Investigating the implementation of biodiversity mitigation in EIA in Chile



Rocío Andrea Cares Suárez

University of East Anglia England/Chile

R.Cares-Suarez@uea.ac.uk



Environmental Impact Assessment System in Chile



NORTE GRANDE

NORTE CHICO

CENTRO

Archi, Juar

PATAGONI

- EIA involves an assessment of the impacts of a proposed development, including the proposal of mitigation measures to address potentially significant impacts, and subsequent monitoring to determine the environmental outcomes.
- ✓ The biodiversity of Chile is known for its high degree of endemism and the exclusivity of some of its ecosystems, caused by the biogeographic conditions. Chile presents multiple types of ecosystems (terrestrial, marine, coastal and oceanic islands), which are critical to the economic development.

Biodiversity mitigation in the Environmental Impact Assessment System in Chile



Mitigation hierarchy

Avoidance	Avoid creating impacts from the outset
Minimisation	Reduce the duration, intensity and/or extent of impacts
Restoration	Restore/rehabilitate degraded ecosystems
Offset	Compensate for any residual significant adverse impacts
Enhance	Apply measures to create new benefits

• Glasson, J., Therivel, R., 2019. Introduction to Environmental Impact Assessment. Routledge, London. IPBES. 2019.

Appropriate mitigation of biodiversity



• SEA, 2022. Guía para la compensación de la biodiversidad en el SEIA. Santiago, Chile. https://sea.gob.cl/sites/default/files/imce/archivos/2022/08/29/guia_teorica_compensacion_biodiversidad.pdf

Objectives/Methods

How can the EIA system in Chile help to achieve no net loss of biodiversity?

1. To evaluate Chilean practice in relation to national obligations

 To analyse the opportunities for improving biodiversity outcomes in Chile

1. Documentary review of relevant documents Environmental Impact Studies (EIS) Authorisation documents Public online database Monitoring reports 2. Semi-structured interviews with stakeholders involved in the EIA process • Developers Environmental Consultants Decision makers Agency in charge of monitoring 3. Focus Group and supplementary interviews

Sub-group of stakeholders

1. Chilean practice in relation to national obligations: Documentary review

> 31 EIS: 215 mitigation measures identified



Cares, R. A., Franco, A. M., & Bond, A. (2023). Investigating the implementation of the mitigation hierarchy approach in environmental impact assessment in relation to biodiversity impacts. *Environmental Impact Assessment Review*, 102, 107214

1. Chilean practice in relation to national obligations: Documentary review

Out of 215 monitoring reports required for the 215 measures, 100 reports were available for examination (47%)

Biodiversityrelated indicator (n=69) Richness and abundance
Number of individuals
Survival of individuals

Implementation indicator (n=31)

Installation of equipment
Attendance record
Scientific studies

Cares, R. A., Franco, A. M., & Bond, A. (2023). Investigating the implementation of the mitigation hierarchy approach in environmental impact assessment in relation to biodiversity impacts. *Environmental Impact Assessment Review*, *102*, 107214

1. Chilean practice in relation to national obligations: Interviews



Tendency to favouring compensation measures rather than follow mitigation hierarchy.



Issues on effective implementation of proposed mitigation measures in practice.



Uncertainty surrounding the achievement of no net loss.



Recommendations by the agencies sometimes incompatible or inconsistent with the biodiversity compensation guidelines.

2. Opportunities for improving biodiversity outcomes in Chile:Focus group/Supplementary interviews



There is optimism about the publication of a new guideline (SEA, 2023)* to reinforce the mitigation hierarchy and quantification of impacts through a defined methodology

*SEA, 2023. Guía metodológica para la compensación de biodiversidad en ecosistemas terrestres y acuáticos continentales. Santiago, Chile. https://sea.gob.cl/sites/default/files/imce/archivos/2023/06/01/Guia-Compensacion-biodiversidad SEA-2023 .pdf

Discussion and conclusions

- ✓ Projects should make a greater effort to include measures that avoid and repair impacts on biodiversity following the mitigation hierarchy, and evaluators must ensure that this is addressed.
- The quantification of impacts should be explicit in the environmental reports, allowing the monitoring of biodiversity losses and gains post authorisation.
- ✓ Indicators of success must be based on the effectiveness of the mitigation measures, in terms of biodiversity outcomes, rather than on the implementation of the measures.
- ✓ Inter-agency cooperation should be reinforced and the need of capacity-building of stakeholders should be discussed.
- ✓ Although a new guideline on methodology was published (SEA, 2023), there is still uncertainty in how effective it will be the application in the practice in order to address some of the issues identified in this research.

SEA, 2023. Guía metodológica para la compensación de biodiversidad en ecosistemas terrestres y acuáticos continentales. Santiago, Chile <u>https://sea.gob.cl/sites/default/files/imce/archivos/2023/06/01/Guia-Compensacion-biodiversidad_SEA-2023_.pdf</u>

Let's continue the conversation!

Post questions and comments in the IAIA24 app.

Acknowledgements

Co-authors: Alan Bond, Aldina Franco.

Funding: The author gratefully acknowledges ANID (Agencia Nacional de Investigación y Desarrollo Chile) - Scholarship ID 72200153 and University of East Anglia for the support to this research.

#iaia24



Rocío Andrea Cares Suárez

University of East Anglia England/Chile

R.Cares-Suarez@uea.ac.uk

linkedin.com/in/rocío-cares-93a9b7290

