



CHARTER OF THE GLOBAL WTERT COUNCIL

Introduction

Since 1997, the Earth Engineering Center (EEC) of Columbia University has conducted research on the generation and disposition of used materials and products in the U.S. and globally. Economic development has resulted in the annual generation of billions of tons of used materials which represent a considerable resource but, when not managed properly, constitute a major environmental problem both in developed and developing nations. The goal of EEC was to identify and help develop the most suitable means for managing various solid wastes research, and disseminate this information by means of publications, the web, and technical meetings. EEC is also collaborating with **BIOCYCLE** journal in carrying out a bi-annual survey of generation and disposition of MSW in the U.S. that is now being used by U.S. EPA in computing greenhouse emissions from waste management.

This research has engaged many M.S. and Ph.D. students on all aspects of waste management. Since 2000, EEC has produced nearly fifty theses and published nearly one hundred technical papers. In 2002, EEC co-founded, with the U.S. Energy Recovery Council (ERC; www.wte.org), the Waste-to-Energy Research and Technology Council (WTERT), which is by now the foremost U.S. research organization on the recovery of materials and energy from solid wastes.

In the course of its studies, EEC established that one billion tons of MSW are landfilled each year, landfilling will continue to be used in the foreseeable future, and nearly 80% of the world's landfills are not equipped to protect surface and ground waters from contamination. Therefore, in 2008 EEC proposed the expanded Hierarchy of Waste Management that differentiates between traditional and sanitary landfills.

In recent years, sister organizations to the WTERT in the U.S. have been created in several other nations such as Brazil, China, France, Greece, and India. In the interest of the common goal of these organizations, of advancing sustainable waste management, it became necessary, at the end of 2011, to create a U.S. non-profit organization named the Global WTERT Council (GWC) and establish a GWC "Charter" that was agreed upon by the existing national members at that time. The GWC Charter is used to explain the operations of the Council to other regions of the world who may wish to become members; and also to existing and prospective industrial and government sponsors.



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The Name of the WTERT Council

The principal tool for disseminating information by the U.S. and other existing members of WTERT has been the internet. The web addresses used (www.wtert.org, www.wtert.eu, www.wtert.gr, etc.) all include the acronym WTERT and this has the advantage that when one types WTERT in Google or other search engine, automatically one links to WTERT organizations in different countries. Thus, WTERT has become a valuable brand name and can be very helpful to people seeking information on waste management in a particular country (e.g. Greece) by using the acronym WTERT and then the name of the country or letters representing it (e.g. “gr”). It is therefore necessary for member nations to register and use the “wtert” web address (e.g. www.wtert.gr) as well as whatever other name and web address they wish. For example, the sister organization in Greece chose the name “SYNERGIA” so one can find their web either by going to www.wtert.gr or by using the SYNERGIA address. The same is true for our sister organization, MatER, in Italy (www.wtert.it).

In summary, each national, or regional, member should choose whatever word or words are most suitable to express the mission of their organization in their national language; and also use the second name “WTERT-Greece”, “WTERT-Brazil”, etc. to express the fact that they are also a member of the Global WTERT Council.

Mission of WTERT Council

The mission of GWC members is to identify the best available technologies for the treatment of various waste materials, conduct additional academic research as required, and disseminate this information by means of publications, the various GWC web pages, and periodic meetings. In particular, GWC members strive to increase the global recovery of materials and energy from used solids, by means of recycling, composting, waste-to-energy, and sanitary landfilling with LFG utilization. The guiding principle is that responsible management of wastes must be based on science and best available technology at a particular location and not what seems to be inexpensive now but can be very costly in the future.

Figure 1 shows the general rule of the accepted “hierarchy of waste management”. However, GWC members understand that for practical or economic reasons it is not possible to follow this hierarchy at all times and at all locations. For example, waste-to-energy requires a much larger initial investment than sanitary landfilling and therefore may not be attainable at a certain stage of economic development of a community.

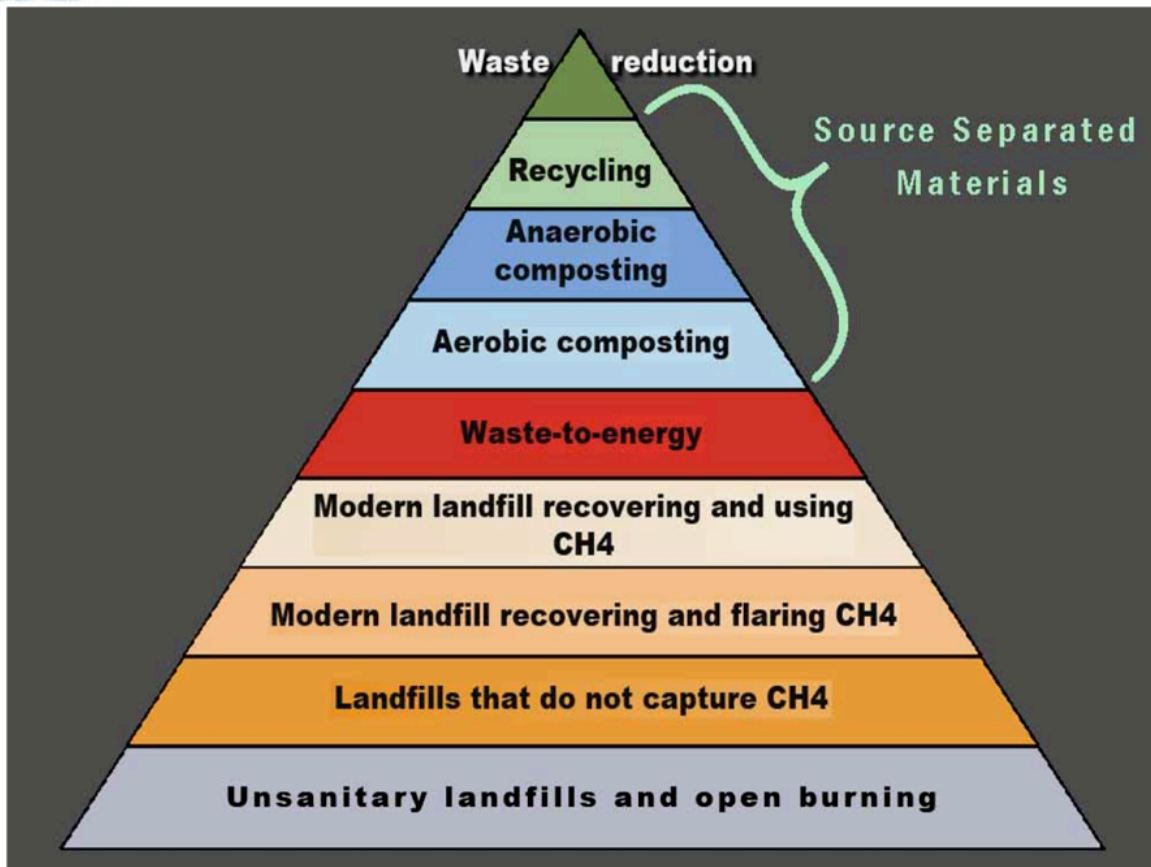


Figure 1: The GWC hierarchy of waste management

Scope of Operations of Global WTERT Council

The Global WTERT Council consists of representatives designated by each national or regional member organization. These representatives form the governing board of the Council. The Chair of the governing board of the Council will be elected by majority vote of all members for a tenure period of five years. The Council will review and vote on the GWC Charter and subsequent actions affecting the operations and Charter of the Council. Most communications will be by e-mail or telephone conference. However, occasional meetings of the Council will be called, preferably to be held in conjunction with an international meeting on waste management.

GWC members realize that waste management solutions vary from region to region. It is hoped that through the new and powerful tool of the internet, we can collectively create a global platform for sharing of experience, expertise and information that will advance the goals of



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sustainable waste management world-wide. GWC has also provided and will provide start up funding for new regional members. For example, this is how WTER T-India was founded. By now GWC India is one of the most active GWC members and is incorporated as non-profit organization in India.

Scope of Operations of Each National/Regional GWC Members

The objectives of each GWC national/regional member is:

1. To develop and maintain a GWC web page that describes the mission and scope of the organization and links as many as possible academic and industrial research groups working on various aspects of waste management, within the nation. Preferably, this web page will be hosted at a major university that is conducting research on resource recovery from wastes. Most of the material in this web page will be in the national language so as to inform the general public and policymakers as well as academia and industry. However, the front web page should also provide for English language translation of part of the content, as discussed in (2) below.
2. To identify the most suitable technologies for the treatment of various waste materials in the nation, encourage additional academic research as required, disseminate this information within the nation, and provide an English language window for the outside world to learn about problems and opportunities for advancing waste management in their respective nation.
3. Once the organization platform described in (a) and (b) has been created, the national or regional GWC member can seek sponsorship and funding by industry and government organizations concerned with advancing waste management in the nation. This model of operation has been successful with some of the existing WTER T national members who are willing to advise and assist new members.

Current GWC national/regional members and contact information (in chronological order of joining WTER T Council)

GWC-US (www.WTER T.org)

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GWC-Greece (www.WTERT.gr) SYNERGIA

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GWC-China

a) Institute of Thermal Power Engineering (ITPE), Zhejiang University, Hangzhou, China
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Prof. Qunxing Huang <hqx@zju.edu.cn>

b) Earth Engineering Center-China (www.WTERT.cn)

Waste-to-Energy Department, Chongqing University of Science and Technology (CQUST)

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WTERT-Germany (www.WTERT.eu) W_tERT

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WTERT-Italy (www.WTERT.it); (www.mater.polimi.it/mater)

MatER (Materials and energy recovery); Department of Energy - School of Industrial Engineering - Politecnico di Milano, Piacenza, Italy; Prof. Stefano Consonni <stefano.consonni@polimi.it >; Prof. Mario Grosso <mario.grosso@polimi.it>



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WTERT-Mexico

WTERT-Chile (web site under development)

Universidad del Desarrollo, Santiago, Chile; Prof. Alex Godoy < alexgodoy@ingenieros.udd.cl>

WTERT-Singapore (under development)

Nanyang Technological University (NTU), Prof. Jing-Yuan Wang

WTERT-Canada (www.WTERT.ca) (presently under development)

Mr. John Foden jpfoden@presterjohn.ca

WTERT-Hong Kong; Polytechnic University of Hong Kong: Prof. Poon, Chi-sun (under development)