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# Case Study Anthropogenic resources

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

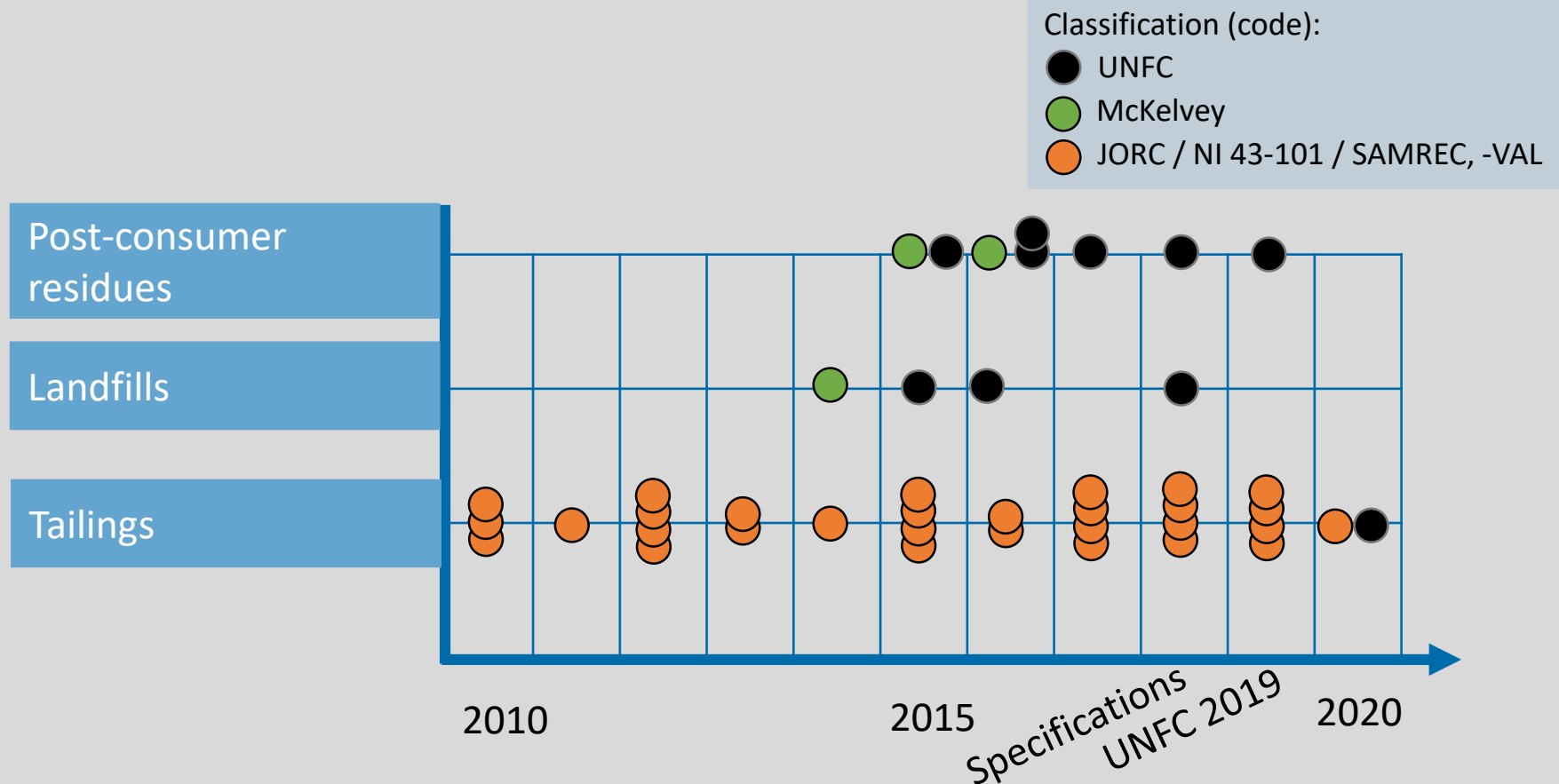
# Case Studies

## Anthropogenic Resources



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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. Lemièrre, G. Liu, R. Mao, S. Mueller, M. Quina, D. Sinnett, 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>

# Case Study: Tailings

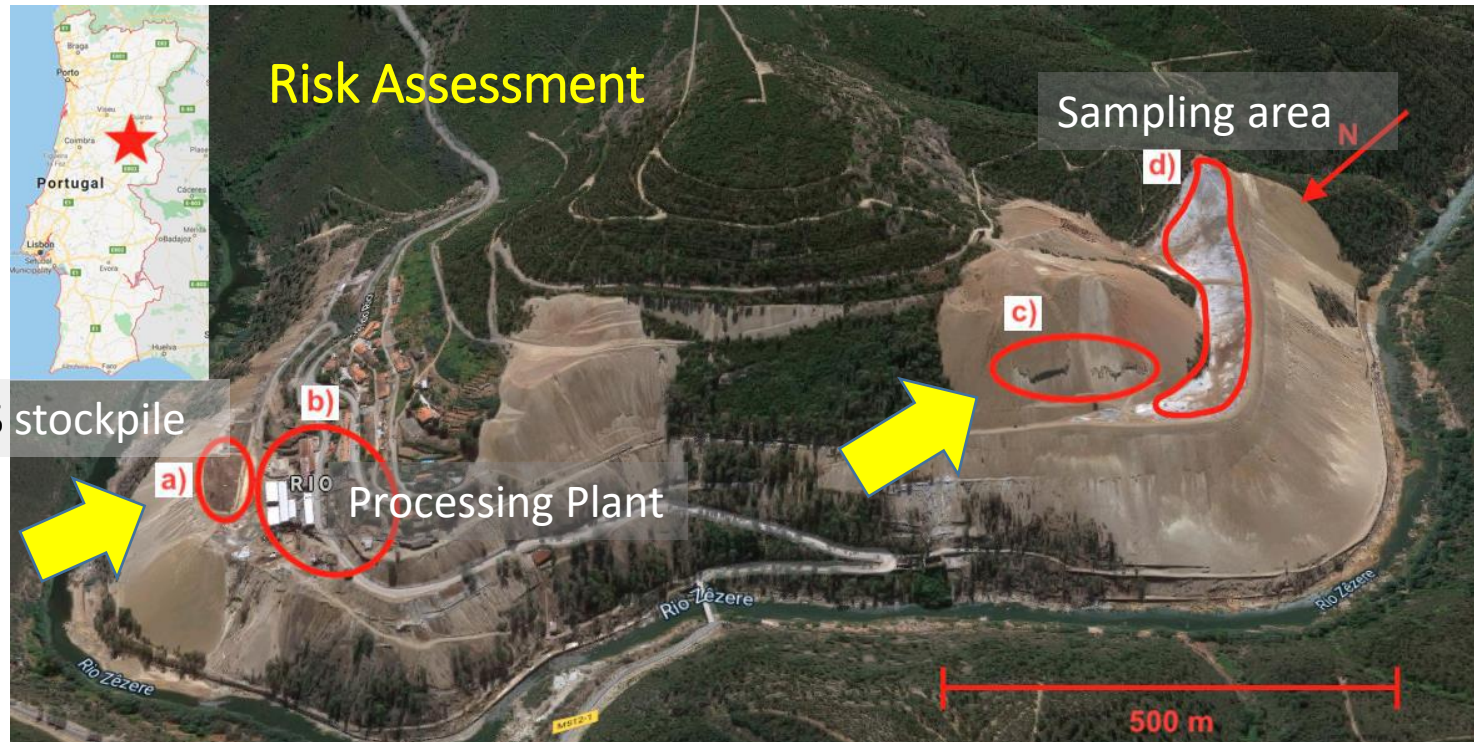
## Anthropogenic Resources



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- Cabeço do Pião tailings deposit in Portugal

Risk Assessment



FeAsS stockpile

Scenario 0 → Rehabilitation →  $\Sigma$  wastes = 1,629,900 t

- Environmental and social impact 😊 Economic viability 😞

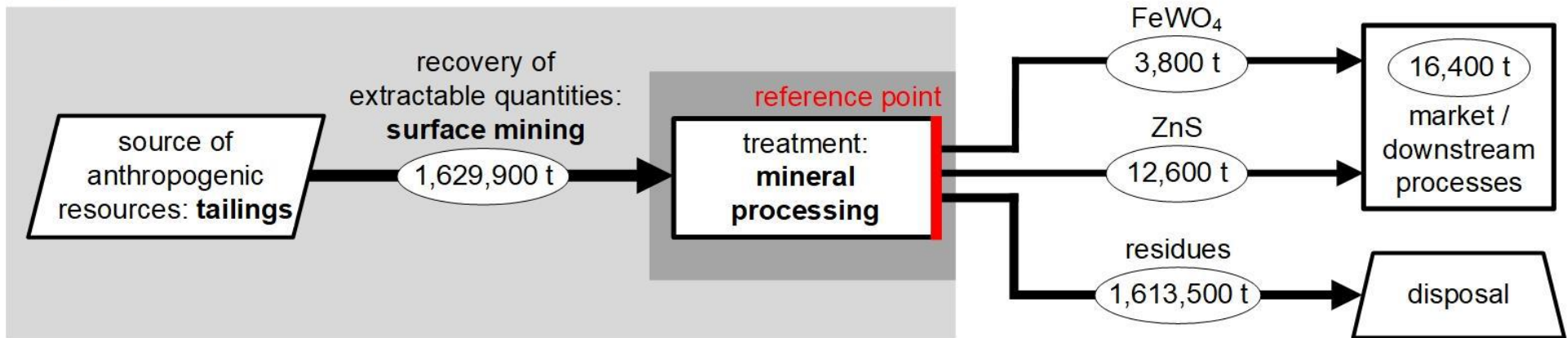
# Scenario 1

## Anthropogenic Resources



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Scenario 1  $\Sigma$  commodities + wastes = 1,629,900 t



- Economic viability 😊
- Environmental impact 😞
- Social impact 😞



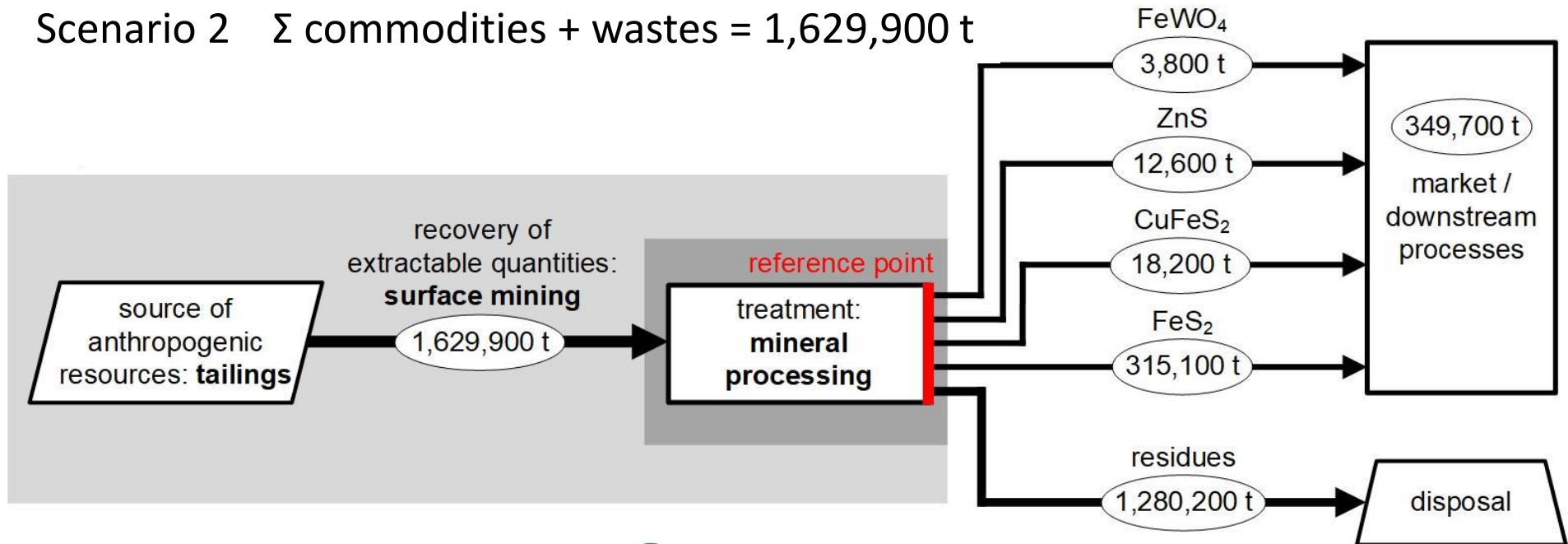
# Scenario 2

## Anthropogenic Resources



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Scenario 2  $\Sigma$  commodities + wastes = 1,629,900 t



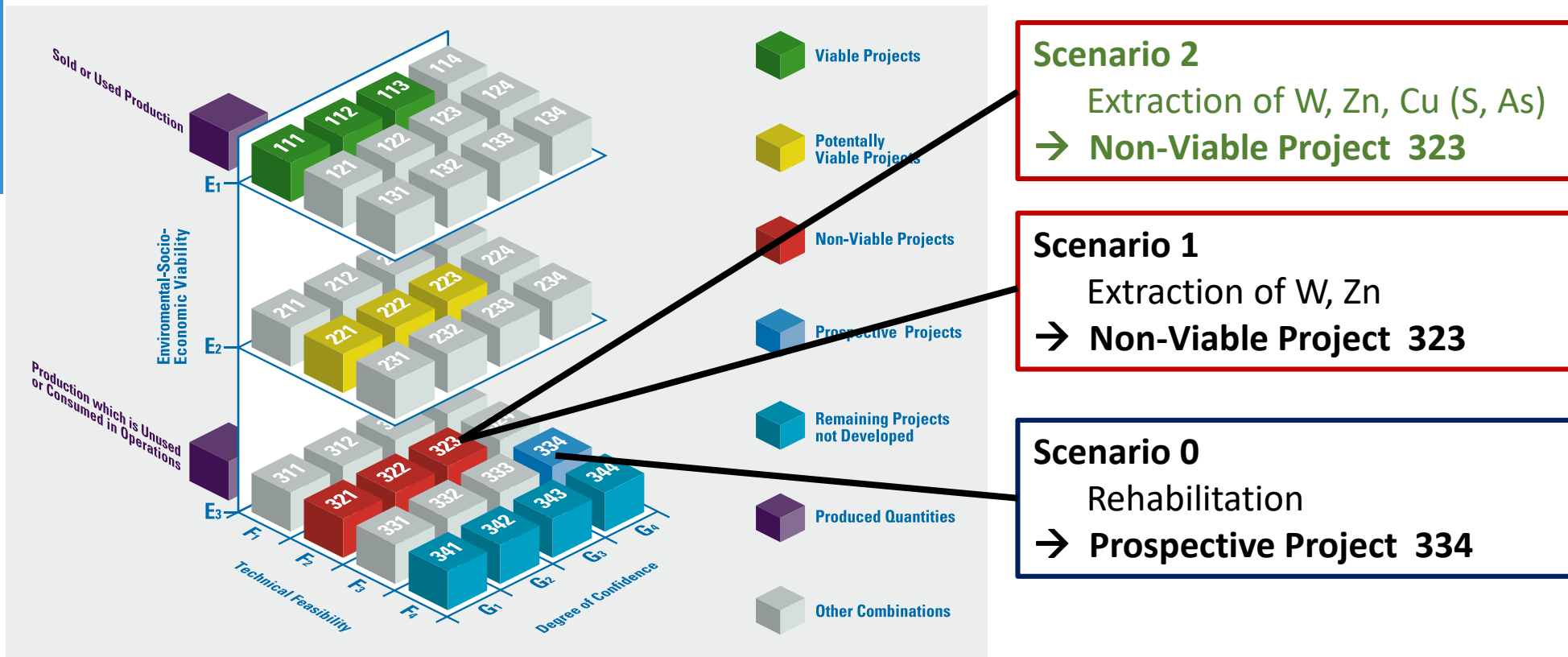
- Economic viability 😊
- Environmental impact 😊
- Social impact 😊

# Classification

## Anthropogenic Resources



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Non-Viable Project, because  
 → very early stage of a project  
 → further data needed to assess the potential for further development



UNFC is a powerful tool for a sustainable management of raw material resources

- Enables the comparability of resource projects for primary minerals with anthropogenic resources
- It helps to make the current stage of a project visible

Need to visualise the information summarized in one code number on the E-axis

- Environmental impact
- Social impact
- Economic viability

# Thank you

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