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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - The author declare no financial or non-financial competing interests. This scoping review is undertaken solely as part of a Master's thesis for the degree in International Business & Economic Diplomacy and receives no external funding or support beyond standard university resources.

INPLASY registration number: INPLASY202560068

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 June 2025 and was last updated on 21 August 2025.

INTRODUCTION

Review question / Objective Review question: "How and through which pathways do documented health disparities impede progress toward Sustainable Development Goal targets in low-income countries?"
Objectives:
1) Map the full range of evidence linking specific health disparities to economic, social, and environmental SDG outcomes.
2) Classify the mechanisms described (e.g., labour-productivity loss, educational disruption).
3) Identify SDG targets with sparse or absent evidence to guide future research.

Element: Population; **Operational definition:** Individuals or communities residing in low-income countries (World Bank classification, at study year or current). |

Element: Concept; **Operational definition:** Health disparities – systematic differences in morbidity, mortality, service coverage, financing, or social determinants between population groups.
Element: Context; **Operational definition:** Sustainable development as framed by the 17 SDGs and 169 targets (2000 – 2024).

Rationale Achieving the SDGs requires equitable health, yet low-income countries experience deep, multi-layered health disparities that may stall or reverse development. While numerous reports describe individual links (e.g., maternal mortality reducing female labour supply), no evidence map shows how various disparities collectively hinder SDG progress or which pathways matter most.

A scoping review is appropriate because:
– the evidence is heterogeneous (epidemiological, economic, qualitative, policy);

- decision-makers often need a broad map, not a pooled effect size;
- the review will inform international business and economic-diplomacy strategies by pinpointing high-impact inequities and research gaps.

Condition being studied The condition is the existence of health disparities in low-income countries. These include mortality or morbidity gaps across socio-economic, geographic, gender, or ethnic lines; unequal coverage of essential services (e.g., vaccination, skilled birth attendance); inequities in social determinants such as sanitation or education. Disparities are treated as risk-exposure conditions whose downstream effects may undermine SDG achievement.

METHODS

Search strategy Following databases are included: Scopus, PubMed, EconLit, and World Bank Repository.

Terms used: global health disparities, health inequality, sustainable development, SDGs, sustainability, low-income countries, developing countries, global south, economic impact, development outcomes, health and development.

Participant or population Population of low-income countries according to the World-Bank-classification, any age or sex, in any setting (community, facility, national).

Intervention Not applicable.

Comparator When present, then internal subgroup with less disparity (e.g., richest quintile); external benchmark (higher-income country/region); absence of a comparator will not exclude studies.

Study designs to be included All primary and secondary designs - observational, interventional, economic modelling, qualitative, mixed-methods and authoritative agency syntheses. Conference abstracts excluded unless full data available.

Eligibility criteria Published ≥ 2000 ; At least one low-income country in focus: Explicit link between a health disparity and an SDG-related outcome; Exclude opinion pieces without data.

Information sources Electronic databases.

Main outcome(s) SDG domain affected (economic, social, environmental) with specific target number. Direction and magnitude of reported impact (qualitative statement, effect size, cost estimate).

Mechanism linking disparity to outcome (productivity loss, fiscal drain, etc.). Timing and effect measures captured as reported.

Additional outcome(s) Geographic distribution of evidence; Frequency of study designs used; Stated research or policy gaps.

Data management Data managed in a versioned Excel charting sheet (23 variables), with controlled dictionary for Clean Categories, mechanism coding to 10 families (M1-M10), and audit trail (dedup rules; pivot outputs) retained in the Annex.

Quality assessment / Risk of bias analysis Quality assessment will not be performed.

Source of evidence screening and selection Screening and extraction conducted by a single English-language reviewer following PCC; grey literature included to form Set21 (peer+grey) for sensitivity against Set15 (peer only). The protocol's planned "high-quality-only" sensitivity was not performed due to design heterogeneity/feasibility.

Strategy of data synthesis Synthesis executed as a scoping evidence map using an Excel-based charting/pivot workflow (not NVivo). Steps: explode multi-SDG fields; map raw disparity labels to Clean Categories; de-duplicate unique study \times SDG cells; compute counts, QES presence (quantitative effect size Y/N), and max confidence (H/M/L); produce Disparity \times SDG heat maps, Mechanism (M1-M10) \times SDG tables, bubble plots (bubble size = share of QES in cell), and evidence-gap matrices with a descriptive robustness heuristic $N \geq 2$. No meta-analysis performed.

Reporting results / Analysis of the evidence Results reported as counts of unique study \times SDG cells, annotated with QES presence and highest confidence tag (H/M/L) per cell. One primary Clean Category per study; one dominant mechanism per populated study \times SDG cell. Findings are descriptive; QES dots indicate existence of estimates, not cross-study comparability/causality.

Presentation of the results Outputs include (i) Disparity \times SDG heat maps (Set15 vs Set21), (ii) Mechanism (M1-M10) by SDG tables and bubble plots, and (iii) Evidence-gap matrices (gap rule $N < 2$). PRISMA-ScR flow and checklist appended; figures re-generated in the thesis.

Subgroup analysis Where feasible, stratify findings by world region, rural/urban status, disparity type, and SDG domain.

Sensitivity analysis

Re-run syntheses:

- excluding grey-literature sources and
- including only studies rated high quality to test robustness of mapped pathways.

Language restriction Search in English language.

Country(ies) involved Austria.

Other relevant information World Bank Open Knowledge Repository (OKR) grey-literature query was inadvertently restricted to 2022-2024 (intended ≥ 2000 across sources). No re-run was undertaken; OKR entries are treated as a labelled sensitivity subset and may under-represent pre-2022 governance/financing/FCV material. Scope (PCC), inclusion/exclusion, and outcomes remain unchanged.

(1) Added interpretive confidence tags (H/M/L) per study (not for exclusion). (2) Switched synthesis from NVivo to Excel-based evidence mapping; replaced traffic-light icons with confidence tags; conceptual diagram omitted; added mechanism matrices & bubble plots. (3) Sensitivity: peer-only vs peer+grey completed; high-quality-only sensitivity not performed. (4) WB-OKR 2022–2024 date window by oversight; no re-run; treated as sensitivity subset. (5) Analytic refinement: introduced Clean Category harmonisation and 10 mechanism families (M1–M10) for reproducible coding.

Keywords scoping review; Sustainable Development Goals; low-income countries; health disparities; governance; fiscal space; grey literature.

Dissemination plans Findings disseminated via Master's thesis, institutional repository, and figure/table annexes; protocol deviations transparently reported per PRISMA-ScR.

Contributions of each author

Author 1 - Vladimir Gavranic - Vladimir Gavranic is a single author of the Scoping review as part of the Master's thesis submitted to IMC Krems, Austria in the International Business and Economic Diplomacy program.

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