

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
ФАКУЛЬТЕТ ІНОЗЕМНОЇ ФІЛОЛОГІЇ
ТА СОЦІАЛЬНИХ КОМУНІКАЦІЙ**



**СОЦІАЛЬНО-ГУМАНІТАРНІ
АСПЕКТИ РОЗВИТКУ СУЧАСНОГО
СУСПІЛЬСТВА**

**МАТЕРІАЛИ V ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ СТУДЕНТІВ,
АСПРАНТІВ, ВИКЛАДАЧІВ ТА СПІВРОБІТНИКІВ**

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OPTIMIZATION OF ECOLOGICAL AND ECONOMIC EFFICIENCY OF WATER RESOURCE RECLAIMING

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Reclaimed water or recycled water (wastewater reuse or water reclamation) is the process of converting wastewater into water that can be reused for other purposes. This process can include agricultural, landscape and field irrigation purposes or even replenishing surface water and groundwater, also referred to as groundwater recharge. Reused water can meet residential needs (e.g. toilet flushing), commercial and industrial water needs, and in rare cases can even be used for drinking.

Reclaiming water for reuse before discharging it back into rivers and oceans conserves water. Less is needed to accomplish more purposes. When water is eventually discharged back into natural water sources, it can still have benefits to ecosystems. Improving streamflow, nourishing plant life and recharging aquifers are parts of the natural water cycle. Being a part of sustainable water management, reusing wastewater allows water to remain in the environment, where it will continue to be available for future use, and at the same time meeting the water requirements of the present. Wastewater reuse is a long-established practice used for irrigation especially in arid countries.

Simply stated, reclaimed water is water that is used more than one time before it passes back into the natural water cycle. Advances in wastewater treatment technology allow communities to reuse water for many different purposes. The water is treated differently: it depends upon the source and use of the water and how it gets delivered.

Cycled repeatedly through the planetary hydrosphere, all water on Earth is recycled water, but the terms "recycled water" or "reclaimed water" typically mean wastewater sent from home or business through a sewer system to a wastewater treatment plant, where it is treated to a level consistent with its intended use.

The World Health Organization has recognized the principal driving forces for global wastewater reuse as following:

1. increasing water scarcity and stress;
2. increasing populations and related food security issues;
3. increasing environmental pollution from improper wastewater disposal;
4. increasing recognition of the resource value of wastewater, excreta and greywater.

Water is a limiting resource, and the pressure exerted on surface and groundwater resources should be reduced or at best maintained, rather than increased, as the human population and industrial development increase. Thus, water recycling and reuse is of increasing importance, not only in arid regions but also in cities and contaminated environments.

In fact, groundwater aquifers, used by over half of the world population, are being over-drafted. Reuse will continue to increase, as the world's population is becoming increasingly urbanized and concentrated near coastlines, where local freshwater supplies are limited or are available only with large capital expenditure. Large quantities of freshwater can be saved by wastewater reuse and recycling, reducing environmental pollution and improving carbon footprint. The process of reuse can be an alternative water supply option.

Wastewater management and sanitation systems that are designed for safe, effective recovery of resources can play an important role in a community's overall resource management, supporting human well-being and broader sustainability.

Most of the uses of water reclamation are non potable uses such as: washing cars, flushing toilets, cooling water for power plants, concrete mixing, artificial lakes, irrigation for golf courses and public parks, and for hydraulic fracturing. Where applicable, systems run a dual piping system to keep the recycled water separate from the potable water.

CHARITY IN PRICING

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Nowadays enterprises in any sphere of activities can not achieve their aims without considering important social needs.

The social importance of commodity producers is realized through various programs (sponsorship, patronage, support, etc.).

One of the new forms of activities is their involvement in pricing.

There are two economic ways to implement charitable programs through the price:

1) including some extra cost in the price with future investing this money to charity;

2) supporting buyers/consumers with some benefits through the different charitable programs.