

## ISWA SUBMISSION

February 2013

### 8. Implementation of all the elements of decision 1/CP.17, (b) Matters related to paragraphs 7 and 8. (ADP)

*Information, views and proposals from Parties and accredited observer organizations on actions, initiatives and options to enhance ambition, including through the workplan on enhancing mitigation ambition, with a particular focus on 2013, including aspects indicated in paragraph 15 (a)-(c) of the ADP conclusions.*

#### **Introduction**

The International Solid Waste Association (ISWA) welcomes the opportunity to contribute to Parties important work under Decision 1/CP.17, relating to pre-2020 ambition, in particular the implementation of matters related to paragraphs 7 and 8, by contributing to information, views and proposals on actions, initiatives and options to enhance ambition, including through the work plan on enhancing mitigation ambition, with a particular focus on 2013; giving consideration to the following aspects: (a) Mitigation and adaptation benefits, including resilience to the impacts of climate change; (b) Barriers and ways to overcome them, and incentives for actions; (c) Finance, technology and capacity-building to support implementation.

ISWA is a global, independent and non-profit making association, working in the public interest to promote and develop sustainable waste management. ISWA has more than 1,400 members (Organizations, Companies and Individuals) in greater than 90 countries and is the only worldwide association promoting sustainable, comprehensive and professional waste management. ISWA works to protect human health and the environment as well as to ensure sustainable resource management and, hence, is committed to contributing to GHG emission reductions through a number of targeted actions, including, inter alia, through capacity building, research and education, and building on experiences from different countries to establish a sound basis for recommendations towards optimum waste related GHG emission reductions and accounting methodologies, as needed. As such ISWA also acts as an UNFCCC Observer Organization.

This submission draws from practices, insights and lessons learned globally derived from ISWA and its members' experience across many different types of activities in the waste sector around the world over the last four decades.

It is hoped that this submission will be a useful input to Parties, in particular through the workshops that will begin in 2013 and may, inter alia, identify and catalyse the implementation of initiatives and actions to rapidly, cost-effectively, urgently and equitably reduce greenhouse

gas emissions. ISWA would be pleased to elaborate further on the issues under consideration and contribute to this important work as required.

This submission is divided into two parts:

1. Key insights from our experience in the waste sector; and,
2. Recommendations for the consideration of the Parties.

### **1. Key insights from our experience in the waste sector**

The waste industry occupies a unique position as a sector that offers an immediate, cost-effective, and fast acting capacity to substantially reduce and avoid greenhouse gas (GHG) emissions globally. As industries and countries worldwide struggle to find effective means to address their current and projected GHG emissions, waste sector activities represent an opportunity for emission reductions which has yet to be fully exploited and facilitate national efforts to address climate change.

Waste industry expertise lies in applying decades of experience and advanced technology to establish integrated systems around and appropriate to local conditions, rather than attempting to transfer any single solution from one region to another.

Furthermore, the waste sector offers a portfolio of proven, practical and cost effective technologies which can contribute efficiently to climate change mitigation. The IPCC states that a “wide range of mature technologies is available to mitigate GHG emissions from waste. These technologies include landfilling with landfill gas recovery (reduces CH<sub>4</sub> emissions), post-consumer recycling (avoids waste generation), composting of selected waste fractions (avoids GHG generation), and processes that reduce GHG generation compared to landfilling (thermal processes including incineration and industrial co-combustion.”<sup>1</sup>

In many of the megacities of the developing world (i.e. Sao Paulo, Dhaka, Buenos Aires, Bogotá, Rio de Janeiro) landfilling and composting are already producing huge GHG emission reductions and contributing to energy generation or to soil recovery processes.

Significant CO<sub>2</sub>-emission reductions can thus be achieved through waste prevention, recycling and reuse, biological treatment with land use of products, energy recovery, and engineered landfilling. Investments in waste management in developed countries have led to substantial net emission savings. For example, since 1990, the EU has reduced its emissions in the waste sector by 31 %, mainly via reduced methane emissions from landfills (EEA, 2011) In most developing countries the potential for net reductions is even larger. However, because “waste management decisions are often made locally without concurrent quantification of GHG

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<sup>1</sup> Waste management and GHG-mitigation technologies, Chapter 10, IPCC, Fourth Assessment Report, 2007. See: Bogner, J., M. Abdelrafie Ahmed, C. Diaz, A. Faaij, Q. Gao, S. Hashimoto, K. Mareckova, R. Pipatti, T. Zhang, Waste Management, In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

mitigation, the importance of the waste sector for reducing global GHG emissions has been underestimated” (IPCC, 2007).<sup>2</sup>

Despite the fact that “Post-consumer waste is a small contributor to global greenhouse gas (GHG) emissions” (IPCC, 2007); GHG emissions from the waste sector are anticipated to triple to 3bn tonnes by 2030 from developing nations unless effective waste policies are enacted.

Although minor levels of emissions are currently released through waste treatment and disposal (estimated at approximately 3-5% of total anthropogenic emissions in 2005), the prevention, reuse and recovery of wastes (i.e. as secondary materials or energy) impacts significantly on the avoidance of emissions in all other sectors of the economy.

A holistic approach to waste management has positive consequences for GHG emissions from the energy, agriculture, transport, and manufacturing sectors. The potential GHG savings from waste prevention, minimization and recycling could greatly exceed the savings that can be achieved by even advanced treatment of the remaining post-consumer waste.

Waste offers a significant source of renewable energy. Incineration and other thermal processes for waste-to-energy, landfill gas recovery and utilization, and use of anaerobic digester biogas can play important roles in reducing fossil fuel consumption and GHG emissions. Further, according to the IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation, selected waste to energy systems are included amongst the several important bioenergy options that are competitive today and can provide important synergies with longer-term options (IPCC, 2011).<sup>3</sup>

Waste prevention, resource recovery, reuse and recycling can minimize environmental impacts, lower costs, and reduce potential risks and liabilities across supply chains and in product disposal. As demand for raw materials intensifies and energy demand accelerates, the capacity to recover, reuse, and recycle key materials — as well as prevent waste in the first instance — is essential to promote greening the economy.

Using existing technologies with lower energy consumption and reuse of processed residuals that can be deployed at scale in virtually all regions and markets, waste management can be transformed into a net carbon reducer.

On the basis of its experience, research and knowledge base, and in line with the IPCC findings, ISWA asserts that the waste management sector can contribute substantially to reduce greenhouse gas (GHG) emissions and offers immediate, economical and swift opportunities to achieve substantial cuts in GHG emissions.

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<sup>2</sup> Ibidem.

<sup>3</sup> Chum, H., A. Faaij, J. Moreira, G. Berndes, P. Dhamija, H. Dong, B. Gabrielle, A. Goss Eng, W. Lucht, M. Mapako, O. Masera Cerutti, T. McIntyre, T. Minowa, K. Pingoud, 2011: Bioenergy. In IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation [O. Edenhofer, R. Pichs-Madruga, Y. Sokona, K. Seyboth, P. Matschoss, S. Kadner, T. Zwickel, P. Eickemeier, G. Hansen, S. Schlömer, C. von Stechow (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

In addition to climate benefits, implementing effective waste management systems brings a wide range of environmental, social and economic benefits. The IPCC states that “Existing waste-management practices can provide effective mitigation of GHG emissions from this sector: a wide range of mature, environmentally-effective technologies are available to mitigate emissions and provide public health, environmental protection, and sustainable development co-benefits.”<sup>4</sup>

Those benefits, comprise of reduced environmental degradation, resource depletion, resource and energy conservation, and improved sanitary and health conditions, are in principle the major outcomes of mitigation actions in developing countries. The significance of these benefits is further emphasized by the current waste emergency whereby half of the world’s population does not have access to collection and treatment services.. Climate change mitigation efforts in the waste sector can thus contribute to significantly improve living conditions for more than 3 billion persons while solving the waste emergency in a sustainable manner.

Sustainable waste management is also an expanding source for employment and green job creation and facilitates the transition to green economies and climate resilient societies. Within the last ten years jobs within the waste management sector in those regions that have implemented advanced waste management systems, like the EU, increased by around 35%, mainly in recycling, guaranteeing the recovery of important material and energy resources for the economy at the national and global scale as well contributing to job creation.

To tap the full potential for emission reductions in the waste sector, a number of challenges lie still ahead.

Sustainable financing mechanisms, technology transfer, adequate regulatory frameworks, strong coordination efforts and appropriate institutional arrangements need to be established or scaled up in order to significantly increase GHG emission reductions and avoidance.

Improved capability is necessary to identify the environmental and social benefits which are being targeted through the proposed management and engineering solutions. In particular, waste prevention, the top of the waste hierarchy, calls for a transparent identification of key players with their respective interests and operational limitations.

In addition, waste policies and regulations, consistently articulated with national climate change strategies can be strong national drivers to reduce GHG emissions, in particular in developing countries. In this regard, the transfer of sustainable technology in the waste sector to developing countries is crucial to reducing GHG emissions.

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<sup>4</sup> Executive Summary, Chapter 10, IPCC, Fourth Assessment Report, 2007. See: See: Bogner, J., M. Abdelrafie Ahmed, C. Diaz, A. Faaij, Q. Gao, S. Hashimoto, K. Mareckova, R. Pipatti, T. Zhang, Waste Management, In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

ISWA has identified and analysed diverse policy instruments and tools to drive waste prevention, waste minimization and resource management, including inter alia, the following ones:

- Introduce or enhance recycling schemes
- Introduce financial stimuli
- Extended producer responsibility
- Green public procurement
- Integration of waste prevention in environmental permitting of SME
- Integration of environmental criteria in product regulation
- Sustainable design

This set of policies instruments will allow optimizing material use and material recoverability in the life cycle of products, decreasing material use in consumption and widely and effectively improving the collection and recovery of materials, diminishing pressure on resources and contributing to address climate change.

## **2. Recommendations for the consideration of the Parties**

ISWA suggests that Waste Management and Recycling should be adequately recognized as one of the important areas of action to facilitate enhancing mitigation ambition by the ADP in the fight against climate change and include means to promote the implementation of mitigation actions in the waste sector pursuant to those levels of ambition.

Given that the waste management sector's climate benefits rely on existing technologies and proven methodologies, and it is ready today for immediate implementation via public-private partnerships and other bilateral initiatives as well as through mitigation actions, including nationally appropriate mitigation actions (NAMAs), sector-based approaches, and through new market mechanisms to be created in the context of a future climate regime, the following opportunities for action exist in recognize the climate mitigation potential of waste management and recycling:

- Integrate and prioritize waste management and recycling strategies in national plans and initiatives, including Nationally Appropriate Mitigation Actions
- Establish public-private partnerships, sector-based programs, and other international mechanisms to disseminate best practices, attract new public and private investment flows in basic infrastructure, and strengthen domestic regulatory standards to maximize the climate benefits of waste management and recycling at the national and global scale.
- Ensure access to climate finance for those mitigation actions in the waste sector.
- Include waste and resource management issues in, inter alia, the following areas for further work:

- In a systemic manner when considering mitigation efforts and means of implementation.
- In the consideration of technology development and transfer under the Convention.
- In the General guidelines for domestic measurement, reporting, and verification of nationally appropriate mitigation actions by developing country Parties.

Further to that, ISWA is ready to participate in the proposed series of workshops beginning in 2013, in order to contribute to identify and catalyse the implementation of initiatives and actions to rapidly, cost-effectively, urgently, and equitably reduce greenhouse gas emissions through the dissemination of information on existing technologies and proven methodologies in the waste management sector, that are ready today for immediate implementation, strengthening mitigation actions and facilitating mitigation efforts, in particular in developing countries.

As regards methodological approaches to measure and account for GHG emissions as well as measuring, reporting and verification systems, ISWA acknowledges that an accurate measurement and quantification of GHG emissions in the waste sector 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 life cycle of materials and energy.

ISWA further suggests the consideration by Parties and the development of the following initiatives:

- a. Improved, harmonised and transparent approaches for both the direct and indirect emissions associated with waste management activities to complement existing methodologies.
- b. Elaborate more consistent and coordinated data collection approaches and standards to support the improved methodologies and reduce accounting uncertainties.
- c. Identify and determine environmental benefits, especially those which impact other sectors significantly.