

International Treaty Standards in Waste Management

Stefan Eder

1.	Introduction.....	44
2.	Legal Framework.....	44
3.	Legal Management.....	45
4.	Contract types	46
4.1.	Service Contracts	46
4.2.	Management Contracts.....	46
4.3.	Lease Contracts	46
4.4.	Concessions	47
4.5.	Divestiture (Outright Sale)	47
5.	Project Phases.....	48
6.	Standards and Standards clauses.....	48
6.1.	Risk assessment and Risk matrix	48
6.2.	Contractual Standards.....	49
6.3.	Generally Used Provisions.....	49
6.4.	Tenure of contract/concession	49
6.5.	Termination	49
6.6.	Non-Recourse financing	50
6.6.1.	Contractor's /SPV's obligations	50
6.6.2.	Deferred capital expenditure.....	51
6.6.3.	Performance requirements	51
6.6.4.	Payment and other financial matters.....	51
6.6.5.	Consideration for Services.....	51
6.6.6.	Third Party Income.....	51
6.6.7.	Waste treatment and disposal.....	52
6.6.8.	Change in law	52
6.6.9.	Termination of contract	52
6.6.10.	Events of default and termination, compensation on termination	52
6.6.11.	Foreclosure by sponsors and Substitution Agreement.....	52
7.	Resources.....	53

1. Introduction

Public procurement in the waste sector represents a major economic activity for all governments. The public procurement framework in the CEE countries is based on Austrian/German laws and regulations. This framework was further developed by the adoption of the *acquis communautaire* during the accession process to the EU. Total EU funds at the disposal of CEE countries equalled EUR 218 billion in 2008, the majority of which comprised resources for structural development projects. The current economic difficulties and fiscal restraints put the reform of the public procurement legal frameworks in some CEE countries back on the agenda. The European Commission announced in the Single Market Act (s. COM(2011) 206/4) that it will, on the basis of wide consultations, make legislative proposals by end 2011, for a revised and modernised public procurement legislative framework so as to make the award of contracts more flexible and enable public contracts to be put to better use in support of other policies. The consultation was opened by the publication of the Green Paper on 27 January 2011.

Experience in procuring previous PPP projects within this sector in this region has highlighted certain sector specific issues which require addressing to improve the development and delivery of future projects. It is the purpose of my presentation to summarise treaty standards which are currently in use in more developed jurisdictions that could be implemented in the legislation or applied on projects currently in development or procurement.

However this only covers the procurement process not the issue of contractual standards. There is no single, European model of a PPP. The term has been in general use since the 1990s and covers a wide diversity of practices designed to let governments harness private sector skills and efficiency in providing public goods or services. The EU has published its Green Paper on *Public-Private Partnerships and Community Law on Public Contracts and Concessions* and tried to initiate such process in 2004. The EIB founded the *European PPP Expertise Centre* (EPEC) for helping public sector clients to share experience and expertise, analysis and good practice.

Nevertheless the UK is the only country in the EU which has developed contractual standards for PPP projects to date. HM Treasury published and maintains the *Standardisation of PFI Contracts* (SoPC). Whereby PFI stands for private finance initiative, which is a sub-form of PPP.

2. Legal Framework

The legal environment has not been adapted in a way that PPP projects could be implemented in a sufficiently efficient manner. The related regulation is highly complex and usually inherent significant litigation risks due to formal mistakes that happen because of the complicated process.

The public procurement framework regulates the interaction between public sector clients and the market; thus determining how governments' purchasing power is exercised and how much competition exists for public contracts. This framework has a direct bearing on the quality of goods and services provided under public contracts, as well as the value for money.

A key element is to balance the often competing considerations of competition, transparency and efficiency, and to do this in a manner which is adapted to local market conditions and the legal and business culture. Procurement best practice calls for removing elements

which reduce the efficiency and economy of the public procurement process. In the meantime, anti-corruption safeguards should still be considered a critical public procurement regulatory factor, particularly in countries where the local business culture lacks integrity.

The missing standards for underlying contracts quite often lead to difficult forms of contracts and different approaches to risk sharing. As a consequence the costs of the process are very significant and in particular for private sector partners who do not succeed in the bidding process such costs are prohibitive. This leads to a decline in competition as potential bidders pull out of the process often very early (in particular if they do not see a high chance to succeed).

Developing contractual standards will reduce the cost of private sector participants, spark competition, enable an efficient process and ultimately will be a key issue for success of public sector procurement of private sector services.

Despite the advantages of PPPs, they have not yet been generally accepted as an alternative platform for the implementation of projects on a large scale in the CEE countries. Therefore PPPs are so far being used for the development of public projects on a case-by-case basis but have no significant market share at this stage.

3. Legal Management

The structure of PPPs consists of contractual agreements between a number of different participants (e.g. financiers, government, engineers, contractors, operators, and customers) (s. Figure 1). The nature of the contractual (see section 4 *Contract types*) relationship, especially between the public sector client and the contractor, can also vary from case to case.

Ideally a project would be constructed on time and on budget, operating revenues and expenses would meet forecasted targets, and the quality of delivered services would meet everyone's expectations. However, unexpected events like insolvency, failure by parties to perform as expected or as contractually required, site conditions or uncontrollable external events (wars, earthquakes, flooding, or fires) have an influence on the performance of projects.

Every aspect of a project has risks. All parties to a PPP must consider a range of possible events that could take place each of these events potentially having a material effect on the project and its goals.

Risk analysis plays therefore an essential part of the contract negotiations. Risk analysis is *the art* of identifying those possible events, measuring them, prioritizing them, and then managing them. A key aspect of the PPP structure is its ability to help facilitate the transferring of risk to the party that is best suited to manage or minimize it. Each party involved will have a different perspective, and thus, a different approach to risk assessment.

While drafting PPP contracts, risk assessment of the parties should be reflected in a clear manner (see section 6 *Standards and Standards clauses*) so that the relevant provisions cannot be challenged by the parties during the various phases of a project.

For this purpose, PPP contracts should apply international standards with particular emphasis on the results of due diligence procedures. The contracts should adapt to the characteristics of the local jurisdiction and to the local environment including the local language.

4. Contract types

The criteria for selecting a particular type of PPP are the size and scope of the project, the rate of payment options to charge the user and the extent of the necessary risk transfer. In the waste sector there is space for more developed forms of PPP with an important level of operational risk transfer to the contractor.

The PPP models vary from short-term simple management contracts (with or without investment requirements), to long-term and very complex BOT (*Build-Operate-Transfer*) form, to divestiture. These models vary mainly by: ownership of capital assets; responsibility for investment; assumption of risks; and duration of contract.

The PPP models can be classified into five broad categories in order of generally (but not always) increased involvement and assumption of risks by the private sector. The five broad categorisations of participation are: (1) service contracts, (2) management contracts, (3) affermage/lease, (4) concessions and (5) divestiture (Outright Sale).

4.1. Service Contracts

Service Contracts provide for private sector supply of specific functional responsibilities in a publicly owned facility. Supply of equipment, raw materials, energy and power, and labour are typical examples of that. A private concessionaire can itself enter into a number of supply or service contracts with other entities/providers for the supply of equipment, materials, power and energy, and labour. Non-core activities of an organization (public or private) such as catering, cleaning, medical, luggage handling, security, and transport services for staff, can be undertaken by private sector service providers. Such an arrangement is also known as outsourcing.

When services are provided directly to users of the infrastructure facility then a special form of licensing or operating agreement is used. The main purpose of such licensing is to ensure the supply of the relevant service at the desired level of quantity and quality.

4.2. Management Contracts

A Management contract is a contractual arrangement for the management of a part or whole of a public enterprise by the private sector. Management contracts allow private sector skills to be brought into service design and delivery, operational control, labour management and equipment procurement; however, the public sector retains the ownership of facility and equipment. The private sector is provided specified responsibilities concerning a service and is generally not asked to assume commercial risk. The private contractor is paid a fee to manage and operate services and the, payment of such fees is normally performance-based. Usually, the contract period is short, typically two to five years but a longer period may be used for large and complex operational facilities such as a port or airport.

4.3. Lease Contracts

In case of lease arrangements, an operator (the leaseholder) is responsible for operating and maintaining the infrastructure facility and services, but generally, the operator is not required to make any large investments. However, often this model is applied in combination with other models such as build-rehabilitate-operate-transfer and in such a case, the contract period is generally much longer and the private sector is required to make a significant level of investment.

A sub-form of the lease arrangement is the so called *affermage*. The difference between an *affermage* and a lease is technical. Under a lease, the operator retains revenue collected from customers/users of the facility and makes a specified lease fee payment to the contracting public sector client. Under an *affermage*, the operator and the contracting public sector client share revenue from customers/users. In the *affermage*/lease types of arrangements, the operator takes lease of both infrastructure and equipment from the public sector client for an agreed period of time. Generally, the public sector client maintains the responsibility for investment and thus bears investment risks. The operational risks are transferred to the operator. However, as part of the lease, some assets may be transferred on a permanent basis for a period which extends over the economic life of assets. Fixed facilities and land are leased out for a longer period than for mobile assets. Land to be developed by the leaseholder is usually transferred for a period of 15-30 years.

4.4. Concessions

In case of a concession structure, the public sector client defines and grants specific rights to a privately-owned special-purpose vehicle (SPV) to build and operate a facility for a fixed period of time. The public sector client may retain the ultimate ownership of the facility and/or right to supply the services. In concessions, payments can take place both ways: concessionaire pays to government for the concession rights and the public sector client may also pay the concessionaire, which it provides under the agreement to meet certain specific conditions. Usually such payments by the public sector client may be necessary to make projects commercially viable and/or reduce the level of commercial risk taken by the contractor, particularly in the initial years of a PPP programme in a country when the private sector may not have enough confidence in undertaking such a commercial venture. Typical concession periods range between 5 to 50 years. Concessions may be awarded to a concessionaire either under a franchise agreement or BOT type of contracts.

4.5. Divestiture (Outright Sale)

Assets can be held or transferred in private ownership. In this form of participation, the private sector remains responsible for design, construction and operation of an infrastructure facility and in some cases the public sector client may relinquish the right of ownership of assets to the contractor. It is argued that by aggregating design, construction and operation of infrastructure services into one contract, important benefits could be achieved through creation of synergies. As the same entity builds and operates the services, and is only paid for the successful supply of services at a pre-defined standard, it has no incentive to reduce the quality or quantity of services. Compared with the traditional public sector procurement model, where design, construction and operation aspects are usually separated, this form of contractual agreement reduces the risks of cost overruns during the design and construction phases or of choosing an inefficient technology, since the operator's future earnings depend on controlling costs. The public sector's main advantages lie in the relief from bearing the costs of design and construction, the transfer of certain risks to the private sector and the promise of better project design, construction and operation.

Divestiture (or privatization) refers to a private ownership structure when assets are transferred to a contractor through the sale of an equity stake in a publicly-owned enterprise. However, the private stake may or may not imply private management of the enterprise. True privatization, however, involves a transfer of deed of title from the public sector to a private undertaking. This may be done either through outright sale or through public floatation of shares of a previously corporatised public enterprise. Full divestiture of existing infrastructure assets is not very common. However, there are many examples of partial divestiture.

The most common PPP structure in the waste sector is the so called Private Finance Initiative (PFI) in the UK, which can be referred to as a sub-form of the divestiture. This is a sub-type within the private ownership structure. In this model the private sector, similar to the Build-Own-Operate (BOO) model builds, owns and operates a facility. However, the public sector (unlike the users in a BOO model) purchases the services (subject to a performance regime) from the contractor through a long-term agreement. PFI projects, therefore, bear direct financial obligations to public sector clients in any event. In addition, explicit and implicit contingent liabilities may also arise due to loan guarantees provided to lenders and default of a public or private entity on non-guaranteed loans.

5. Project Phases

Projects can be broken down into four phases:

Projects start with the preparation phase. It is performed by the public sector client and the objective is to gather as much information on the project as possible, without considering the procurement route. The phase focuses on identifying specific project objectives, public service objectives and project stakeholders. In this phase the advisors should be selected and political approval acquired.

Once the project is specified and approved the procurement phase commences. In this phase of the project the public sector client prepares the tender documentation and advertises the scope of their project. In response to this a number of contractors, consisting of organisations with the required skills to deliver the project, prepare documents outlining their experience, methods of working and eventually their solution. Based on these documents the public sector client negotiates the contract with the potential contractors, and awards the project to the best bidder.

The construction phase starts when the project contracts are signed. Usually an SPV contracts with the public sector client. This SPV is owned by the private partners (sponsors) that are responsible for the construction and service provision to the project. The sponsors invest risk capital into the SPV. The SPV then raises non-recourse finance from a bank syndicate or the capital markets to fund the construction of the asset.

The construction phase and the operating phase are separated by the service commencement date. Following construction, the SPV provides support services under a long term contract and maintains the facility according to the public sector client's specification. Once the operational period begins, the public sector client pays the SPV for the provision of services. This revenue stream, which is subject to deductions for poor performance, is used to repay debt, fund operations and provide a return to the investors.

6. Standards and Standards clauses

6.1. Risk assessment and Risk matrix

An important aspect of PPPs is an explicit arrangement for sharing of risks between parties involved. Many different techniques ranging from rule of thumb (based on past experiences) to sophisticated simulation models are available for the assessment of different risks in a project. The general principle is that project risks are allocated to the party that is the best equipped to manage them most cost effectively. A risk matrix helps in making clear how

such risks are allocated to the various parties in a project. It is developed after assessing risks in quantitative and/or qualitative terms for all possible risk factors. The risk matrix identifies the risks, their magnitudes and possible mitigation measures and serves as a useful tool for the purpose of sharing risks between the parties. PPP contracts often include incentives that reward private partners for mitigating risk factors.

6.2. Contractual Standards

Contract agreements are at the heart of any public-private partnership transaction. With poorly structured agreements, PPP projects are doomed to fail. Contract agreements of a project between the public sector client and the contractor may be contained in a single document or may consist of more than one separate document.

In the UK standard agreements were developed for various sectors of public services (eg. the Ministry of Defence PFI project agreement, School standard form PFI contracts, Housing (HRA) model contract and Waste infrastructure delivery programme contracts) based on the Standardisation of PFI Contracts (SoPC).

The first edition of SoPC was published in 1999. The aim was to provide guidance on the key issues that arise in PFI projects in order to promote the achievement of commercially balanced Contracts and enable public sector procurers to meet their requirements and deliver best value for money. Since then more editions have followed in order to update the documents to take into account new legislation and developments in the PFI market.¹ These standard contracts often serve as basis for medium and large scale international projects mainly in the EU.

6.3. Generally Used Provisions

It is difficult to generalize all possible contents of contract agreements as they vary due to differences in legal and regulatory provisions from one country to another, type of PPP model and the nature of involvement of the public sector, implementation arrangements (including financial matters), operational, and various sector specific resource utilisation, technological and other matters. There are, however, certain standard elements that are expected to be covered in most contract agreements.

6.4. Tenure of contract/concession

Along with other relevant items, this section outlines authorized activities granted to the contractor or the SPV; rights, privileges and obligations of the contractor/SPV; and concession/contract period. It may also mention what would have to be done by the contractor at the end of the contract period.

6.5. Termination

As discussed above risk allocation is an important process for any PPP project. In this context the risk of early termination and the way of risk sharing in such a situation is a key factor to find efficient financing.

¹ http://hm-treasury.gov.uk/iuk_related_standardcontracts.htm

A project can be early terminated because of a default of either party or because of force majeure or other events none of the parties can influence. Many of the risks leading to such a termination situation can be insured and/or safeguarded by efficient control mechanisms. Good projects include provisions in this respect and do so safeguard the potential downside risks of the parties involved (including the lenders to such a project).

In case of public sector defaults the agreements usually secure that the private sector does not lose out on the investment made including potential profit margins. In case of a private sector default the termination often includes penalty elements reducing or cancelling the private sector profit margins. In a force majeure situation that is not insurable (e.g. terrorism) the pain is usually split. In all cases provision to protect lenders are put in place.

6.6. Non-Recourse financing

An important issue for all infrastructure projects is the way of financing. With respect to PPP projects the main form is a project finance arrangement which is also referred to as *non-recourse financing*. Non-recourse financing means that a loan is secured by the assets and the revenue of the project, and no other assets which are outside of the project. In terms of repayment such a financing is solely depending on the cash flow the project is generating (from whatever source). The Borrower is usually a special purpose company (SPV) that is set up for the implementation and execution of the respective project and has no other activities. The shareholders are usually the sponsors developing the project who also provide equity to the project. Non-recourse finance does not allow the lenders access to the sponsor's other assets in the event of default. In order to put this structure in place the parties agree a priority of the payment obligations under the project agreements and allow payments from the project revenues only in the given order of priority (e.g. first: tax payments, second: project maintenance costs, third: senior debt, fourth: mezzanine debt, fourth: junior debt etc). In every month payments are made in this order, and if revenue is too short to make payments for each item, then items on the lower priority level will not be discharged. This order of priority is also referred to as the *Waterfall*.

In transactions where payments are prioritised the contracting parties have to relinquish their rights to take legal actions against the project company in case payments obligations are not met due to shortage in the waterfall.

In this respect certain standards have developed that allow such financing to be successfully implemented and provide for protection of the lenders in case of non performance of the private sector partners. This in particular includes so called *Direct Agreements*, which are agreements that regulate the different interest of the private sector partners, the public sector partner and the lenders with a particular view to protect the lenders in such a situation and by doing so creating a growing market of available funding for such private to public projects.

6.6.1. Contractor's /SPV's obligations

This section deals with matters on general obligations; shareholding arrangement; financing arrangement, financial close and refinancing; use of insurance proceeds; uninsurable risks; information disclosure and public information; and performance security. Obligations in respect of sectoral issues (for example, providing interconnection to services provided by other operators), and various reporting requirements to regulatory bodies may also be included in this section or in a separate section.

6.6.2. Deferred capital expenditure

This section covers capital expenditure that will be incurred sometime after the contract is signed. Deferred capital expenditure might be required in waste sector projects because planning permission may need to be obtained after contract signature; and/or it is anticipated that the need for a new facility, to accommodate demand growth given projected levels of residual waste, will only arise sometime in the future. As a result of these factors, the overall construction period for waste projects may be long (e.g. 5-7 years), raising further and different risks for the parties.

6.6.3. Performance requirements

This covers the details of service delivery and other technical, quality and safety standards; availability of contracted services and procedures for variations of service scope. Normally, these are included in a separate schedule annexed to the main agreement.

6.6.4. Payment and other financial matters

This section may consider the provision of types and period of payments (including mode of payment, valid discharge, dates of payment etc); procedure for payment; calculation of the amount of payment; payment adjustment; bonus and reduction in payment; security; sinking funds; VAT and other taxes; performance security; supervision charges of the implementing authority; and monitoring expenses.

6.6.5. Consideration for Services

General

The key question in all private to public transaction is adequate remuneration for private sector services. There are many different concepts. They build either on performance (payment for a specific service like for example the transport of particular waste units) or on availability (e.g. in case of sewage systems). The payments can be either direct (from the end customer e.g. a household) or indirect from the community. There are also various forms of mixed systems (partly availability, partly service based on one side and partly direct and partly indirect on the other side).

Tariff, fees, levy and their collection and appropriation

The public sector client's, contractor's/SPV's obligation, tariff structure and amount, exemption and discrimination, subsidization/cross-subsidization, reviewing of tariff, tariff adjustment, cost of tariff review, fees and levy, integration of fees and tariff with other relevant operators, appropriation, revision of fees, collection and payment/transfer mechanism are included in this section. It may also include accounting standards, information on cost of operation, tariff review process and mechanism.

6.6.6. Third Party Income

This section covers income deriving from a source other than under the main waste contract and which can be considerable. The nature of third party income that can be earned

is largely dependent upon the solution put forward by the successful bidder. Third party income in waste projects may be derived from: sales of dry recyclables and compost; electricity and heat-related sales; and/or d) non-Contract waste (commercial waste, waste from other Authorities etc). Contracts should also be flexible so as to afford both the contractor and the public sector client the benefit of changes in the market relating to the waste sector.

Funds generated from such sources often subsidise the consideration for services and are in times of pressure on raw material prices becoming more important and substantial. This will have the effect that additional forms of consideration for services will be developed around such income sources. Depending on the price developments models will reach from partly subsidised to fully compensating out of third party income and in some cases even generate an income for the public sector. The latter in case of substantial profit being generated from particular forms of waste collection and raw material recycling.

6.6.7. Waste treatment and disposal

The coverage of this section may include types of waste covered and their sources; methods of collection, transportation, treatment and final disposal (solid and liquid); physical, chemical and biological characteristics of the wastes at final disposal; and recycling of treated waste water. The details of technical standards on treatment and disposal can be considered in a separate annex or schedule.

6.6.8. Change in law

The definition of the meaning of *change in law*, assessment of effect on contractor/SPV, compensation to contractor/SPV, obligation of contractor/SPV and other related matters can be covered in this section. Generally, risks in relation to foreseeable changes in law are borne by the contractor. The issue here is that many changes in law relating to the waste sector are potentially foreseeable but not with sufficient certainty to be adequately priced.

6.6.9. Termination of contract

The contents include the possibility of renewal, the transition arrangements when a new operator takes over, the basis for calculating compensation for assets not fully amortized or depreciated and related matters.

6.6.10. Events of default and termination, compensation on termination

The matters of consideration include contractor/SPV event of default, public sector client event of default, termination due to contractor/SPV or public sector client events of default, obligations and rights of parties, termination procedure and payments and claim on assets.

6.6.11. Foreclosure by sponsors and Substitution Agreement

This is a provision for a separate agreement between the public sector client and the senior lenders for securing their interests through assignment, transfer and substitution of the concession to a nominated company under certain defined conditions. Generally this contained in a separate schedule annexed to the main agreement.

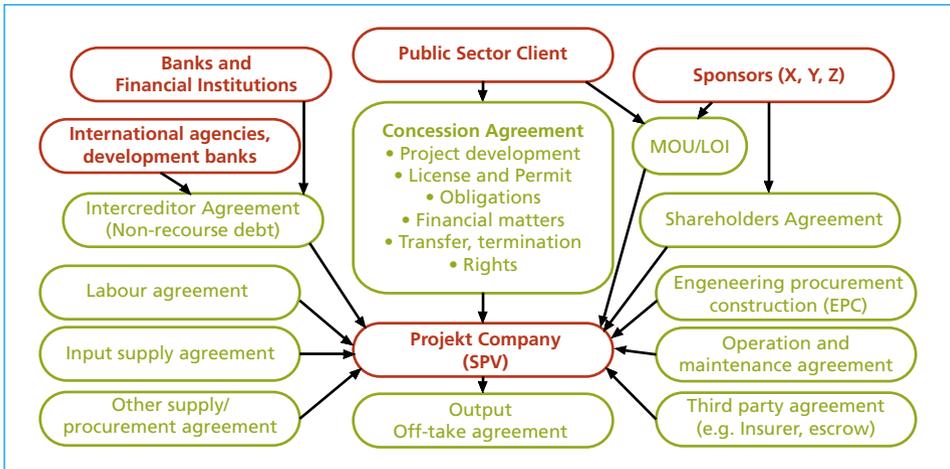


Figure 1: Agreements in typical PPP arrangements

Source: Transport Division, UNESCAP

7. Resources

- [1] Schim van der Loeff, B.: EIB's learning curve: PPPs are most likely to succeed when structured to reflect the specific financial features of each project and relevant national legal and political frameworks
- [2] KPMG Tanácsadó Kft.: EU Funds in Central and Eastern Europe. Hungary, 2008
- [3] Eder, S: Legal and technical aspects of Public Private Partnerships. Joint Vienna Institute, Vienna, 27 September 2010
- [4] Eder, S.: Legal framework for real estate financing in Central and Eastern Europe. Continuing Education Center of the University of Technology, Vienna
- [5] Eder, S.: Legal aspects of the structuring of financings. SMBS – University of Salzburg Business School
- [6] Law in Transition Online by European Bank for Reconstruction and Development, 2010
- [7] Sabolová, V.: Public Private Partnership. In: Waste Management, University of Pardubice, Faculty of Economics and Administration, Institute of Economics, ~2009
- [8] Transport Division: Public-Private Partnerships. In: Infrastructure Development, United Nations Economic and Social Commission for Asia and the Pacific, June 2008
- [9] Standardisation of Standardisation of PFI Contracts by HM Treasury. London, March 2007
- [10] Standardisation of waste management PFI contracts: guidance on SoPC derogations by UK Department for Environment, Food and Rural Affairs, May 2006
- [11] O'Keeffe, J.: Third Party Income And Waste PFIs/PPPs. June 2007
- [12] www.benn-ibler.com



Leading in Waste Technology

Air & Water-Cooled Grates
Horizontal & Vertical Boiler Types
Ash & Slag Handling
Advanced Combustion Control
Hazardous Waste Treatment
Flue Gas Cleaning Processes

We make the world a cleaner place



www.fisia-babcock.com

Die Deutsche Bibliothek – CIP-Einheitsaufnahme

WASTE MANAGEMENT, Volume 2

Waste Management, Recycling, Composting, Fermentation,
Mechanical-Biological Treatment, Energy Recovery from Waste,
Sewage Sludge Treatment

Karl J. Thomé-Kozmiensky, Luciano Pelloni.

– Neuruppin: TK Verlag Karl Thomé-Kozmiensky, 2011

ISBN 978-3-935317-69-6

ISBN 978-3-935317-69-6 TK Verlag Karl Thomé-Kozmiensky

Copyright: Professor Dr.-Ing. habil. Dr. h. c. Karl J. Thomé-Kozmiensky
Alle Rechte vorbehalten

Verlag: TK Verlag Karl Thomé-Kozmiensky • Neuruppin 2011

Redaktion und Lektorat: Professor Dr.-Ing. habil. Dr. h. c. Karl J. Thomé-Kozmiensky,

Dr.-Ing. Stephanie Thiel, M. Sc. Elisabeth Thomé-Kozmiensky, Janin Burbott

Erfassung und Layout: Janin Burbott, Petra Dittmann, Sandra Peters,

Martina Ringgenberg, Ginette Teske

Druck: Mediengruppe Universal Grafische Betriebe München GmbH, München

Dieses Werk ist urheberrechtlich geschützt. Die dadurch begründeten Rechte, insbesondere die der Übersetzung, des Nachdrucks, des Vortrags, der Entnahme von Abbildungen und Tabellen, der Funksendung, der Mikroverfilmung oder der Vervielfältigung auf anderen Wegen und der Speicherung in Datenverarbeitungsanlagen, bleiben, auch bei nur auszugsweiser Verwertung, vorbehalten. Eine Vervielfältigung dieses Werkes oder von Teilen dieses Werkes ist auch im Einzelfall nur in den Grenzen der gesetzlichen Bestimmungen des Urheberrechtsgesetzes der Bundesrepublik Deutschland vom 9. September 1965 in der jeweils geltenden Fassung zulässig. Sie ist grundsätzlich vergütungspflichtig. Zuwiderhandlungen unterliegen den Strafbestimmungen des Urheberrechtsgesetzes.

Die Wiedergabe von Gebrauchsnamen, Handelsnamen, Warenbezeichnungen usw. in diesem Werk berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, dass solche Namen im Sinne der Warenzeichen- und Markenschutz-Gesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürfen.

Sollte in diesem Werk direkt oder indirekt auf Gesetze, Vorschriften oder Richtlinien, z.B. DIN, VDI, VDE, VGB Bezug genommen oder aus ihnen zitiert worden sein, so kann der Verlag keine Gewähr für Richtigkeit, Vollständigkeit oder Aktualität übernehmen. Es empfiehlt sich, gegebenenfalls für die eigenen Arbeiten die vollständigen Vorschriften oder Richtlinien in der jeweils gültigen Fassung hinzuzuziehen.