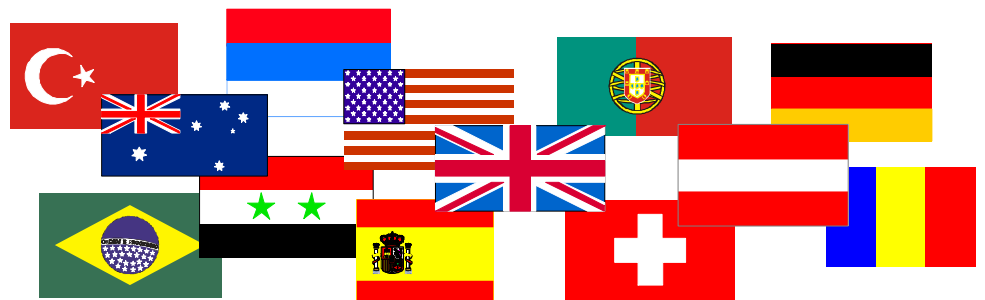




Terminology of the New Science "Metabolism of the Antroposfera"

A	Deutsch-Englisch Terminologie der neuen Wissenschaftsdisziplin "Metabolismus der Anthroposphäre"
B	Terminología inglesa-española en el campo de la nueva ciencia del metabolismo de la antroposfera
C	Terminologia engleză - română din domeniul noii științe „Metabolismul Antroposferei“
D	Терминология новой науки метаболизма антропосферы (английский, русский)
E	عربي - انكليزي المصطلحات الحديثة الخاصة بموضوع حركة المواد ضمن الأنتروبوسفير
F	Terminologia Inglesa-Portuguesa da Nova Ciência do "Metabolismo da Antroposfera"
G	Ingilizce-Türkçe "Antroposfer Metabolizması" Yeni Bilimin Terminolojisi
H	
I	



English-Spanish
Terminology of the New Science
"Metabolism of the Anthroposphere"

Terminología inglesa-española en el campo de la nueva ciencia
del metabolismo de la antroposfera

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Teil B: Englisch-Spanisch

Wien, im Juli 2002

Folgende Teile sind erhältlich:

Teil A: Deutsch-Englisch

Teil B: Englisch-Spanisch

Teil C: Englisch-Rumänisch

Teil D: Englisch-Russisch

Teil E: Englisch-Arabisch

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Layout: Inge Hengl

Impressum:

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English	Español
activity	actividad
anthropogenic	antropogenico
anthroposphere	antroposfera
biomass	biomasa
biosphere	biosfera
combustion	combustion
compost	compost
composting	compostaje
early recognition	reconocimiento anticipado
ecobalance	ecobalance
ecodesign	diseño ecologico
eco-label	etiqueta ecologica
ecosystem	ecosistema
educt	educt
emission	emision
end-of-pipe	end-of-pipe
energy consumption	energia de consumo
environmental compartment	compartimento ambiental
environmental quality standards	criterios de calidad medio ambiental
eutrophication	eutropizacion
final storage	almacenaje final
final storage quality	calidad de almacenaje
global warming potential (GWP)	potencial del calentamiento global (global warming potential; GWP)
good	producto
hazardous waste	deshechos peligrosos
immission	immision
incineration (of refuse and waste)	incineracion (de desperdicios y deshechos)
landfill	vertedero
material	material
material balance	balance material
material flow	flujo de materia
material flow analysis	analisis del flujo de materia
material flux	“caudal ”de materia
material management	gestion de materiales
municipal solid waste (MSW)	deshechos solidos municipales
ozone depletion potential (ODP)	reduccion potencial de ozono
polluter pays principle	principio de “quien contamina paga”
primary energy	energia primaria
private household	viviendas privadas
process	proceso
production	produccion



English	Español
recycling	reciclaje
region	region
resources	recursos
sewage sludge	lodos
sewage treatment plant	estacion depuradora de aguas residuales (e.d.a.r.)
sink	contenedor
source	fuelle
stock	stock (existencias)
storage	almacenaje
substance	sustancia
sustainable development	desarrollo sostenible
to clean	limpiar
to nourish	alimentacion
toxicology	toxicologia
transformation	transformacion
transportation	transporte
urbanization	urbanizacion
waste	deshecho
waste management	gestion de deshechos



Español	English
actividad	activity
alimentacion	to nourish
almacenaje	storage
almacenaje final	final storage
análisis del flujo de materia	material flow analysis
antropogenico	anthropogenic
antroposfera	anthroposphere
balance material	material balance
biomasa	biomass
biosfera	biosphere
calidad de almacenaje	final storage quality
“caudal ”de materia	material flux
combustion	combustion
compartimento ambiental	environmental compartment
compost	compost
compostaje	composting
contenedor	sink
criterios de calidad medio ambiental	environmental quality standards
desarrollo sostenible	sustainable development
deshecho	waste
deshechos peligrosos	hazardous waste
deshechos solidos municipales	municipal solid waste (MSW)
diseño ecologico	ecodesign
ecobalance	ecobalance
ecosistema	ecosystem
educt	educt
emision	emission
end-of-pipe	end-of-pipe
energia de consumo	energy consumption
energia primaria	primary energy
estacion depuradora de aguas residuales (e.d.a.r.)	sewage treatment plant
etiqueta ecologica	eco-label
eutropizacion	eutrophication
flujo de materia	material flow
fuelle	source
gestion de deshechos	waste management
gestion de materiales	material management
immision	immission
incineracion (de desperdicios y deshechos)	incineration (of refuse and waste)
limpiar	to clean
lodos	sewage sludge



Español	English
material	material
potencial del calentamiento global (global warming potential; GWP)	global warming potential (GWP)
principio de “quien contamina paga”	polluter pays principle
proceso	process
produccion	production
producto	good
reciclaje	recycling
reconocimiento anticipado	early recognition
recursos	resources
reduccion potencial de ozono	ozone depletion potential (ODP)
region	region
stock (existencias)	stock
sustancia	substance
toxicologia	toxicology
transformacion	transformation
transporte	transportation
urbanizacion	urbanization
vertedero	landfill
viviendas privadas	private household



FACHTERMINI

WASTE

DEF.:

Waste originally meant, under Council Directive 75/442, any substance or object that the holder disposes of or is required to dispose of pursuant to the provisions of national law in force. Article I was amended by Directive 91/156. The current definition of waste is therefore "any substance or object in the categories set out in Annex I to Directive 75/442 which the holder discards or intends or is required to discard." Annex I specifies 16 categories of waste. The 16th category reads "any materials, substances or products which are not contained in the above categories." A holder means the producer of the waste or the natural or legal person who is in possession of the waste. There is no definition of discard or intend. It may therefore be stated that waste in European law means

"any substance, material, product or object which the 'holder' discards or intends or is required to discard, subject to the exclusions, to interpretation by the European Court of Justice, to the application of the European Waste Catalogue and to the conclusions of the technical working group." [The ISWA Yearbook, 1994/95]

CON.:

Wastes may be transformed and then deposited or emitted directly without any pretreatment into the environmental compartments. Not all the produced wastes generated by production, distribution and consumption are covered by waste management. [Baccini und Brunner, 1991]

CON.:

Waste materials have to be recycled to reduce pollution especially from the final treatment of wastes and the corresponding production of new materials. [Bonomo und Higginson, 1988]

DESHECHO

DEF.:

Originalmente deshecho significaba, según el Consejo Directriz 75/442, cualquier sustancia u objeto que el titular desheche o requiera ser deshechada de acuerdo con las estipulaciones en obligación de las leyes nacionales. El Artículo I fue corregido por la Directriz 91/156. La definición general de deshecho es desde entonces "cualquier sustancia u objeto clasificado según las categorías del Anexo I de la Directriz 75/442 que el titular desheche, esté destinada para deshechar o requiera ser deshechada". El Anexo I especifica 16 categorías de deshechos. La categoría número 16 dice "cualquier materia, sustancia o producto que no esté contenido en las categorías anteriores". Un titular es el productor del deshecho o la persona legal que está en posesión del mismo. No se especifica el significado de deshechar ni de destinada para deshechar. Por esta razón se establece, según las leyes Europeas que deshecho significa "cualquier sustancia, material, producto u objeto que el "titular" desheche, está destinada para deshechar o requiera ser deshechada, sujeta a las exclusiones, a la interpretación del Tribunal Europeo de Justicia, a la aplicación del Catálogo Europeo de Residuos y a las conclusiones del grupo de trabajo técnico". [The ISWA Yearbook, 1994/95]





WASTE MANAGEMENT

DEF.:

The major goal of environmental protection and waste management is to reduce the material flows at the anthroposphere/environment interface to sustainable levels. [Lohm et al., 1994]

CON.:

(...) With increasing accumulation and improvement of building stock, construction waste will pose the major waste management problem in the future, at least in quantitative terms. Because of its predominant inorganic nature it cannot be substantially reduced in mass by combustion or biological degradation, on the other hand the changing composition and "chemicalization" will make separation and recycling of construction materials as well as their disposal increasingly costly. [Koenig, 1994]

CON.:

Not all the produced wastes generated by production, distribution and consumption are covered by waste management. [Baccini und Brunner, 1991]

CON.:

The compartment waste management will receive all the goods which are of no use and little or no value in the three other compartments (agriculture; industry, trade, commerce; private household), i.e. sewage, solid and liquid wastes. Wastes may be transformed and then deposited or emitted directly without any pretreatment into the environmental compartments. Not all the produced wastes generated by production, distribution and consumption are covered by waste management. [Baccini und Brunner, 1991]

GESTION DE DESHECHOS

DEF.:

La meta mas importante de la protecci3n ambiental y la gesti3n de deshechos es la reducci3n del flujo de materiales en la interfase antroposfera/medio ambiente a niveles sostenibles. [Lohm et al., 1994]



ACTIVITY

DEF.:

An activity can be defined as a set of processes and fluxes of goods, materials, energy, and information serving a certain purpose, such as to nourish, to clean, or to transport. [Brunner et al., 1992]

CON.:

All human activity, from the most basic (our individual metabolism), to the most industrialized (energy infrastructures), is embedded in the earth's environment and leads to some transaction with it. This relationship works in both directions. Human activity is bounded by environmental conditions while also influencing the environment, by preempting a part of it and by emitting waste residuals into it. Indeed, the history of human activity can be seen as a history of overcoming environmental limitations in the pursuit of personal, political, or social goals. [Socolow et al., 1994]

CON.:

Somehow, we must find ways of reducing the impacts of human activities on the environment, but of still maintaining and improving the quality of life, which is, after all, the avowed principle aim of development. [Allen, 1992]

ACTIVIDAD

DEF:

Una actividad puede definirse como un conjunto de procesos y flujos de productos, materiales, energía e información que sirven a un propósito seguro, por ejemplo la alimentación, la limpieza o el transporte. [Brunner et al,1992]



ANTHROPOGENIC

DEF.:

Influenced or caused by man. [++ Eigenvorschlag]

CON.:

Anthropogenic environmental changes are largely due to the massive increases in energy and material flows that have been generated since the early 19th century, fuelled by fossil energy, directed by increasing flows of capital, and shaped by information as well as technical and chemical innovations. [Pillmann, 1992]

ANTROPOGENICO

DEF.:

Influenciado o causado por el hombre. [++Eigenvorschlag]



ANTHROSPHERE

DEF.:

The anthroposphere is the field where human activities take place: it is embedded in the environment. Sometimes called the man-made biosphere, it can be envisaged as a living organism. It has its own metabolism consisting of the uptake, transformation, storage, and discharge of energy, matter, and information. The anthroposphere can be described as a system of processes, and fluxes of goods, materials, energy, and information. There are many regional varieties of the anthroposphere, since it is highly influenced by such parameters as climate, the topography and geology, the native population and its values, the neighbouring regions, and others. [Brunner et al., 1992]

CON.:

The anthroposphere is still growing. Although the dominant part of the anthroposphere consists of inorganic material (e.g. buildings, roads), long-living organic materials such as wood and plastics are also stocked by man. [Baccini und Brunner, 1991]

ANTROPOSFERA

DEF.:

La antroposfera es el espacio donde tienen lugar las actividades humanas: está empotrada en el medio ambiente. También llamada la biosfera artificial, puede ser imaginada como un organismo vivo. Tiene su propio metabolismo consistente en la recogida, transformación, almacenaje, y descarga de energía, materia e información. La antroposfera puede ser descrita como un sistema de procesos, y flujos de productos, materiales, energía e información. Existen algunas variaciones de la antroposfera, al estar altamente influenciada por algunos parámetros como el clima, la topografía y la geología, la población y sus valores, y las regiones vecinas, entre otros. [Brunner et al., 1992]



BIOMASS

DEF.:

Organic, non-fossil material of biological origin, a part of which constitutes an exploitable energy resource. Although the different forms of energy from biomass are always considered as "renewable", it must be noted that their rates of renewability are different. These rates depend on the seasonal or daily cycles, solar flux, climatic hazards, techniques or cycles of plant growth, and may be affected by intensive exploitation. However, for statistical needs, they may be considered as renewable yearly. In some countries biomass is further subdivided, when considered as an energy resource, into

primary biomass: rapidly growing plant material that may be used directly or after a conversion process, for the production of energy;

secondary biomass: biomass residues remaining after the production of fibre, food or other agricultural products or biomass by-products from animal husbandry or food preparation that are modified physically rather than chemically. Examples include waste materials from agricultural and forestry industries, manure, sewage, etc., from which energy may be produced.

Note: The above distinction between primary and secondary biomass is based on economic factors. The terms are defined otherwise in ecological science. It is also possible to classify the different types of biomass according to the nature of their main constitutional component: ligno-cellulosic biomass, glucidic biomass (cellulose, starch, etc.), lipidic biomass (oleaginous), which determines the output products and the type of processing equipment and methods to apply. [Energy Terminology, 1986]

CON.:

(...) This scenario projects that nearly one-half of the world's energy could be supplied from renewable sources by the year 2025, with biomass providing the largest share. [Socolow, 1994]

CON.:

Seafood wastes, being animal biomass, are highly biodegradable and nutrient rich. Loose piles of seafood wastes therefore self-heat due to rapid thermophilic microbial activity. [Twelfth Canadian Waste Management Conference, 1990]

BIOMASA

DEF.:

Materia orgánica ,no fosilizada de origen biológico, parte de la cual constituye un recurso energético explotable. Si bien las distintas formas de energía de la biomasa son siempre consideradas como " renovables", debe anotarse, que los porcentajes de renovabilidad son diferentes. Estas proporciones dependen de las estaciones o ciclos diarios, flujo solar,inclencias metereológicas, técnicas de cultivo, y explotaciones intensivas. Sin embargo, para las necesidades estadísticas, pueden considerarse como anualmente renovables.

En algunos países ,cuando consideramos biomasa como un recurso energético, puede subdividirse en:



biomasa primaria: plantas de rápido crecimiento que pueden ser usadas directamente o después de un proceso de transformación, para la producción de energía;

biomasa secundaria: residuos de biomasa que resultan después de la producción de fibra, comida u otros productos agrícolas, de subproductos procedentes de la labranza animal, o de aquellos procedentes de la de la preparación de alimentos que han sido modificados química y físicamente. Ejemplos de esto son los deshechos de la agricultura y la industria forestal, estiércol, aguas residuales, etc., a partir de los cuales puede obtenerse energía.

Nota: la distinción anterior entre biomasa primaria y secundaria está basada en factores económicos. Estos términos se definen de otra forma en ecología. También es posible clasificar los distintos tipos de biomasa de acuerdo a la naturaleza de sus componentes :biomasa ligno-celulósica, biomasa glucídica (celulosa, almidón, etc.), biomasa lipídica (oleaginosa), las cuales determinan las salidas de productos, el tipo de procesamiento, y los métodos de aplicación. [Energy Terminology, 1986]



BIOSPHERE

DEF.:

Portion of the earth where living organisms are found (governs the existence of plant and animal life, including micro-organisms). It includes the lower part of the atmosphere, the hydrosphere, and a part of the lithosphere. All ecosystems of the earth overlap to form the biosphere. [+Energy Terminology, 1986]

CON.:

Natural scientists have developed plausible models for the evolution of biotic systems on the earth. A thin layer of about 20 km, from the bottom of the deepest oceans to the outer boundary of the atmosphere, contains the entire biotic system, the biosphere. [Baccini und Brunner, 1991]

BIOSFERA

DEF.:

Porción de la tierra donde viven los organismos que la habitan.(rige la existencia de plantas y vida animal, incluyendo los microorganismos). Incluye la parte inferior de la atmósfera, la hidrosfera, y parte de la litosfera. Todo ecosistema de la tierra se superpone para formar la biosfera. [+Energy Terminology, 1986]



LANDFILL

DEF.:

A sanitary landfill is traditionally defined as an engineered method of disposing of solid wastes on land in a manner that protects the environment, by spreading the waste in thin layers, compacting it to the smallest practical volume, and covering it with soil by the end of each working day. [Robinson, 1986]

DEF.:

A sanitary landfill can be described as engineered burial of solid wastes that are subsequently degraded by soil microorganisms. [Robinson, 1986]

DEF.:

Landfill is to be the last step in an integrated waste management policy and not a primary means of waste disposal. Thus, in the future, the landfill will find itself at the very end of the waste management chain, the last step, but nonetheless a very crucial step. [The ISWA Yearbook, 1994/95]

CON.:

In practice, today`s landfills produce leachates and gas fluxes to water and air. Furthermore, they require an additional material and energy flux for their operation, e.g. for leachate purification and landfill gas treatment. [Baccini und Brunner, 1991]

CON.:

Modern landfills are constructed to be stable, to entomb our wastes, and to minimize leachate and biogas generation and thus impacts from these sources. The entry of air and water is limited. As a result, biodegradation of organic waste is not an effective nor rapid process in modern landfills; favourable conditions for biodegradation do not exist. [Casu und Marino, 1990]

VERTEDERO

DEF.:

Un vertedero con calidad sanitaria puede definirse tradicionalmente como una obra ingenieril de vertido de residuos sólidos en tierra , de forma que se proteja el medio ambiente ,mediante la extensión de la basura en finas capas ,la compactación de estas en el menor volumen posible y cubriéndolas con suelo cuando termine el dia de trabajo. [Robinson, 1986]

DEF.:

Un vetedero sanitario puede ser descrito como un enterramiento ingenieril de residuos sólidos que son subsecuencialmente degradados por los microorganismos del suelo. [Robinson,1986]



DEF.:

Un vertedero es el último paso de una política de administración integrada y no un medio primario de vertido de residuos. Además, en el futuro los vertederos se encontrarán muy al final de la cadena de administración, el último paso pero sin embargo un paso crucial. [The ISWA Yearbook, 1994/95]



ECO-LABEL

DEF.:

The eco-labelling scheme, ratified by the European Union (EU) in 1991, confers a stamp of approval on products that meet a series of environmental criteria. Companies awarded an eco-label can display the official logo - 12 stars encircling the letter "E" on a green stem - on their products. [Kozloff, K.L., ES&T - Vol. 28, N. 4, 94, p. 197 A]

DEF.:

Ecolabeling, or Green Labeling, is the advertising of a product's environmental benefits on the product or its package. [Eblen, 1994]

CON.:

The first eco-label was awarded in November 1993 for a group of washing machines. Deciding suitable criteria in this case proved relatively straightforward. But agreement on the award criteria for detergents is proving more difficult. The German federal environment agency, which was asked to draw up the criteria for the EU's detergent eco-label, has proposed an assessment based on the impact of detergents in wastewater. Points will be awarded covering factors such as biological oxygen demand, total chemical content, and nonbiodegradable content per wash. [Kozloff, K.L., ES&T - Vol. 28, N. 4, 94, p. 197 A]

ETIQUETA ECOLOGICA

DEF.:

El esquema de eco-etiquetado, ratificado por la Unión Europea (EU) en 1991, concede un sello de aprobación a productos que tienen una serie de criterios ambientales. Las compañías premiadas pueden disponer del logotipo oficial- 12 estrellas rodeando la letra "E" con un tallo verde- en sus productos. [Kozloff, K.L., ES&T- Vol. 28, N. 4, 94, p. 197 A]

DEF.:

El eco-etiquetado, o la Etiqueta Verde, advierte de un producto beneficioso para el medio ambiente en el producto o su embalaje. [Eblen, 1994]



EDUCT

DEF.:

Educts are input goods. [Baccini und Brunner, 1991]

DEF.:

Goods or materials that flow into a process. [++Eigenvorschlag]

CON.:

Despite the good yield efficiency of the composting process (96% of P and 75% of N in the educt "household waste" are transferred to the product compost; Obrist, 1987), this material contains only about 1% of the N and P used as input into agriculture. [Baccini und Brunner, 1991]

EDUCT

DEF.:

Educt son entradas de productos. [Baccini und Brunner, 1991]

DEF.:

Productos o materiales que se fluyen dentro de un proceso. [++Eigenvorschlag]



EMISSION

DEF.:

The release of matter, energy and information (e.g. noise, vibration, radiation, heat) into the environment from a source. [Energy Terminology, 1986]

CON.:

Western industrialized countries have accomplished a great deal in curbing process-related emissions and improving waste disposal/treatment on a per unit output basis during the past 20 years. Even so, actual overall emissions, effluents, and waste generation are still increasing. [Pillmann, 1992]

EMISION

DEF.:

La liberación de materia, energía, e información (ejm. ruidos, vibraciones, radiaciones, calor) desde una determinada fuente al medio ambiente. [Energy Terminology, 1986]



FINAL STORAGE

DEF.:

The term "final storage" (Baccini et al., 1989) denotes a system, where inert materials, which are not to be mobilized by natural processes even for long time periods, are confined by three barriers: the natural impermeable surroundings, an artificial barrier (such as a liner) which can be controlled and, most important, the inert material itself. The concept of final storage includes the possibility to mine the materials in the future if such materials are sufficiently "clean" (mono-landfills) and if it becomes economic to mine such ores. [Baccini und Brunner, 1991]

CON.:

The good which contains the largest fraction of lead is the residue from the car - shredder. This waste does not yet have "final storage" quality; when it is landfilled, long-term biogeochemical reactions occur, which may mobilize the lead and other materials contained in the landfill. (...) One technical option for producing a residue with "final storage" quality would be incineration, followed by immobilization of the incineration residues. (...). [Brunner et al., 1992]

ALMACENAJE FINAL

DEF.:

El término "almacenaje final" (Baccini et al., 1986) denota un sistema, donde la materia inerte, que no será movilizada por procesos naturales incluso durante largos periodos de tiempo, está confinada por tres barreras: el contorno impermeable natural, una barrera artificial que puede ser controlada y, la mas importante, la propia materia inerte. El concepto de almacenaje final incluye la posibilidad de extraer los materiales en el futuro si estan lo suficientemente limpios (mono-rellenos) y si pueden ser rentables para extraer como menas. [Baccini und Brunner, 1991]



FINAL STORAGE QUALITY

DEF.:

Waste can be regarded as having "final storage quality" if the flows of materials it emits when landfilled are environmentally compatible even in the long run. [Brunner, 1992]

DEF.:

A material has "final storage quality" if its interaction with the environment does not alter the existing concentrations in water, soil and air beyond a certain extent. [Brunner und Baccini 1991]

CON.:

For those wastes, which leave the man made system, it is therefore necessary that their disposal yields sustainable fluxes only (c.f. waste treatment residues with "final storage quality"[Baccini, 1988]). [Brunner et al., 1992]

CALIDAD DE ALMACENAJE

DEF.:

Se puede considerar que un residuo tiene "calidad de almacenaje final" si el flujo de materiales que se emite una vez sellado es compatible con el medio ambiente incluso a largo plazo. [Brunner, 1992]

DEF.:

Un material tiene calidad para el almacenaje final si su interacción con el medio ambiente no altera la concentración existente en el agua, suelo y aire, más allá de un cierto grado. [Brunner und Baccini, 1991]



END-OF-PIPE

DEF.:

The total number of measures which are designed to minimize emissions and waste and which are implemented at the end of the chain production-consumption (e.g. sewage treatment).

[++Eigenvorschlag]

CON.:

It must be pointed out that pollutants (e.g. fly ash) removed from waste streams by "end-of-pipe" technologies, like Cottrell precipitators, are usually disposed of in landfills. [Ayres und Ayres, 1994]

END-OF-PIPE

DEF.:

Medidas que se diseñan para minimizar las emisiones y residuos, y que se llevan a cabo al final de la cadena producción-consumición (ejm. tratamiento de aguas residuales).

[++Eigenvorschlag]



ENERGY CONSUMPTION

DEF.:

The utilization of energy for conversion to secondary energy or for the production of useful energy. It should be stated whether the energy consumed is primary energy, secondary energy, energy supplied or useful energy. [Energy Terminology, 1986]

CON.:

There is clear evidence that substantial energy taxes lead to a substantially smaller energy consumption per unit of GNP than in countries where such taxes are lacking. (...) In the US the energy consumption per ECU of national income is about twice as high as in Japan and Western Europe. (...) Thus, in Western Europe and Japan, energy depletion and CO₂ emissions from energy use, per ECU of GNP, are half that of the US and about a quarter of that of the former Soviet Union. [Huppel, 1993]

CON.:

Energy consumption in general is accompanied by more or less serious environmental effects, and energy-intensive industries in particular pose environmental threats. Energy consumption thus is probably "the" central ecological dimension of the production pattern of a country. [Simonis, 1994]

ENERGIA DE CONSUMO

DEF.:

La utilización de energía para convertir a energía secundaria o para la producción de energía útil. Esta debe indicar si la energía consumida es primaria, secundaria, de abastecimiento o energía útil. [Energy Terminology, 1986]



TO NOURISH

DEF.:

This comprises all processes and goods to produce solid and liquid food for man. To nourish includes agricultural production (e.g. the process "crop raising"; the good "fertilizer"), food production and distribution (e.g. the process "dairy"; the good "cheese"), consumption (the processes "eating and drinking"; the goods "bread", "apple", "wine"), and the release of wastes and digested residues to the environment (e.g. the process "composting"; the goods "compost", "feces"). [Baccini und Brunner, 1991]

CON.:

(...) This means that the activity "to nourish", i.e. the biological need for water, is globally the dominant factor for the anthropogenic water flux. [Baccini und Brunner, 1991]

ALIMENTACION

DEF.:

Comprende todo proceso y producto para producir comida sólida y líquida para el hombre. Incluye la producción agrícola (ejm. el proceso "poda" el producto "fertilizante"), la producción y distribución de comida (ejm. los procesos "lácteos", el producto "queso"),consumición (los procesos "comer y beber "; los productos "pan", "manzana", "vino"), y la liberación de los deshechos y residuos de la digestión al medio ambiente(el proceso "compostaje"; los productos "compost", "heces"). [Baccini und Brunner, 1991]



EUTROPHICATION

DEF.:

Proliferation of phosphorous, nitrogen and organic matter in a body of water, causing the multiplication of vegetable matter which, by decomposition, decreases the oxygen content required for animal life. [+Energy Terminology, 1986]

CON.:

The growth of phosphate-free detergents is widely regarded as a victory for green consumerism. In Germany, thanks to sustained environmental and product-marketing campaigns, the market for phosphate-based detergents had virtually vanished by 1987. The well-rehearsed case against phosphorus is that in rivers it acts as a nutrient that causes eutrophication; blue-green algae prosper at the expense of other species. [Kozloff, K.L., ES&T - Vol. 28, N. 4, 94, p. 197 A]

EUTROPIZACION

DEF.:

Proliferación de fósforo, nitrógeno y materia orgánica en un cuerpo de agua, causando la multiplicación de materia vegetal, la cual al descomponerse, hace que descendan los niveles de oxígeno requeridos para la vida animal. [+Energy Terminology, 1986]



EARLY RECOGNITION

DEF.:

Awareness of potentially advantageous and/or disadvantageous future burdens on and changes in the global resource potentials. [++Eigenvorschlag]

CON.:

However, it is possible to give "if-then" answers for a given system with respect to physically and chemically defined processes and goods. Therefore, it is a useful instrument to prevent damage to man and the biosphere by early recognition. [Baccini und Brunner, 1991]

RECONOCIMIENTO ANTICIPADO

DEF.:

Reconocer el potencial de los recursos globales, aprovechándolos o no, con vista a futuras responsabilidades y cambios. [++Eigenvorschlag]



GOOD

DEF.:

A good consists of one or many materials, such as a pipe made of lead, or gasoline containing benzene. A good has a negative or positive economic value. In the economic sense, goods can also be energy, information, or services. [Brunner et al., 1992]

CON.:

The law of conservation of mass and energy (the "first law" of thermodynamics) gives rise to the materials balance principle. One implication of this principle is that materials extracted from the natural environment for the production of goods and services must eventually be returned to the environment in degraded form. [Ayres et al., 1994]

CON.:

The huge increase in the consumption of goods has several implications: on the one hand, it causes a quantitative problem, since the large mass of used goods has to be recycled or disposed of as waste, and thus financial and natural resources (land, water, air for dissipation) are required for its management. [Ayres et al., 1994]

PRODUCTO

DEF.:

Un producto está formado por uno o más materiales, por ejemplo una tubería hecha de plomo, o la gasolina que contiene benceno. Un producto tiene un valor económico positivo o negativo. En el sentido económico, un producto puede ser también la energía, la información, o los servicios. [Brunner et al., 1992]



MATERIAL FLUX

DEF.:

Material fluxes are measured in mass per time and area. The "area" can be an entire region, a household, or a person; hence the flux unit may be in kg/capita and year.

[Brunner et al., 1992]

CON.:

Today, in densely populated areas, the fluxes of many anthropogenic materials surpass natural material fluxes. [Brunner et al., 1992]

CON.:

Each flux has a "process of origin" and a "process of destination" and thus is precisely defined. Equally, each process is linked with other processes by means of fluxes. [Brunner et al., 1992]

“CAUDAL ”DE MATERIA

DEF.:

Medidas de masa por tiempo y área. El área puede ser una región entera, una casa, o una persona. Partiendo de esto la unidad de caudal puede ser en kg/ persona y año.

Nota: el término “flux” tiene su equivalente en español con la palabra caudal aunque esta se utiliza habitualmente para fluidos, por lo tanto, los términos “flux” y “flow” se traducirán indistintamente como flujo.



IMMISSION

DEF.:

A German term for which there is no simple English equivalent. In the Federal Republic of Germany, "Immissionen" were legally defined as "air pollutants, noise, vibrations, light, heat, radiation, analogous environmental factors affecting human beings, animals, plants or other objects. They are to be distinguished from emissions ("Emissionen"), which are defined as "air pollutants, noise, vibrations, light, heat, radiation and analogous phenomena originating from an installation." [Skitt, 1992]

IMMISION

DEF.:

Término alemán para el cual no existe una traducción simple. En la República Federal Alemana las "Inmisionen" estaban legalmente definidas como "polución ruido vibraciones luz, calor, radiaciones, y factores ambientales afines que afectan a seres humanos, animales plantas u otros objetos". Hay que distinguirlos de "emisiones" ("Emissionen") que se definen como "polución, ruido, vibraciones, luz, calor, radiaciones y fenómenos afines originados por una instalación". [Skitt, 1992]



SEWAGE TREATMENT PLANT

DEF.:

Plant designed to purify municipal, commercial and/or industrial sewage by means of mechanical, biological and/or chemical-physical treatment. [++Eigenvorschlag]

CON.:

From a quantitative point of view the waste fluxes from the consumer are the most important ones, namely, sewage sludge (taken as fresh sludge, leaving the sewage treatment plant for land application or further treatment, e.g. digesting, composting, incineration, landfill and municipal solid waste. [Baccini und Brunner, 1991]

CON.:

In sewage treatment plants with primary and secondary treatment, typically 50 per cent or more of input, heavy metals are trapped in sewage sludges. [Stigliani und Anderberg, 1994]

ESTACION DEPURADORA DE AGUAS RESIDUALES (E.D.A.R.)

Planta diseñada para purificar el agua residual municipal, comercial y/o industrial mediante métodos de tratamiento mecánicos, biológicos y/o físico-químicos. [++Eigenvorschlag]



SEWAGE SLUDGE

DEF.:

Sewage sludge is any liquid, semisolid, or solid waste generated from a municipal, commercial, or industrial sewage treatment plant. [++Eigenvorschlag]

DEF.:

Treated or untreated sludge from municipal sewage treatment plants. [++Eigenvorschlag]

CON.:

Sewage sludges exhibit wide variations in their physical, chemical and biological properties according to their origin, type, previous treatment and period of storage. Other, less definable, factors may also influence sludge characteristics and can make their behaviour rather unpredictable. [Dirkzwager und L'Hermite, 1988]

CON.:

The treatment and disposal of sewage sludge is an expensive and environmentally sensitive problem for the Community. At present, approximately 6 million tonnes dry solids (tds) of sludge are produced each year and it is likely that this figure will increase significantly in the future. [Dirkzwager und L'Hermite, 1988]

LODOS

DEF.:

Un lodo es un residuo líquido, semisólido o sólido generado por una E.D.A.R. municipal, comercial o industrial. [++Eigenvorschlag]

DEF.:

Lodos tratados o sin tratar procedentes de una estación depuradora de aguas residuales. [++Eigenvorschlag]



COMPOST

DEF.:

Compost is a humus-like soil conditioner with low levels of nutrients unless the compost is used as a carrier for chemical fertilizers. [Robinson, 1986]

CON.:

(...) The others want to make compost, using manure from their livestock operations, and chips and sawdust from a local pallet mill as a carbon source. They are planning to use the compost on their farms, and hope to sell some to people in town. [Bio-Cycle, Vol. 36, N.11, Nov., 1995, p.25]

COMPOST

DEF.:

Es la porción de suelo equivalente a la materia orgánica (humus), utilizado como acondicionante en suelos con bajo nivel de nutrientes o como portador en fertilizantes químicos. [Robinson,1986]



COMPOSTING

DEF.:

Composting is a natural process that breaks down organic waste compounds to a soil-like product, compost. [Casu und Marino, 1990]

DEF.:

Composting is a biochemical process that stabilizes the putrescible fraction of an organic material under controlled conditions. As with organic digestion, it is an ancient natural process that has for millions of years broken down leaves and other organic material into humus. [Robinson, 1986]

CON.:

Composting offers a way for society to reduce the amount of waste that must be landfilled while recycling organic waste materials and producing a useful product. Composting of diapers along with other wastes represents, therefore, one way that soiled diapers might be recycled and reused. [Casu und Marino, 1990]

CON.:

Before the advent of chemical fertilizers, farmers and gardeners sought and used biological wastes to manure their lands. The more enlightened ones composted the waste before application to land, as composting reduced the bulk, sanitized the wastes, conserved the nutrients to produce a humus-rich product that both conditioned soils and nourished plants. Also, unlike most chemical fertilizers, the plant nutrients in compost are not all water soluble and consequently not subject to loss through run off and leaching. Further, unlike raw wastes, composts do not have to be ploughed in immediately, and create no problems of vermins and nuisance insects, nor pose health hazards to man, crops or farm animals. Composts can therefore be spread with impunity on any ground that can be traversed. [Twelfth Canadian Waste Management Conference, 1990]

COMPOSTAJE

DEF.:

Es un proceso natural que descompone la materia orgánica de los deshechos en productos afines al suelo. [Casu und Marino. 1990]

DEF.:

Proceso bioquímico que estabiliza la porción capaz de descomponerse de la materia orgánica bajo condiciones controladas. Como la digestión orgánica, es un proceso natural antiguo que ha descompuesto durante millones de años las hojas y demás materia orgánica en humus. [Robinson, 1986]



STOCK

DEF.:

A stock is produced by the accumulation of the material under investigation in the respective process. [++Eigenvorschlag]

CON.:

If the input into the anthroposphere is larger than the output inevitably the stock in the anthroposphere will grow. [Brunner et al., 1992]

CON.:

The landfill of the non-metallic shredder residue is the largest sink for lead in the region. It can be assumed that after a decade of landfilling this stock is the most important regional reservoir of lead. Therefore, the careful management of this stock is or will become extremely important. [Ayres et al., 1994]

STOCK (existencias)

DEF.:

Un stock se produce por la acumulación del material bajo investigación en el proceso respectivo. [++Eigenvorschlag]



STORAGE

DEF.:

The turnover of materials in the process "storage" can be very large. It cannot be assumed a priori that no transformation of materials takes place during storage. To support storage, energy (cooling, heating, maintenance) and materials (construction, emission control) are required. [Baccini und Brunner, 1991]

CON.:

One of the most important storage processes at the interface anthroposphere/environment is sanitary landfilling. [Baccini und Brunner, 1991]

ALMACENAJE

DEF.:

La fracturación de materiales en los procesos de "almacenaje" puede ser muy grande. No se asume a priori que la no transformación de materiales tiene lugar durante el almacenaje. Para el mantenimiento se requiere energía (aire acondicionado, calefacción, mantenimiento) y materiales (construcción, control de emisiones). [Baccini und Brunner, 1991]



SUSTAINABLE DEVELOPMENT

DEF.:

Sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. [1987:46, Brundtland Report]

CON.:

The World Commission on Environment and Development, in its report (the Brundtland Report), considered sustainable development to be a process of change that meets the needs of the present without compromising the ability of future generations to meet their own needs. (...) Ekins (1992) analyses sustainable development by looking at sustainability and development and their interaction. On sustainability he says that in order for economic activity...to be environmentally sustainable, certain conditions need to be adhered to concerning the use of renewable and non-renewable resources, the emission of wastes and associated environmental impacts. These conditions can be defined. The first principle of sustainable development is that these conditions have absolute priority over GNP growth. [Trindade, 1994]

DESARROLLO SOSTENIBLE

DEF.:

El desarrollo sostenible es un proceso en el que la explotación de recursos, la dirección de investigación, la orientación del desarrollo tecnológico e instituciones están todos en armonía y mejorando los potenciales actuales y futuros para satisfacer las necesidades y aspiraciones humanas. [1987:46, Brundtland Report]



ECOBALANCE

DEF.:

Ecobalances analyse the productline of a product (extraction and treatment of resources, production, distribution and transport, use, consumption and disposal), they analyse the effects on the environment and the ecological burden which results. [++Eigenvorschlag]

CON.:

Experience with the introduction of eco-balances shows that the basis of information about the ecological consequences of all the activities of a company thus obtained provides a substantial contribution to a preventive ecological policy. [+Van Weenen, 1990]

ECOBALANCE

DEF.:

Los ecobalances analizan las líneas de producción de un producto (extracción y tratamientos de recursos, producción, distribución y transporte, usos, consumición y vertidos), sus efectos sobre el medio ambiente, y las responsabilidades ecológicas resultantes. [++Eigenvorschlag]



ECODESIGN

DEF.:

Products and production processes are designed in such a way that the legitimate amount of substances released to the environment does not have a negative effect on the environment.

[++Eigenvorschlag]

CON.:

Methods are needed for the general area "control of material flow in regions", in particular for topics such as eco-design, eco-auditing, environmental impact statement, waste management design and concepts. [MM - ARS, 1994]

DISEÑO ECOLOGICO

DEF.:

Los productos y procesos de producción se diseñan de forma que el equivalente admisible de sustancias liberadas al medio ambiente no tenga efectos negativos sobre él.

[++Eigenvorschlag]



ECOSYSTEM

DEF.:

An ecosystem is a biotic assemblage of plants, animals, and microbes, taken together with their physico-chemical environment. [Husar, 1994]

DEF.:

The combined effect of a living community and the physico-chemical environment in which it lives (e.g. a forest, lake, cultivated field, etc.). All the ecosystems of the earth overlap to form the biosphere. [Energy Terminology, 1986]

CON.:

On the basis of more and new data, it was emphasized that the impact of the residual material fluxes from the anthroposphere back to the air, the aquatic and terrestrial ecosystems, can or could have a fatal effect on man much earlier than it was thought at first. (...) This means that even highly organized ecosystems with sophisticated self-regulating properties have a limited lifetime, due to a limited biological, chemical or physical capacity to adapt to changes in their environment and alter their biotic and abiotic environment. This is about all we can predict about ecosystems. (...) [Baccini und Brunner, 1991]

CON.:

Purposive interventions in natural ecosystems are historically the oldest form of modification of the environment for economic purposes. [Fischer-Kowalski et al., 1994]

ECOSISTEMA

DEF.:

Un ecosistema es un ensamblaje biótico de plantas, animales, y microbios que conviven en su ambiente fisico-químico. [Husar, 1994]

DEF.:

El efecto combinado de una comunidad viva y el ambiente físico-químico en el que viven (por ejemplo un bosque, un lago, campos de cultivo, etc.). Todos los ecosistemas de la tierra se solapan para formar la biosfera. [Energy Terminology, 1986]



OZONE DEPLETION POTENTIAL (ODP)

DEF.:

Ozone depletion potential (ODP) is defined as the ration of the calculated ozone column change per mass of a given compound released to the column change for the same mass of CFC-11. [Wallington et al., ES&T - Vol. 28, N. 7, 94, S. 323A]

CON.:

HFCs do not contain any chlorine and so have no ozone depletion potential associated with the well-established chlorine-based catalytic ozone destruction cycles. Recently, there has been speculation regarding the possibility of an impact of HFCs on stratospheric ozone by virtue of their degradation into CF₃Ox, FCOx, and FOx radicals that could participate in catalytic ozone destruction cycles. However, experimental studies have shown that no such cycles are viable. The ODPs of HFCs are essentially zero ($< 10^{-3}$). [Wallington et al., ES&T, Vol. 28, N. 7, 94, p. 323 A, 324 A]

REDUCCION POTENCIAL DE OZONO

DEF.:

Ratio entre el cálculo de la columna de ozono cambiado por la masa de un compuesto dado liberado a esa columna por la misma masa de CFC-11. [Wallington et al., ES&T-Vol. 28, N. 7, 94, S. 323A]



PRIMARY ENERGY

DEF.:

Energy that has not been subjected to any conversion or transformation process. [Energy Terminology, 1986]

CON.:

The region's share of the world's population is plotted on the x-axis. The area of each rectangle in this graph is proportional to the share of the economic region's energy consumption. It shows that about half of the world's population consumes about 90% of the total primary energy per year. [Baccini und Brunner, 1991]

ENERGIA PRIMARIA

DEF.:

Energía que no ha estado sujeta a ningún proceso de conversión o de transformación. [Energy Terminology. 1986]



PRIVATE HOUSEHOLD

DEF.:

This process stands for the many processes which take place in a private home in relation to the activities "to breathe", "to nourish", (e.g. shopping, preparation and consumption of food), "to reside" (construction and maintenance of buildings, heating, purchase and maintenance of furniture, carpets, curtains), "to clean" (laundry, dishwasher, toilet, shower, car wash, cleaning) and "to communicate" (transport of persons, goods, energy, and information). Included are processes (and goods) which serve exclusively the private household but which take place outside of it, such as the use of a motor vehicle for shopping, the use of a sewerage system to collect sewage from households, or part of the telecommunication network for TV and phone. The process "private household" comprises all households in a region. [Brunner et al., 1992]

CON.:

Private households also have a productive function, in industrialized countries mostly a limited one. Consumption, the other main economic activity, however, is generally quite diffuse in households, and in some private and public organizations. In their capacity as producers and consumers, households belong to the economy of society, even if not functionally differentiated and specialized. [Huppel, 1993]

VIVIENDAS PRIVADAS

DEF.:

Este proceso representa a muchos procesos que tienen lugar en una vivienda en relación a actividades como la "respiración", "alimentación" (ejm. compras, preparación y consumición de comida), "residencia" (construcción y mantenimiento de edificios, calefacciones, adquisición y mantenimiento de muebles, alfombras, cortinas), "limpieza" (ropa, platos, baño, ducha, lavado de coches, limpieza) y "comunicaciones" (transporte de personas, productos, energía e información). Se incluyen procesos (y productos) que sirven exclusivamente al ámbito doméstico pero que tienen lugar fuera de él, como es el uso de vehículos de motor para comprar, el uso del sistema de recogida de aguas residuales, o parte de la red de telecomunicaciones para televisión y teléfono. Los procesos de "vivienda privada" comprenden todas las viviendas de una región. [Brunner et al., 1992]



PRODUCTION

DEF.:

Production means the transformation of raw material into products through the use of utilities, energy, know-how, capital and manpower. It is absolutely impossible to avoid the occurrence of byproducts and wastes. [Pillmann, 1992]

CON.:

Economic institutions specialize in the procurement of goods and services, i.e. production, the first main economic activity. [Huppel, 1993]

CON.:

Industry has traditionally focused on production rather than waste management. Over time this has led to the creation of chemicals and products for which no environmentally sound method of disposal exists. Large-scale production has led in turn to significant waste disposal problems. [Socolow et al., 1994]

PRODUCCION

DEF.:

Producción es la transformación de la materia prima en productos a partir del uso de servicios, energía, destreza, capital y mano de obra. Es absolutamente imposible impedir la aparición de subproductos y desechos. [Brunner et al., 1992]



PROCESS

DEF.:

A process is defined as a transport, transformation, or storage of goods, materials, energy, and information. A transport often involves a change in the value of a good. There are processes possible on all levels: a car engine may be looked at as a process, in the same way as a private household, a waste incinerator, a branch of regional economy, or an entire region. [Brunner et al., 1992]

CON.:

The processes of thinking, learning, discussing, promising and deciding do not have any direct material effect, and therefore no direct effect on the environment either. They are symbolic in the sense that they manipulate symbols. They may function only to the extent that others recognize the meaning of these symbolic actions properly. Other processes, such as the production of food and materials, the use of energy, and the dumping of wastes, are material ones. Such material processes encompass a-biotic, chemo-physical processes and biological processes, such as fermentation, digestion, respiration, etc.. In human communities the symbolic processes determine or regulate the material ones, within the boundaries of course of what is possible in the material world. [Huppel, 1993]

PROCESO

DEF.:

Un proceso se define como un transporte, transformación o depósito de productos materiales, energía e información. Un transporte a menudo implica un cambio en el valor del producto. Hay procesos posibles a todos los niveles: un motor de un coche se puede ver como un proceso, de igual manera una vivienda privada, un incinerador de residuos, una sección de la economía regional, o una región completa. [Pillmann, 1992]



SOURCE

DEF.:

Origin of materials. [++Eigenvorschlag]

CON.:

Reduction activities aim at minimizing the generation of wastes at the source by substituting products which are less wasteful, by redesigning packaging and products, and utilizing processes which are less wasteful. [Twelfth Canadian Waste Management Conference, 1990]

FUENTE

DEF.:

Origen de los materiales. [++Eigenvorschlag]



RECYCLING

DEF.:

Recycling refers to the use or reuse of a waste as an effective substitute ingredient or feedstock in an industrial process. It also refers to the reclamation of useful constituent fractions within a waste material or removal of contaminants from a waste to allow it to be reused. [Van Weenen, 1990]

CON.:

At first glance, the thought of Kodak's single-use camera being environmentally benign seems contradictory. But the single-use camera has been designed for reuse and recycling, and over 85% of each camera can be reused or recycled. [Socolow et al., 1994]

CON.:

Collecting, transporting, and sorting material to be recycled can use so much energy and effort that recycling damages the economy and environment.

(...) Use of virgin materials and energy, environmental leadings, safety, reliability, and cost are all relevant in evaluating a recycling program. Society desires high-value recycling but only when the energy, environmental, and labor costs make these solutions attractive. [Lave et al., ES&T - Vol. 28, N. 1, 94, p. 20 A]

CON.:

Recycling is a dirty, unromantic business. Companies that operate municipal recycling facilities and automobile shredders try to cover their costs; they don't see themselves as environmental idealists. Instead, they try to figure out how to make a profit from the consumer waste that is their raw material. [Lave et al., ES&T - Vol. 28, N. 1, 94, p. 22 A]

RECICLAJE

DEF.:

Reciclaje es la utilización o reutilización de un deshecho como un sustituto eficaz de un componente o como combustible en un proceso industrial. Se refiere también a la reclamación de los constituyentes útiles de un material de deshecho o a la separación de los contaminantes de un residuo para permitir a este ser reutilizado. [Van Weenen, 1990]



REGION

DEF.:

A region is a more or less autonomous network of ecosystems and anthropospheres. Its area can vary from tens to thousands of squarekilometers, its population density from tens to thousands of inhabitants per squarekilometer. [Baccini und Brunner, 1991]

CON.:

The region is an open, three-dimensional system where man determines essentially the main sources, pathways, storages and sinks. [Baccini und Brunner, 1991]

CON.:

A region may be defined as a complex combination of processes. [Baccini und Brunner, 1991]

CON.:

For each region the phosphorus load from different sources (e.g. agriculture, detergents, human feces) has to be limited to reduce the resulting residual flux to a tolerable level (Bundesamt für Umweltschutz, 1983). [Baccini und Brunner, 1991]

REGION

DEF.:

Una región es mas o menos una red autónoma de ecosistemas y antroposferas. Este área puede variar desde diez hasta mil kilómetros cuadrados, y su densidad de población de diez a mil habitantes por kilómetro cuadrado. [Baccini und Brunner, 1991]



TO CLEAN

DEF.:

The activity "to clean" can be defined as the separation of goods: "unwanted" goods (dirt, grease, sewage, etc.) are separated from "wanted" goods (shirt, metal, water, etc.). The motivation for this separation may be a hygienic, an aesthetic, an environmental or an economic reason. The activity "to clean" takes place at many levels. [Baccini und Brunner, 1991]

CON.:

The flux of P is mainly due to the two activities "to nourish" and "to clean". It was recognized several decades ago that P can be the limiting factor for the eutrophication of surface waters. In areas where eutrophication of lakes is a serious problem, the time-span between scientific recognition of its cause and preventive action was about two decades. Most actions concerned the replacement of phosphate-based detergents, i.e. processes and goods involved in the activity "to clean". [Brunner et al., 1992]

LIMPIAR

DEF.:

La actividad "limpiar" puede ser definida como la separación de productos: los productos "no deseados" (suciedad, grasa, aguas residuales, etc.) son separados para obtener productos "deseados" (camisas, metales, agua, etc.) La separación puede hacerse por motivos higiénicos, estéticos, medioambientales, o económicos. La actividad de "limpiar" tiene lugar a muchos niveles. [Baccini und Brunner, 1991]



RESOURCES

DEF.:

Generally spoken, resources are the total amount of the production factors labour, nature and capital, which are used in the production of goods. More specifically, resources are natural capital, raw materials, energy sources and environmental media, whereas a distinction can be made between renewable and non-renewable resources. [++Eigenvorschlag]

CON.:

(...) The conclusions of this study are as simple as convincing: assuming a continued growth of population, a collapse of the anthroposphere will take place within two generations, due to lack of resources (energy, food, water and minerals) and/or environmental pollution. [Baccini und Brunner, 1991]

RECURSOS

DEF.:

Generalmente hablando, los recursos son el equivalente total de factores laborales, naturales y económicos usados en la producción de bienes de consumo. Más específicamente, los recursos son el capital natural, la materia prima, las fuentes de energía y el medio ambiente. Se puede hacer una distinción entre recursos renovables y no renovables. [++Eigenvorschlag]



SINK

DEF.:

An environmental compartment where materials are accumulated and may be eliminated by decomposition processes. [++Eigenvorschlag]

CON.:

(...) Thus, soil and aqueous systems with long residence times (e.g. groundwater reservoirs and lakes) within the region can become main sinks for anthropogenic residual matter. [Baccini und Brunner, 1991]

CON.:

The landfill of the non-metallic shredder residue is the largest sink for lead in the region. It can be assumed that after a decade of landfilling this stock is the most important regional reservoir of lead. Therefore, the careful management of this stock is or will become extremely important. On the one hand, the lead in the landfill poses a threat to the hydrosphere, on the other hand, it may be an important resource for the future. [Brunner et al., 1992]

CONTENEDOR

DEF.:

Compartimento ambiental donde los materiales son acumulados y pueden eliminarse por procesos de descomposición. [++Eigenvorschlag]



MUNICIPAL SOLID WASTE (MSW)

DEF.:

Municipal Solid Waste (MSW) is operationally defined as wastes which are produced by private households (residual source), small trade, working places of the tertiary sector (commercial source), open areas, and which are collected by public authorities. [+Baccini und Brunner, 1991]

DEF.:

Municipal solid waste is defined by the US Environmental Protection Agency (EPA) as the wastes generated from residences, community establishments, institutions, and to a limited extent, industrial facilities. It is generated by everyone in the daily life - at home, at school, traveling and at work. The use of the term generally implies that the waste generation is not a one-time event but occurs regularly over a period of time. Thus, residential wastes are generated every day and industrial wastes are generated every working day. [Eblen, 1994]

CON.:

The United States generates approximately 450,000 tons per day of MSW. This amounts to an average of 1 ton per person per year. Although composition varies from city to city and also according to seasons, more than two-thirds of the MSW (on a weight basis) is comprised of organic or combustible materials (i.e., paper, wood, food, yard clippings). The remaining one-third is primarily metals, glass, and dirt. Approximately 90% of the MSW is disposed of by land burial. [Dirkzwager und L'Hermitte, 1988]

DESHECHOS SOLIDOS MUNICIPALES

DEF.:

Los desechos sólidos municipales se definen como aquellos producidos en el área doméstica (superficie residual), pequeña empresa, lugares de trabajo del sector terciario (superficies comerciales), áreas abiertas, y que son recogidas por las autoridades públicas. [+Baccini und Brunner, 1991]

DEF.:

La Agencia de Protección Ambiental de US (EPA) define los desechos sólidos municipales como aquellos generados por barrios, establecimientos comunitarios, instituciones y, si ampliamos, los facilitados por la industria. Se genera por cada uno en la vida diaria-en casa, en la escuela, viajando y en el trabajo. El uso del término implica generalmente que la generación de desechos no es un antiguo evento sino que ocurre generalmente en un periodo de tiempo. Además, los desechos domésticos son generados cada día y los industriales todos los días de trabajo. [Eblen, 1994]



HAZARDOUS WASTE

DEF.:

According to the Resource Conservation and Recovery Act (RCRA), a waste is defined as hazardous if it exhibits properties of ignitability, corrosivity, reactivity, or toxicity.

Additionally, a waste or waste stream is considered hazardous if it has been specifically listed in the federal regulations or is a mixture of a listed hazardous waste and nonhazardous waste.

In general, Congress has defined hazardous wastes as those discarded materials which may threaten human health or the environment when improperly disposed.

Hazardous wastes may be in any of the following forms:

solids, liquids, sludges, or contained gases. These wastes are generated by a variety of sources, including industry, the military, hospitals, research institutions, schools, businesses, and households. [Dirkzwager und L`Hermitte, 1988]

DEF.:

Waste that requires special precaution in its storage, collection, transportation, treatment of disposal to prevent damage to persons or property. There are no universally accepted definitions for the term hazardous waste, and each country defines the term with its own criteria. In a general sense, however, hazardous wastes include explosive, flammable, volatile, radioactive, toxic and pathological wastes. [Van Weenen, 1990]

CON.:

More often than before unused hazardous chemicals from households, schools, hospitals, small companies, etc. eventually find their way to treatment plants for hazardous waste. To get there they have to be collected, sorted, labelled and transported. All these phases have their safety problems. The knowledge and attitudes of persons involved in this chain vary greatly. Thus a general safety guide has to be simple and short, emphasizing only the most important aspects of a vast amount of safety topics. [Pillmann, 1992]

SYN.:

Toxic and dangerous waste



DESHECHOS PELIGROSOS

DEF.:

De acuerdo con la Resource Conservation and Recovery Act (RCRA), un residuo puede considerarse peligroso si este posee las propiedades de irritabilidad, corrosibilidad, reactividad o toxicidad. Adicionalmente, un residuo o escape de residuo es considerado como peligroso si ha sido listado específicamente en las regulaciones federales o es una mezcla de residuo peligroso listado y un residuo no peligroso. En general, El Congreso ha definido como residuos peligrosos como aquellos materiales desechables que pueden ser una amenaza para la salud o el medio ambiente cuando son vertidos incorrectamente. Los residuos peligrosos pueden aparecer en alguna de las siguientes formas: sólidos, líquidos en lodos, o contenidos en gases. Estos residuos son generados por una variedad de superficies, incluyendo industrias, ejército, hospitales, instituciones de investigación, escuelas, negocios y el área doméstica. [Dirkwager und L'Hermitte, 1988]

DEF.:

Residuos que requieren precaución especial en su almacenamiento, recogida, transporte o tratamiento de vertidos, para prevenir daños a personas o propiedades. No existe una definición universalmente aceptada para este término, y cada país lo hace según su criterio. Como norma general, los residuos peligrosos incluyen materiales explosivos, inflamables, volátiles radiactivos, tóxicos y residuos patológicos. [Van Weenen, 1990]



MATERIAL

DEF.:

The term „material“ is used as a generic term for both, goods and substances.

MATERIAL

DEF.:

El término „material“ se utiliza como genérico término para los dos, productos y sustancias.



SUBSTANCE

DEF.:

A substance is a chemical element (e.g. lead, carbon) or its compounds (lead chloride, benzene). [Brunner et al., 1992]

CON.:

(...) It is essential that the disposal of wastes that leave the man-made system should yield sustainable substance fluxes only. Hence, input, storage, and output of substances in the anthroposphere are interrelated and cannot be controlled separately. [Brunner et al., 1992]

SUSTANCIA

DEF.:

Una sustancia es un elemento químico (por ejemplo plomo, carbono) o sus compuestos (cloruro de plomo, benceno). [[Brunner et al., 1992]



MATERIAL BALANCE

DEF.:

A material balance includes the assessment of imports, exports, and internal fluxes of goods and materials in the anthroposphere and environment, and emphasizes the growth and/or depletion of natural and anthropogenic reservoirs. [Brunner et al., 1992]

CON.:

The materials-balance principle, a straightforward application of the first law of thermodynamics (widely used in the design of chemical engineering systems, for example), is a potentially valuable and underutilized tool for using economic data in environmental analysis. Frequently, a combination of input data (obtainable from economic statistics), together with technical process data available from engineering analysis, gives a more reliable estimate of waste residual outputs than direct measurements alone could be expected to do. [Ayres et al., 1994]

BALANCE MATERIAL

DEF.:

Un balance material incluye la valoración de importaciones, exportaciones y flujos internos de productos y materiales en la antroposfera y el medio ambiente, y enfatiza el crecimiento y/o la reducción de las reservas naturales y antropogénicas. [Brunner et al., 1992]



MATERIAL FLOW

DEF.:

Material flows are measured in mass per time units. [Brunner et al., 1992]

DEF.:

Amount of material transported per unit of time. [++Eigenvorschlag]

CON.:

For the time being, it is beyond the capacity of any research project to investigate the total material flow of a region; the number of goods and materials (elements and compounds, especially of organic carbon), as well as the number of processes, is far too large. [Brunner et al., 1992]

CON.:

In principle, the flow of every material can be characterized by three types of information:

1. the mass fluxes of the input goods
2. the material concentration of the input goods
3. the transfer function of this material in each process

[Baccini und Brunner, 1991]

FLUJO DE MATERIA

DEF.:

Medidas de masa por unidad de tiempo. [Brunner et al., 1992]

DEF.:

Equivalente de material transportado por unidad de tiempo. [++Eigenvorschlag]



MATERIAL FLOW ANALYSIS

DEF.:

Material flow analysis consists of the following steps: First, the system (company, branch, watershed, region, nation, etc.) is identified by selecting the system's boundaries in time and space, by defining the processes and goods and the interrelationship between the processes and goods, and by selecting the indicator materials. In the next step, the flows of goods and materials between the processes are determined by assessments, by measurements or by balancing processes. In order to investigate into the various means to control material flows with respect to resource optimization, static or dynamic modeling may be applied to different scenarios. As a result, the most important flows and stocks of materials, its changes with time and its means to manage them with respect to minimum environmental loading and optimum resource utilization are identified. [MM - ARS, 1994]

DEF.:

Substance flow analysis is a method to describe the processes, material flows, stock and its changes within a defined system on the basis of technical and scientific criteria.
[++Eigenvorschlag]

CON.:

The method of the material flux analysis is an indispensable instrument in the perception of the metabolism of the anthroposphere. [Baccini und Brunner, 1991]

SYN.:

Substance flow analysis, pathway analysis

ANALISIS DEL FLUJO DE MATERIA

DEF.:

El análisis de flujo de material consiste en los siguientes pasos: Primero, el sistema (compañía, sucursal, región, nación, etc.) se identifica mediante la selección de los sistemas ligados en espacio y tiempo, la definición de procesos y productos y su interrelación, y la selección de los materiales indicadores. En el siguiente paso se determinan los flujos de los productos y materiales por procesos de valoración, mediciones o por balances. Con el motivo de investigar varias formas de control de flujos con respecto a un recurso de optimización se pueden aplicar a los diferentes escenarios modelos estáticos o dinámicos. Como resultado se identifican los flujos mas importantes, las existencias, sus cambios con el tiempo y las medidas de administración con respecto a una mínima carga ambiental y a una óptima utilización de los recursos. [MM-ARS, 1994]

DEF.:

El análisis de flujos de sustancias es un método para describir los procesos, flujos de materiales, las existencias y sus cambios, con un sistema definido en base a un criterio científico. [++Eigenvorschlag]



MATERIAL MANAGEMENT

DEF.:

The analysis and control of material flows and stocks in order to utilize efficiently natural and manmade resources. [++Eigenvorschlag]

CON.:

In order fully to exploit the potential of material management for efficient resource conservation and environmental protection, it is essential to identify the key processes within a region and to establish their annual material balance. [Brunner et al., 1992]

CON.:

However, given a defined set of processes and goods, called a material management system, it is possible to quantify and qualify the resulting material fluxes. [Baccini und Brunner, 1991]

CON.:

In urban areas, the key processes for material fluxes are private households. They are characterized by a large turnover and a growing stock of materials. Hence, the management of wastes from households is an important part of regional material management. [Brunner et al., 1992]

GESTION DE MATERIALES

DEF.:

El análisis y el control del flujo de material y abastecimiento para utilizar eficientemente los recursos naturales y artificiales. [++Eigenvorschlag]



TOXICOLOGY

DEF.:

deals with the negative effects of natural and anthropogenic substances on living organisms. [++Eigenvorschlag]

CON.:

Toxicology of Beryllium: The practical importance of acute and chronic beryllium induced diseases in occupationally exposed persons and for the general public has decreased during the last three decades due to improved industrial hygiene standards. [Gmelin, 1986]

TOXICOLOGIA

DEF.:

trata de los efectos negativos que producen algunas sustancias naturales y antropogénicas en los seres vivos. [++Eigenvorschlag]



TRANSFORMATION

DEF.:

Through transformation, goods are changed into new products of new qualities and usually new chemical compositions. [Baccini und Brunner, 1991]

CON.:

(...) First, as noted above, most materials "pass through" the economic system rather quickly. That is to say, the transformation from raw material to waste residual takes only a few months to a few years in most cases. [Ayres et al., 1994]

CON.:

An important problem of long-term storage (more than 100 years) is the slow transformation by microorganisms and/or geological processes which cannot be followed by experiments or analyses. [Baccini und Brunner, 1991]

CON.:

Materials used by industrial societies undergo numerous transformations in the time between their extraction from the earth as raw materials and their deposition back to the environment as wastes. [Socolow et al., 1994]

TRANSFORMACION

DEF.:

A través de la transformación, los productos cambian a nuevos productos con nuevas cualidades y generalmente nuevas composiciones químicas. [Baccini und Brunner, 1991]



TRANSPORTATION

DEF.:

The process "transportation" changes the location of a good without changing its physical and chemical properties. [++Eigenvorschlag]

CON.:

The potential for problems are numerous, ranging from groundwater contamination through leaching to accidents during transportation and direct contact with hazardous materials. [Dirkzwager und L'Hermite, 1988]

TRANSPORTE

DEF.:

El proceso de transporte cambia la localización de un producto sin cambiar sus propiedades físicas y químicas. [++Eigenvorschlag]



GLOBAL WARMING POTENTIAL (GWP)

DEF.:

Halocarbon global warming potential (GWP) is defined as the ratio of the calculated warming at steady state for a fixed mass release of gas relative to that calculated for the release of the same mass of CFC-11. [Wallington et al., ES&T - Vol. 28, N. 7, 94, p. 324 A]

CON.:

The global warming potentials of HFCs and HCFCs are less than those of CFCs but substantially greater than those of CO₂. For example, the HGWP of CFC-12 is 4,100 times greater than for CO₂, whereas HGWP of HFC-132a is only 350 times greater than for CO₂. [Wallington et al., ES&T - Vol. 28, N. 7, 94, p. 324 A]

POTENCIAL DEL CALENTAMIENTO GLOBAL (GLOBAL WARMING POTENTIAL; GWP)

DEF.:

El potencial de calentamiento global se define como la relación entre el calentamiento calculado a condiciones constantes para una masa fija de gas liberada y, la misma masa de CFC-11. [Wallington et al., ES&T - Vol. 28, N. 7, 94, p. 324 A]



ENVIRONMENTAL COMPARTMENT

DEF.:

Section of the environment, e.g. soil, water, air, biota (all living creatures).

[++Eigenvorschlag]

CON.:

The environmental compartments serve not only as sources of energy and matter for the anthroposphere, but are also short- (hours to years) or long-term (hundreds and thousands of years) sinks for its residual fluxes. [Baccini und Brunner, 1991]

COMPARTIMENTO AMBIENTAL

DEF.:

Sección del medio ambiente, e.j.m. suelo, agua, aire, biota (todas las criaturas vivas).

[++Eigenvorschlag]



ENVIRONMENTAL QUALITY STANDARDS

DEF.:

Environmental quality standards are those regulations that dictate acceptable levels of toxic substances in the environment. The standards are determined by assessing how much of the various pollutants can be discharged into the environment without adversely affecting the desired quality of the environment. [Eblen, 1994]

CON.:

By introducing quality standards for air, water and soil (environmental protection by emission control), each anthropogenic compartment is essentially forced to limit its emissions (environmental pollution control). [Baccini und Brunner, 1991]

CON.:

Threshold values for potentially hazardous elements in soils were fixed to maintain the fertility of soils to be used by man. These quality standards are based essentially on physical, chemical and a few biological properties of the environmental compartments. They have been derived from studies of processes in various ecosystems. [Baccini und Brunner, 1991]

CON.:

(...) The resulting "sewage" (or raw waste water) enters the sewage treatment plant which produces essentially three new goods, namely offgases, effluents and sludge. If they meet the quality standards they can be transferred directly into air, water and soil respectively, the latter step being partly a recycling procedure, and no further treatment is necessary. [Baccini und Brunner, 1991]

CRITERIOS DE CALIDAD MEDIO AMBIENTAL

DEF.:

Los criterios de calidad medio ambiental son aquellas regulaciones que dictan los niveles aceptables de sustancias tóxicas en el ambiente. Los patrones se determinan mediante valoraciones de cuantos de los contaminantes pueden ser liberados sin afectar negativamente la calidad del entorno. [Eblen, 1994]



URBANIZATION

DEF.:

Urbanization inevitably means the concentration of large numbers of people in a small area whose needs have to be supplied from outside: much of the water, food, timber and fuel has to be imported. [Herbert Girardet, 1992]

CON.:

Today, it appears that the urbanization of planet Earth is an irreversible process. The expression "let's go to town", known in most languages in analogous terms, has a manifold meaning. [Baccini und Brunner, 1991]

CON.:

Urbanization of the anthroposphere has produced a high density of energy and material fluxes, i.e. a high metabolic rate. [Baccini und Brunner, 1991]

URBANIZACION

DEF.:

Urbanización significa inevitablemente la concentración de un gran número de personas en un área pequeña cuyas necesidades tienen que ser suplidas desde fuera: agua, comida, madera y combustible tienen que ser importados. [Herbert Girardet, 1992]



COMBUSTION

DEF.:

An exothermic chemical reaction with oxygen. [+Energy Terminology, 1986]

CON.:

Combustion is an aerobic thermal chemical process that changes the chemical composition of MSW. [+Tillman et al., 1989]

CON.:

Combustion is a process where compounds of carbon, hydrogen, sulfur, and fuel-bound nitrogen are oxidized to carbon dioxide, water, sulfur dioxide, and various oxides of nitrogen: if chlorine is present in the fuel, hydrogen may be preferentially oxidized to hydrogen chloride. [+Tillman et al., 1989]

COMBUSTION

DEF.:

Reacción química exotérmica que se produce en presencia de oxígeno. [+Energy Terminology, 1986]



INCINERATION (OF REFUSE AND WASTE)

DEF.:

The controlled burning of solid, liquid, or gaseous combustion wastes to produce gases and solid residues containing little or no combustible material.

[Skitt, 1992]

DEF.:

The ignition and burning of solid, semi-solid, liquid or gaseous combustible waste matter in combustion equipment specially designed for this purpose.

Note: The main purpose of incineration is to reduce the bulk of the waste materials prior to disposal of the ash residue and to render toxic materials harmless; a further possibility is to utilise the heat of the combustion for steam generation and electricity production; the products of incineration may also be utilised in the road-making and construction materials. [Energy Terminology, 1986]

CON.:

Incineration, the thermal destruction of organics by combustion, or high temperature oxidation, is one of the many techniques used for the treatment of municipal solid wastes (MSW) and hazardous wastes. (...)

Incineration has several distinctive characteristics. For the most part, it dramatically reduces the volume of waste to be landfilled. Further, incineration chemically transfers MSW and hazardous wastes and, when combined with stabilization, can produce a material which is relatively benign in the landfill. Incineration is also among the most capital-intensive solutions to both MSW and hazardous waste disposal. (...)

Technically, however, incineration is simply the process of thermally oxidizing various wastes. [Tillman et al., 1989]

INCINERACION (DE DESPERDICIOS Y DESHECHOS)

DEF.:

La quema controlada de residuos combustibles sólidos, líquidos y gaseosos para producir gas y residuos sólidos con bajo o nulo contenido de materia combustible. [Skitt, 1992]

DEF.:

La ignición y quemado de residuos combustibles sólidos, semi-sólidos, líquidos o gaseosos tienen lugar en equipos de combustión especiales diseñados para este propósito.

Nota: La razón principal de la incineración es reducir el volumen de residuos antes de verter las cenizas y hacer inocuos los materiales tóxicos; una buena alternativa es utilizar el calor de la combustión para generar vapor y producir electricidad; los productos de la incineración pueden también ser utilizados en la construcción de carreteras y como material de construcción. [Energy Terminology, 1986]



POLLUTER PAYS PRINCIPLE

DEF.:

The principle that those causing environmental harm by producing or utilizing energy and goods shall bear the cost of its remedy, i.e. such cost shall become a component in the cost of the product. [+Energy Terminology, 1986]

CON.:

In 1985, OECD Member countries adopted the "Declaration on Environmental Resources for the Future", in which they undertake to seek to introduce more flexibility, efficiency and cost-effectiveness in their pollution control measures in particular through a consistent application of the Polluter-Pays Principle (PPP) and a more effective use of economic instruments in conjunction with the regulations. [OECD, 1989]

PRINCIPIO DE “QUIEN CONTAMINA PAGA”

DEF.:

Este principio se basa en que aquellos que causen un daño mediambiental por producir o utilizar energía y productos, deberán asumir el coste necesario para el remedio, por ejemplo cada coste formará parte en el precio del producto. [+Energy Terminology, 1986]



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