

State of the Nation Report

landfilling practices and regulation in different countries



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Prepared by the Working Group on Landfill

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1. INTRODUCTION

The State of the Nation Report has been prepared by the ISWA Working Group on Landfill to illustrate the current practices and legislation regarding landfill operation around the world. In the majority of cases the reports are from regions that have had landfilling in place for many years and therefore have reasonably advanced operational practices in place such as for leachate management and gas capture.

In many developing economies uncontrolled open dumping is more prevalent than controlled and adequately engineered landfills. Open dumps are a significant source of methane and are the major contributor of greenhouse gas emissions by the waste sector. Not only are open dumps or mismanaged landfills a threat to the climate, they are also a health and safety hazard and may cause considerable environmental damage, such as contamination of water bodies and soil. Much needs to be done to expedite the transition from open dumps to sustainable landfills.

The quantity and type of waste received by landfills is also a pertinent theme. The type of waste received may accentuate environmental degradation and/or climate impacts, such as bio-waste (putrescible waste). When landfills receive potentially recyclable or recoverable materials, the result is a net loss of resources, which contributes to resource scarcity.

Despite the necessary trend for increasing diversion of resources and therefore increasingly less waste disposed in landfills, landfills remain an essential infrastructure.

2. OVERVIEW AND GLOBAL TRENDS IN LANDFILL MANAGEMENT

The general trend in landfill management is toward improved operation and maintenance so that environmental degradation and human health and safety impacts are minimised. Also becoming more widely spread is the capture of landfill gas to convert and sell as energy.

In regions where zero waste and resource efficiency policies are in place, increasingly waste/resources are being diverted from landfills in favor of recycling or recovery (material and energy). Certain measures such as landfill taxes, recycling and recovery targets, and landfill bans or diversion targets are resulting in less waste to landfills, particular with the implementation of the Waste Framework Directive and Landfill Directive in the European Union Member States.

In other regions landfilling remains the predominant practice and policy has not had a significant impact on reducing the volume of waste to landfills.

The siting of new landfills, particularly in countries where land is not abundant is also a growing issue. The trend is toward fewer but larger regionally sited landfills, which has seen the closure of many landfill sites over recent years.

The table on page 3 gives an overview of waste practices for municipal solid waste for OECD countries. The data is a little dated but nevertheless reflects the wide scale of differences in practice with respect to the volumes of waste landfilled.

3. FURTHER INFORMATION

If you have knowledge on the landfilling practices in your country and a State of the Nation Report is missing, your contribution is most welcome. Also if you notice that any information is recorded inaccurately or the situation has changed please contact rwilliams@iswa.org

DISPOSAL OF MUNICIPAL WASTE, latest year available
(amounts in 1 000 tonnes)

		Year	Total amounts of waste generated	% of pop. served by municipal waste services	Recycling	Composting	Incineration with Energy Recovery	Total incineration	Landfill	% landfill in 1995	Other
Canada	*	2004	13375	99,0	3582	1669	..	..	..	..	..
Mexico	*	2006	36088	90,0	1175	-	-	-	34913	98	..
USA	*	2005	222863	100,0	52980	18643	30300	30300	120939	57	..
Japan	*	2003	54367	99,8	9157	..	37656	40237	1863	11	3110
Korea	*	2004	18252	99,3	8975	-	2113	2637	6641	72	..
Australia	*	2003	8903	..	2701	..	..	..	6202	..	..
N.Zealand	*	1999	1541	..	236	..	..	..	1305	89	..
Austria	*	2004	4588	100,0	1218	2052	969	969	310	36	41
Belgium	*	2003	4608	100,0	1433	1049	1453	1581	533	48	..
Czech Rep	*	2004	2841	100,0	36	92	396	397	2267	..	..
Denmark		2003	3618	100,0	925	553	1955	1955	184	17	..
Finland	*	2004	2374	100,0	715	..	184	236	1423	65	..
France		2005	33963	100,0	5380	4870	10805	11475	12238	45	-
Germany	*	2004	48434	100,0	16052	8305	11892	11892	8578	..	3607
Greece	*	2003	4710	100,0	382	-	-	-	4328	93	..
Hungary	*	2003	4387	89,5	117	47	245	245	3968	91	11
Iceland		2004	147	100,0	23	13	13	13	106	75	-
Ireland	*	2005	2847	76,0	964	..	..	..	1883	92	..
Italy	*	2005	31677	100,0	..	10546	3781	3824	17225	93	..
Luxembourg	*	2003	306	100,0	71	59	119	119	58	31	..
Netherlands	*	2004	10161	100,0	2581	2387	3281	3281	175	30	..
Norway	*	2004	1746	99,0	588	267	431	431	453	..	8
Poland		2005	9354	..	368	318	-	44	8623	98	..
Portugal	*	2005	5009	100,0	430	314	1057	1057	3210	..	..
Slovak Rep.	*	2005	1468	100,0	17	21	2	183	1144	..	103

Spain	*	2004	22735	..	2036	7433	1505	1515	11752	80	..
Sweden	*	2005	4347	100,0	1474	454	2182	2182	210	35	26
Switzerland	*	2005	4855	99,0	1645	770	2416	2416	24	13	..
Turkey	*	2004	24237	72,8	-	349	-	-	23714	96	174
UK	*	2005	35077	100,0	6100	3262	2933	2939	22559	83	217

Source: OECD