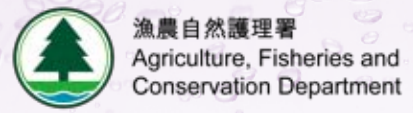




Genetically Modified Organisms (Control of Release) Bill

Genetically Modified Aquarium Fish



Genetically Modified Aquarium Fish will be Regulated

The objective of the Genetically Modified Organisms (Control of Release) Bill is to implement the Cartagena Protocol on Biosafety in Hong Kong. The Protocol provides for the safe transfer, handling and use of genetically modified organisms (GMOs) that may have adverse effects on the conservation and sustainable use of biological diversity, including GM aquarium fish.

Aquarium fish genetically modified to possess novel traits that do not occur naturally are now available in the international pet market. These fish contain genetic material introduced from other species by the use of modern biotechnology. Examples of GM aquarium fish include fluorescent zebra fish and fluorescent rice fish. These fish are genetically modified by the introduction of fluorescent genes from jellyfish and coral. Due to the genetic modification, these fish can emit fluorescence and glow in the dark. These GM aquarium fish will be subject to regulation under the Bill.

On the other hand, new breeds of aquarium fish (e.g. guppies and variegated carps) produced through traditional breeding and selection techniques are not GMOs, and thus will not be regulated under the Bill.

The Bill

When commenced, the Bill will control the release into the environment and the transboundary movement of GMOs, and provide for related matters.

Under the Bill, prior approval must be sought from the Director of Agriculture, Fisheries and Conservation (the Director) before a GMO can be released into the environment or imported into Hong Kong for release into the environment. A GMO is deemed to be released into environment if it is not in contained use and is exposed to a condition in which it may grow or reproduce.

How Are You Affected?

Release of unapproved GM aquarium fish may have adverse effects on the environment, so will be prohibited by the Bill once it is

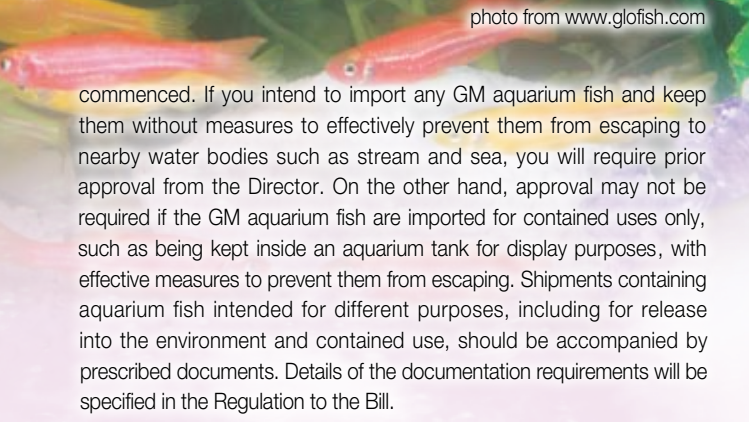


photo from www.glofish.com

commenced. If you intend to import any GM aquarium fish and keep them without measures to effectively prevent them from escaping to nearby water bodies such as stream and sea, you will require prior approval from the Director. On the other hand, approval may not be required if the GM aquarium fish are imported for contained uses only, such as being kept inside an aquarium tank for display purposes, with effective measures to prevent them from escaping. Shipments containing aquarium fish intended for different purposes, including for release into the environment and contained use, should be accompanied by prescribed documents. Details of the documentation requirements will be specified in the Regulation to the Bill.

How to Apply for Prior Approval?

Application

An application for approval of first release or import for release of GM aquarium fish into the environment must be made on a specified form to the Director by mail or in person, and supported by the necessary documents, including a risk assessment report on the possible adverse biosafety effect of the GM aquarium fish. A prescribed fee (HK\$14,250) has to be paid for the approval application.

Acknowledgement of Receipt of Application

Within 90 days after receiving an approval application, the Director will issue a written acknowledgement to the applicant confirming the receipt of the application and whether the application contains, on the face of it, the required information.

Decision on Application

A decision will be made with written notice from the Director, within 270 days after receiving the application. The decision may be an approval with or without condition(s), or a refusal. The shipment or delivery shall only be arranged after the application has been approved.

The approval will apply to all subsequent releases, after the GM aquarium fish is approved and entered in the register. You may search the GMO Register from the office of the Agriculture, Fisheries and Conservation Department or from the Internet at www.afcd.gov.hk/GMO for the list of approved GMOs, before making an application.

Penalties

A person who knowingly releases or imports for release into environment any unapproved GM fish will be subject to a maximum penalty of a fine of HK\$100,000 and imprisonment for one year. Import or export of GM aquarium fish without prescribed documents will be subject to a maximum penalty of a fine of HK\$10,000.

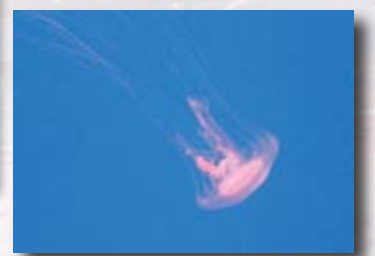
GM aquarium fishes currently available in the international pet market

Commercial Name	Description	Origin
TK-1 Fluorescent Rice Fish-Green	Emit green fluorescence from the whole body in dark	Taiwan
TK-1 Fluorescent Rice Fish-Red	Emit red fluorescence from the whole body in dark	Taiwan
TK-1 Fluorescent Rice Fish-Golden	Emit both red and green fluorescence from the whole body in dark	Taiwan
TK-1 Fluorescent Rice Fish-Green Diamond	Emit green fluorescence from the whole body in dark; has a white patch at the back	Taiwan
TK-1 Fluorescent Rice Fish-Red Diamond	Emit red fluorescence from the whole body in dark; has a white patch at the back	Taiwan
TK-1 Fluorescent Rice Fish-Golden Diamond	Emit both red and green fluorescence from the whole body in dark; has a white patch at the back	Taiwan
TK-2 Fluorescent Zebra Fish-Red	Emit rosy red fluorescence from skeletal muscles in dark; has golden stripes on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Yellow	Emit greenish yellow fluorescence from skeletal muscles in dark; has golden stripes on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Green	Emit dark green fluorescence from skeletal muscles in dark; has black stripes on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Purple	Emit purple fluorescence from skeletal muscles in dark; has black stripes on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Red Leopard	Emit rosy red fluorescence from skeletal muscles in dark; has golden spots on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Purple Leopard	Emit purple fluorescence from skeletal muscles in dark; has black spots on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Platinum Red Leopard	Emit pink fluorescence from skeletal muscles in dark; has no obvious strips or spots on the body surface	Taiwan
TK-2 Fluorescent Zebra Fish-Platinum Green Leopard	Emit light green fluorescence from skeletal muscles in dark; has no obvious strips or spots on the body surface	Taiwan
TK-3 Fluorescent Zebra Fish-Candycane	Emit red fluorescence from the first half part of the body and green fluorescence from another half part of the body (start from the dorsal fin)	Taiwan
Electric Green™ (Zebra Fish)	Emit green fluorescence from the whole body in dark	USA
Starfire™ (Zebra Fish)	Emit red fluorescence from the whole body in dark	USA
Sunburst Orange™ (Zebra Fish)	Emit orange fluorescence from the whole body in dark	USA

[* The above list may not be comprehensive and is for reference only.]



non-GM rice fish



jelly fish

Enquiries

Further details about the Bill, the application procedures, the documentation requirements and information on GM aquarium fishes can be obtained from :

**Biodiversity Conservation Division
Agriculture, Fisheries and Conservation Department
Hong Kong Special Administrative Region Government**

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303 Cheung Sha Wan Road, Kowloon
Tel : 2150 6918
Fax : 2314 2802
Website : <http://www.afcd.gov.hk/GMO>
E-mail : biosafety@afcd.gov.hk