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Ethical Water Exchange Introducing a New Model



Is water a resource or a weapon of mass destruction? Today ninety percent of wastewater remains untreated, hereby endangering our planet, health, security, and economy. Today, 2.6 billion people still have no access to basic sanitation. Wastewater can be promoted as a raw material, given all the byproducts that can result from appropriate treatments. Indeed, wastewater can be changed into a valuable raw material for fertilizers, polymers, biogas, treated water, and other purposes.

Mechanism

The Ethical Water Exchange uses the mechanisms of Futures markets to trade treated water from wastewater as a commodity. This means commodities are sold before production thanks to commitments to future deliveries, which generate the financing of wastewater treatment. Ethical Water Titles® (EWT), the futures contracts traded on the Ethical Water Exchange, are priced by matching the following medium term commitments:

- Treated water supply from wastewater treatment at listed decentralized sanitation locations
- Demands of treated water to be supplied locally (i.e. in the operating range of decentralized sanitation plant), or internationally via agreed water footprint of listed goods/services.

Different security levels can strengthen the system. The methods used include clearing houses holding deposits and margin calls, independent supervision and verification companies, smart grid monitoring. The 1% philanthropic fee charged on every traded Ethical Water Title generates additional funding for environmental projects (e.g. for the African Great Green Wall) and water banks. >



Innovation

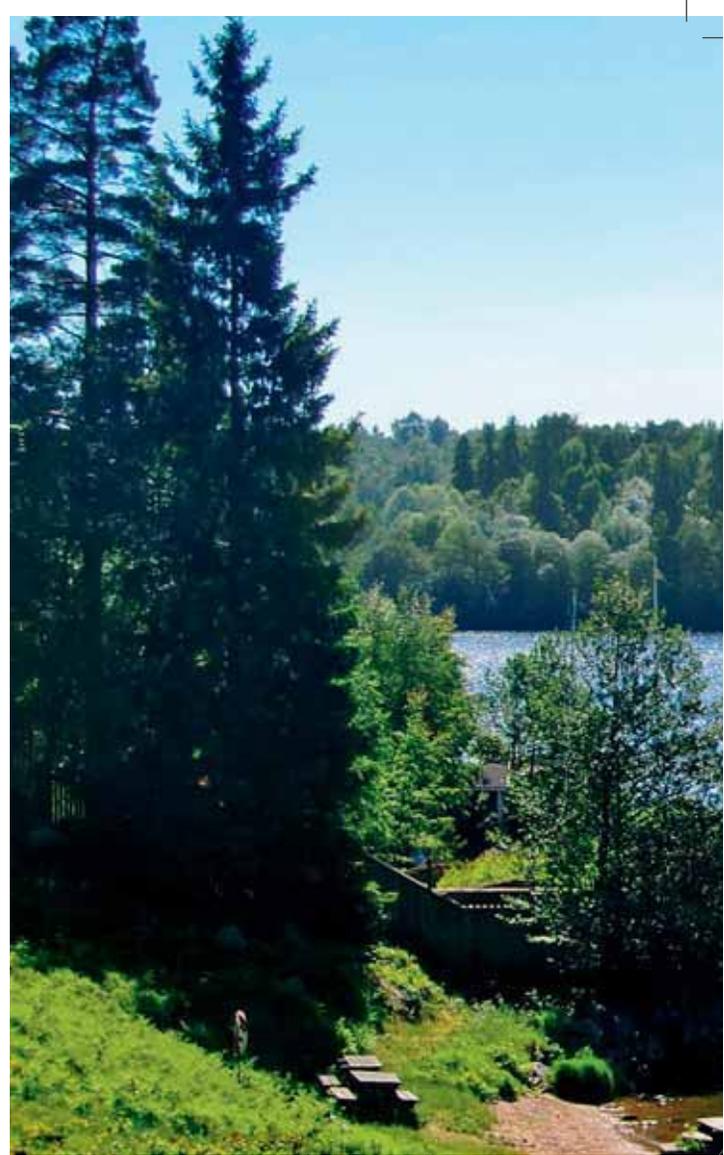
The most innovative aspects of the Ethical Water Exchange are:

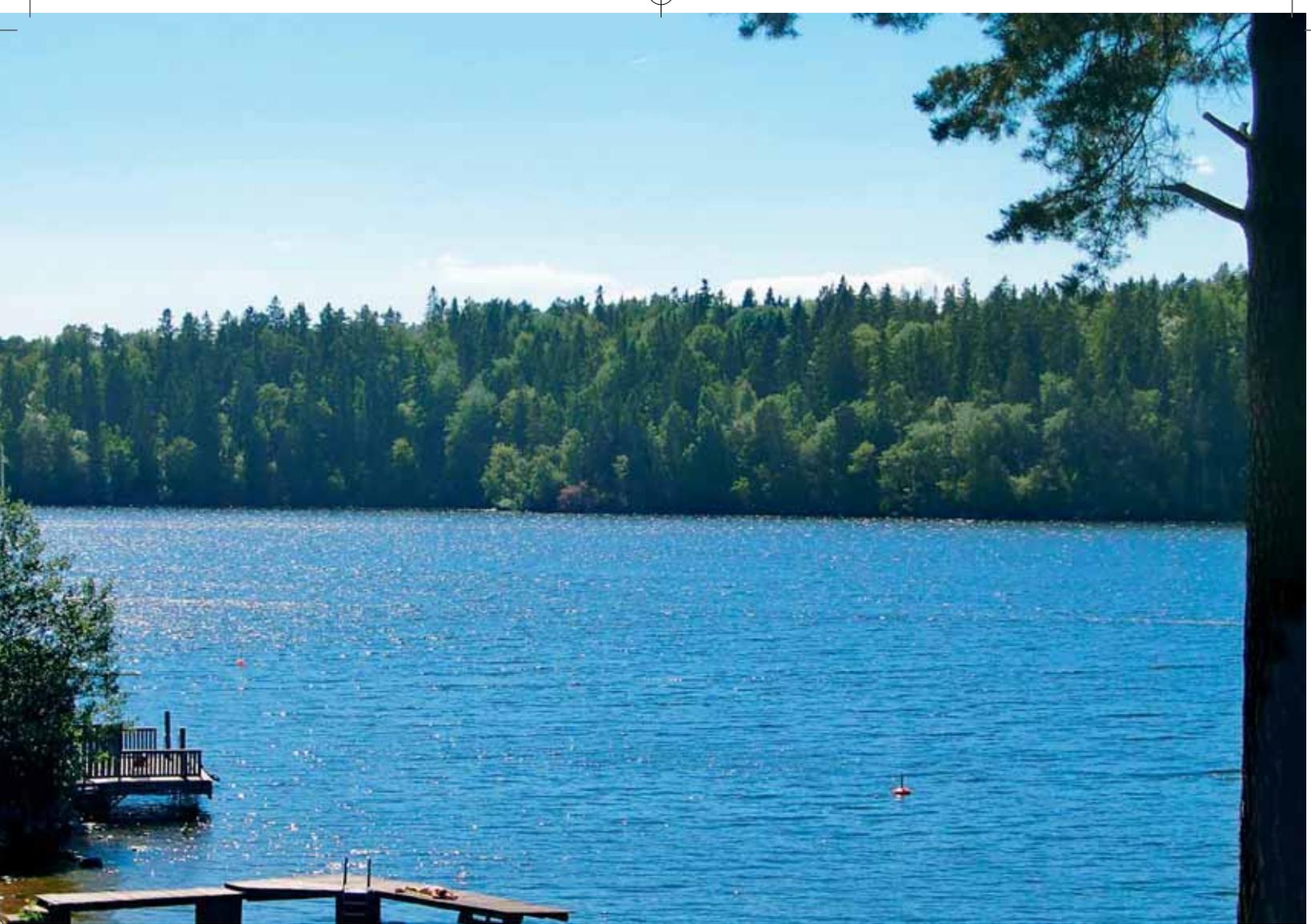
- Pricing wastewater transparently according to the ecosystem's values and the demand for related by-products (e.g. phosphorus, energy), including water risk management
- Incentivizing and organizing the water reuse to reduce global water and carbon footprints
- Scaling-up & prioritizing decentralized wastewater energy positive treatment technologies
- Using treated water as the underlying commodity of all goods/services as a common "currency", including automatic philanthropy related to food security

The Ethical Water Exchange incentivizes entities to produce what makes sense (covering basic needs first), where it makes sense (according to the water exploitation index and water risks), and in a way that makes sense (with treated wastewater, sludge energy, and pre-paid commitments using commodities markets' mechanisms). The 'water footprint' acts as an indicator of water use that looks at both direct and indirect water use of a consumer or producer. The Ethical Water Exchange is a global solution via the foreign exchange of water 'footprints', a virtual measuring tool, with local water reuse execution. As a result, production is limited to goods that have buying commitments and makes sense.

Example of Implementation

1. Ethical commodity product demand (here for functional food/sugar) with treated water, 1kg of sugar cane has a water footprint of about 1500 liters, if only 1% of water used to produce sugar comes for treated water, 20,000 tons of sugar can cover every year/crop the wastewater recycling of about 13,000 persons near the sugar plant
2. Water, energy & ecological assessments of the producer of the goods >







The Ethical Water Exchange could be considered as an opportunity for governments to fulfill the human right to sanitation of their population, while building a sustainable investment climate.

3. Sewage infrastructure financed via pre-payment of treated water of ethical products
4. Micro-credits or leasing at household level to improve living conditions: equipment for rainwater harvesting, water filters & decentralized sanitation with wastewater metering for collecting wastewater with wastewater ownership transfer agreements
5. Seller of Energy Water Titles responsible for collecting household wastewater, sanitation and supply of treated water to the producer (not invoiced to producer) and decarbonized energy
6. Buyer receives the food supply invoice with deduction of treated water price pre-financed
7. Reverse micro-credit or leasings for rainwater harvesting, water filters and sanitation reimbursed via commoditized treated water from wastewater
8. Reporting (new jobs created via the pre-financed water footprint, access to sanitation, scaled-up technology, quality and yields data near sanitation plant, reduction of charcoal use in tropical areas, ...etc...), branding and follow-up of philanthropy.

Adoption Possibilities

The Ethical Water Exchange tool is primarily designed for non-State actors (such as a luxury or an ethical brand willing to have a sustainable lifecycle for its products or irrigation needs) agreeing on a voluntary basis to the trading scheme for advantages pertaining to the buyer and seller. For the buyer of Ethical Water Titles:

- Water procurement security and benefit of treated water stocks
- Reduction of environmental exposures and default risks
- Branding

For the seller of Ethical Water Titles (a wastewater treatment and management company that collects, treats wastewater, and stores treated water):

- Sanitation/Sewage market visibility, stability and financing

A switch from traditional environmental fines to a legal obligation for polluters to buy a specific amount of Ethical Water Titles, based on the degree of their wastewater and impact water footprint and/or the obligation to transfer the wastewater ownership to the Ethical Water Titles sellers could be applied.

A State could perhaps generate more income through the governmental tax, which can be included in each Ethical Water Titles transaction. The latter could directly be divided between a Ministry of Finance and that of Environment, and through leverage effects of access to dignity and green jobs created, such as for the green water banks or wetland with 1% philanthropy. The Ethical Water Exchange could be considered as an opportunity for governments to fulfill the human right to sanitation of their population, while building a sustainable investment climate.

Bilateral agreements could also be done via pension funds that want to avoid global crisis contagion, by making sure that countries who do not have enough sanitation today will be able to sustain the consumption of their production, and that the water pollution which does not recognize borders will not jeopardize the production yields, climate and health of the contributing employers/employees.

In the spirit of long-term partnership and environmental protection, development banks might also condition their loans to cover of the wastewater treatment of the trade of certain goods via Ethical Water Titles that ensure the sewage or sanitation of the related productions.

In sum, insurance premiums increase because water related risks remain uncovered. The end of water and agro subsidies, and other classical ways to finance wastewater infrastructures show the need for new ways to finance and manage sanitation. The Ethical Water Exchange model guarantees integrated water management with transparency, viability, philanthropy and accountability. It reduces defense, health and climate change costs, while securing economic, social and environmental interests. ■