Workshop 02

Sustainable Waste Management in the Mediterranean Region: Impacts of Socio-economical and Political Factors

directed by

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Workshop abstract

Solid waste management is a key task of city councils and municipalities throughout the world in order to keep cities tidy and clean. Focus is often on the technologies such as collection, transportation, recycling, storage, and disposal of wastes. However, solid waste management must be seen in a much wider perspective that includes health to people and environment, conscious use of resources (materials and energy) and goods, as well as welfare and economic livelihood to business and people. Waste prevention, energy saving, reuse, recycling, and material and energy recovery, thereby, become concrete challenges to administrations, businesses and individuals in the urban areas. Up-to-date urban solid waste management demands a well designed mix of, for example, policy, administration, corporate social responsibility, business economy and motivation and education of the individual citizen. Successful implementation of such management of solid waste then becomes strongly dependent on the local and regional socio-economic and political attributes of the area where the waste is generated, in addition to the traditional collection and treatment technology aspects. A good understanding of the mechanisms by which these socio-economic and political factors impact the waste management process is pivotal to developing effective and more sustainable waste management strategies. For example, it is imperative that waste management policies express the sustainability ambition, that decision-making and implementation become participatory processes and include both businesses and citizens, that administrations become flexible and effective with short intervals between application and permission, and that resources be allocated or reallocated to

implement new waste management strategies and systems. Climate change and Greenhouse Gas emission reduction will become new and concrete challenges in the needed change of solid waste management strategies.

The dynamics by which socio-economical and political factors influence or change solid waste management are not sufficiently understood or documented in literature or by practice. Therefore, this workshop will provide a platform for researchers from universities and private and public institutions and businesses from various Mediterranean countries to exchange their knowledge in this field, with the intent that such exchange of knowledge and experience will lead to more fruitful and sustainable waste management strategies in their countries.

Workshop description

1. Background

Waste is anything discarded by an individual, household or organization. As a result waste is a complex mixture of different substances. Municipal solid waste (MSW) refers to solid wastes from homes, streets and public places, shops, offices, and hospitals, which are very often the responsibility of municipal or other governmental authorities for collection, transport and final disposal. The source classification of MSW considers three divisions: urban, industrial and rural, where each one is represented as a discrete entity (Vesilind *et al*., 2002). The collection, processing, transport, recycling, and disposal of solid waste are all important aspects of waste management for public health, aesthetic, and environmental reasons. The handling and disposal of MSW is a growing concern as the global volume of waste increases continuously (Elliott *et. al.* 2001; Berkun *et. al.* 2005). Increased urbanization, accelerated industrial growth, as well as the introduction of harmful wastes, are the main factors providing the reason for the urgent need for MSW management at the local, regional, and global level (Mwanthi *et al.* 1997; Dyson and Chang, 2005). Recently, MSW management gained more attention as a potential avenue to combat global warming, since waste is used for energy generation, via incineration, in many parts of the world. Moreover, waste prevention, reuse, and recycling, can all lead to energy savings and material and energy recovery.

Whereas the reasons for waste storage, collection and sanitary disposal and the technology of waste recycling and disposal are well accepted and understood in developed countries, there is a growing concern for the insufficiencies of sustainable solid waste management in developing countries, including most countries in Middle-East and North Africa (MENA). Developed countries have established regulatory programs for the disposal of solid wastes, while developing countries have generally continued to use unsophisticated methods such as open dumps (Berkun *et. al.*, 2005). The problem of upgrading policies and practices for the disposal of municipal solid waste are far more difficult in most developing countries than in developed countries. There are a number of reasons for these difficulties, some of which result from poverty and lack of education and opportunity and, in some cases, adherence to customs that do not easily fit into the modern world. But more seriously, waste management in these countries is not a participatory process and both businesses and citizens are not usually actively involved in it. As a result, the management of solid waste is totally left to governmental bodies, making it non-sustainable and inefficient. It is only recently that the problems of waste management in developing areas started to be seriously addressed, and waste generation reduction is becoming considered an educational and awareness task which has to be promoted at the societal level (Agamuthu and Hansen, 2007, Arafat et al., 2007, Vencatasawm, *et al*., 2000; Tchobanoglous *et.al*., 1993).

An array of socio-economical and political factors can affect the strategies adopted for solid waste management in a particular country, as well as the extent of societal involvement in the process and, consequently, the sustainability of the process itself. These factors are region- and culture-dependent and it is very important to study them if effective and sustainable waste management strategies are to be designed and implemented on a national level. For example, waste separation and recycle has been successful, even enforced by law, in several European countries, while virtually non-existent in other Mediterranean countries. Similarly, social and economical pressure mounting on industry in the United States and Europe to become "green" has enhanced the design of many products in these countries with the goal of improved recyclability and waste minimization in mind. Another striking example is that while littering is an unacceptable behavior that is heavily punished with hefty fines or even jail in developed countries, it is a very normal and accepted practice in most MENA countries.

The economics of solid waste management is also intricate. In some cases, waste management can consume up to 40% of the budget of a municipality. Therefore, decisions pertaining to waste management operations, such as collection, recycle, and disposal, are economics-based in many cases.

2. Aims of the workshop

The workshop aims at allowing participants from several countries -with various advancement levels in waste management strategies- of the Mediterranean region, to share their experiences in this field. Although waste management, in its broader sense as an environmental issue, is a commonly shared issue by all countries of the world, every country has its unique set of waste management strategies, largely influenced by its particular socio-economical and political circumstances. As a recent trend, some academic institutions have taken it upon themselves to lead educational, participatory, and public awareness efforts to move their communities to an advanced level of involvement in sustainable environmental solutions, including solid waste management. Countries of the northern-Mediterranean have accumulated more expertise and have arrived at an advanced stage in community involvement in solid waste management than their neighboring MENA countries. Therefore, this workshop could be a unique learning opportunity and an eye-opener for researchers, private businesses, and administrative figures working in the area of solid waste management to discuss their research on how social, economical, and political factors influence their approach to sustainable waste management and how their handling of this sensitive environmental issue has improved as a result of an in-depth understanding of these factors.

3. Potential Participants of the Workshop

A wide spectrum of participants is invited to participate in this workshop. This includes, but not limited to, the following:

1. *Academics in political and social sciences, environmental health, or environmental sciences/engineering with research interests in solid waste management:* Researchers who study the socio-economical, political, and educational aspects of sustainable strategies of environmental

protection, particularly in solid waste management and modeling thereof can find this workshop particularly useful to discuss research ideas with their peers and to present their recent work.

2. *Policy makers in Mediterranean countries, at the municipal and governmental levels*: Individuals from developing countries which are still struggling to formalize sound and sustainable solid waste management strategies will find this session particularly useful. Participants from developed countries will also find it useful to further develop their waste management strategies.
3. *Researchers from the private waste management and recycling industry* who look for more accurate predictability of waste generation rates and waste composition in their respective fields will also benefit from this workshop.

4. Cited References

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