Common Terminology – Waste Management

Several terms of waste terminology were used by the Cluster projects. The definitions of these terms can be found in the European Legislation:

- EWC – European Waste Catalogue
- Directive on the landfill of waste (2002)
- Regulation on Waste Statistics (2002)
- Directives on Packaging and Packaging Waste (1999, 2001)
- Directive on Waste Electrical and Electronic Waste (2003)
- Directive 91/156/EEC on Batteries and Accumulators containing dangerous substances
- Directive 91/689/EEC on Hazardous Waste
- Directive 2000/76/EC Incineration of Waste

A very good reference for a common terminology discussion is http://glossary.eea.eu.int/EEAGlossary/ where you'll be able to find the English definition and corresponding national terminology.

In the report 'Household and municipal waste: Comparability of data in EEA member countries' (EEA) there is some discussion of waste definitions and categories. See: http://reports.eea.eu.int/Topic_report_No_32000/en/topic_3_2000.pdf

Within the Cluster projects it became necessary to specify and define terms in the field of waste management.

E.g., regarding the decision to concentrate on collection of household waste, the definition of **municipal waste** varies across Member States. Different countries include different elements. France, for example, includes sewage sludge in the definition. For all municipalities in Denmark (which does not specifically define .municipal waste.), all wastes are the responsibility of the municipality. Elsewhere, such as in Austria and Ireland, relatively large quantities of non-household waste are collected in the municipal fraction. The one thing common to all countries. definition of municipal waste is household waste. Concentrating on this fraction facilitates cross-country comparisons. Clearly, there may be cross-subsidising of different waste fractions collected. Where this occurs, an attempt has been made to establish this in addressing the roles and responsibilities of the different bodies in the municipal waste management system (though this is not always easy to discern)". [Eunomia report, 2001]

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1. USED TERMS AS DEFINED IN THE EU LEGISLATION WITHIN THE CLUSTER PROJECTS

Waste shall mean any substance or object which the holder discards or intends or is required to discard. [Directive 91/156/EEC, 1991]

Liquid waste means, according to the European directive on the landfill of waste [Directive 1999/31/EC, 1999], any waste in liquid form including wastewaters but excluding sludge.

Municipal waste means, according to the European directive on the landfill of waste [Directive 1999/31/EC, 1999] waste from households, as well as other waste which, because of its nature or composition, is similar to waste from household.

Municipal solid waste (MSW) is defined and classified in the European waste catalogue (EWC). The EWC was established in 1994 [Decision 94/3/EC, 1994] (valid from 1994 to 2001), harmonised in 2000 [Decision 2000/532/EC, 2000] and amended in 2001 [Decision 2001/118/EC, 2001] (applies from 1. January 2002). Municipal solid waste (EWC 20) can be divided in (see Table 1):

- EWC 20 01: separately collected fractions
- EWC 20 02: garden and park waste (including cemetery waste)
- EWC 20 03: other municipal waste (incl. mixed household waste)

The definition of MSW through EWC includes hazardous wastes, electronic equipment, discarded equipment containing chlorofluorocarbons and septic tank sludge. Additionally to the wastes of code number 20 of EWC, the following wastes are investigated in the system:

- EWC 15 01: municipal packaging wastes
- EWC 16 01: end-of-life vehicles. This category was classified as municipal solid waste in the first edition of the EWC (valid from 1994 to 2001) and therefore investigated during the development of the AWAST system. In order to avoid loss of already collected data, this waste will be further investigated. However, for the three case studies it is not relevant and therefore this good will not be investigated in the first step of the development of the simulation software.
- EWC 19 08 05: sewage sludge (from urban wastewater). This solid waste is often co-processed with mixed MSW in biological waste treatment plants. For the three case studies it is not relevant and therefore this good will not be investigated in the first step of the development of the simulation software.

Mixed municipal waste means, according to the European directive on the incineration of waste [Directive 2000/76/EC, 2000], waste from households as well as commercial, industrial and institutional waste, which because of its nature and composition is similar to waste from households, but excluding fractions indicated in the Annex to Decision 94/3/EC(22) under heading 20 01 that are collected separately at source (e.g. paper, glass, plastic, metal) and excluding the other wastes indicated under heading 20 02 of that Annex (e.g. park and garden waste).

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2. USED TERMS AS DEFINED BY THE SEVERAL CLUSTER PROJECTS

Cluster Project	Terms defined	Definition
SWA-Tool	Daily household and commercial waste	As defined by the European Environmental Agency (EEA) report“ “Household and municipal waste: Comparability of data in EEA member countries” (2000) www.eea.eu.int. Daily household and commercial waste forms the scope of waste to be covered by the SWA-Tool methodology includes “residual household waste” and “residual co-collected commercial waste.
	Residual household waste	Residual household waste is mixed solid waste from households, which is collected, transported, and disposed of, either by the household, the municipality or by any other third party in any kind of containersn and/or plastic bags and includes similar commercial mixed solid waste; which is co-collected.
	residual co-collected household/commercial waste	Residual co-collected household/commercial waste which may be described as mixed solid waste from commerce, which is co-collected, transported, and co-disposed of, either by the household, the municipality or by any other third party in any kind of containers and/ or plastic bags. The composition of daily residual commercial waste is similar to the composition of residual waste from households. But the amount and composition arises in spatial clusters and depending on the business sector. NOT included: • Separately collected household and commercial material streams such as glass, paper, plastics; • Separately collected municipal waste streams which may include small scale hazardous waste, electrical/electronic waste, street cleanings, garden/park waste; • Any other waste stream, which is not produced from routine activity such as bulky waste.
PAYT More definitions as to the different PAYT approaches can be found on the project website	Household waste Residual waste	Agreed on for internal purposes as outlined in the comment given above For the purpose of getting clear what different persons actually meant while speaking about the financing of waste management services*, and to have our own consistent terminology for the guidebook, the following definitions were agreed. *(in SP and CH payments levied from households for the obtained waste management services are commonly called “waste tax” while in other countries the terms “charge” and “fee” are common for this)
	Charge	In the literal sense of price, payable to authorities or the like for a service. The charge is a compulsory requited payment proportionally related to the provided service, i.e. in our case environmental services in conjunction with the collection and

		disposal of waste. Guiding principle is that the payment shall reflect the costs for providing the service. Beside the function to recover the costs for the provided service, charges may also serve steering purposes. [In adaptation to Driehaus, H.-J.: Kommunalabgabenrecht, Kommentar dargestellt auf der Grundlage des KAG NW unter Berücksichtigung der Besonderheiten in den übrigen KAG, Verlag Neue Wirtschafts-Briefe Herne/Berlin, Juli 2002] This term is used to express the total waste charges, i.e. the final charge which is debited to someone's account. A charge can be composed of various components, including fees.
	Fee	In the literal sense of remuneration, payment for a single specific service/performance (e.g. exta hauling effort) or for obtaining a limited right (e.g. right of use = rental fee).
	Tax	In the literal sense of levy. The tax is a compulsory unrequited payment to the government. The specific benefits provided by the government are not necessarily related to the specific subject under which the taxpayers are obliged to do the payment. This payment is a not recurring one, legally demanded by a governmental or public authority to meet public general expenditures and to finance collective services provided by these authorities. Revenues from these taxes are included in general budget and not directly or automatically earmarked for waste management policy.
	Illegal dumping	(also known as "fly dumping", "midnight dumping", "wildcat dumping" and "open dumping") is defined as: • Disposal in non-approved sites. • Disposal in the bins of neighbors. • Unauthorized removal of the special tags or stickers from the waste bins or bags of neighbors. • Disposal of non-recyclables in recycling bins. • Disposal of recyclables in mixed-waste bins. • Waste tourism, i.e. waste disposal in neighboring areas where other schemes of waste charging apply. • Littering (e.g. lay bys).
	Fairness (of PAYT)	Is a function of the degree to which there is equality of opportunity (equal treatment of users in terms of access to and incentive to use the system) and the degree to which there is equity. Equality of opportunity will be determined by the characteristics of the system introduced, with the idea being that these features should ensure that all participants have an equal chance (opportunity) to "use" the system to the same degree as they choose. Equity has to do with making distinctions among users with respect to the outcomes or impacts of the system on different groups or types of participants.
	Chamber system (D) Müllschleuse (in the literature referred to as waste lock, lockhopper,	A special technical installation for the temporary storage of waste for collection where discards can only be inserted in conjunction with direct payments or the registration of the user. Usually involves a separate chamber at the feeding slot to allow for the measurement of the inserted amount of waste and/or to make sure that the corresponding payments or user registration takes place before the waste is stored inside the system. Depending on which solution is applied, the system can be either a prepaid-system or one with subsequent charging

	lock gate system)	
LCA-IWM	Municipal/household waste	Just some definitions are mentioned in LCA-IWM, based on EWC, EEA and German legislation (TA SiedlAbf). The main concern was the determination of which fractions were to be considered in the project.
	Mixed household waste	Integrally collected household waste. The total generated solid wastes from households without separate collection of some fractions. E.g. the household waste that is landfilled in countries like Greece.
	Residual household waste	Mixed household waste minus separately collected fractions. E.g. the household waste that is disposed of in countries like Germany.
	Social sustainability in waste management systems (SSWMS)	social sustainability in waste management systems is an integral part of sustainability in waste management systems (note: the other parts are environmental and economic sustainability). SSWMS, in broad summary, is the ethical behavior of a waste management system towards society. In particular, this means planning and managing municipal waste responsibly with society who has a legitimate interest in this issue – not just accomplishing legislation. SSWMS can be divided as follows: • social acceptability • social function • social equity
	Environmental sustainability (EnSu)	"Although EnSu is needed by humans and originated because of social concerns, EnSu itself seeks to improve human welfare by protecting the sources of raw materials used for human needs, and ensuring that the sinks for human wastes are not exceeded, in order to prevent harm to humans. Humanity must learn to live within the limitations of the biophysical environment. EnSu means natural capital must be maintained, both as a provider of inputs (sources), and as a sink for wastes. This means holding the scale of the human economic subsystem to within the biophysical limits of the overall ecosystem on which it depends. EnSu needs sustainable consumption by a stable population. On the sink side, this translates into holding waste emissions within the assimilative capacity of the environment without impairing it. On the source side, harvest rates of renewables must be kept within regeneration rates …" (provided by Goodland after Daly)
	Environmental Sustainability in Waste Management (ENSWM)	Based on the above provided definition of general EnSu, general objectives for any human activity can be summarised as an objective of rational resources consumption and reduction of environmental pollution. Hence, also Environmental Sustainability in Waste Management may be expressed through these two major objectives • conservation of resources and • pollution prevention.

	Economic Sustainability in Waste Management (EcSWM)	We understand economic sustainability (EcS) as related to a specific system, a specific time horizon and a specific controlling authority . A system operates in a EcS manner if it covers all its expenses and it expects to do so over the horizon of the analysis. If it is covering its expenses through subsidies, it would be sustainable only if there is guarantee that these will continue. In fact economic sustainability means the cheapest WMS for all served clients a/o financier(s) over the complete exploitation period, that provides enough income a/o profit to ensure an economically sound and continuous exploitation during the complete period of exploitation and after care. General *objectives* of economic sustainability in WMS are: • An acceptable pricelevel for all citizens a/o (small) companies served during the next two generations (60 years); • An acceptable level of income a/o profit from operation during the complete period of exploitation (including the after care phase) that ensures a sound and continuous operation.
AWAST Sometimes terms are used for groups of waste goods.	Secondary materials	Separate collected wastes that are or are to be reused or reclaimed as secondary raw materials [Buchner & Manu, 1994]. In the AWAST system, the following waste goods from the preceding table are subsumed to this category: glass, metal, paper, plastic, textiles.
	Hazardous waste	In the AWAST project, only small scale hazardous waste included e.g. in household waste or business waste is investigated, because industrial wastes are not in the scope of the project. The following waste goods from the preceding table belong to this category: batteries, chemicals, fluorescent tubes, medicines, oil and fat, WEEE (waste of electric and electronic equipment), CFCE (chlorofluorocarbons-containing equipment) and end-of-life vehicles. This waste category is not identical with the definition of hazardous waste in the European legislation. Physical-chemical treatment of hazardous waste is not in the scope of project AWAST and therefore will not be further examined. However, thermal treatment and disposal will be investigated.
	Organic waste	Biowaste (from kitchens and canteens), garden waste, cemetery waste and market waste is characterised as organic waste.
	Other waste	Waste categories, that don't fit into the preceding waste groups: bulky waste, road waste, sewer waste and sewage sludge.
	Mixed Waste	Mixed municipal waste from households as well as commercial, industrial and institutional waste, which because of its nature and composition is similar to waste from households. Including composite and mixed packaging (European Waste Catalogue, categories 150105,150106, 200301)
RELIEF	Environmental relief potential	Is the potential environmental benefit, measured in terms of the quantified reduction of harmful emissions such as CO_2 or solid waste, to be gained by implementing a certain measure such as a green purchasing strategy
	Person equivalent	A person equivalent (PE) is the potential contribution from an average person in a year to a given environmental impact.

		The expression is used in the Danish EDIP LCA-methodology to put the different environmental impact potentials and resource consumptions on a common scale, or – in other words – to normalise the results. For impacts covering the whole world, the person equivalents are related to an average global citizen, whereas regional impacts are related to an average regional citizen e.g. an average European citizen and so on. Taking global warming as an example of a global impact, the total global contribution to this impact in 1994 was 43.3 billion tons from all anthropogenic sources. With about 5.61 billion world citizens this equals 7.7 ton CO_2-equvivalents per person. If an LCA shows that a product in its lifetime of 1 year contributes to global warming with 15.4 ton CO_2-equvivalents in the total life cycle it means that it contributes with 2 person equivalents to global warming. In this way it is possible to determine the relative importance of a products contribution to the different impact categories. Furthermore, it is possible to determine the relative importance of different product to a specific impact category, and the expression is easy to understand by non-experts in the environmental field.

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