Dissoluble fishing line an eco-friendly success

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At first glance, it's just looks like plain old fishing line - but the strong filament is actually a technological innovation made of special plastic that dissolves into carbon dioxide and water through the work of microorganisms in water.

"The time it takes depends on water temperature and other conditions, but it usually dissolves completely in five years," said Tokuo Ichikawa, the person in charge of developing the product at Globeride Inc., a fishing-gear company based in Higashi-Kurume, Tokyo.

The impetus for developing an environment-friendly fishing line came five years ago when Ichikawa, 53, and his colleagues took part in recovering discarded fishing line and sinkers underwater at Lake Kawaguchi in Yamanashi Prefecture. A small truck full of garbage, including fishing gear, is collected at the lake every day.

"Garbage you find on the ground should be removed out of common decency, but garbage left underwater should be taken away by companies," Ichikawa said.

Making stout fishing line from a fragile, naturally dissoluble material was challenging. Ichikawa solved the problem by using a stretchable material that was about 80 percent as strong as a regular nylon fishing line.

In July, Globeride started selling a hook rig using the textile. Even though it was 10 percent more expensive, the product sold out quickly

and they had to scramble to produce enough to meet the demand.

In 2002, the firm developed a sinker made of tungsten instead of lead, which is toxic. A tungsten sinker has less of an adverse impact on the environment, but products made of this rare metal cost 10 times more than off-the-shelf sinkers.

Globeride's president deemed it too expensive to sell, but employees noticed the relatively small but high-density tungsten product could be cast further than the lead sinker. The tungsten sinker was released under the advertising slogan, "Only you can hit the unreachable spot" and was named "Top Gun." Sales took off.

"Products won't sell just because they're 'environmentally friendly.' We have to sell things without lowering their quality. If we can do that, an awareness of biodegradable material will spread," Ichikawa said.

Ichikawa said he and his colleagues will develop fishing line using natural materials such as rice and corn in the future.