

Increasing transparency in the determination of significance



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Introduction

An examination of the shifting context for determining the significance of impacts of large scale mining projects with a proposal for improving this process to better serve indigenous peoples, communities, stakeholders, proponents, regulators and practitioners.

Characterization

Direction, Context, **Magnitude**, Direct vs. Indirect, **Geographic Extent**, Momentum, **Duration**, Reversibility, Recoverability, Frequency, Synergy, Certainty

Valuation

Trend is towards the use of formulas

Determination of Significance

Acceptable vs Not Acceptable

Do we arrive to similar outcomes by using less attributes?

Approach

Criteria to Select Cases for Analysis:

- Mining
- Greenfield
- Open Pit
- Throughput higher than 10,000 tpd
- Project Area larger than 1,000 hectares
- LOM longer than 15 years
- Environmental Assessment Processes within 15 years ago

The formula proposed by Conesa to calculate the Importance of an impact was used (Reference: Guía Metodológica para la Evaluación del Impacto Ambiental, Vicente Conesa Fdez – Vítora, 4ta Edición, 2010)

Analysis is preliminary as the outcomes of some of the cases selected are pending and the plan is to add more cases



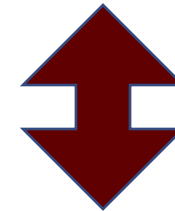
Method – Step 1

We reviewed the values assigned to the 10 attributes used by the Conesa method and the resulting valuations for every impact (positive and negative) assessed in the EIAs of each case. In one case, the Conesa formula had not been originally used in the EIA, so for the attributes not originally assessed the same values were applied across all impacts. In another case, the analysis was done in reverse moving from 3 attributes back to 10 attributes

- Case 1: 95 valuations reviewed across Construction through Closure phases
- Case 2: 415 valuations reviewed across Construction through Post-Closure phases
- Case 3: 40 valuations reviewed across Construction through Post-Closure phases
- Case 4: 10 valuations reviewed for one Valued Component across Construction through Post-Closure

In total, we reviewed 560 valuations of residual impacts

Importance = Magnitude + Extent + Speed + Duration + Reversibility + Synergy + Accumulation + Direct/Indirect + Frequency + Restorability
Negligible Low Moderate High



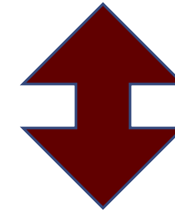
Importance = Magnitude + Extent + Duration
Negligible Low Moderate High

Method – Step 2

For each valuation reviewed in Step 1, we calculated a new value of Importance by only using the values for the attributes of Magnitude, Extent and Duration.

- Each attribute was assigned the same weight.
- Each attribute was normalized to have a maximum value of 12 points.
- New thresholds for Negligible, Low, Moderate and High were created make results comparable to the original determinations.

Importance = Magnitude + Extent + Speed + Duration + Reversibility + Synergy + Accumulation + Direct/Indirect + Frequency + Restorability
Negligible Low Moderate High



Importance = Magnitude + Extent + Duration
Negligible Low Moderate High

Results

Case 1: 86% of determinations were identical across both steps.

- 11 of the 13 determinations in Step 2 that were not identical to Step 1 were 1 point off from being identical.

Case 2: 86% of determinations were identical across both steps.

- 51 of the 57 determinations in Step 2 that were not identical to Step 1 were 2 points off from being identical.

Case 3: 83% of determinations were identical across both steps.

- 3 of the 7 determinations in Step 2 that were not identical to Step 1 were 1 point off from being identical.

Case 4: Reverse analysis confirmed that additional attributes do not modify the outcome of the valuation of residual impacts.

Conclusions and Recommendations



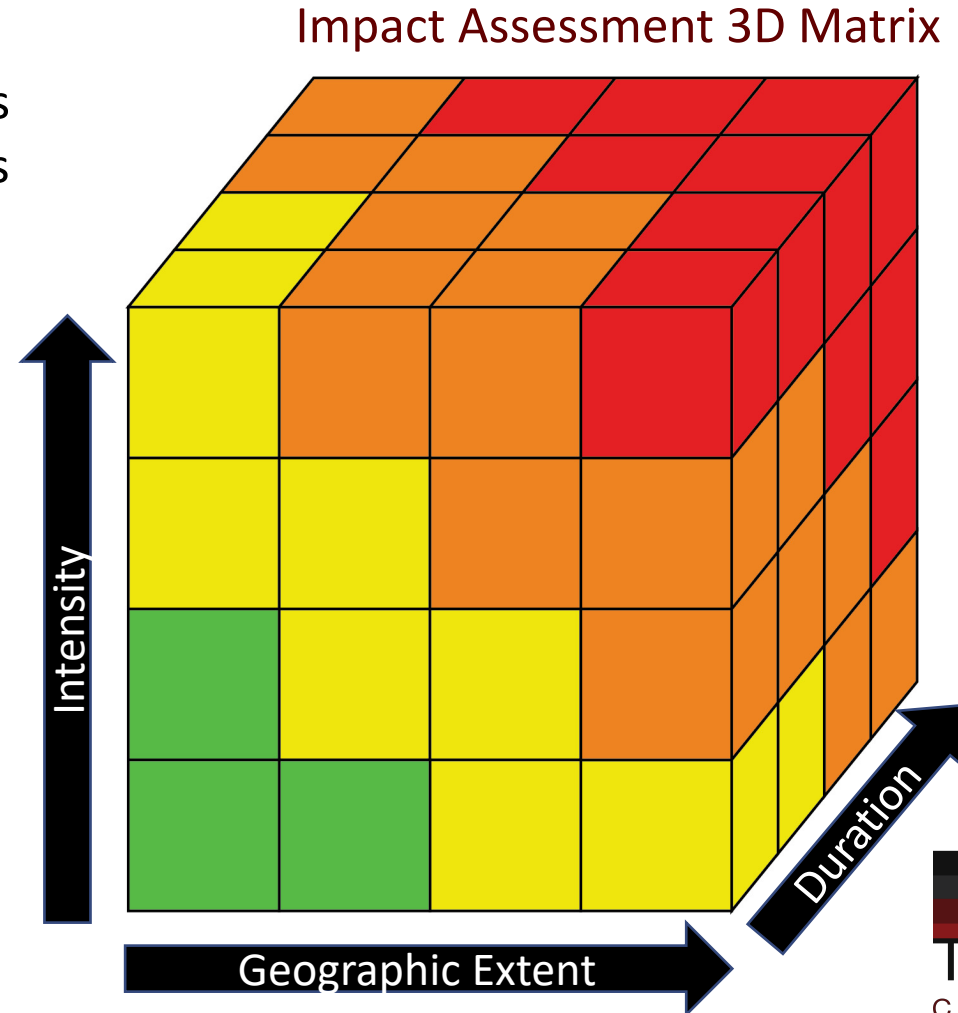
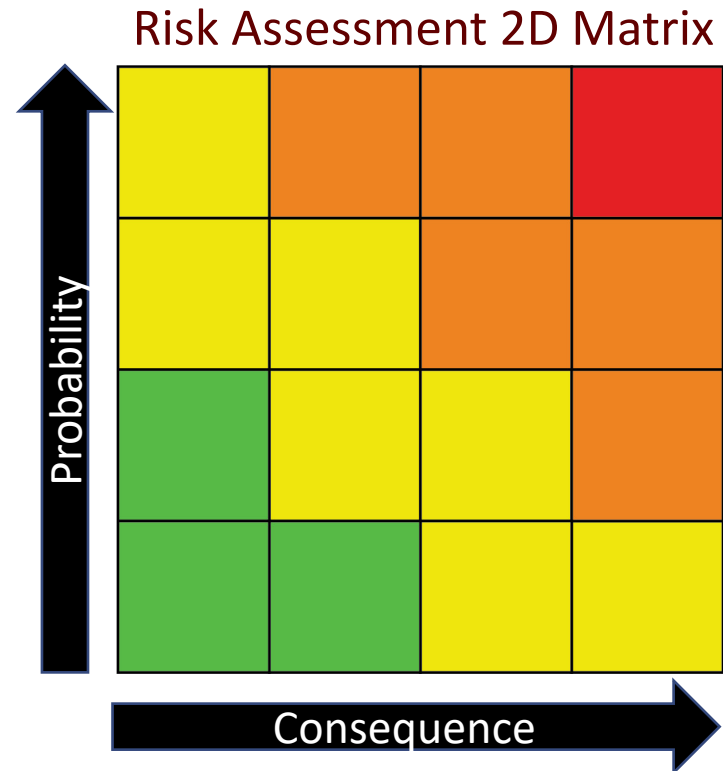
Valuations and Decisions can be supported by three attributes

Reducing the number of attributes opens the door to more meaningful engagement with stakeholders on criteria for each attribute

Decisions will be more transparent and credible if stakeholders have a clear line of sight from characterization to decisions

Proposal – 3D Impact Matrix

Communities and stakeholders can visualize the distribution of all residual impacts of a project
 Proponents and Regulators can use it to benchmark projects
 Consultants can use it for rapid assessments - due diligences



Let's continue the conversation!

Post questions and comments via chat in the IAIA22 platform.



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