

GMOs (Control of Release) Expert Group

Confirmed Minutes of the 6th Meeting

Date : 24 March 2023 (Thursday)
Time : 10:00 a.m. – 11:40 a.m.
Venue : Room 701, Agriculture, Fisheries and Conservation Department,
7/F, Cheung Sha Wan Government Offices, 303 Cheung Sha Wan
Road, Kowloon

ATTENDANCE

Chairman

Professor LAM Hon-ming

Members

Professor CHOW King-lau

Dr. FONG Jonathan Julio

Dr. HUI Ho-lam, Jerome

Mr. LAM Chun-hong, Dominic

Dr. WONG Ka-wai, Creany

Professor WONG Kam-bo

Ms. WONG Pik-yan, Nicole

Ms. WONG Sze-yi, Cecily

Mr. YIP Wing-kui, B.B.S.

Ms. YUEN Yan-ling, Elaine

Mr. CHAN Kin-fung, Simon

Assistant Director (Conservation),
Agriculture, Fisheries and
Conservation Department (AFCD)

Mr. WU Chia-chun, Desmond

Principal Assistant Secretary for
Environment and Ecology (Nature
Conservation), Environment and
Ecology Bureau

Secretary

Ms. HO Shuk-yin, Zoe

Conservation Officer (Biodiversity)
4, AFCD

IN ATTENDANCE

Dr. MOK Siu-yan, Flora

Senior Conservation Officer
(Biodiversity), AFCD

ABSENT WITH APOLOGIES

Dr. CHAN Mo-chee, Charles

Ms. NG Shan-shan, Kiffany

Dr. TSUI Bo-yin, Nancy

Representative from Department of Health (DH)

WELCOME MESSAGE

1. The Chairman welcomed all members to the Genetically Modified Organisms (Control of Release) Expert Group (the Expert Group) meeting. The Chairman announced that a member, Dr. YU Yuen-ping, William had retired from the Expert Group since December 2022, and expressed gratitude and appreciation for Dr. William YU's support to the Expert Group.
2. The Chairman informed members that, as an established practice to facilitate the taking of meeting minutes, sound recording would be made during the meeting. The audio records would be destroyed after the meeting minutes had been confirmed.
3. The Chairman reminded members about the declaration of interests and transparency measures adopted by the Expert Group. Members were requested to follow the declaration of interests and transparency measures.

AGENDA ITEMS

I. Confirmation of Minutes of the Last Meeting held on 19 April 2018

4. The Chairman reported that the draft minutes of the last meeting held on 19 April 2018 was circulated on 25 March 2019 and no comment were received. As members had no further comment in the meeting, the draft meeting minutes were confirmed.

II. Survey on GMOs in Hong Kong during 2020-21 and 2021-22

(Discussion paper: GMO/01/2023)

5. The Chairman invited Ms. Zoe HO to brief members on the discussion paper (GMO/01/2023) that summarised the findings of the survey conducted during 2020-21 and 2021-22 on genetically modified organisms (GMOs) in local markets and farms.

6. A member appreciated the work of AFCD and said that the European Union tested the stability of GMOs to see if mutations occurred, and AFCD might consider similar practice in the survey. The member also opined that AFCD might consider conducting environmental DNA testing on the water samples collected from aquarium shops to test whether genetically modified materials exist. Mr. Simon CHAN replied that AFCD would study the methods for detecting GMOs.

7. A member suggested providing more guidance and education to the tertiary institutions (e.g. universities and research institutions) on the handling of GMOs, particularly GM Zebrafish which was commonly used in research studies. The Chairman added that the Genetically Modified Organisms (Control of Release) Ordinance, Cap. 607, controls the environmental release of GMOs; the GMOs used for research purposes in university laboratories were classified as GMOs intended for contained use, which did not require prior approval for import and use in Hong Kong. The Chairman also supplemented that the approval of GMO usage in research should be under the purview of the ethic committee or laboratory safety committee of the respective universities. The member added that more education on the disposal of GMOs should be provided to postgraduate students. The Chairman concurred and recommended AFCD to take note of the promotion of controls on the environmental

release of GMOs to both postgraduate and secondary school students, due to the increased STEM (Science, Technology, Engineering, and Mathematics) activities in the secondary school programmes.

8. A member enquired about the population of the wild Rice Fish in the samples. Ms. Zoe HO explained the sampling frequency and population distribution of the sampled Rice Fish. Another member suggested to establish a communication mechanism with the corresponding stakeholders in the universities (e.g. safety office) to share protocols and information regarding the controls on the environmental release of GMOs. He further asked about the details of the market survey and whether there were any international benchmarks to indicate the scale of survey and samplings. Mr. Simon CHAN said that a GMO survey plan including the types and quantities of samples was reviewed and updated annually, and the sampling quantities in 2020-2022 exceeded 1,000 samples. The Chairman commented that the targeted crops and products for GMO testing varied among counties, depending on their agricultural development and attitudes toward GMOs. The Chairman suggested AFCD to take reference from nearby countries to review the survey plan. Ms. Zoe HO supplemented that the exact amount of sample collection was also subject to the availability of the products in local markets and farms.

9. A member expressed concern about local organic farmers sharing free tomato seeds given by seed traders in Mainland China among themselves, which might be possibly GM seeds and enquired whether AFCD had any measures to address the issue. She also suggested AFCD to increase the sampling number for tomatoes or crops from the Solanaceae family. Dr. Flora MOK replied that circular letters and educational pamphlets about GM seeds were regularly distributed to local seed traders, and follow-up actions would be taken if GM seeds were tested. So far, no tomato seed samples had been tested as GM; and AFCD would distribute educational materials about GM seeds to farmers and relevant associations/organisations.

10. A member enquired about the actions AFCD would take if a sample is tested positive for GM. Ms. Zoe HO replied that a reminder letter with QR codes linking to educational materials would be sent to the shop to notify them of the positive testing result and outline the documentation requirements from Cap. 607 regarding GM crops intended for direct consumption as food.

11. As regards a member's enquiry about the consequences or penalties for planting GM tomato seeds in an open field, Mr. Simon CHAN explained that a person who intentionally releasing an unapproved GMO commits an offence under Cap. 607, whereas a person who was unaware that a species was GM did not violate the Ordinance. Therefore, education efforts and market survey played a crucial role in educating the public about the Ordinance and serving as a surveillance mechanism to identify the potential establishment of GM species in the environment. The Chairman encouraged members to report any new information about GM crops to AFCD to enhance the survey sampling. Mr. Simon CHAN supplemented that the current sampling species were referenced from the information on the Biosafety Clearing-House, and he welcomed members to report any GM species that was being developed or undergoing field experiments which might not be covered in the Biosafety Clearing-House.

12. A member opined that since GMO testing was conducted by using Polymerase Chain Reaction (PCR) methods, which were included in STEM education curriculums, AFCD might consider incorporating relevant knowledge about GMOs in the STEM programmes to as an introduction to the topic. In addition, the member also suggested that accredited laboratories might be required to perform the GMO testing to ensure the testing quality. Mr. Simon CHAN replied that the educational efforts on the Ordinance would continue, and current GMO testing was conducted by accredited laboratories and university laboratories. The performance and quality control of these service providers were closely monitored and deemed acceptable.

13. Another member enquired about the regulations of the import and sale of GMOs in the pet and aquaculture markets. Mr. Simon CHAN explained that prior approval was mandatory for the environmental release of GMOs and importation of GMOs intended for release into the environment. Prescribed documents were required for the importation of GMOs intended for food, feed or processing, and GMOs intended for contained used, such as aquarium fish kept in a container.

14. A member also opined that GMOs intended for food or feed might potentially be released into the environment. Mr. Simon CHAN responded that there was no common consensus on addressing that issue globally, therefore market survey played a role in detecting self-established GM products. The Chairman commented that

massive reproduction of self-established GM crops was unlikely, given that the crop production required a certain amount of effort.

III. Review of the Exemption of Live Recombinant Veterinary Vaccines

(Discussion Paper: GMO/02/2023)

15. The Chairman invited Ms. Zoe HO to take members through the discussion paper (GMO/02/2023) on the findings of risk assessment of commercially available live recombinant veterinary vaccines (LRVVs), and sought members' views and comments on the review of the exemption of LRVVs.

16. Regarding a member's enquiry on the risk assessment and usage of LRVVs, Ms. Zoe HO replied that the risk assessments were conducted through literature reviews, covering information from the Biosafety Clearing-House, risk assessments performed by other countries and the manufactures of the vaccines; and DH maintained records of the LRVVs imported into Hong Kong. Mr. Simon CHAN supplemented that those LRVVs were usually high in cost and primarily used for cats and dogs, rather than for livestock animals such as chickens and pigs which typically received traditional non-GM vaccines.

17. Another member suggested AFCD to work with DH to incorporate relevant knowledge about handling LRVVs in relation to licensing for individuals involved with pharmaceutical trade or products. Mr. Simon CHAN responded that AFCD had been in close communication with DH regarding the importation of LRVVs, and representative from DH was a member of the Expert Group.

18. Members noted the review on the exemption of LRVVs. Members supported the recommendation of the discussion paper (GMO/02/2023) that the current control and exemption under the Ordinance should be maintained, subject to regular reviews.

IV. Review of the Exemption of Genetically Modified Papayas

(Discussion Paper: GMO/03/2023)

19. The Chairman invited Ms. Zoe HO to take members through the discussion paper (GMO/03/2023) on the findings of risk assessment of GM papayas and sought

members' views and comments on the review of the exemption of GM papayas.

20. A member suggested AFCD to consider conducting a local study on the impact of GM papayas on soil microorganisms to address potential adverse biosafety effects on soil microbial diversity. The Chairman advised that determining the correlation between soil microbial species and transgenic events of GMOs was challenging, thus recommended AFCD to include information about the transgenic events of GMOs in the risk assessment. Mr. Simon CHAN explained that current risk assessments were conducted through the literature reviews, adhering to the requirements of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (the Cartagena Protocol). It was also conducted according to Schedule 3 of Cap. 607 (Requirement on Risk Assessment on Possible Biosafety Effects of GMOs) that mandates the inclusion of relevant technical and scientific details about the GMOs. Mr. Simon CHAN supplemented that conducting experimental studies on GMOs was outside the scope of AFCD. However, commercialised GMOs usually underwent risk assessments and experimental studies prior to market approval, and these provided reliable references.

21. The member further questioned the criteria for determining the types of samples included in the market survey. The Chairman opined that increased circulation of species (e.g. GM papayas) in the market facilitated more samplings in the survey. Dr. Flora MOK replied that the papaya species assessed in the risk assessments were based on information retrieved from the Biosafety Clearing-House, which included GM species intended for commercialisation or those already received market approval, and as a precautionary measure, the market survey also targeted some commercialised papayas that were either not available for sale in the market after receiving market approval or not sold in Hong Kong. Similar practices were applied to other samples, focusing on potential GMOs either set for commercialisation or already available for sale, such as orange petunia and purple carnation.

22. Another member asked whether the monitoring of GMOs prevalence in Hong Kong was based on the guidelines from the Cartagena Protocol and the Biosafety Clearing-House. Mr. Simon CHAN affirmed and reiterated that the Expert Group is established to advise the Director of Agriculture, Fisheries and Conservation (the Director) on the administration of Cap. 607 which implements the Cartagena Protocol

in Hong Kong. He also supplemented that the Cartagena Protocol was evolving, as no consensus had been reached yet regarding the control of synthetic biology among the international communities, therefore comments from the Expert Group on the impact of the latest biotechnology were welcomed.

23. The member further enquired about the environmental release of unapproved GMOs and the follow-up actions taken. Mr. Simon CHAN replied that no unauthorised environmental release of GMOs had been noticed, nor had any applications for environmental release of GMOs been received.

24. In conclusion, the Expert Group considered the review of the exemption acceptable. Members did not have adverse comments on the recommendation of the discussion paper (GMO/03/2023) and so the current control and exemption of GM papayas should be maintained, subject to regular reviews.

V. Any Other Business

25. As it is the last meeting of the current term, the Chairman thanked all Members for their support to the work of the Expert Group. On behalf of AFCD, Mr. Simon CHAN also expressed his gratitude to the Chairman and members for their contribution.

26. There was no other issue to discuss.

VI. Date of Next Meeting

27. The Chairman said that members would be informed of the meeting date in due course.

28. The meeting adjourned at 11:40 a.m.

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