

SWEDISH ENVIRONMENTAL PROTECTION AGENCY



Supporting Albanian Negotiations in Environment, Chapter 27 (SANE27)

Mbështetja e Negociatave Shqiptare në Mjedis, Kapitulli 27 (MNSHM27)

Stöd till Albanien i förhandlingar av miljökapitel 27

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MINISTRIA E TURIZMIT DHE MJEDISIT



Requirements of the EU policy and legislation regarding waste management – Trends in waste management towards a Circular Economy

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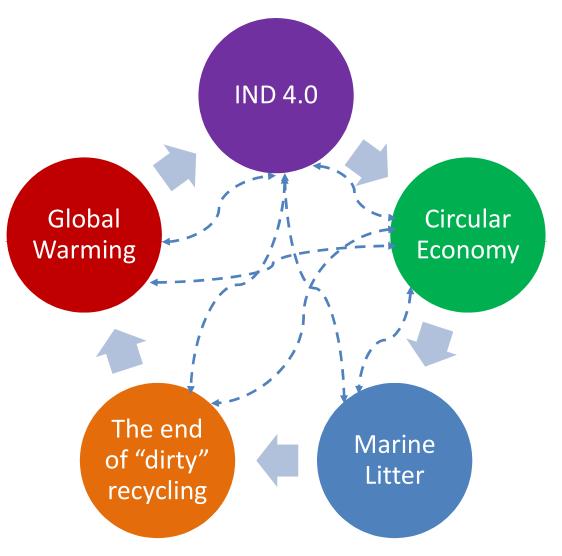


Contents

- The global picture and the end of business as usual
- The European Green Deal and Circular Economy
- Towards a new paradigm in waste management

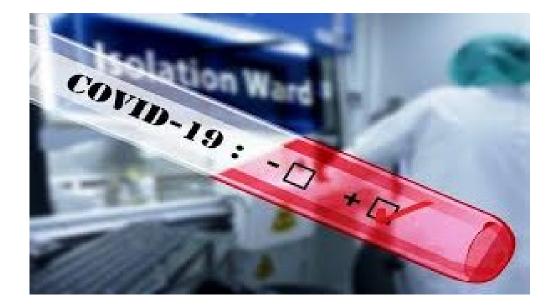


The global picture





The end of "business as usual"





COVID19 global impacts

- We believed that a global pandemic similar to Spanish flu will kill 70 million people and trim 5% of the world GDP
- Now we know that the death toll is around 1 million but the world GDP will be reduced around 8% comparing to expectations
- Our interconnected world is more vulnerable and fragile than we thought





- COVID19 is another element of "the end of business as usual". The unexpected becomes the new normal.
- COVID19 demonstrates that health protection is a global challenge that requires more and better global cooperation and coordinated response – either we will overcome it all together or we have to forget the world as we know it.
- COVID19 highlights the importance of science and data driven decision – making. It reminds everyone that using the right experts and know-how is a matter of life or death.
- Still, global pandemics both unify and fragment our world the way we will go out of the current crisis will determine the future of global cooperation and international aid patterns.



COVID19 & Waste Management

• Pandemics are urban – MSWM is a major urban service that protects public health and environment, a major contribution to our daily living standards.

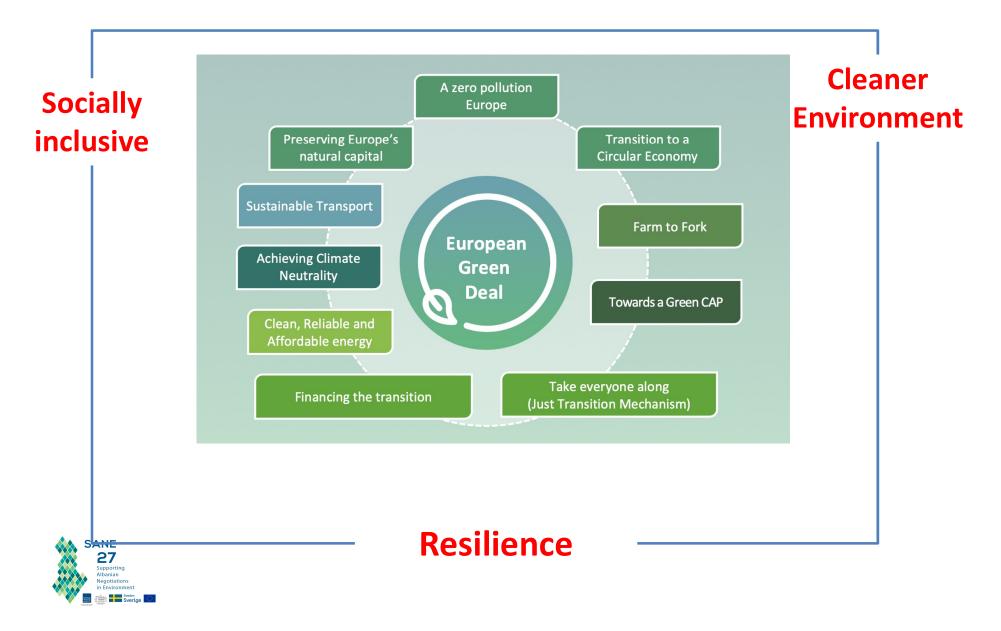
• We recognize the importance of a good health system only when we miss it – the same is true for waste management too.

• Waste management is an essential service that should be continuously delivered 24/7 during the pandemics too – governments and local authorities should recognize it and put proper measures in place e.g. UK

MSWM during pandemics should shift its priorities



European Green Deal



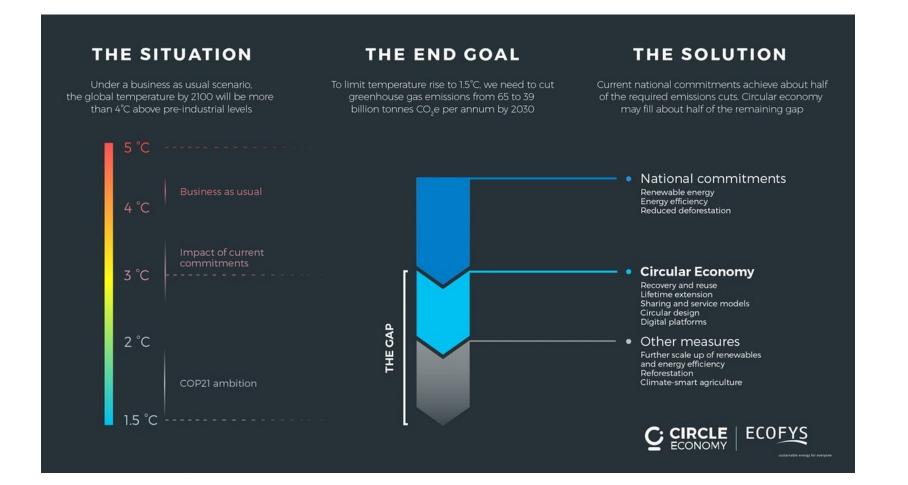
What is Circular Economy?







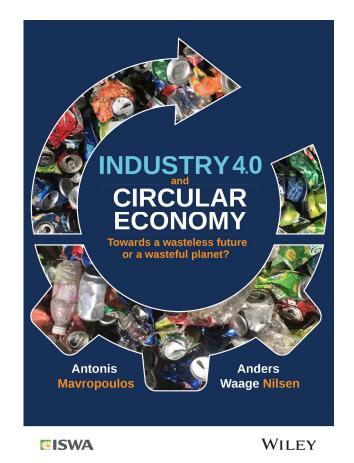
The importance of domino effects







Towards a new paradigm in SWM

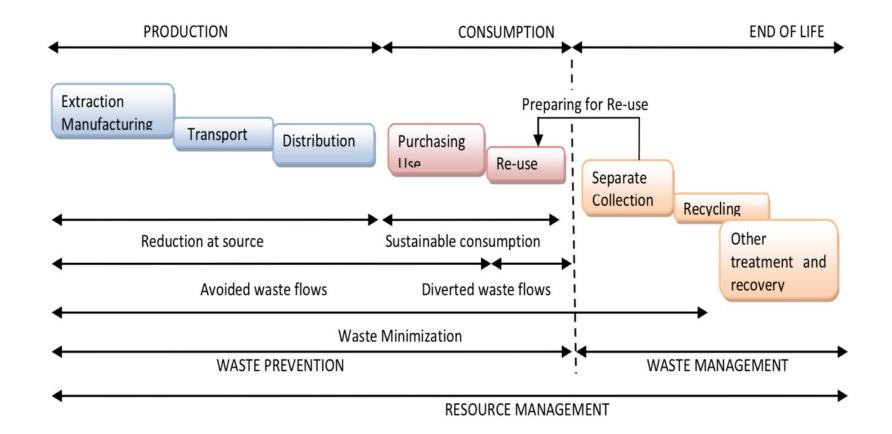


Waste management goes beyond waste

- Rethinking recycling in CE
- The importance of final sinks
- The challenge of digitalization and IND4.0

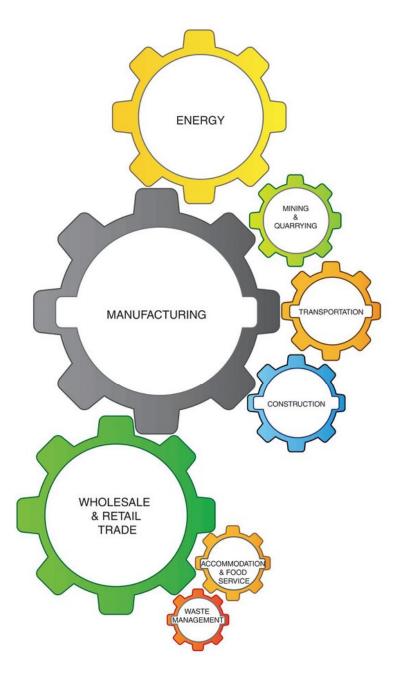


Waste management beyond waste





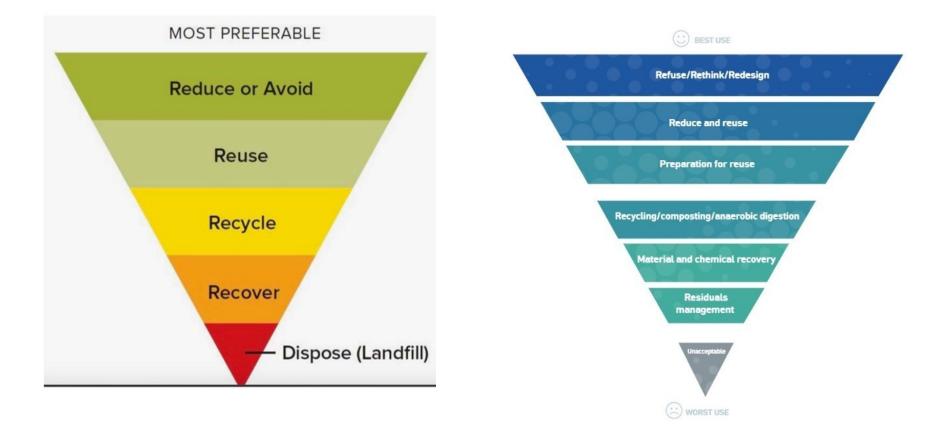
SWM as a Catalyst



Source: Mavropoulos & Nielsen, Industry 4.0 and Circular Economy, Towards a Wasteless Future or a Wastefull Planet? Wiley Publications, 2020



Rethinking recycling in CE





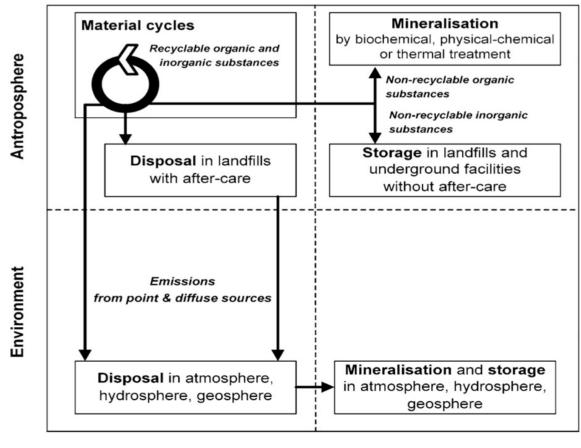
Usual misconceptions on recycling

Misconceptions about recycling	
Recycling means displacement	Market conditions will determine the fate of the
of primary materials	recovered materials - recycling does not automatically
	bring the benefits of the displacement of primary
	materials, which are the main benefits.
Recycling materials multiple	Cascading effects and chemical pollution undermine the
times is better than once	recycling benefits and at a certain point the inclusion of
	virgin materials is definitely required, even for materials
	like aluminium and steel.
Closed loops are better than	This is also a confusing argument because the logistics of
open ones	the closed loop and the exact type of substituted
	materials finally determine the preference order.
Recycling is a decentralized	This is completely misleading for municipal recycling in
activity with small financial	middle and high- income countries. The cost of source
cost and huge financial	separation programs and the cost pf reprocessing
benefits	materials in Material Recovery Facilities (MRFs) are
	usually 4-5 higher than the revenues from the sales of
	recyclables.



Source: Mavropoulos & Nielsen, Industry 4.0 and Circular Economy, Towards a Wasteless Future or a Wastefull Planet? Wiley Publications, 2020

The importance of final sinks



Temporary sinks

Final sinks



Source: Kral, U.; Morf, L. S.; Vyzinkarova, D.; Brunner, P. H. Cycles and Sinks: Two Key Elements of a Circular Economy. *J Mater Cycles Waste Manag* **2019**, *21* (1), 1–9. https://doi.org/10.1007/s10163-018-0786-6

IND4.0 will deliver a plethora of new products, materials and chemical substances that will become, sooner or later, part of the waste streams. The heterogeneity of MSW is expected to increase.

Final sinks are becoming a key-element for a more circular economy

Circular Economy requires the development of closed loops to provide clean materials to displace material extraction. The cleaner the cycle the higher the demand for safe final sinks for the contaminants removed.

Waste Management has at its core the need to protect human health and environment by ensuring safe removal and disposal of hazardous and nonrecyclable materials and substances



Source: Mavropoulos & Nielsen, Industry 4.0 and Circular Economy, Towards a Wasteless Future or a Wastefull Planet? Wiley Publications, 2020

The challenge of IND4.0





Instead of conclusions

