

International Geosynthetics Society



Did You Know... geosynthetics help protect the environment from landfill waste contamination?

The world creates **more than two billion tonnes** of municipal solid waste a year with at least a third of that not managed in an environmentally safe way. With waste expected to grow by at least three billion tonnes by 2050 it's vital that it is managed responsibly to prevent disease and groundwater contamination.



As nations and humanity have advanced, and recycling and the circular economy have developed, our treatment of waste has become increasingly sophisticated and efficient. Previously, waste was either disposed of in the streets, or moved to a 'dumping' location away from houses and people. This meant both local contamination and waterborne pollution in subsurface groundwater tables, creeks, rivers, lakes and oceans.

That's where geosynthetics come in. Geosynthetics are not only essential in creating the infrastructure and environmental protections the human race uses every day, but are a vital component of waste management by helping to contain the waste within landfills and water treatment facilities.





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Different types of geosynthetics provide the principal barriers which retain both the waste materials and the contaminated liquids that have passed through the waste. Multiple configurations are used to store everything from household waste to radioactive contaminated soils and materials.



These barriers, drains and other geosynthetic materials are designed to perform robustly for centuries. Over the past 60 years, they have successfully contained waste, protected groundwater and provided sanitation.

These are just some of the ways geosynthetics contribute to the United Nations Sustainable Development Goals (UNSDG) on managing human waste, in particular the aims of ensuring 'Clean Water and Sanitation' and 'Industry, Innovation and Infrastructure'.



Geosynthetic solutions should be fully investigated on every infrastructure project to ensure they meet the needs of the present without compromising the ability of future generations to meet their own needs.

Find out more on how geosynthetics are making a difference by downloading the IGS Sustainability eBook here or visiting our Sustainability page.