



Recycled wastewater could boost river flows

The over-extraction of water from rivers has reduced river flows, particularly in water scarce areas, affecting their ecological status. A recent study has found that citizens in a water-stressed river basin of Spain are willing to pay over €5 extra on top of their monthly water bill to treat wastewater that can be used to replenish river flows.

Over-extraction of river water for use in agriculture and by cities reduces water flow in rivers and may lead to environmental stress. One objective set by the EU's Water Framework Directive (WFD)¹ is to ensure an adequate flow of water in rivers.

Using reclaimed water is one way to moderate the effect of water shortages. This is water that has been treated and recycled for use in agricultural or landscape irrigation, in industry and for non-drinking water purposes in urban areas. In addition, reclaimed water can be released into rivers to boost water flows, which could help European rivers in water scarce areas achieve a good ecological status, as required by the WFD.

The study estimated the non-market environmental benefits of using reclaimed water to boost river flow in the Segura basin in southern Spain. Many environmental benefits, such as clean air and water, are not traded in markets, and valuing these environmental goods typically relies on methods based on the public's willingness to pay for the environmental benefit: in this case, the extra cost of wastewater treatment for release into the river.

Water demand in the Segura River basin exceeds water supply, even though extra water is transferred to the basin, and water stress here is the third highest in Europe. Reclaimed water presently accounts for 12.8% of irrigated water used in the area and city dwellers and industries presently pay for the cost of cleaning the water through a treatment charge of €6 a month per household, which is added to the water bill.

Through a survey, 337 people were questioned about their willingness to pay for increased wastewater treatment so that the reclaimed water could be used to increase river flow and improve the ecological status of the river.

On average, respondents were willing to pay an extra €5.31 a month to use the reclaimed wastewater for environmental purposes, even though the price of water in the region is one of the highest in Europe. It is estimated that increasing the river flow would generate a benefit of €24.12 million a year.

Of the respondents, younger people, and smaller, higher income households were willing to pay the most. People who used the river for recreational purposes were also willing to pay more than people who did not.

1. See: http://ec.europa.eu/environment/water/water-framework/index_en.html

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