Altering unused irrigation ponds to mitigate flooding, maintain habitats, and reduce maintenance burden

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In recent years, many unused irrigation ponds have been reclaimed for building because of the difficulty in maintaining them and the decline in their use for agriculture. However irrigation ponds play an important role in not only agriculture but also flood prevention and maintaining ecosystem diversity. If irrigation ponds are reclaimed, these functions will be lost. In this research, we suggest a new maintenance method: low water level control. By keeping the water level in ponds low, we can better prevent flooding. Using this method, we can preserve the ecosystem. Also, we show that low water level control can be done automatically by using plugs on the bottom of irrigation ponds.

Keywords: irrigation pond, low water level control, flood prevention, ecosystem preservation

