



Solid waste management – overcoming challenges and creating opportunities

Waste generation rates are rising rapidly in many parts of the globe, driven by increased urbanisation and improved standards of living. Appropriate management of wastes is essential to ensure local environmental and health protection, and to address the challenges of climate change and resource scarcity.

But improving waste management services and infrastructure also has the potential to bring local social and environmental benefits, create jobs, generate opportunities for business, and provide access to international investment and climate finance. And improved solid waste management has a significant role to play in combatting climate change, through directly reducing emissions from waste and mitigating the emissions of other sectors, for instance, through waste to energy.

Within this context, it is essential that decision-makers have access to sound information and advice on solid waste management issues that links international best practice with solutions that are appropriate to the local context.

Ricardo-AEA draws on over 30 years' experience of helping international institutions, national governments, municipalities and private sector organisations to develop sustainable, cost-effective solid waste management systems. We have the necessary expert knowledge and appreciation of real-world solid waste management issues to help our clients make effective decisions, taking into account the rapidly evolving economic, environmental, social and technological factors which affect this sector.

- Leading provider of environmental advice to UK and EU public sector clients.
- Bringing deep technical insights to the full range of climate, energy, waste and environmental issues.
- Applying international expertise to develop tailored country-specific solutions.

Our services

Ricardo-AEA's waste team includes world-leading experts in all aspects of resource efficiency and waste management, including areas such as waste collection, recycling and treatment, waste to energy, product eco-design, eco-labelling, sustainable procurement and product life cycle. We deliver innovative solutions through direct technical support as well as through training courses and workshops.

Our skills and services include:

- Support in the development of policies and strategies on issues such as zero waste, waste to energy, resource efficiency and the circular economy.
- Feasibility studies and options appraisal for waste management service improvement and infrastructure development.
- Institutional restructuring and development of effective governance and regulatory bodies for waste management, including training programmes, capacity building and knowledge transfer.
- Life-cycle analysis and greenhouse gas (GHG) emission modelling.
- Procurement, contract development and public-private-partnership (PPP) approaches for waste management.
- Dump site reviews and landfill assessment, planning and management.
- Waste technology appraisals and due diligence, including conventional energy from waste, gasification, pyrolysis, mechanical biological treatment, composting, anaerobic digestion and materials reprocessing technologies.
- Communications, stakeholder engagement and behavioural change studies and strategies.

Our experience

Examples of our work in this field include:

- 13 years of developing and delivering the Envirowise Programme for UK Government, improving profitability and environmental performance for UK businesses.
- Technical and policy support on product standards for energy efficiency for the European Commission (EC).
- Developing an Integrated Waste Management Strategy and Implementation Plans for the capital city, ArRiyadh, of the Kingdom of Saudi Arabia.
- Collating the UK's GHG emissions inventory for the waste sector.
- Providing the secretariat for the International Energy Agency Bio-Energy Task Force.
- An international review of thermal and biological energy from waste technologies for the Environmental Technologies Institute.
- Waste management strategy implementation and technical assistance for Metro Manila, Philippines on behalf of the Asian Development Bank.
- A review of opportunities and challenges associated with waste to energy solutions for Zero Waste South Australia.

A global review of Nationally Appropriate Mitigation Actions (NAMAs) in the solid waste sector (US Environmental Protection Agency)

Our experts were commissioned by the US EPA to assess the status and potential for development of NAMAs in the solid waste sector. Our team developed a bespoke conceptual framework for waste sector NAMAs and assessed their potential for delivering emissions reductions and other benefits, such as pollution control, poverty reduction and resource productivity. The outputs of our work have helped the Global Methane Initiative to develop its ongoing strategy and provide a significant contribution to the technical guidance and framework needed to deliver NAMAs in the solid waste sector in a range of developing countries.

Ricardo-AEA is a global sustainability consultancy. We combine energy, climate change and environmental expertise with powerful IT, knowledge management and economics capability. Our experience helps policy makers understand complex issues and our world-leading advice and support empowers business leaders.

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