7 nos. before draining to 92 nos. after draining). The results clearly show that the Pilot Project has facilitated the restoration and enhancement of the ecological value of commercial fishponds in the Inner Deep Bay area.

13. Furthermore, the Pilot Project has been welcomed by the fishpond operators who have expressed positive feedback to HKBWS. Likewise, great support from the Hong Kong New Territories Fish Culture Association (HKNTFCA) has been given through their active involvement in coordinating the fishpond operators for implementation of the project. In 2012, only 2 cases of illegal nets / hooks were found in Inner Deep Bay when compared with the 20 cases in 2011, indicating that the conflicts between fish farming and bird conservation have been reduced.

14. As a significant added benefit, the project has helped preserve the indigenous knowledge and cultural heritage of traditional fish farming practice. An eco-tour guide training course conducted in July under the Pilot Project was popular, and over 80 applications were received. 11 eco-tours for the public were conducted from October to November 2012 with 429 participants. HKBWS also received overwhelming requests from schools to organise more eco-tours for the students to learn more about the fishpond ecology and aquaculture in Hong Kong.

The Current Applications

15. The Pilot Project will end on 28 February 2013. Considering the good response and outcome of the Pilot Project, and to sustain the efforts in promoting conservation management of fishponds in the Inner Deep Bay area, the HKBWS has submitted two applications to seek ECF's support to launch new MA projects for the two respective Priority Sites covered by the Pilot Project in the Inner Deep Bay area designated under NNCP, i.e. the "Ramsar Site" (Project 1) and the "Deep Bay Wetland outside Ramsar Site" (Project 2). They propose that the project duration for both projects should be two years, i.e. from March 2013 to February 2015. The estimated budget for Project 1 and Project 2 are \$4,925,172 and \$6,665,052 respectively (approximately \$2.46M and \$3.33M per year respectively).

16. According to HKBWS's proposal, apart from conservation management practices to be conducted by the fishpond operators (i.e. annual drain-down of

fishponds) as required by the Pilot Project at the two sites, HKBWS will also enhance the scientific component in the new projects by conducting additional ecological surveys on avifauna, odonata and herpetofauna so as to collect more comprehensive and up-to-date ecological information of the fishponds as wetland habitats. The management fee for the fishpond operators is proposed to be increased from \$4,500 to \$4,700 per ha per year in view of the anticipated increase in operation costs due to inflation.

Project 1: Fishpond Conservation Scheme in Ramsar Site

17. Apart from conducting drain-down of fishponds, the aim of this project is also to strengthen the ecological monitoring programme to provide deeper understanding of the value of fishpond habitats in the project area. HKBWS has proposed to conduct eco-tours for 800 participants during the two-year period of the project. In addition, a workshop about this MA project will be organised for secondary school teachers to provide references for learning opportunities beyond the formal school curriculum. Nevertheless, the scale of educational activities should be restricted to a level that will not cause undesirable disturbance to the sensitive ecosystem of the Ramsar Site.

Project 2: “Hong Kong Got Fishpond - Eco-fishpond Management Agreement Scheme 2013-15”

18. In addition to the conservation elements such as drain-down and ecological monitoring of fishponds, HKBWS’s proposal on Deep Bay Wetland outside Ramsar Site put a strong emphasis on the public awareness on wetland ecology, birds and conservation of fishponds. Compared with the fishpond area in Ramsar Site, the fishpond area of the Priority Site “Deep Bay Wetland outside Ramsar Site” is larger and further away from the core area of the Ramsar Site. Hence Project 2 has greater capacity to accommodate an array of publicity and educational activities.

19. It is proposed to conduct various eco-tours for 1,375 participants (including eco-tours for general public and corporate, and night safaris) during the two-year period of the project. In addition, an Education Kiosk is proposed to be set up in Nam Sang Wai to introduce the ecology and history of fish farming in Hong Kong (expected to attract over 30,000 visitors). A “New Territories Fishpond Festival” with eco-tours, games, workshops and photo competition is proposed to convey the conservation message to different segments of the community (expected over 300 participants). Furthermore, exhibitions will be set up at the “Flower, Birds, Insects and Fish Fair” and the Hong Kong Wetland Park’s “World Wetlands Day”

fair to promote the value of aquaculture to the mass public (expected 31,000 visitors). School exhibitions are also proposed to outreach to secondary students (approximately 5,000 students).

20. A summary of the two MA projects is presented in **Annex B**.

Recommendations

Agriculture, Fisheries and Conservation Department (AFCD) and the Environmental Protection Department (EPD)

21. **AFCD and EPD have examined each of these applications independently in accordance with the following major evaluation criteria –**

- (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

Our assessment of the two proposals is at **Annex C** for Members' reference. In

addition, we have conducted a detailed assessment on the cost-effectiveness of the two proposed MA projects as summarised at **Annex D**.

22. It should be noted that ECF has set a benchmark for resource allocation for MA projects and set a reference point of 5% of total budget to encourage applicants to seek alternative funding. For the proposal on Ramsar Site (Project 1), as explained by HKBWS, they experienced difficulties in meeting the benchmark as most efforts would be deployed in the implementation of conservation management measures and ecological monitoring. Besides, in view that the Ramsar Site is more ecologically sensitive, HKBWS would only organise some small scale public educational tours and small-group teachers workshop which would generate limited income. On the other hand, the intention to better develop public education programmes is demonstrated in the proposal on Deep Bay Wetland outside Ramsar Site (Project 2). HKBWS proposed some new ideas to encourage the fishpond operators to participate more actively in some interactive fishpond educational activities which would be more attractive to the general public. The various public education activities would be expected to generate a total income of \$338,500, which is over 5% of the estimated budget and achieving the reference point.

23. We consider that even though the 5% benchmark could not be met by Project 1, on balance, **Project 1 is worth supporting** in view of the positive results of the Pilot Project and the benefits it will bring to the conservation of the “Ramsar Site”.. With enhanced communications with fishpond operators/owners to maintain the long-term sustainability of the pond-fish farming, the project will demonstrate how stakeholders participate in biodiversity conservation, as recommended under the Convention on Biological Diversity (the CBD), i.e. an open and participatory process of the public and all relevant stakeholders. Baseline ecological monitoring on various taxa groups collected would also provide insights into the ecological value of the fishpond habitats.

24. **Project 2 is also worth supporting** considering that in addition to benefiting the conservation and protecting the ecological integrity of the Deep Bay wetland, the project would help increase public awareness and understanding on the fishpond ecology, the cultural value of the Deep Bay area and the importance of conservation of fishponds.

25. Members are asked to note that the above two proposals are in fact complementary with each other as they cover fishponds in the two adjacent Priority

Sites namely “Ramsar Site” and “Deep Bay Wetland outside Ramsar Site”. The fishponds within these two Priority Sites are contiguous and ecologically interdependent on each other with similar ecological functions. The large areas of fishponds within and outside the Ramsar Site in the Deep Bay area (some 730 ha in total) form an integral wetland system of ecological importance. Should the two projects be implemented together, the contiguous fishpond ecosystem in Deep Bay would be conserved more effectively with synergies created as demonstrated in the Pilot Project.

Nature Conservation Subcommittee under the Advisory Council on the Environment

26. At the meeting on 30 January 2013, the Nature Conservation Subcommittee under the Advisory Council on the Environment has been briefed on the proposals of the MA projects at the two Priority Sites in Deep Bay area. Views of the ACE-NCSC Members would be presented at the ECF meeting on the same day.

Advice Sought

27. Members are invited to advise whether the two MA applications, namely the “Fishpond Conservation Scheme in Ramsar Site 2013 – 2015” (**Attachment 1**) and “Hong Kong Got Fishpond - Eco-fishpond Management Agreement Scheme 2013 – 2015” (**Attachment 2**) should be supported and, if supported, the exact amount of funds to be granted to each of them. Members may consider the proposals on their individual merits. It is subject to Members’ approval on both, or either one of the projects as well as the amount of funding for each project.

Agriculture, Fisheries and Conservation Department

Environmental Protection Department

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