

**SCG unveils “Thailand’s first reinvented toilet,” an innovation for sustainable public sanitation,
piloted in Khlong Phlabphla Community, Rama IX.**

Chemicals Business, SCG has unveiled SCG Reinvented Toilet, Thailand’s first toilet with an integrated waste treatment system that can disinfect waste and separate liquids and solids with a 100% efficiency. The self-contained toilet helps ensure safe waste disposal, preventing harmful pathogens from being released into rivers and reducing the spread of infectious diseases. The invention also makes it possible to recover useful resources from solid waste and use them as soil conditioners. SCG Reinvented Toilet is developed by Chemicals Business, SCG in collaboration with the Asian Institute of Technology (AIT), in an effort to improve basic sanitation for communities and contribute to environmental sustainability. Initial development of the toilet was funded by the Bill & Melinda Gates Foundation. Pilot units of the toilet have recently been installed for public use at Khlong Phlabphla Community in Rama IX.

Cholanat Yanaranop, President of Chemicals Business, SCG, said that SCG Reinvented Toilet is the product of a collaboration between Chemicals Business, SCG and the Asian Institute Technology (AIT). As **Thailand’s first toilet with a self-contained waste treatment system**, it offers a solution that can improve sanitation, especially in remote areas and public spaces with poor sanitation due to lack of toilets and proper waste management. Its main distinguishing feature is the integrated treatment system, which not only sanitizes waste but also separates liquids from solids completely. As the system releases no waste into the sewer system or rivers and canals, it helps prevent diseases. The innovative toilet also makes it possible to recover water as well as other resources from solid waste that are useful in agriculture. In addition, SCG has incorporated a bio-scrubber technology that eliminates odors and volatile organic compounds (VOCs) with microorganisms to ensure that the toilet is odorless and eco-friendly.

SCG has recently installed pilot units of SCG Reinvented Toilet in a public space located right next to the Khlong Phlabphla Canal in Khlong Phlabphla Community, Rama IX. As there were no toilets at the site, these toilets will help prevent people from relieving themselves into the canal and remove the root cause of the hygiene problem.

Dr. Doulaye Kone, Deputy Director – Water, Sanitation & Hygiene at the Bill & Melinda Gates Foundation, said, New off-grid, toilets are on the cusp of transforming sanitation, providing people and cities with new flexibility, safety, and convenience. This means that the 4.5 billion people who don’t have access to safe sanitation, today, could soon leapfrog decades into the future, rapidly achieving safe sanitation and setting a new standard for the 21st century. We hope that SCG will leverage its network and partnerships to rapidly deploy its reinvented toilet to communities, worldwide.

Pralong Dumrongthai, Director General of the Pollution Control Department, the Ministry of Natural Resources, stated that water pollution is one of the most pressing environmental problems. About 10 million cubic meters of wastewater is generated by communities each day, and only about 20%, or one fifth of that amount, undergoes proper treatment in the central treatment system. This means that a large proportion of wastewater from houses along canals and rivers is still released into waterways, filtered only by on-site treatment systems. Currently, the government is drawing up standards for residential septic tanks, a move that is in line with the development of SCG Reinvented Toilet, which will deliver both improved sanitation and environmental sustainability. The Director General believed that once adopted in more communities and installed in public spaces such as in national parks across Thailand, the reinvented toilet will be a sustainable solution to environmental problems.

Dr. Suracha Udomsak, Chief Technology Officer of Chemicals Business, SCG, added that the company's R&D team has specifically designed the shape and angle of the toilet to achieve the flow speed that generates the optimal centrifugal force for liquid-solid waste separation. The liquid waste then undergoes biotreatment, which involves different filtration media, aeration, and water recirculation, as well as electrochemical disinfection, producing sanitized water that can be used for different purposes. The solid waste, on the other hand, is sterilized at temperatures as high as 100-120 degrees Celsius, allowing it to be used as soil conditioners.

For polymer components of the toilet, SCG has collaborated with Thammasorn Company Limited, its supplier and plastic processing expert, to make sure that they are easy to transport and install and can be assembled without any special equipment. Thanks to these specially designed parts, SCG Reinvented Toilet can be installed in only 30 minutes. In addition, the roof has also been designed, so that it can be fitted with solar panels that can turn in all directions.

Piyapath Suksanguan, Vice Chairman of Khlong Phlabphla Community, has expressed her appreciation that her community has been selected as the pilot site for Thailand's first reinvented toilets. Previously, many people in the community relieved themselves along the canal and did not take personal hygiene seriously. After the reinvented toilets were installed in a public park of the community near Khlong Phlabphla Canal, people can now use clean toilets, and the sanitation standard has improved tremendously. Furthermore, the disinfected water is reused to water plants in the community vegetable plots, which helps the vegetables grow better and give greater yields. After consumption in households, any surplus vegetables are sold, and any income earned goes towards the maintenance of these reinvented toilets.
