

Term	Abbreviation	Description
(Aerobic) composting		Biological decomposition of solid organic materials by bacteria, fungi, and other micro organisms into a soil-like product. The method of composting uses bacteria that need oxygen. This requires that the waste be exposed to air, either via turning or by forcing air through pipes that pass through the material.
Alternative fuels and raw materials	AFR	Inputs to clinker production derived from waste streams that contribute energy and raw material. Also used: AF = alternative fuels, AR = alternative raw materials.
Anaerobic digestion		A process of decomposition of biodegradable organic material without the presence of oxygen. The end product to be used as fuel is methane. The method is also known as anaerobic composting.
Ash		The noncombustible solid by-products of incineration or other burning process.
Atmosphères EXplosibles	ATEX	Commonly given name to the framework for controlling explosive atmospheres and the standards of equipment and protective systems used in them as well as minimum requirements for improving the health and safety protection of workers potentially at risk. It is based on the requirements of two European Directives. Directive 99/92/EC (ATEX 137) & Directive 94/9/EC (ATEX 95).
Basel Convention		The international agreement on the control of transboundary movements of hazardous wastes and their disposal, drawn up in March 1989 in Basel, Switzerland, with over 100 countries as signatories.
Biodegradable material		Any organic material that can be broken down by microorganisms into simpler, more stable com-pounds. Most organic wastes (e.g., food, paper) are biodegradable.
Biogas		Gas formed by digestion of organic materials. Typically dominated by CH <sub>4</sub> and CO <sub>2</sub> in a landfill.
Bottom ash		Relatively coarse, noncombustible, generally toxic residue of incineration that accumulates on the grate of a furnace.
Bulky waste		large wastes such as appliances, furniture, and trees and branches, that cannot be handled by normal MSW processing methods.
Calorific Value		The quantity of heat generated when unit mass of a material undergoes complete combustion under certain specified conditions. It is expressed in terms of kilo Joules (kJ) per kilogramme for solid or liquid fuels and kilo Joules per cubic meter for gases (kJ/m <sup>3</sup> ). Gross (or 'higher') calorific value includes the enthalpy of vaporisation; net (or 'lower') calorific value excludes it.
CEPIC		European Chemical Industry Council is the main European trade association for the chemical industry. It was founded in 1959.
Cement		Final product of cement industry, manufactured by intergrinding of clinker, mineral components and set controllers
Clinker		An intermediate product in cement manufacturing produced by decarbonizing, sintering and fast-cooling of ground raw mix (generally limestone, marl, correctives)
Collection		The process of picking up wastes from residences, businesses, or a collection point, loading them into a vehicle, and transporting them to a processing, transfer, or disposal site.
Combustion or incineration		In SWM it means the burning of materials in an incinerator.
Community advisory panel	CAP	A panel comprised of representatives from the local community. The function of the panel is to advise an organisation on community issues and on how to deal with potential and actual impacts.
Compaction		Reduction of the bulk of municipal solid waste and increasing its density through a physical process such as rolling or tamping or as a result of waste compacting under its own weight.
Compost		The material resulting from composting. Compost, also called humus, is a soil conditioner and in some instances is used as a fertilizer.
Concrete		A material produced by mixing cement, water and aggregates. The cement acts as a binder, and the average cement content in concrete is about 15%.
Construction and Demolition waste (CDW)	CDW	A waste stream that is primarily received from construction sites. Some examples of C&D waste include, but are not limited to, concrete, rebar, wood, paneling, linoleum, and carpet.
Co-processing		Use of (often pre-processed) selected, combustible waste streams as substitute fuels in an industry not originally using that fuel.
Corporate social responsibility	CSR	The commitment of business to contribute to sustainable development, working with employees, their families, the local community and society at large to improve their quality of life.

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Cement Sustainability Initiative	CSI	The working group of the cement industry within the WBCSD
Disposal		The final handling of solid waste, following collection, processing, or incineration. Disposal most often means placement of wastes in a dump or a landfill.
Disposal Fee		A fee charged for the amount of waste disposed of by customers at a landfill.
Dump		A site used to dispose of municipal solid waste without management and/or environmental controls.
Dust (clean gas dust only)		Total clean gas dust after de-dusting equipment. (In the case of cement kiln main stacks, more than 95% of the clean gas dust has PM10 quality, i.e. is particulate matter (PM) smaller than 10 microns.)
Eco-efficiency		Reduction in the resource intensity of production, i.e. the input of materials, natural resources and energy compared with the output: essentially, doing more with less.
Ecological footprint		A resource management tool that measures how much land and water area a human population requires to produce the resources it consumes and to absorb its wastes under prevailing technology
Electronic waste		This is waste from electrical and electronic equipment including all components, subassemblies and consumables which are part of the product at the time of discarding (def. according to EU-Directive 2002/96/EC from January 2003).
End-of-life application		Product (e.g. concrete debris) which is not reused but disposed of in a landfill ("end of life").
Environmental impact assessment (EIA)	EIA	An evaluation designed to identify and predict the impact of an action or a project on the environment and human health and well-being. Can include risk assessment as a component, along with economic and land use assessment.
Emissions from cement plants		Include: Dust, SO <sub>2</sub> , NO <sub>x</sub> , various VOCs, NH <sub>3</sub> , HCl and heavy metals
Fossil fuels		Non-renewable carbon-based fuels such as coal, oil and natural gas.
Hazard		Anything with the potential to cause harm
Hazardous Waste		Waste that is reactive, toxic, corrosive, or otherwise dangerous to living things and/or the environment. Many industrial by-products are hazardous. Waste that is designated such by regulatory agencies either because it has elevated levels of hazardous chemicals or materials, because it exhibits a potentially dangerous characteristic (e.g., ignitable, corrosive, etc.) or because the material belongs to a general family of materials which have been deemed hazardous by regulatory agencies.
Heavy metals		Metals of high atomic weight and density, such as mercury, lead, and cadmium, that are toxic to living organisms.
Incineration		The process of burning solid waste under controlled conditions to reduce its weight and volume, and often to produce energy.
Industrial ecology		Framework for improvement in the efficiency of industrial systems by imitating aspects of natural ecosystems, including the transformation of wastes to input materials; one industry's waste becomes another industry's input.
Infectious Waste		Hazardous waste with infectious characteristics, including contaminated animal waste, human blood and blood products, isolation waste, pathological waste, and discarded sharps (needles, scalpels or broken medical instruments).
Informal sector		The part of an economy that is characterized by private, usually small-scale, labor-intensive, largely unregulated, and unregistered manufacturing or provision of services. These services include i.e. collection and segregation within the solid waste management.
Inorganic waste		Waste composed of inert material other than plant or animal matter, such as sand, dust, glass, and many synthetics.
Integrated Waste Management		1. A frame of reference for designing and implementing new waste management systems and for analysing and optimising existing systems Based on the concept that all the strategic aspects of the MSWM system should be analysed together since they are interrelated and development in one component frequently affects other areas of the system. 2. A practise using several alternative waste management techniques to manage and dispose of specific components of the municipal solid waste stream. Waste management alternatives include source reduction, recycling, composting, energy recovery and landfilling.
Kiln		Large industrial oven for producing clinker used in the manufacture of cement. In this report, "kiln" always refers to a rotary kiln system.
Landfill gases		Gases arising from the decomposition of organic wastes at landfills; principally composed of methane, carbon dioxide, and hydrogen sulfide. Such gases may cause explosions at landfills.

Leachate		Liquids that have come in contact with waste. Leachate accumulates in the waste footprint of the landfill. Leachate levels within the landfill must be monitored and cannot exceed state regulatory agency established levels. Depending upon the site, there are different ways to treat leachate.
Leaching		The extraction, by a leachant (de-mineralized water or others) of inorganic and/or organic components of a solid material, into a leachate by one or more physical-chemical transport mechanisms.
Liner		A clay and/or synthetic protective layer that is placed on both the bottom and top of a landfill.
Lost time injury		A work-related injury after which the injured person cannot work for at least one full shift or full working day.
Materials Recovery Facility	MRF	Line of business where recyclable material is processed, separated, and sold. This is a facility where recyclable materials are sorted and processed for sale. This process includes separating recyclable materials (manually or by machine) according to type, and baling or otherwise preparing the separated material for sale. Operating costs and revenues for MRF's are accounted for as a separate line of business.
Mechanical Separation		Using mechanical means to separate solid waste into various components.
Mechanical-Biological Pretreatment (MBP)	MBP	Waste treatment technology that combines mechanical separation and biological treatment to pre-treat municipal waste as stabilisation for final landfilling, to regain valuable fractions and to extract a high calorific waste fraction as alternative fuel.
Micro Enterprise Development	MED	The development of small businesses to enable people in communities to earn a living.
Moisture Content		The fraction or percentage of a substance or soil that is water.
MSW Composition		MSW is as a heterogeneous mixture of different types of discarded materials. The composition of MSW depends on the conditions of the city in question. In general, MSW is composed of the following fractions: paper, rubber, plastic, fabric, leather, vegetable/putrescible, wood, etc. (combustibles), coal ash, glass, metal, etc. (non-combustibles).
Municipal Solid Waste (MSW) also named residual, household or domestic waste	MSW	Regular garbage from non-industrial sources, such as residential homes, restaurants, retail centers, and office buildings. Typical MSW includes paper, discarded food items, and other general discards. Green waste is considered MSW and includes yard clippings, leaves, trees, etc.
Needs assessment		A collaborative exercise in which the needs of a community are established. The purpose is to inform an organisation on where best to spend resources allocated for development/social programs.
NFPC		The National Fire Protection Association is an international nonprofit membership organization founded in the U.S. in 1896 where creating and maintaining minimum standards and requirements for fire prevention and suppression activities, training, and equipment, as well as other life-safety codes and standards are made. This includes everything from building codes to the personal protective equipment used by firefighters while extinguishing a blaze.
Occupational exposure limit	OEL	Limit values defining the maximum "admissible" or "acceptable" concentration of a hazardous substance in the workplace and using TLVs (Threshold Limit Value) established by organizations such as the American Conference of Governmental Industrial Hygienists (ACGIH) as guidelines. National scientific institutes and scientific committees prepare health-based OEL-value levels, ideally using the concept of "no observed adverse effect levels" (NOAELs). The most common limit values are air limit values of a hazardous substance in the workplace air. This concentration varies from substance to substance according to its toxicity and issues such as the substances' physico-chemical characteristics. (i.e. Inhalable dust maximum exposure limits is 10mg/m3 in an 8hr period)
Occupational health and safety	OHS	Policies and activities to promote and secure the health and safety of all employees, subcontractors, third parties and visitors.
OH&S management system		Is part of the overall management system that facilitates the management of the OH&S risks associated with the business of the organization. This includes the organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing and achieving, reviewing and maintaining the organization's OH&S policy.
Organic waste or biowaste		Technically, waste containing carbon, including paper, plastics, wood, food wastes, and yard wastes. In practice in MSWM, the term is often used in a more restricted sense to mean material that is more directly derived from plant or animal sources, and which can generally be decomposed by microorganisms.

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Personal Protective Equipment	PPE	Equipment designed to protect employees from serious workplace injuries or illnesses resulting from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. (i.e. Hard hats, steel toe boots, ear plugs, respiratory protection mask, safety vest, etc.)
Precalciner kiln (PC kiln)		Today's standard version of a cement kiln, characterized by two firing areas, the main firing in the rotary kiln (40% of fuel input) and the precalciner firing between rotary kiln and cyclone preheater (60% of the fuel input). Precalciner kilns have production capacities between 2000 and 12000 tons of clinker per day.
Pre-processing (of waste fuel)		Mechanical preparation process (separation of undesired components, drying, crushing, classifying, etc.) to make a selected waste stream fit for co-processing (co-incineration, co-firing)
Primary material or virgin raw materials		Commercial material produced from virgin materials used for manufacturing basic products. Examples include wood pulp, iron ore, and silica sand.
Producer responsibility		A system in which a producer of products or services takes responsibility for the waste that results from the products or services marketed, by reducing materials used in production, making repairable or recyclable goods, and/ or reducing packaging.
Quality		Quality is defined as the degree to which a set of inherent characteristics fulfils requirements (def. according to ISO 9000).
Quality		Quality is defined as the degree to which a set of inherent characteristics fulfils requirements (def. according to ISO 9000).
Recyclables		Items that can be reprocessed into feedstock for new products. Common examples are paper, glass, aluminum, corrugated cardboard, and plastic containers.
Recycling		Separation physical/mechanical process by which secondary raw materials (paper, metals, glass, plastics/synthetics) are obtained from solid waste. The process could be accomplished manually, by simple and/or sophisticated mechanical equipment.
Refuse-derived fuel (RDF)	RDF	Fuel produced from MSW that has undergone processing. Processing can include separation of recyclables and noncombustible materials, shredding, size reduction, and pelletizing.
Risk		Likelihood that a hazard will cause a specified harm to someone or something
Risk Assessment		Examination of the probability and magnitude/impact of an event that could occur.
Risk Management		Process that involves assessing the risks that arise in the workplace, putting sensible health and safety measures in place to control them and then making sure they work in practice.
RMP		Risk Management Plan
Sanitary landfill		An engineered method of disposing of solid waste on land, in a manner that meets most of the standard specifications, including sound siting, extensive site preparation, proper leachate and gas management and monitoring, compaction, daily and final cover, complete access control, and record-keeping.
Secondary material		A material recovered from post-consumer wastes for use in place of a primary material in manufacturing a product.
SEVESO II		EU legislation of the Council of European Union directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances. Aimed at the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for man and the environment, with a view to ensuring high levels of protection throughout the Community in a consistent and effective manner.
Site remediation		Treatment of a contaminated site by removing contaminated solids or liquids or treating them on-site.
Solid waste management		Planning and implementation of systems to handle solid wastes.
Stakeholder		Any person or group which holds a stake or interest in the organization and its performance, or any person or organisation that can have an impact on, or is impacted by the organisation.
Stakeholder dialogue		The engagement of stakeholders in a formal and/or informal process of consultation to explore specific stakeholder needs and perceptions.
Sustainable Development	SD	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs
Triple bottom line		Accounting for Economic, Social and Environmental impacts

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VDI		Verein Deutscher Ingenieure (German engineer association) is a financially independent and politically unaffiliated, non-profit organization of 132,000 engineers and natural scientists. As the leading institution for training and technology transfer among experts, it is also a partner at the preliminary stages of the decision-making process in matters of technological policy and for all questions that engineers face in their professional or public lives.
Waste		Any substance or object that the holder discards or intends or is required to discard or has to be treated in order to protect the public health or the environment.
Waste-to-energy (WTE) plant	WTE	A facility that uses solid waste materials (processed or raw) to produce energy. WTE plants include incinerators that produce steam for district heating or industrial use, or that generate electricity; they also include facilities that convert landfill gas to electricity.
Waste Incineration Directive	WID	Waste Incineration Directive, Directive 2000/76/EC of the European Parliament and the Council of December 2000 on the incineration of waste.
WBCSD		World Business Council for Sustainable Development