ISWA commitments on waste and climate

The International Solid Waste Association (ISWA) is committed to global GHG emission reduction through a number of targeted actions:

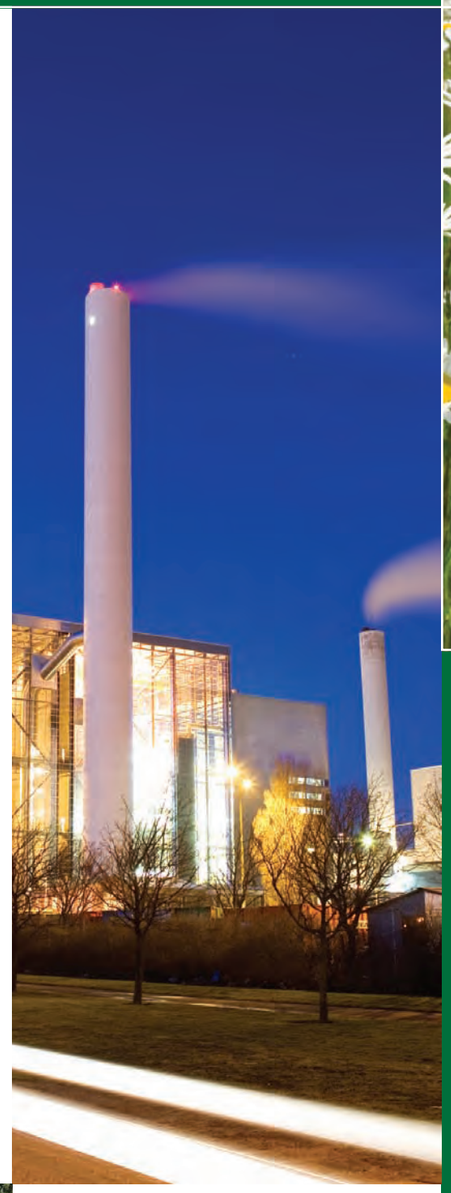
1 Networking for capacity building, disseminating knowledge and experience at country, institution or individual levels. ISWA will undertake cooperation with complementary organisations dealing with sustainable material and energy management to support these activities.

2 Initiating and supporting research and education on GHG related issues. ISWA will work in partnership with established providers such as research institutes, universities, corporations and administrations in countries with proven infrastructures, to transfer tangible knowledge and expertise to less developed regions.

3 Selecting cities to participate in case studies and targeted action to mitigate GHG emissions through waste management systems, and disseminating the results of their experience to other comparable cities. ISWA will bring its membership structure, secretariat and staff together to facilitate the success of this endeavour.

4 Assessing experience from different countries and regions on policies, strategies and regulations. With solid data to draw upon, ISWA will develop a sound basis for recommendations that would accomplish optimum waste related GHG emission reductions, both locally and globally. This work might include formulation, implementation, enforcement and compliance tools as well as transparent and accurate accounting methodologies.

5 Participating actively in global events and negotiations regarding Waste and Climate Change before 2012 and beyond. ISWA will work in close cooperation with other international institutes and organisations to promote a more global and ambitious commitment to GHG reduction targets, focusing on realising the potential for waste related GHG emissions reductions.



ISWA General Secretariat
123 Mariahilfer Strasse, 3rd floor
1060 Vienna
Austria

Tel: +43 (159) 999 8038
E-mail: iswa@iswa.org
www.iswa.org

ISWA
International Solid Waste Association

Waste and Climate Change

ISWA WHITE PAPER SUMMARY

ISWA
International Solid Waste Association

Re-evaluating waste: ISWA key messages

Preface

The climate change phenomenon, its causes and consequences, is now generally accepted and recognised by the international scientific community, governments, the private sector, NGOs and the general population.

It requires a robust response. Solutions must be found that will mitigate emissions of greenhouse gases and help to adapt to its unavoidable consequences. The complexity of the issue requires the acceptance of a common responsibility from both the public and private sector.

As the only international association promoting sustainable development in the waste management sector, ISWA is well placed to acknowledge our own responsibility and to act accordingly. We are now very proud to present the Waste & Climate ISWA White Paper, setting forth the technologies and mechanisms which can transform the waste sector into a net global reducer of GHG emissions, and making the necessary commitments to assist this change.

ISWA's aim is to facilitate global improvements in waste management strategies. Our membership structure and secretariat offer an established resource for the dissemination of knowledge and experience. We will support new research and education programmes and assess experiences from different countries on policy, strategy and accounting, to provide a global foundation for progress.

Our commitments will see us working in close cooperation with other international institutes and organisations to promote far-reaching and fundamental reduction targets, which recognise the untapped potential for waste related GHG emissions reductions.

I would like to extend our special acknowledgement and thanks to the members of the Task Force for having made possible the publication of this White Paper, as well as all those people who have participated in this process with presentations, opinions and comments.

Atilio A. Savino
President, ISWA
3rd December 2009
asavino@ars.org.ar

1 The waste industry occupies a unique position as a potential reducer of greenhouse gas (GHG) emissions. As industries and countries worldwide struggle to address their carbon footprint, waste sector activities represent an opportunity for carbon reduction which has yet to be fully exploited.

- Between 1990 and 2003, total global GHG emissions from the waste sector declined 14–19% for the 36 industrialised countries and Economies in Transition (EIT) listed in annex 1 of the United Nations Framework Convention on Climate Change (UNFCCC). This reduction was mainly due to increased landfill methane recovery.
- In the EU region, municipal waste management activities alone could potentially account for 18% of the 2012 Kyoto GHG reduction target set for the original 15 member states of the EU. The European municipal waste system is well on the way to becoming a net reducer of GHG emissions as increased material recycling and energy recovery outweigh direct emissions.

	1990	2007	2012 – 2020 (projected)
European waste sector annual GHG emissions	69 million tonnes CO_2	32 million tonnes CO_2	Net reducer

- At the city and local community level, there are numerous examples of waste management solutions involving new technologies and integrated systems, which have resulted in net greenhouse gas reductions as well as other associated sustainable development benefits.

2 The waste sector offers a portfolio of proven, practical and cost effective technologies which can contribute to GHG mitigation. When adapted and deployed according to local traditions and needs, they can help secure significant global GHG emission savings.

- Solutions might include waste prevention, recycling and reuse, biological treatment with land use of products, energy recovery, and engineered landfilling. Waste industry expertise lies in applying decades of experience and advanced technology to establish integrated systems around local conditions, rather than attempting to transfer any single solution from one region to another.
- Waste industry research and development programmes are crucial to the continued development of solutions which minimise impact on resources, the environment and our climate.

3 Waste prevention, minimisation, reuse and recycling are on the increase across the globe, representing a growing potential for reducing GHG emissions by conserving raw materials and fossil fuels.

- The potential GHG savings from waste prevention and minimisation could greatly exceed the savings that can be achieved by advanced technologies managing post-consumer waste.
- Recycling is an integral part of waste management systems and a fundamental waste management tool. Recycling materials such as paper, cardboard, metal and glass can help to limit resource consumption and achieve energy savings.
- In 2007, 85 million tonnes of materials were recycled from municipal solid waste in the US (including recycling through composting) achieving a total national recycling rate of 33.4%.

4 Through aerobic and anaerobic biological treatment technologies, organic wastes can be recovered and transformed into soil conditioners and fertilisers. These processes reduce GHG emissions by sequestering biogenic carbon in soils, improving soil physical properties, and adding soil nutrients.

- The organic component of waste (e.g. paper, cardboard, food waste or garden waste) ranges from 30-70% of total municipal waste production. If collected separately, it can offer a valuable contribution to GHG emissions reduction and soil improvement.
- Organics recovery is particularly effective where soil and organic matter are being eroded due to deforestation, cultivation practices, or as a consequence of climate change.
- Anaerobic technologies provide an added energy benefit (see 5 below).

5 Waste offers a significant source of renewable energy. Incineration and other thermal processes for waste-to-energy, landfill gas recovery and utilisation, and use of anaerobic digester biogas can play important roles in reducing fossil fuel consumption and GHG emission.

- Globally, more than 130 million tonnes of waste are incinerated every year at over 600 waste-to-energy plants, producing over 1000 PJ of electricity per annum. This is equivalent to the electrical energy demand of approximately 10 million European consumers (100GJ per annum).
- In 2008 in the US alone, landfill gas utilisation projects offset 84.3 million tonnes of CO_2 eq.; comparable to the emissions from 15.5 million passenger vehicles.

6 The transfer of sustainable technology to developing countries is crucial to reducing GHG emissions. The Clean Development Mechanism (CDM), introduced under the Kyoto protocol, has provided an opportunity for the waste sector to make significant advances towards this goal. However, structural and administrative improvements to the CDM registration process are needed.

- The waste sector is well represented amongst the registered projects. As of October 2009, 18% of the 1834 projects are waste related.
- Waste projects currently registered as CDM are on track to deliver 209 million carbon credits by the end of 2012. (One carbon credit corresponds to an emission reduction of one tonne of CO_2 equivalent.)
- So far, most solid waste management projects have centred on landfill gas recovery. There is significant potential for additional CDM projects focusing on recycling systems, composting, incineration and anaerobic digestion.
- The CDM flexible mechanism can assist developing countries to achieve environmentally-sound waste management practices through technology transfer and added revenue from GHG emission credits.

7 Waste policies and regulations can be strong national drivers to reduce GHG emissions.

- Progress in reducing GHG emissions in the EU between 1990 and 2007 was made through policy and regulations based on the Waste Hierarchy. The legislative framework included specific targets and directives regarding packaging waste and diversion of organic waste from landfill.
- In the US, landfill methane emissions decreased by 11% between 1990 and 2007 due to increased landfill gas recovery resulting from economic incentives, policies, and regulations.
- In developing countries, it is important to focus on waste policies and regulations which are practical and sustainable. Initiatives from one country cannot be exported to another without taking into account local waste composition and quantities, infrastructure, preferences, economic resources, and climate.

8 Accurate measurement and quantification of GHG emissions is vital in order to set and monitor realistic reduction targets at all levels. Current methodologies form a valuable database for assessment of GHG emissions from waste activities, however, improvements are required to adequately represent the full lifecycle of materials and energy.

- IPCC national waste GHG inventory methodologies estimate direct emissions, but do not include indirect emissions and environmental benefits, especially those which impact other sectors.
- Improved, harmonised and transparent approaches for both the direct and indirect emissions associated with waste management activities must be developed to complement existing methodologies.
- More consistent and coordinated data collection is needed to support the improved methodologies and reduce accounting uncertainties.