Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

The humanitarian coverage plateau: sustaining survival while constraining capability development in the Rohingya refugee response, 2017-2024

Kyohei NISHINO

nkyoohei@gmail.com

Research Article

Keywords: Humanitarian financing, Protracted displacement, Refugee health, Health system resilience, Donor ecosystem, Rohingya

Posted Date: March 6th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-9005544/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Abstract

Background

Forced displacement has become one of the most pressing global public health challenges. Despite the scale and protracted nature of contemporary displacement, there remains limited longitudinal evidence on how international humanitarian systems sustain the responses for the protracted crises. The Rohingya refugee response in Cox's Bazar exemplifies this systemic strain. As displacement has entered a protracted phase, international attention has waned, even as needs remain substantial. To address this gap, this study characterizes donor financing patterns for the Rohingya refugee crisis from 2017 to 2024.

Methods

We conducted a retrospective longitudinal analysis of humanitarian financing for the Rohingya JRP from 2017 to 2024, using data from the OCHA FTS and UNHCR population estimates. We assessed (i) overall and sector-level financial coverage, (ii) donor participation dynamics (entries, exits, and stayers), and (iii) donor concentration using HHI, to identify system-level financing patterns and structural dynamics characteristic of protracted displacement setting.

Results

Overall financial coverage remained relatively stable across the study period. Meanwhile, sector-level coverage demonstrated marked heterogeneity across sectors and years. Food security and Nutrition sector showed comparatively high coverage, while other sectors including WASH, Shelter/Non-Food, Health, and Education were consistently under-covered or exhibited discontinuous episodic coverage. Donor concentration and donor participation dynamics both showed significant fluctuation over the study period.

Conclusions

The findings revealed relatively stable overall financial coverage masked persistent sectoral inequalities and structural vulnerability in donor ecosystem. We conceptualize this pattern as a humanitarian coverage plateau: a financing equilibrium that sustains basic survival but constrain investment needed for longer-term capability development and system strengthening. As protracted displacement becomes increasingly common, redesigning humanitarian financing framework that enable multi-year planning and reduce structural imbalances is critical to support durable wellbeing in refugee settings.

1. Background

Forced displacement has become one of the most pressing challenges for global public health and humanitarian systems. The number of forcibly displaced people worldwide has surged dramatically over the last few decades, surpassing 100 million in 2022 and reaching a record 123.2 million at the end of 2024 (UNHCR, 2025). Adding to the scale, the defining feature of contemporary displacement is the protracted nature. Approximately two-thirds of refugees (67%) are caught in protracted situations, with displacement lasting an average of two decades (UNHCR, 2025 ; European Commission, n.d). Despite this reality, there remains limited documentation that enables longitudinal and comparative understanding of how international humanitarian systems sustain the responses as crises become prolonged.

The Rohingya refugee response in Cox's Bazar, Bangladesh, the world's largest refugee camp, exemplify this systemic strain. Following the mass displacement from Myanmar's Rakhine State in August 2017, more than 600,000 Rohingya fled to Bangladesh, which now hosts over one million Rohingya refugees. Although Bangladesh and Myanmar reached a bilateral repatriation agreement in November 2017, implementation has largely stagnated, resulting in nearly a decade of prolonged displacement for the Rohingya population. As the crisis enters a protracted phase, international attention has waned, even as needs remain substantial.

To address this gap, this study examines longitudinal trends in humanitarian financing for the Rohingya Joint Response Plan (JRP) from 2017 to 2024, using data from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Financial Tracking Service (FTS). Combining the refugee population estimates by the UNHCR Operational Data Portal, we evaluate overall and sector-level funding coverage, alongside the donor perspective by quantifying donor participation dynamics and donor concentration. By integrating these indicators, we aim to characterize donor financing patterns and assess how humanitarian financing align with shifting requirements in a protracted humanitarian emergency.

2. Methods

2.1. Study design

This study employed a retrospective longitudinal design to examine trends in the humanitarian financing for the Rohingya refugee crisis from 2017 to 2024. We assessed (i) overall and sector-level financial coverage, (ii) donor participation dynamics (entries, exits, and stayers), and (iii) donor concentration, with the aim of identifying system-level financing patterns and structural dynamics characteristic of protracted displacement.

2.2. Data sources

Humanitarian financing and coverage data were obtained from the Rohingya JRP through the OCHA FTS (n.d). Refugee population estimates were obtained from the UNHCR Operational Data Portal (n.d.). These platforms are the authoritative and standardized sources used by the United Nations (UN) system

to track humanitarian funding flow and population dynamics within UN-coordinated humanitarian response plans.

2.3. Data processing and analysis

FTS data were downloaded as Microsoft Excel files and compiled across years. Data cleaning, aggregation, and descriptive analyses were conducted in R (version 4.3.3). Analyses focused on longitudinal trends and comparative patterns across years and clusters. We used reported incoming funding amounts in USD as recorded in FTS and pledges were not included in the analyses.

2.4. Indicator definitions

2.4.1. Overall and sector-level coverage

Annual overall financial coverage was defined as the ratio of total incoming funding to total requirements for the Rohingya JRP in each year. Sector-level coverage was analogously defined as the ratio of sector-specific funding to sector-specific requirements for each year. Both overall and sector-level coverage figures were extracted directly from the OCHA FTS for the Rohingya JRP.

2.4.2. Donor participation (entry/exit/stay)

Donor participation was assessed annually by classifying donor organizations as entries, exits, or stayers based on year-to-year presence. Donors were defined as entries if they provided funding in year *t* but not in year *t-1*; exits if they provided funding in year *t-1* but not in year *t* ; and stayers if they provided funding in both years. Donor presence was defined as any reported funding amount greater than zero. Donor entities corresponded to the Organization fields in FTS data.

2.4.3. Donor concentration:

Donor concentration was quantified annually using the Herfindahl-Hirschman Index (HHI) based on donor's shares of total incoming funding. For each year, donor funding shares were calculated as $s_i = f_i / \sum_i f_i$, where $f_i$is the total funding attributed to donor i. The HHI was computed as $\mathrm{HHI} = \sum_i s_i^2$, with higher values indicating greater concentration of funding among fewer donors. All calculations were conducted in R.

3. Results

3.1. Overall- and sector-level coverage

Overall financial coverage for the Rohingya JRP remained relatively stable across the study period regardless of increase in the refugee population. Between 2017 and 2024, with the exception for a sharp decline in 2020 (59.5%), funding coverage maintained stability of over 70% coverage for six of the eight years anlaysed (Fig. 1).

In the meanwhile, sector-level coverage demonstrated marked heterogeneity across sectors and years (Fig. 2). Food security sector demonstrated comparatively higher coverage over time and was the only sector with repeated years of over-coverage (> 1.0). Nutrition sector also showed relatively high coverage across the study period except in 2020 (0.09).

By comparison, several sectors showed consistently under-covered throughout the study period. WASH and Shelter/Non-Food Items sectors coverage remained below 0.5 in all years. Health sector coverage was also persistently low-to moderate, between 0.2 and 0.5.

However, most sectors exhibited discontinuous or episodic coverage patterns. Logistics sector showed substantial fluctuations, with high coverage in 2018 (1.09) and 2022 (1.21), but zero reported coverage in 2021, 2023, and 2024. Coordination sector reached more than 0.7 coverage in 2021 and 2022; however, the coverage in other years were continuously low, between 0.0 to 0.42. Education shifted from very low coverage in 2017 (0.08) to over-coverage in 2019 (1.13), followed by a sharp decline in 2020 (0.18) and gradual improvement by 2023–2024 (0.55–0.59). Gender Based Violence and Communication with Communities sectors both exhibited limited and inconsistent coverage, with Gender Based Violence sector recording at zero from 2020 onward. The Bhasan Char Response, a new response component, emerged from 2022 with high initial coverage (0.95 in 2022), followed by lower levels in 2023 (0.36) and 2024 (0.52).

Overall, the sector-level coverage denotes sustained inequities in sectoral financing within the Rohingya refugee response. Nutrition and Food security sectors were comparatively protected; while persistent under-coverage in several foundational sectors such as WASH, Health, and Shelter/ Non-Food Item, alongside fluctuation and discontinuities in most sectors.

3.2. Donor concentration

Donor concentration, measured using the HHI, revealed a significant shift over time despite relatively stable overall financial coverage (Fig. 1). During the first three years of the crisis (2017–2019), donor concentration was low to moderate, ranging between 0.13 and 0.17. However, the concentration sharply increased from 2020 and peaked in 2022 (HHI: 0.32). Thereafter, concentration declined markedly in 2023 (HHI: 0.12) and remained moderate level in 2024 (HHI: 0.18).

3.3. Donor participation dynamics (entry/exit/stay)

Donor participation varied over time across the three categories of stayers, entries, and exits (Fig. 3). The number of stayers increased sharply after the first year of crisis, rising to more than 30 in 2018 and peaking at over 50 in 2019. Although the number of stayers declined in 2020, it remained relatively stable thereafter at the mid- to high 30s, with an increase again in 2024.

In contrast, the number of entries and exits showed pronounced fluctuations. The number of entries declined steadily from a high level in 2017 through 2020, followed by alternating trend over the last four

years. The number of exits increased from 2018 to a peak in 2020; thereafter, there has been notable year-over-year variation.

4. Discussion

This study provides longitudinal evidence on humanitarian financing for the Rohingya refugee crisis from 2017 to 2024 using financial coverage and donor ecosystem indicators. Overall financial coverage remained relatively stable over the study period, despite the protracted nature of displacement, persistent humanitarian needs, and modest growth in the refugee population. However, the sector-level analyses revealed that this aggregate stability conceals substantial and persistent sectoral inequalities, alongside pronounced volatility in several sectors. Life-sustaining sectors, particularly Food Security and Nutrition, received higher and more stable coverage, including repeated periods of over-coverage. In contrast, life-building and system-strengthening sectors, such as WASH, Health, Shelter/Non-Food Items, Education, and Protection, were persistently under-covered or exhibited more volatile funding patterns. Furthermore, some sectors experienced discontinuous or episodic coverage patterns, with occasional zero coverage. Particularly, persistent under-coverage in WASH and Health may increase vulnerability to infectious diseases and limit access to preventive chronic disease management. In this sense, humanitarian financing patterns shape the structural conditions that influence health equity in refugee populations.

This sectoral hierarchy suggests a gap between needs-based planning and donor allocation preference. Financing appears relatively protected for immediate survival-oriented activities while investments that support longer-term wellbeing, dignity, resilience, and human development remain constrained. We conceptualize the coexistence of stable aggregate coverage and persistent sectoral hierarchy as humanitarian coverage plateau: a financing equilibrium that sustains basic survival but constrain capability development in a protracted displacement setting. Importantly, this plateau reflects neither donor fatigue (i.e., monotonic decline in overall coverage and donor participation) nor successful scale-up toward adequacy. Instead, it represents a normalization of partial and uneven coverage as a steady state.

Such plateaus may be increasingly salient in protracted refugee crises, where short-term, emergency-oriented response mechanisms persist over extended years. In these contexts, annual planning cycles and short-term funding commitments tend to prioritize immediate and measurable outputs over longer-term outcomes, limiting sustained investments aligned with United Nations human rights frameworks, including adequate standard of living, physical and mental-wellbeing, and education (UN, n.d.). Over time, the response structure may become oriented toward keeping people alive rather than supporting recovery, resilience, and expanded capability in protracted displacement.

The stable aggregate coverage also coexisted with notable fluctuations in donor concentration and donor participation. Donor concentration, measured by the HHI, increased substantially in certain years, indicating heightened reliance on smaller number of specific donors. Concurrently, donor entries and

exits pattern demonstrated considerable year-to-year turnover. Together, these patterns have implications for the resilience and predictability of the donor ecosystem behind the stable overall coverage. A financing system with high donor concentration may increase vulnerability to sudden policy shifts by a small number of major donors, while elevated turnover can complicate coordination, continuity, and strategic multi-year planning for implementing partners.

The system's exposure to external shocks is also underscored by the marked decline in overall coverage in 2020, coinciding with the COVID-19 pandemic. This shock revealed how donor priorities can be rapidly reordered by new global emergencies, and how protracted crises remain vulnerable to global disruptions even when needs remain stable or increase. Looking ahead, the potential reductions or withdrawal of major institutional donors, such as the anticipated scaling back of United States Agency for International Development (USAID) contributions from 2025, may further test the resilience of the funding base. With high donor concentration, the exit of a large donor could have disproportionate downstream impacts, potentially reinforcing the sectoral hierarchy.

As this study examines a single protracted displacement context, the extent to which the humanitarian coverage plateau is observable in other crises remains an empirical question. Nevertheless, the framework proposed here offers an analytical lens that may be applied in future comparative research across multiple displacement settings. Longitudinal financing analyses in other protracted crises would be valuable to assess whether similar equilibrium patterns emerge and how they interact with health system performance and population health outcomes.

Taken together, these findings indicate that the Rohingya response has been financed in a manner that sustain survival while structurally constraining investments essential for longer-term wellbeing and human development. The humanitarian coverage plateau framework provides a practical lens for donors and coordinating agencies to identify persistent trade-offs embedded in current financing patterns and to underscore the need for reforms that support multi-year planning, reduce persistent sectoral inequities, and strengthen resilience to donor turnover and external shocks. Addressing protracted displacement as a long-term structural challenge rather than a sequence of recurring short-term emergencies may be critical for advancing health equity and sustainable wellbeing in refugee settings.

5. Limitations

This study utilizes standardized, plan-aligned data from OCHA FTS and UNHCR, enabling a consistent longitudinal assessment across years. However, OCHA FTS reporting may underestimate total contributions due to reporting practices, and coverage indicators do not capture service quality, effectiveness, or within-setcor allocation efficiency. Donor identifiers may also reflect naming conventions and administrative changes over time. In addtion, sector definitions and reporting practices may change across years, and zero coverage may reflect reporting classification rather than true absence of financing. Future work could extend this analysis by comparing multiple displacement crises

to assess generalizability, examine how plateau dynamics vary by geopolitical salience, and link sector-level financing patterns to sector-specific service outputs where data permit.

6. Conclusions

This study examined longitudinal trends in humanitarian financing for the Rohingya refugee response in Cox's Bazar from 2017 to 2024 using OCHA FTS data and UNHCR population estimates. Overall finacial covereage remained relatively stable across the study period; however, this aggregate coverage masked persistent sectoral inequalities. Life-sustaining sectors, particularly Food Security and Nutrition, were comparatively well covered, although life-building and system-strengthening sectors, including WASH, Health, and Education, were chronically underfunded or experienced episodic and volatile coverage. Donor concentration and donor entry/exit dynamics also fluctuated over time, indicating the structural vulnerability in funding predictability and continuity. These findings together support the concept of a humanitarian coverage plateau: a financing equilibrium that sustains basic survival outcomes while constrains investments needed for longer-term well-being, dignity, and human rights in protracted displacement. Given that protracted displacement has become a normalized feature of current humanitarian crises, redesigning humanitarian response framework to support multi-year planning, long-term well-being, and resilience to donor turnover and external shocks is critical.

Declarations

Ethics approval and consent to participate

Not applicable. This study used publicly available aggregated secondary data and did not involve human participants or identifiable personal information.

Availability of data and materials

The datasets analysed during the current study are publicly available from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Financial Tracking Service (FTS) and the United Nations High Commissioner for Refugees (UNHCR) Operational Data Portal. The processed datasets and R code used for data cleaning, aggregation, and analysis are available from the corresponding author upon reasonable request.

Competing interests

The author declares that there are no competing interests

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Authors' contributions

KN conceived and designed the study, conducted the analysis, interpreted the findings, and wrote the manuscript

Acknowledgements

The author thanks colleagues and peers for constructive discussions that informed the conceptual framing of this work.

References

1. European Commission. Forced displacement: refugees, asylum seekers and internally displaced persons (IDPs) [Internet]. Brussels: European Commission; [cited 2026 Feb 21]. Available from: https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/forced-displacement_en
2. United Nations. Peace, dignity and equality on a health planet [Internet]. New York: UN;[cited 2026 Feb 8]. Available from: https://www.un.org/en/global-issues/human-rights
3. United Nations High Commissioner for Refugees. Operational data portal: Bangladesh [Internet]. Geneva: UNHCR; [cited 2025 Oct 23]. Available from: https://data.unhcr.org/en/country/bgd
4. United Nations High Commissioner for Refugees. Global trends: forced displacement in 2024 [Internet]. Geneva: UNHCR; 2025 [cited 2025 Feb 15]. Available from: https://www.unhcr.org/global-trends-report-2024
5. United Nations Office for the Coordination of Humanitarian Affairs. Rohingya humanitarian crisis joint response plan [Internet]. New York: OCHA; [cited 2025 Oct 23]. Available from: https://fts.unocha.org/plans/628/flows

Figures

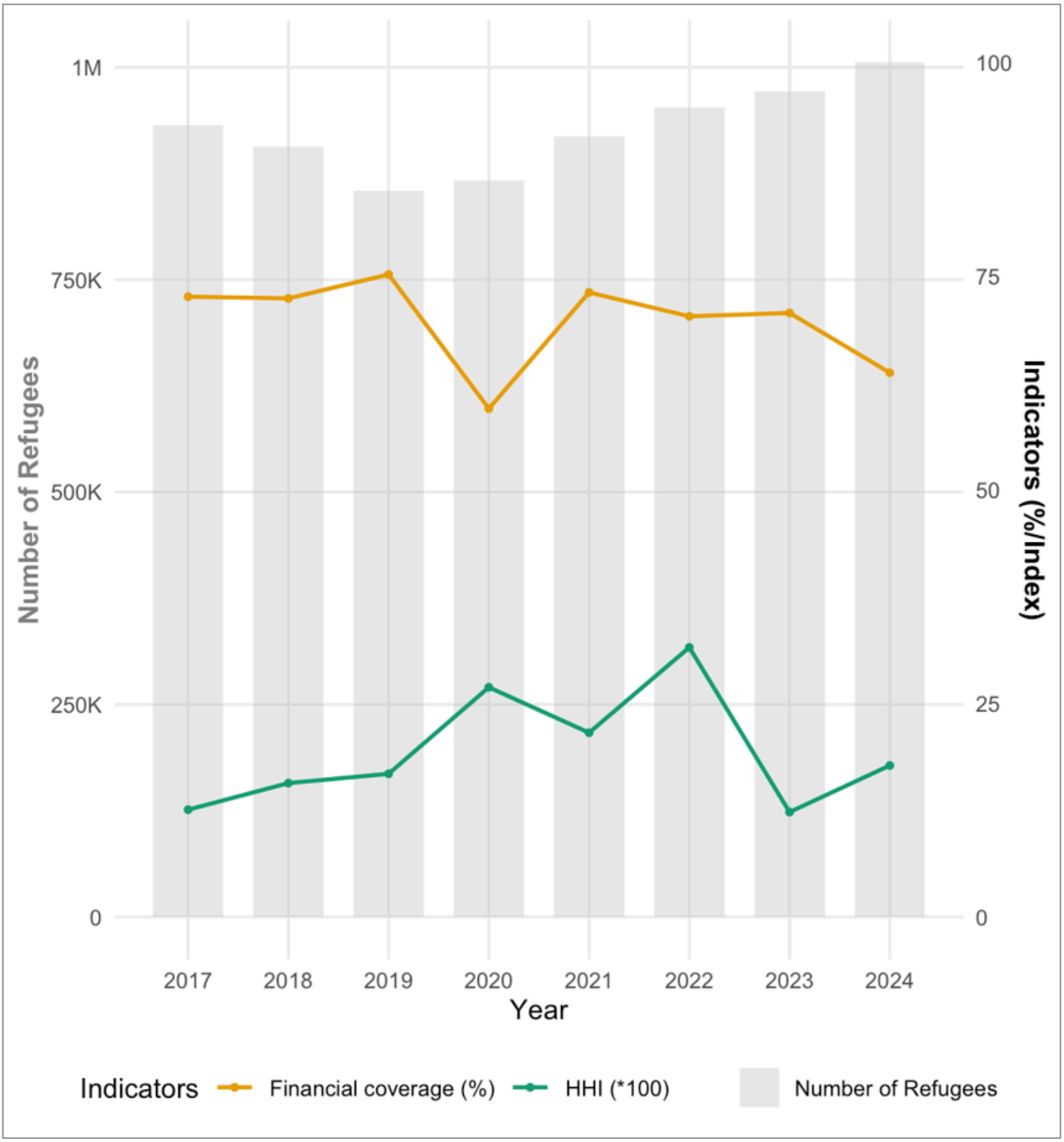


Figure 1

Trend in overall financial coverage, donor concentration, and refugee population

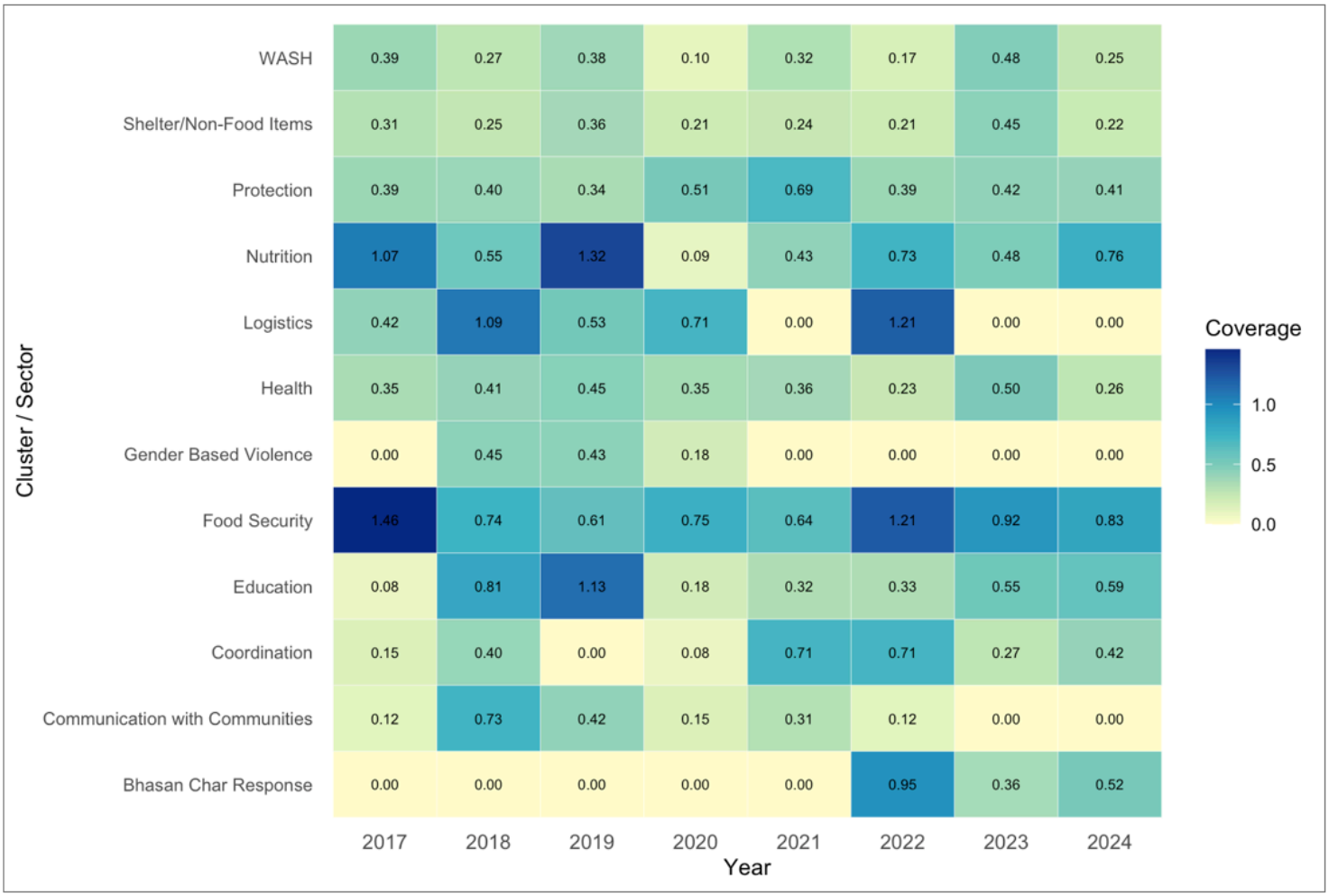


Figure 2

Humanitarian Funding Trends by Sectors (2017-2024)

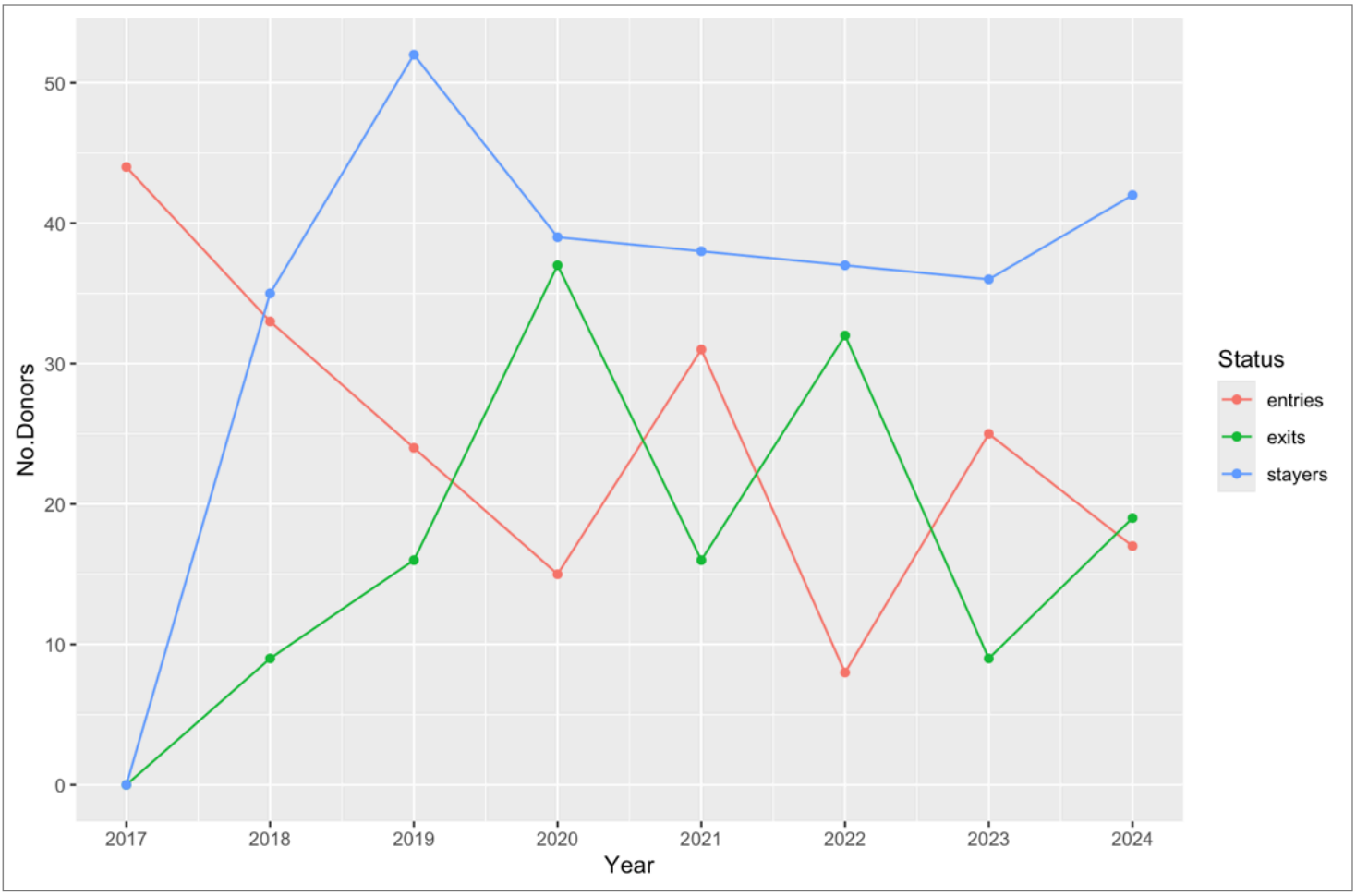


Figure 3

Donor participation dynamics (entries, exits, stayers) 2017-2024