THE - Impact Rankings 2026

SDG 6: Clean Water and Sanitation

ANNUAL REPORT 2023-2024

SDG 6: Clean Water and Sanitation focuses on ensuring the availability, accessibility, and sustainable management of water and sanitation for all. Water is a fundamental resource for human health, community wellbeing, and environmental sustainability. This goal underscores the need for reliable water supply systems, efficient wastewater management, safe sanitation facilities, and stronger community awareness on water conservation.

Kalasalingam Academy of Research and Education (KARE) actively supports SDG 6 through comprehensive initiatives that safeguard water quality, strengthen sanitation infrastructure, and promote responsible water usage across campus. KARE provides purified drinking water through Reverse Osmosis (RO) units, ensuring safe access for students, faculty, staff, and visitors. Regular water quality testing is performed to maintain compliance with national safety standards, and maintenance systems are in place to ensure uninterrupted water supply.

The institution is equipped with well-maintained sanitation facilities in academic blocks, hostels, and public areas. Separate restrooms for men, women, and persons with disabilities ensure

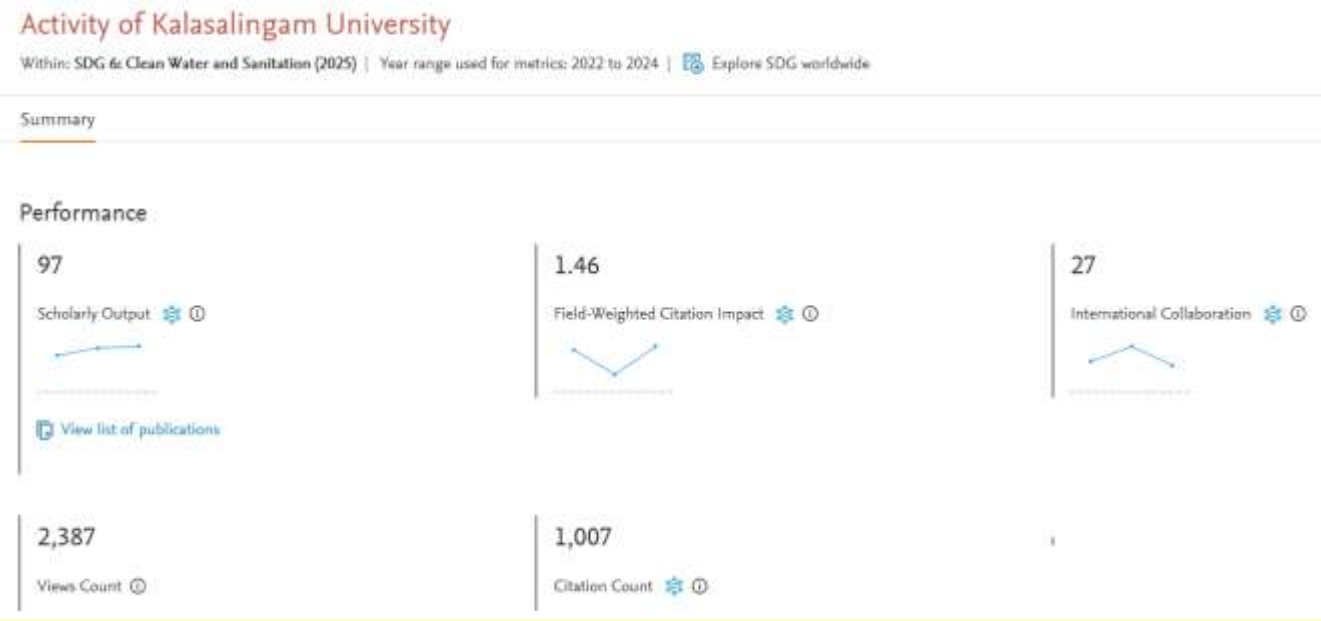
inclusivity and hygiene. A structured cleaning schedule and sanitation audits further enhance cleanliness, safety, and accessibility.

KARE operates efficient Sewage Treatment Plants (STPs) to treat wastewater and promote sustainable recycling. Treated water is reused in gardening and landscaping, reducing the burden on freshwater resources. Rainwater harvesting systems, including recharge pits and percolation wells, are integrated across campus to support groundwater replenishment.

A strong emphasis is placed on water conservation awareness, with campaigns, workshops, and student-led initiatives that encourage responsible usage. The institution also undertakes outreach programs in neighbouring villages, promoting safe drinking practices, sanitation awareness, and hygiene education (WASH).

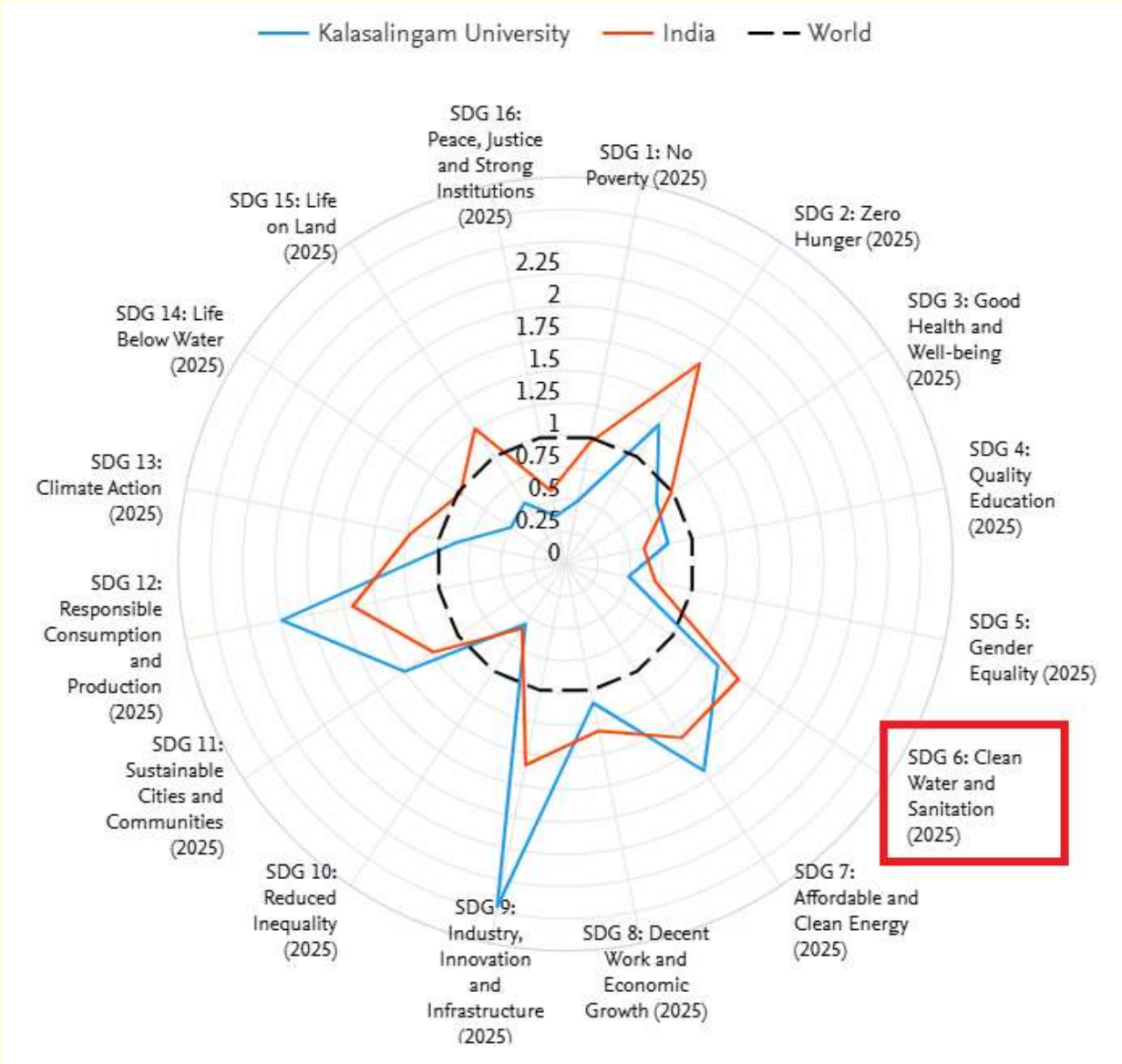
Through its infrastructure, policies, and community engagement, KARE demonstrates its commitment to the long-term sustainability of water resources and sanitation systems, contributing significantly to SDG 6: Clean Water and Sanitation.

SDG 6: Research Metrics (SciVal)



Relative Activity

The Relative Activity Index is defined as the share of an Institution's Scholarly Output in a SDG relative to the worldwide share of Scholarly Output in that same SDG.



Free drinking water:

Water sustains life on the planet based on this aspires Kalasalingam Academy of Research and Education support clean water sanitation (SDG 6) for providing free drinking water for all. We adopted a very systematic and sustainable approach towards pure drinking water that has been practiced at KARE for more than a decade now. In our university purification of drinking water by a separate Reverse Osmosis plant. Hard Water is treated by RO plant. Treated water is supplied from the RO plant to the different drinking water tanks available at various locations at the campus. The plant has a capacity of 3000 litres per hour. The water sample is tested once a month by the Department of Chemistry.

Multi graded filter in Mineral water treatment plant

Disinfection of Water with UVTreatment

Pure drinking water provision to all

Promoting water usage on campus:

The Tamil Mandram club organized a meaningful plantation drive to honor the birthday of our beloved People's President, Dr. APJ Abdul Kalam. Dr. Kalam, a visionary who championed sustainable development, deeply believed in the power of youth and their responsibility toward the environment and promoting conscious water usage on campus. With over 100 saplings planted across our campus, we took a step closer to realizing Dr. Kalam's dream. Volunteers from Tamil Mandram, along with students and faculty members, planted native trees and shrubs, symbolizing growth, unity, and sustainability.

Tree plantation at KARE campus

Our institution has adopted policies for promoting conscious water usage on campus.

1. Water Conservation Policy

   https://kalasalingam.ac.in/wp-content/uploads/2021/11/Water-Conservation-Policy.pdf

2. Recycle Policy

   https://kalasalingam.ac.in/wp-content/uploads/2021/11/Recycle-Policy.pdf

Rain water Harvesting:

KARE has established a sustainable water management system that includes rain water harvesting pits, trenches, check dams, canals and percolation ponds. The rainwater is harvested from the roof-top of the academic buildings and hostels. Our campus maintains separate canals for sewage water, rainwater and drinking water so there is no possibility In our campus of mixing polluted water with drinking water.

The rainwater collected is also used to recharge the groundwater through the campus's bore wells and open wells. Open wells and Borewells, which are strategically placed throughout the campus, are also used to recharge the groundwater. To meet the water needs of the campus

community and also to help the nearby communities, the institution maintains open wells on its land near the campus.

Recharging Percolation Ponds Location at Babbage Block / Academic Block-VI

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Recharge Trenches near Manimandapam

Separate canals for the Rainwater collection and Transportation

Water sustains life on the planet; realizing this, a very systematic and sustainable approach towards cleaning and recycling water has been practiced at KARE for more than a decade now. Using advanced automatic SBR technique, not only the demands on the fresh water has been substantially reduced; rather the generated biomass has been effectively re-used as a source of organic manure for cultivation of various plant species alongside the foothills of the Western ghats. This practice has brought several laurels to the University such as UI Green Metric Award 2020 (2^{nd} position among Indian Universities and 168^{th} among World Universities) and 7^{th} amongst cleanest Higher Educational Institution in the country by Swachh Campus awarded by Government of India, MHRD in 2018. The clean and green practice at KARE, could set an example for other institutions believing and aiming towards sustainable development goals.

Aeration to the Wastewater in Sequential Batch Reactor

Adsorption Column (Rapid Sand Filter and Activated Charcoal Filter) Facility in the STP at Kalasalingam Academy of Research and Education.

Air Blower Pumps Facility in the STP at Kalasalingam Academy of Research and Education

Azolla Based Water Free Floating Sustainable Water Treament

Standards for drinking and domestic use

Kalasalingam Academy of Research and Education adopted standard policies for water usage in the campus. We are following the Indian and International standard for drinking water supply and rain water harvesting. Pressure reducing plumbing valves. We have an active plumbing team for routine maintenance and to correct leakages of pipes.We use aerators pressure reducing nozzles at taps in order to reduce water loss. We have proximity sensor based taps at our wash areas to prevent unnecessary water loss.

Green Campus:

Waste water generated in the campus is treated by two Sewage Treatment Plants with a total capacity of 800 KL per day. KARE has a separate sustainable environment policy that deals with wastewater management towards our sustainability models for reducing and reusing water at our campus.

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Courses Offered:

1. University Open Elective Course: 214BIT1106 Biological WasteWater Treatment (all Undergraduate Engineering Students)
2. M.Tech Biotechnology: Industrial Wastewater Treatment and Management: 222BIT5105
3. Water and Wastewater Engineering 212CIV1308 (Civil Engineering)

Publications:

Year	Title Of Article/Research Paper	Name Of Journal	Journals published by	Indexed	Impact Factor
2024	Predictive Biodegradation of Multiple Toxic Pollutants in Bioreactors Treating Real Wastewater using ANN and GP	IOP Earth and Environmental Science	IOP	Scopus	0.42
2023	Crepe Bangades effluent treatment using C.vulgaris and nanomaterials	Indian Journal of Engineering and Material Science	NISCAIR	SCI	0.9
2023	Student-Based Community Service Learning to Assess Water Issues in Rural Parts of Virudhunagar District of India	Journal of Engineering Education Transformations	IUCEE	Scopus	-
2023	A biological and technological approach to treat wastewater by using macroalgae and microalgae	Research Journal of Chemistry and Environment	International Congress of Chemistry and Environment	Scopus	0.2

INITIATIVES TO REDUCE THE USE OF PLASTIC:

An awareness program to reduce the use of plastic was conducted by the volunteers of Green Army in the nearby village (Mullikulam).

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Food Packaging Materials:

Plastic materials are dumped into the land, it will create greenhouse emissions. In our campus sustainable packaging materials are prepared from biopolymers. Biodegradable polymers, obtained from waste seaweed, incorporated with natural plant pigments are used for the production of environmental-friendly mobile cases and bags. Sample photos are attached below.

Biopolymer based eco-friendly packing material