With increasing global population and growing wealth, the quantity and complexity of waste as well as its pressure on natural resources is also growing. As such, there’s a rising need to conserve and recover the resources (represented by the waste) and to effectively manage the residual, non-recoverable waste in an environmentally safe and sustainable manner.

**THE CHALLENGES**

- Obtaining knowledge about potentially harmful properties of a given stream of waste or contaminated soil
- Choosing the optimum management solution for a given type of waste
- Ensuring that the impact of waste management solutions are environmentally safe and cost-effective – both in the short- and long-term
- Assessing the environmental impacts of various waste and soil management solutions
- Assessing compliance with regulations

**OUR APPROACH**

At DHI, we pioneer the latest developments in waste and soil management. We participate in international Research & Development (R&D) projects and maintain extensive networks in all related sectors (including industry and regulators). Our approach includes participation in international standardisation of waste characterisation and leaching tools and assisting in the implementation of these tools in legislation. Our participation in the development of new strategies for waste management allows us to provide the best possible solutions aligned to existing and future regulations.

**OUR SOLUTIONS**

We apply our knowledge and expertise in the characterisation and classification of specific waste streams with respect to leaching properties and hazard potential. In so doing, we help find the best management options (such as treatment recovery or landfilling) in terms of environmental impact and technological/economic feasibility. We provide decision and legislation support for environmental protection legislation as well as Environmental Impact Assessments (EIAs) of existing or planned waste management solutions. These are often based on a combination of laboratory testing, site-specific information and advanced computer modelling.

**THE ULTIMATE GOAL**

EFFECTIVE MANAGEMENT OF WASTE AND SOIL
OUR TOOLS AND SERVICES

We have a wide range of tools and services to help our clients with effective waste and soil management. These include:

- sampling and characterisation of waste and soil
- classification of waste as hazardous or non-hazardous
- performance and interpretation of leaching tests
- performance of pilot scale and field testing of waste management options
- decision support for selection of waste management options
- development of risk-based criteria for reuse or landfilling of waste
- assessment or prediction of the environmental impact of waste management solutions
- development of strategies for sustainable management solutions that optimise resource recovery and minimise the environmental impact in the long term for specific waste types
- capacity building and training by THE ACADEMY by DHI

The annual global production of waste exceeds 4 billion tonnes

ISWA (2012)