

# INPLASY

## Exploring Non-economic Losses of Climate Refugees (CRs): A Systematic Review

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### ADMINISTRATIVE INFORMATION

**Support** - Social Sciences and Humanities Research Council Canada and Canada Research Chairs (CRC) Program.

**Review Stage at time of this submission** - Piloting of the study selection process.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202440007

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 April 2024 and was last updated on 02 April 2024.

### INTRODUCTION

**Review question / Objective** Objective: To systematically examine the non-economic losses of climate refugees (CRs). Review question: What are the current knowledge and knowledge deficits of CR-specific invisible losses?

**Rationale** Climate change is increasingly recognized as a major driver of human displacement, leading to the emergence of climate refugees (CRs) who are compelled to flee their homes due to environmental degradation, natural disasters, and climate-related hazards. While existing literature predominantly focuses on the economic impacts of climate-induced migration, there is a growing recognition of the profound non-economic losses experienced by CRs. These losses encompass social, cultural, psychological, environmental, and other dimensions, yet they

remain underexplored and inadequately understood. This study aims to address this gap by conducting a systematic review of the non-economic losses of climate refugees, synthesizing existing evidence to enhance our understanding of the multifaceted impacts of climate-induced displacement. The key points for the study include: 1. Human-Centered Approach: Traditional approaches to understanding climate-induced migration tend to prioritize economic impacts, such as loss of livelihoods and property. However, CRs also endure significant non-economic losses that profoundly affect their well-being and resilience. By adopting a human-centered approach, this systematic review seeks to spotlight the lived experiences and voices of CRs, illuminating the less tangible but equally significant dimensions of their displacement, including loss of social connections, cultural heritage, and sense of belonging.

2. Comprehensive Understanding: Non-economic losses of CRs encompass a broad spectrum of dimensions, including loss of social networks, erosion of cultural identity, dislocation from ancestral lands, deterioration of mental health, and degradation of natural environments in their places of origin. These losses are interconnected and mutually reinforcing, shaping the trajectories and outcomes of climate-induced migration. A systematic review provides a platform to synthesize diverse sources of evidence and generate a holistic understanding of the complex and interrelated nature of non-economic losses experienced by CRs.

3. Policy and Practice Implications: Recognizing and addressing the non-economic losses of CRs is pivotal for informing policy and practice interventions aimed at supporting climate-affected communities. By systematically reviewing existing literature, this study can identify knowledge gaps, underscore promising interventions and best practices, and inform the development of policy frameworks and programming strategies that prioritize the protection and well-being of CRs. Understanding the non-economic dimensions of displacement is imperative for designing contextually appropriate responses that promote resilience, dignity, and human rights. The key points for the study include:

4. Ethical Imperatives: The non-economic losses experienced by CRs raise profound ethical considerations regarding justice, equity, and accountability in climate governance. Climate-induced displacement disproportionately affects marginalized and vulnerable populations, exacerbating existing inequalities and injustices. By centering on the non-economic dimensions of displacement, this systematic review contributes to efforts to amplify the voices of affected communities, uphold their rights, and hold duty-bearers accountable for addressing the root causes and consequences of climate-induced migration in a manner that respects their dignity and autonomy.

**Condition being studied** N/A.

## METHODS

**Search strategy** 1. Search terms used: "Refugee\*" OR "Climate Refugee\*" OR "Climate Change Refugee\*" OR "External Climate Migrant\*" OR "Climate-displaced Person\*" OR "Environmental Refugee\*" OR "Environmental Migrant\*" OR "Climate Displaced Person\*" OR "Climate-induced Mobility" OR "Climate-induced Displacement" OR "Climate-related Mobility" OR "Climate-driven Mobility" OR "Climate-driven

Migra\*" OR "Climate-change Migrant\*" OR "Climate-exacerbated Disaster" OR "Environmental Displace\*"

AND

"Cultur\*" OR "Identity" OR "Belong\*" OR "Attach\* OR Ties" "Experience\*" OR "Language\*" OR "Heritage" OR "Tradition\*" OR "Knowledge\*" OR "Loss"

2. Databases used:

Web of Science, SCOPUS, Proquest, PubMed, Embase, EBSCOhost.

**Participant or population** The review will focus specifically on the "climate refugees", also identified in the literature as "environmental refugees" or "climate displaced".

**Intervention** N/A (the review will not evaluate any interventions).

**Comparator** N/A.

**Study designs to be included** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).

**Eligibility criteria** Additional inclusion criteria for all databases: English language; Articles.

**Information sources** The information sources will be based on electronic databases: Web of Science, SCOPUS, Proquest, PubMed, Embase, EBSCOhost.

**Main outcome(s)** The expected outcomes of the study include:

1. Enhanced Understanding of Non-Economic Losses:

The systematic review is expected to provide a comprehensive overview of the non-economic losses experienced by climate refugees (CRs). By synthesizing existing literature, the study will identify and elucidate the diverse dimensions of non-economic losses, including social, cultural, psychological, and environmental impacts. This enhanced understanding will contribute to a more nuanced appreciation of the multifaceted challenges faced by CRs and the complexities of climate-induced displacement.

2. Identification of Key Themes and Patterns:

Through thematic analysis of the synthesized data, the study will identify key themes and patterns related to non-economic losses among CRs. These themes may include loss of social support networks, cultural heritage, traditional livelihoods, mental well-being, and ecological disruptions. By systematically categorizing and analyzing these themes, the study will provide insights into the

underlying factors and dynamics driving non-economic losses in the context of climate-induced migration.

### 3. Recognition of Intersections and Interdependencies:

The systematic review will highlight the intersections and interdependencies between different dimensions of non-economic losses experienced by CRs. It will elucidate how social, cultural, psychological, and environmental factors interact and reinforce one another, shaping the experiences and outcomes of climate-induced displacement. Recognizing these interconnections is essential for developing holistic and integrated responses that address the complex needs of CRs.

### 4. Implications for Policy and Practice:

The study's findings will have implications for policy and practice interventions aimed at supporting CRs and addressing the non-economic dimensions of displacement. By identifying gaps, challenges, and promising practices, the study will inform the development of contextually relevant policies, programs, and interventions that prioritize the protection, well-being, and resilience of CRs. These insights will be valuable for policymakers, practitioners, and humanitarian actors working in the field of climate change adaptation and migration.

**Additional outcome(s)** 5. Contribution to Knowledge and Advocacy: The systematic review will contribute to the growing body of knowledge on climate-induced displacement. Its findings will serve as a valuable resource for researchers, advocates, and stakeholders interested in understanding and addressing the impacts of climate change on vulnerable populations. By disseminating the study's findings through academic publications, policy briefs, and advocacy initiatives, the research will raise awareness and promote greater recognition of the non-economic dimensions of displacement in climate change discourse and policy.

**Data management** All formal screening process will be done with the use of COVIDENCE. Covidence is a web-based systematic review management tool designed to streamline the process of conducting systematic reviews and meta-analyses. While Covidence primarily focuses on systematic reviews, its principles of data management can be broadly applicable to various research contexts. Here are the particulars of data management using Covidence:

1. Importing Studies: Covidence allows researchers to efficiently import search results from bibliographic databases such as PubMed, Embase, and Cochrane Library. After conducting a

systematic search, researchers can upload search results directly into Covidence, where they can screen and manage studies throughout the review process.

2. Screening and Selection: Covidence facilitates the screening and selection process by providing a user-friendly interface for reviewers to assess the eligibility of studies based on predefined inclusion and exclusion criteria. Reviewers can independently screen studies, with discrepancies resolved through discussion or arbitration. Data management in this phase involves tracking the status of each study (e.g., included, excluded, or pending) and documenting reasons for exclusion.

3. Data Extraction: Once studies are selected for inclusion, Covidence supports data extraction by providing customizable forms for capturing relevant study characteristics, outcomes, and findings. Researchers can collaboratively extract data from included studies, ensuring consistency and accuracy across reviewers. Data management involves organizing extracted data systematically, making it easier to analyze and synthesize findings later.

4. Synthesis and Analysis: After completing data extraction and risk of bias assessment, Covidence supports the synthesis and analysis of findings through features such as descriptive summaries, forest plots, and subgroup analyses. Researchers can visualize and interpret data within the platform, facilitating collaborative decision-making and hypothesis testing. Data management involves organizing synthesized findings and ensuring transparency in reporting methods and results.

5. Reporting and Exporting: Covidence allows researchers to generate reports and export data in various formats, including Microsoft Word, Excel, and RevMan. This enables researchers to prepare manuscripts, presentations, or supplementary materials using the compiled data and analysis. Data management in this phase involves finalizing the dataset, ensuring data integrity, and maintaining documentation for reproducibility and transparency.

### Quality assessment / Risk of bias analysis

**Quality assessment:** there are two stages of the formal screening process. In the first stage, two reviewers use COVIDENCE to screen title and abstract independently. In the second stage, two reviewers screen full text of the articles selected based on stage 1.

**Risk of bias analysis:** Covidence includes tools for assessing the risk of bias in individual studies, particularly in systematic reviews. Researchers can use predefined risk of bias domains or customize assessment criteria based on the review's specific objectives. Data management in this phase

involves documenting judgments about the risk of bias for each included study, which informs the interpretation of review findings. However, we will not apply a risk of bias assessment scale due to the fact that it is a social science based review and that uses primarily qualitative methodology to report results.

**Strategy of data synthesis** The following stages will be applied for the thematic data analysis:

1. **Data Organization:** After completing the screening and data extraction phases in Covidence, we will export the extracted data, including relevant study characteristics, outcomes, and findings, into a format compatible with qualitative analysis software (e.g., NVivo) or spreadsheets (e.g., Microsoft Excel). This data export ensures that all relevant information from included studies is readily accessible for thematic analysis.

2. **Familiarization with Data:** We will begin thematic analysis by familiarizing ourselves with the data extracted from included studies. This involves reading through the extracted data to gain an understanding of the breadth and depth of the information collected.

3. **Generating Initial Codes:** Using qualitative analysis software, we will generate initial codes to systematically label and categorize segments of data relevant to the research question or objectives. Codes are typically descriptive labels assigned to specific concepts, themes, or patterns identified within the data. We will employ inductive coding approaches, allowing themes to emerge directly from the data.

4. **Organizing Codes into Themes:** we will organize the generated codes into broader thematic categories or themes based on similarities, differences, or relationships between codes. This process involves grouping related codes together to form overarching themes that capture key patterns or concepts present in the data. Themes should be coherent, internally consistent, and reflective of the content and context of the data.

5. **Reviewing and Refining Themes:** we will iteratively review and refine the identified themes through constant comparison and triangulation of data across included studies. This iterative process involves revisiting the coded data, comparing themes within and between studies, and refining the definitions and boundaries of themes as necessary to ensure accuracy and consistency.

6. **Interpretation and Reporting:** Once the thematic analysis is complete, we will interpret the meaning and significance of the identified themes in relation to the research question or objectives. This involves synthesizing the findings across studies, providing explanations or interpretations for the

patterns observed, and considering their implications for theory, practice, or policy. We will then report the results of the thematic analysis in the systematic review, integrating the identified themes into the narrative synthesis or discussion section to contextualize and enrich the overall findings

**Subgroup analysis** N/A.

**Sensitivity analysis** N/A (It is not health-focused systematic review).

**Language restriction** English.

**Country(ies) involved** Canada.

**Keywords** climate-change, climate refugee, non-economic loss, environmental refugee, climate-change displacement.

**Dissemination plans** The study will result in a peer-reviewed publication.

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