

Landfills and the Dark Side of the Circular Economy

10 years of ELFM: Status quaestionis

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Leuven, ELFM V Symposium, 06-02-2020

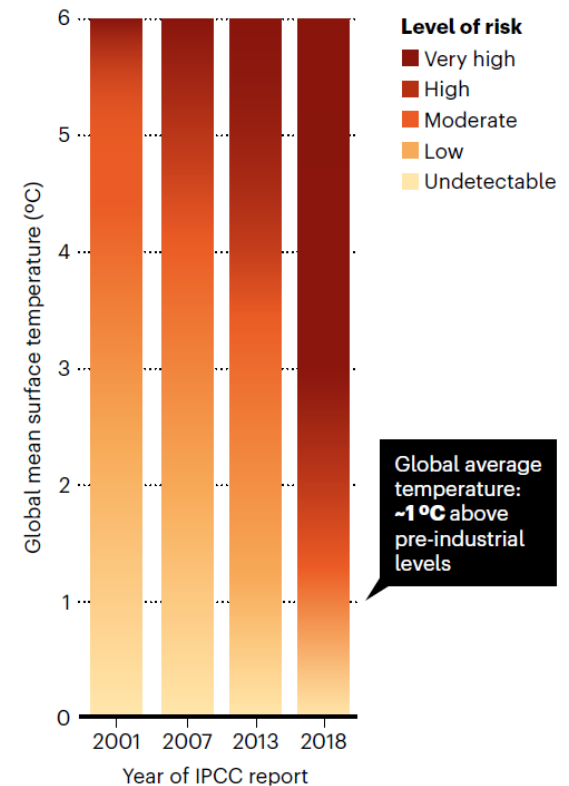


Setting the scene

“The scientific evidence is clearer day by day [with respect to] how quickly and disastrous the consequences of unrestrained climate change are affecting us. (...) I am just reporting what is actually happening. It is urgent, it is essential; it is undeniable that we need to take action. The risks will only increase, as the earth gets hotter and the climate gets more disturbed.”

TOO CLOSE FOR COMFORT

Abrupt and irreversible changes in the climate system have become a higher risk at lower global average temperatures.



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Greta Thunberg?



Images (PW):
ETN NEW-
MINE team
meeting Greta
Thunberg in
Stockholm, 8-2-
2019

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(Frans Timmermans, EC, 28-1-2020)

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(Executive Vice President Timmermans, European Green Deal, Conference first European Climate Law, Brussels, 28-1-2020)



Setting the scene: the European Green Deal & Circular Economy

A new circular economy Action Plan will help modernise the EU's economy

The Commission will present a **'sustainable products' policy**, which will prioritise reducing and reusing materials before recycling them. Minimum requirements will be set to prevent environmentally harmful products from being placed on the EU market. False green claims will be tackled.

Efforts will focus first on resource intense sectors such as:



textiles



construction



electronics



plastics



The Commission will propose measures to ensure that **all packaging in the EU is reusable or recyclable** by 2030.



New business models based on renting goods and services will help to shift **consumption patterns away from single or limited use products**.

The European Green Deal & moving up the Waste Hierarchy

“The circular economy action plan (...) will prioritise reducing and reusing materials before recycling them”
(EC, COM(2019)640)

Most favoured option

Reduce

lowering the amount
of waste produced

Reuse

using materials repeatedly

Recycle

using materials to make
new products

Recovery

recovering energy
from waste

Landfill

safe disposal of waste
to landfill

Least favoured option

What to do ?

“The question is, what can we do? (...) we will have [to] help people understand that doing nothing does not mean that everything stays the same. (...) By doing nothing, the problem will get much worse but, on the other side, by acting we can actually tackle the problem.”

(Frans Timmermans, EC, 28-1-2020)

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What does “Doing nothing” mean for Europe’s 500,000+ landfills?



This has been **THE** question addressed during:

- 5** Enhanced Landfill Mining **Symposia** (2010, 2013, 2016, 2018, 2020)
- 3** **ELFM EP Seminars & EIP workshops** (2015, 2018, 2018)
- 7** **General Assemblies of EURELCO**
- >10** **European Projects** - incl. NEW-MINE, COCOON, RAWFILL, REGENERATIS...
- 2** **Special Issues** (Journal of Cleaner Production & Detritus)
- >10** **Animation videos and documentaries**
- >100** **Papers** (peer-review journal & conf' papers)
- >20** **Interviews & featured articles in newspapers**

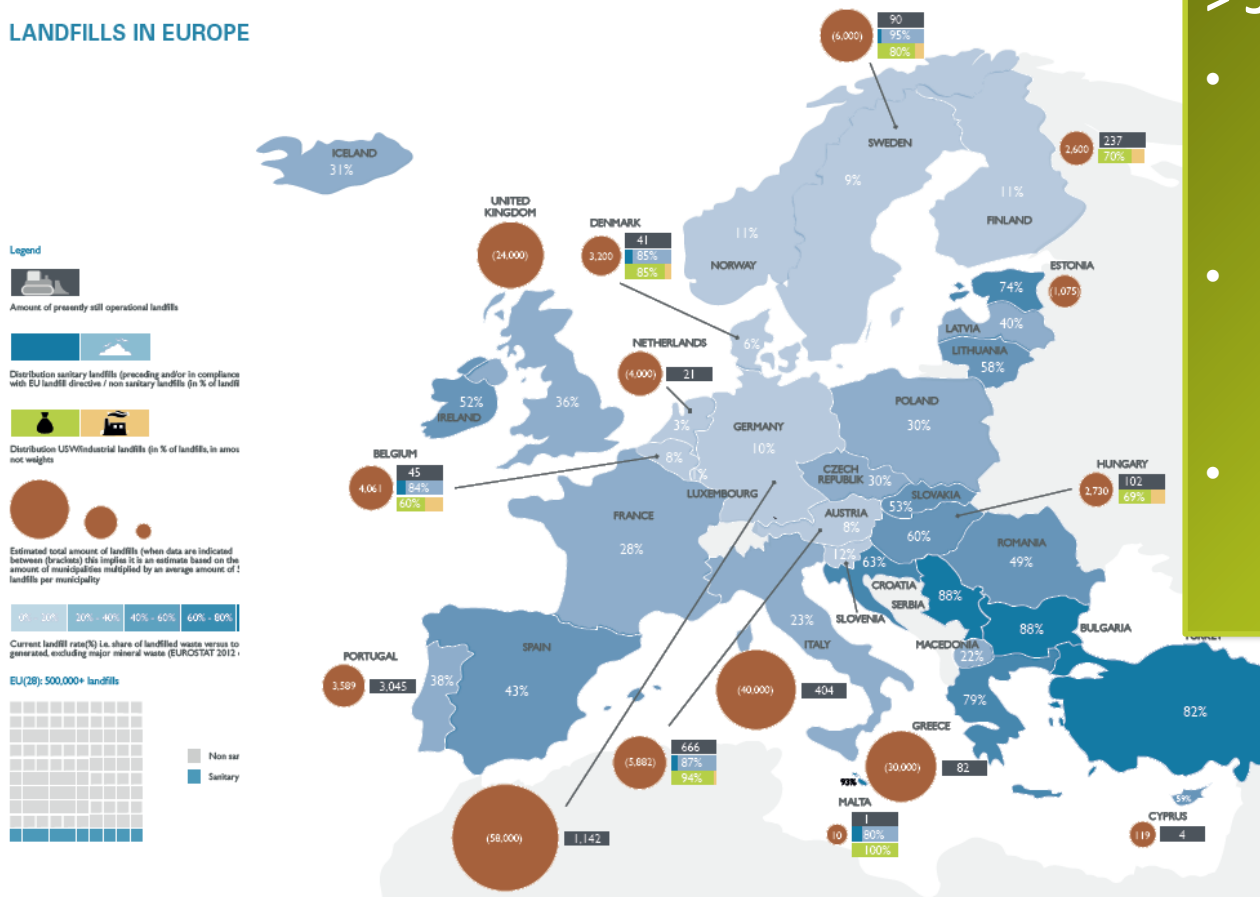
What does “Doing nothing” mean for Europe’s 500,000+ landfills? (1st ELFM EP Seminar, 2015)



Credits image: Nicolas Herbots

What does “Doing nothing” mean for Europe’s 500,000+ landfills?

LANDFILLS IN EUROPE



> 500,000 landfills in EU-28

- 90% = “non-sanitary landfills”, preceding Landfill Directive
- Majority of landfills are (smaller) MSW-type landfills
- Minority of landfills are (larger) industrial waste landfills

The EU Landfill Directive suffers from multiple blind spots (cf. 2nd ELFM EP Seminar (Nov' 2018))

For EU's historic landfills:

- LFD does not address the landfills predating 1999 (> 90% of EU's landfills)

For Sanitary Landfills:

- LFD offers NO ANSWER to long-term liabilities: aftercare funds are underfunded
- Long-term liability increasingly important as new threats, e.g. **climate change**, will impact landfills in coastal & alluvial areas, requiring remediative action in the future



Photo: SIM² KU Leuven (Giorgian Dinu)



Photo: © EU/EP

Landfills and the Dark Side of the Circular Economy (even in v2.0)



Landfills and the Dark Side of the Circular Economy (even in v2.0)

“As part of this [European] Green Deal the Commission will also launch a new Circular Economy Action Plan (...), moving up the Waste Hierarchy. Undoubtedly this is a step in the right direction.

Nevertheless, this shift towards a more pro-active Circular Economy vision does not yet address the question of what Europe and other countries in the world will do with the vast amounts of industrial and consumer waste that have been disposed of in waste dumps and landfills over the past 100 years. In this context Enhanced landfill mining (ELFM) has been proposed as an “out of the box” approach to address the dark side of the Circular Economy vision: i.e. how can we deal with the waste of the past, irrespective of the urgent need to avoid new waste creation and disposal in the future?

(Machiels, Bernardo & Jones, Detritus, 2019, 8, 1-4)

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The new circular economy action plan needs to address the dark side of the CE

Landfills are here - Denying their existence will not make them disappear

“ELFM needs to become institutionalized and recognized as a potential option for landfill management and recovery of natural resources.” (...) “A first step of such a process could be to **legally define ELFM** and provide this emerging concept with a **clear regulatory framing.**”



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Paradigm shift in line with the high-level ambitions of the European Green Deal:

From landfills as **“static end stations for obsolete waste” [linear economy]** to...

Landfills as **“dynamic resource stocks”** to be re-integrated in the **circular economy** when time is right



Reinstate the (2017) ELFM Amendment in the new circular economy action plan?



On 14-3-2017 EP voted YES to include Enhanced Landfill Mining in the EU Landfill Directive

- Amendment was **blocked** in May 2017 during Trilateral Meeting EP, EC, Council
- Why? Eastern EU Member States have **other, more pressing priorities** in waste management, such as avoidance of landfilling and setting up of recycling schemes

“The Commission shall further examine the feasibility of proposing a regulatory framework for enhanced landfill mining so as to permit the retrieval of secondary raw materials that are present in existing landfills. By 31 December 2025 Member States shall map existing landfills and indicate their potential for enhanced landfill mining and share information.”

Expand “ELFM-only” approach to a Dynamic Landfill Management (DLM) framework (cf. COCOON)

A phased approach is proposed

- Not all landfills should be mined (e.g. priorities for landfills in areas with high flooding risk)
- Timing of mining can be modulated
- Interim use of landfill surfaces generates revenues for subsequent remediation and/or mining activities in longer term



- ✓ DLM is an **integrated framework** with multiple objectives: pollution prevention, land reclamation & restoration, new landfill void space, interim use of landfill surface, recovery of materials & energy
- ✓ DLM requires a **cross-cutting approach** with respect to distinct EU policies and legislations

→ **European Green Deal & new circular economy action plan**

Landfills and the Dark Side of the Circular Economy (even in v2.0)

“The importance of the required paradigm shift with respect to the definition of a “landfill” – from a static (linear) view towards a dynamic (circular) perspective – will need to be put on the agenda again in the coming years so that we can clean up our historic waste legacy. Only then can we truly speak of a Circular Economy 2.0 version in which “climate and resource frontrunners” (EC 2019) are facilitated rather than blocked.”

(Machiels, Bernardo & Jones, Detritus, 2019, 8, 1-4)

AND NOW... LET THE SYMPOSIUM BEGIN!

