ABSTRACT

Agricultural Pollution Control for the Prevention of Water Eutrophication

HU Xueying, **LIN Birun**
Management Office of Guangdong Agricultural Pollution Control Project

There are many rivers and few lakes in Guangdong Province, with 1,343 rivers and a total length of more than 25,000 km. The main rivers are Pearl River, Han River, Jianjiang River and Moyang River. The rivers in Guangdong Province are characterized by a large discharge, low sediment concentration, long flood season, no freezing all year round and abundant hydraulic resources. Agricultural non-point source pollution is the main reason for water eutrophication. Therefore, the prevention and control of agricultural non-point source pollution is of great significance to the control of water nutrition management.

Launched in 2014, the Guangdong Agricultural Pollution Control Project is the largest one in Asia which used a World Bank loan to control agricultural pollution, and it is also the first pollution control project funded by the World Bank in China. With a total investment of 213 million US dollars (RMB 1.34 billion), the objective of the Project is to reduce water pollutant releases from crop and livestock production in selected areas of Guangdong Province. The Project covers four components, including: Environmentally Friendly Crop Production; Livestock Waste Management Demonstration; Monitoring and Evaluation; Capacity-building, Knowledge Management and Project Management. The project closing date is 30 June 2021.

The main achievements are as follows: (1) Establishment of compensation mechanism for agricultural pollution control based on informationization (information dissemination); (2) Establishment of incentive mechanism for promotion of agricultural pollution control technology focusing on villages and towns; (3)Establishment of goal-oriented monitoring and evaluation mechanism for agricultural pollution control; (4) Creating a new model of

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high-rise ecological breeding; (5) Creating a new model of conservation agriculture in the Southern area; and (6) Establishment of a new model for fund management of agricultural projects. By 2018, the cumulative reduction of pesticides (active ingredients) and chemical fertilizers (total amount) were 699 tons and 33,000 tons, respectively. The reduction of COD, BOD, ammonia nitrogen and TP were 39,000 tons, 14,000 tons, 2375 tons and 584 tons respectively in 2018. The project achievements have made significant contribution to the protection of water nutrition in Dongjiang River. The water quality of the Dongjiang River has been maintained as CLASS II in the national water quality standard all the year round.