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Specifications to apply UNFC to Anthropogenic Resources

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Application of UNFC to minerals and anthropogenic resources: Sustainable management of raw material resources, 26 August 2020

Background

UNFC & Anthropogenic Resources



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UNFC communicates the viability of resource recovery projects

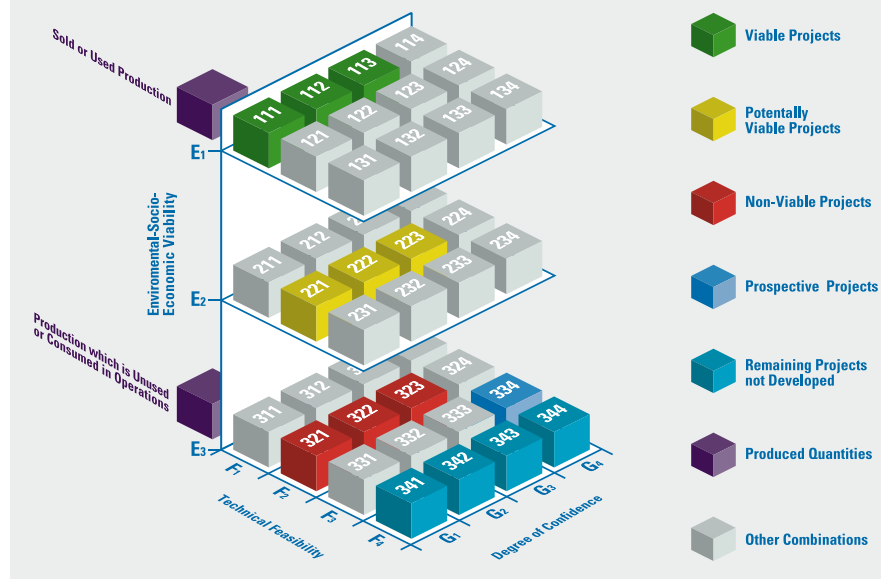


Figure taken from Heuss-Albichler, S., Z. Horváth, U. Kral, A. Lovik, S. Mueller, M. Simoni, J. Stegemann, P. Wäger, and A. Winterstetter (2020). Strategic roadmap on Sustainable Management of Anthropogenic Resources (MINEA Deliverable). COST Action Mining the European Anthroposphere (MINEA), DOI: <https://doi.org/10.5281/zenodo.3739269>

UNFC is applicable to different resource types

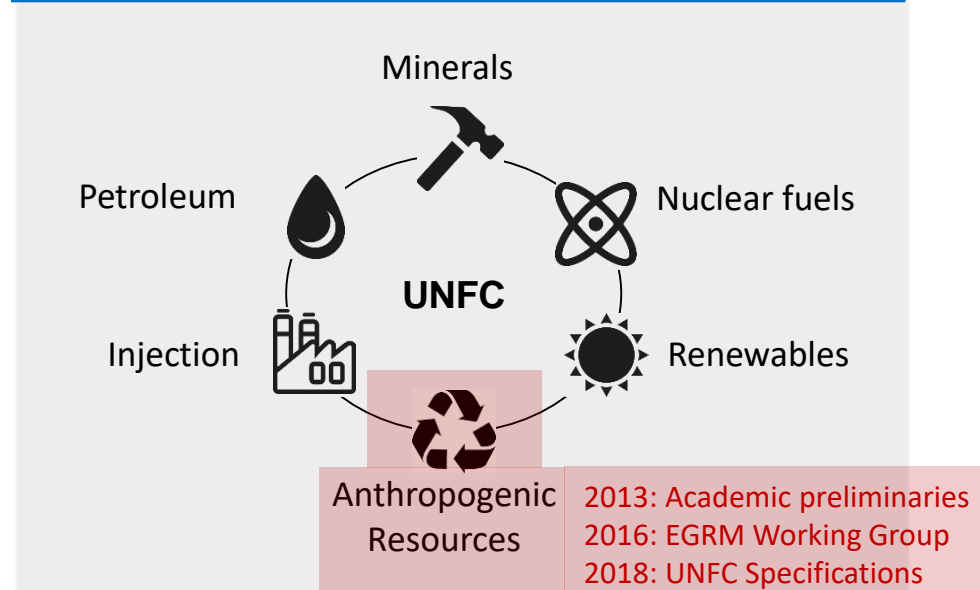


Figure adopted from Kral, U., S. Heuss-Albichler, J. Fellner, D. Laner, F. Müller, H. Rechberger, M. Simoni, L. Weber, F.-W. Wellmer, and A. Winterstetter (2018). Vorratsklassifikation von anthropogenen Ressourcen. Recy & DepoTech 2018, 7-9 November 2018. Icon source: Redesigned by Ingeborg Hengl based on UNECE webcontent (<https://www.unecce.org/energy/welcome/areas-of-work/unfc-and-sustainable-resource-management/applications.html>)

Scope

Anthropogenic Resources



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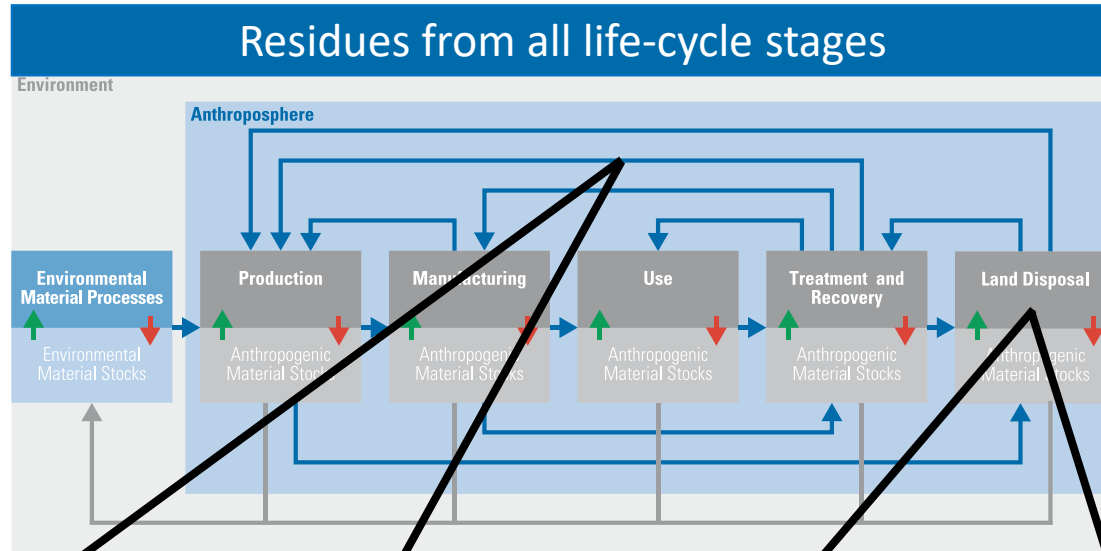


Figure taken from Heuss-Albichler, S., Z. Horváth, U. Kral, A. Lovik, S. Mueller, M. Simoni, J. Stegemann, P. Wäger, and A. Winterstetter (2020). Strategic roadmap on Sustainable Management of Anthropogenic Resources (MINEA Deliverable). COST Action Mining the European Anthroposphere (MINEA), DOI: <https://doi.org/10.5281/zenodo.3739269>

Examples

<h4>Residues from Buildings & Infrastructure</h4>	<h4>Residues from Waste Incineration</h4>	<h4>Residues in landfills</h4>	<h4>Residues from extractive industries</h4>
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Image Source: Adobe Stock; from left to right: No. 163057800 by helmutvogler, No. 10242258 by kenzo, No. 336005879 by Perytsky, No. 229769002 by Alexey Slyusarenko.

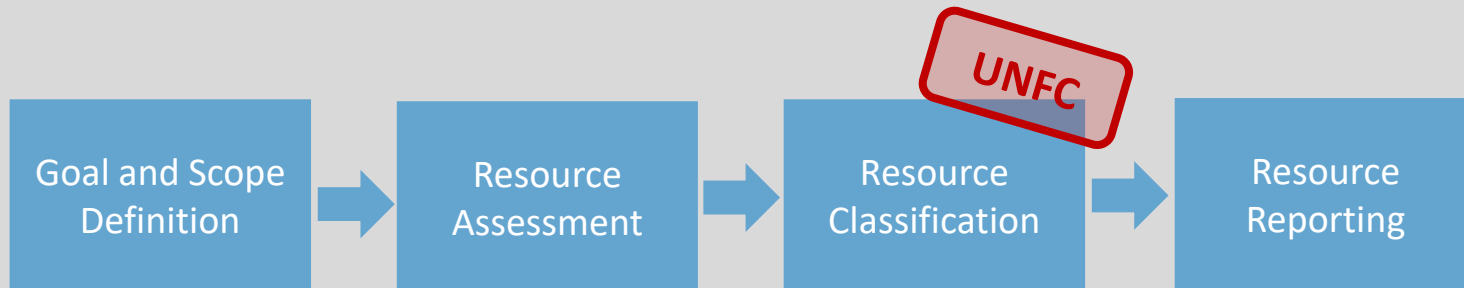
Approach

Integrating UNFC



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Procedure to Estimate and Communicate the Viability of Anthropogenic Resource Recovery



UNFC documents

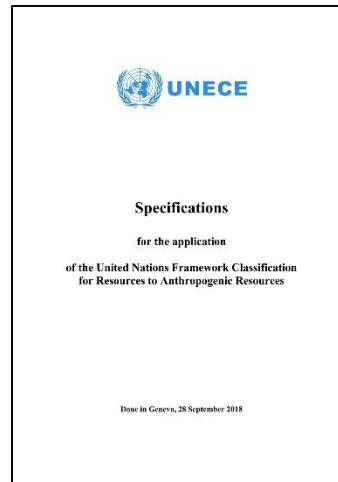
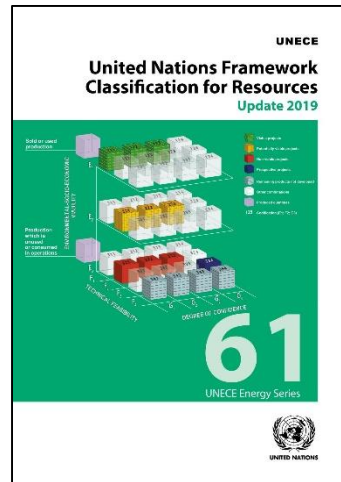


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Generic Terminology & principles

Specifications Anthropogenic Resources

Guidelines



<https://doi.org/10.5281/zenodo.3759026>

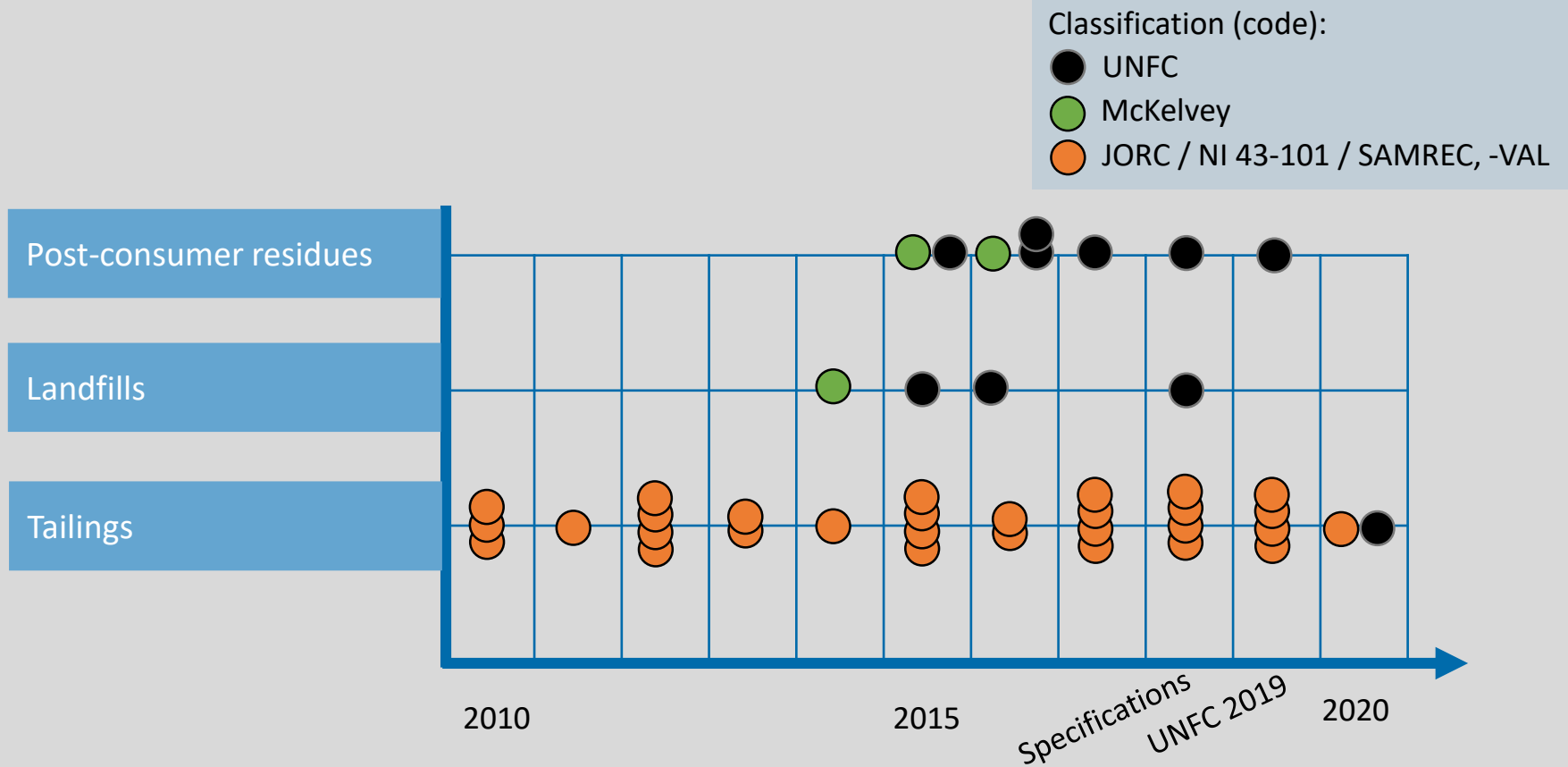
Application

Case studies



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Case studies by type of classification (code)



Data taken from: Blasenbauer, D., A. Bogush, T. Carvalho, P. Cleall, C. Cormio, D. Guglietta, J. Fellner, M. Fernández-Alonso, S. Heuss-Aßbichler, F. Huber, U. Kral, M. Kriipsalu, J. Krook, D. Laner, J. Lederer, B. Lemière, G. Liu, R. Mao, S. Mueller, M. Quina, D. Sinnott, J. Stegemann, M. Syc, K. Szabó, T.T. Werner, E. Wille, A. Winterstetter, and G. Žibret (2020). Knowledge base to facilitate anthropogenic resource assessment (MINEA Deliverable). COST Action Mining the European Anthroposphere (MINEA)., DOI: <https://doi.org/10.5281/zenodo.3739164>



- Revising the Specifications
 - to be consistent with UNFC 2019
 - based on case study experiences
- Complementing the Specifications with Guidelines



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Thank you

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