Development of New Standard Amphibian Eco-Duct Model Installing Under the Concrete Block Road

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Abstract :

The most important problems of the existing amphibian eco-ducts are that their habit conditions are not environmental and are designed without considering surrounding environments. Existing amphibian eco-ducts are made of concrete and steel, and they don't respond to temperature changes. Amphibians are poikilothermal animal and are sensitive to temperature changes. Therefore, it is necessary to replace the material of the eco-ducts with new one which can cope with the temperature decrease and can maintain the humidity. Techniques should be considered to protect against the natural enemies and to ensure adequate width and shelter to increase migration efficiency. The steel grating of the eco-ducts should be of a new material that can mitigate the noise/vibration impact.This study presents the new standard model suitable for amphibian migration considering the above conditions. This research was supported by a grant (12-TI-C02) from Advanced Water Management Research Program funded by Ministry of Land, Infrastructure and Transport of Korean government.

Key Words : amphibian eco-duct poikilothermal animal shelter migration

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