

## ORIGINAL RESEARCH ARTICLE

# Informing reproductive, maternal, neonatal, child, and adolescent health and nutrition priority-setting and financing in Guinea: Findings from a national investment case study

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## Abstract

Guinea faces high maternal and child mortality, low coverage of essential reproductive, maternal, neonatal, child and adolescent health and nutrition (RMNCAH+N) services, and major financing constraints. This study developed a national investment case for 2026–2030 to estimate the costs, health gains, economic returns, and fiscal feasibility of scaling up priority interventions. The analysis integrated situational, budget, costing, cost–benefit, cost of inaction, and fiscal space assessments, and modelled four scenarios. Despite broad service availability, major gaps persist in quality, continuity, and effective coverage. Health expenditure reached USD 776 million in 2022 but remained heavily reliant on household spending. Scale-up would require an additional USD 200–447 million above the baseline, could avert about 334,000 disability-adjusted life years (DALYs) by 2030, and would generate benefit–cost ratios ranging from 6.7 by 2030 to more than 110 by 2050. By contrast, the cost of inaction would reach USD 1.6–2.8 billion by 2030. These findings indicate that scaling high-impact interventions is economically justified and fiscally feasible. (*Afr J Reprod Health* 2026; 30 [7s]: 62-72).

**Keywords:** RMNCAH+N, investment case, maternal and child health, fiscal space, Guinea

## Résumé

La Guinée est confrontée à une mortalité maternelle et infantile élevée, à une faible couverture des services essentiels de santé reproductive, maternelle, néonatale, infantile et des adolescents ainsi que de nutrition (RMNCAH+N), et à d'importantes contraintes de financement. Cette étude a élaboré un cas d'investissement national pour la période 2026–2030 afin d'estimer les coûts, les gains sanitaires, les retours économiques et la faisabilité budgétaire de la mise à l'échelle des interventions prioritaires. L'analyse a intégré des évaluations de la situation, du budget, des coûts, du rapport coût–bénéfice, du coût de l'inaction et de l'espace budgétaire, et a modélisé quatre scénarios. Malgré une disponibilité relativement large des services, d'importantes lacunes persistent en matière de qualité, de continuité et de couverture effective. Les dépenses de santé ont atteint 776 millions USD en 2022, mais restent fortement dépendantes des paiements directs des ménages. La mise à l'échelle nécessiterait un financement additionnel de 200 à 447 millions USD au-delà du niveau de référence, permettrait d'éviter environ 334 000 années de vie ajustées sur l'incapacité (DALYs) d'ici 2030, et générerait des ratios bénéfice–coût allant de 6,7 d'ici 2030 à plus de 110 d'ici 2050. À l'inverse, le coût de l'inaction atteindrait entre 1,6 et 2,8 milliards USD d'ici 2030. Ces résultats indiquent que la mise à l'échelle d'interventions à fort impact est économiquement justifiée et budgétairement réalisable. (*Afr J Reprod Health* 2026; 30 [7s]: 62-72).

**Mots-clés:** RMNCAH+N, cas d'investissement, santé maternelle et infantile, espace budgétaire, Guinée

## Introduction

Despite sustained global commitments under the Sustainable Development Goals (SDGs), preventable maternal, neonatal, and child deaths remain disproportionately concentrated in sub-Saharan Africa.<sup>1,2</sup> Guinea faces major challenges

across the reproductive, maternal, newborn, child and adolescent health and nutrition (RMNCAH+N) continuum of care. Maternal and child mortality remain among the highest globally, with an estimated 550 maternal deaths per 100,000 live births and an under-5 mortality rate of 111 deaths per 1,000 live births.<sup>3</sup>

Coverage of essential interventions remains inadequate. Although 88% of women attend at least one antenatal care (ANC) visit, only 47% complete four visits.<sup>4</sup> More than one-third of births occur outside health facilities,<sup>4</sup> and only around one in four children aged 12–23 months is fully immunized.<sup>4</sup> Nutritional indicators also reflect persistent system weaknesses, with high levels of stunting and wasting indicating important gaps in preventive and curative nutrition services.<sup>3</sup> Adolescents face elevated risks of early pregnancy and limited access to youth-responsive reproductive health services; 23% of women aged 15–19 years have begun childbearing.<sup>5</sup> At the same time, gender-based violence (GBV) remains widespread and insufficiently addressed within health sector responses: more than 80% of women report having experienced violence in their lifetime,<sup>6</sup> and over 90% have undergone female genital mutilation/cutting.<sup>3</sup> Together, these overlapping vulnerabilities highlight the need for integrated, life-course approaches to RMNCAH+N service delivery.

These challenges are compounded by persistent financing constraints. Out-of-pocket (OOP) payments account for 54% of total health expenditure in Guinea, exposing households to financial hardship and limiting equitable access to essential services.<sup>7</sup> Government expenditure on health remains low at 7% of the national budget, well below the 15% Abuja Declaration target.<sup>8</sup> Although political commitment to RMNCAH+N has increased in recent years, budget execution and absorptive capacity remain constrained.<sup>8</sup> Guinea also remains highly dependent on external financing for health, increasing vulnerability to recent reductions in development assistance.<sup>9</sup>

Scaling up RMNCAH+N interventions would not only improve health outcomes, but also generate important economic benefits. Preventable mortality, malnutrition, and adolescent pregnancy reduce lifetime productivity and weaken human capital formation, while strategic investments in the health of women, children, and adolescents can improve educational attainment, labour force participation, and long-term economic growth.<sup>10</sup>

Guinea may also have emerging opportunities to expand fiscal support for the social sector, including health. In particular, the Simandou 2040 National Development Program, which aims to channel future mining revenues into long-term

national development, could have important social dividends if accompanied by active policies.<sup>11</sup>

Against this backdrop, a national investment case for RMNCAH+N was developed for Guinea for the period 2026–2030. Investment cases have been used across low- and middle-income countries to inform strategic resource allocation and priority-setting.<sup>12,13</sup> This study estimates the costs, health impacts, economic returns, and fiscal feasibility of scaling up priority RMNCAH+N interventions through scenario-based coverage modelling. By integrating epidemiological, economic, and financing evidence, the analysis aims to inform sustainable financing strategies and accelerate progress towards national health targets and the SDGs.

## Methods

### *Framework*

This study developed a national investment case to estimate the financial requirements, projected health impacts, economic returns, and fiscal feasibility of scaling up RMNCAH+N interventions in Guinea between 2026 and 2030. The analysis was aligned with national strategic priorities set out in the National Health Development Plan (PNDS).<sup>14</sup> The analytical framework comprised six components: situation analysis, budget analysis, costing and scenario modelling, cost–benefit analysis, cost of inaction analysis, and fiscal space analysis.

### *Data sources*

Baseline demographic and epidemiological parameters were drawn primarily from the two most recent Demographic and Health Surveys.<sup>3,4</sup> At the time of analysis, results from the latest Demographic and Health Survey (2024–25 DHS) had not yet been formally ratified by the Government of Guinea and were therefore interpreted with caution. Additional sources included the 2022 SMART nutrition survey<sup>15</sup> and routine health information system data. Health facility readiness indicators were supplemented, where available, by Service Availability and Readiness Assessment (SARA) data.<sup>16</sup>

Health financing and expenditure data were extracted from national budgets for 2020–2025 and complemented with data from the World Health

Organization (WHO) Global Health Expenditure Database.<sup>7</sup> Macroeconomic projections, including gross domestic product (GDP) growth, inflation, and fiscal balances, were derived from International Monetary Fund (IMF) reports. Financial data were standardised in 2025 United States dollars using historical exchange rates.

### **Analytical components**

#### ***Situation analysis***

The situation analysis examined baseline levels and trends in maternal, neonatal, infant, and under-5 mortality, adolescent reproductive health outcomes, nutritional indicators, and GBV. It was structured using the Tanahashi model, which provides a coverage cascade for identifying health system bottlenecks across availability, accessibility, acceptability, contact, and effective coverage.<sup>17</sup> Coverage of core RMNCAH+N interventions, including antenatal care, skilled birth attendance, postnatal care, full immunization, family planning, and management of childhood illnesses, was assessed using nationally representative survey data. Gaps between service contact and effective coverage were identified by comparing utilization indicators with service readiness data. These findings informed the prioritization of high-impact interventions included in the modelled scenarios.

#### ***Budget analysis***

The budget analysis examined trends in public health expenditure, the composition of financing sources, and sector execution rates. Government health allocations were analysed as a share of total public expenditure and GDP, alongside the distribution of funding across recurrent and capital expenditure categories. The relative contributions of domestic public financing, external assistance, and OOP payments were assessed to characterize structural financing constraints. This analysis established the baseline against which incremental financing requirements and fiscal sustainability were assessed.

#### ***Costing and scenario modelling***

A bottom-up, ingredient-based costing approach was implemented using the Spectrum software suite and the One Health Tool, including the Lives Saved

Tool (LiST), FamPlan, and related modules.<sup>18</sup> The modelling framework ensured internal consistency across demographic projections, intervention coverage, health outcomes, and financial requirements.<sup>19</sup>

Four scenarios were modelled to reflect variation in both intervention package and scale-up ambition. Two intervention packages were defined: a comprehensive package including all RMNCAH+N interventions specified in national policy documents, and a prioritized package consisting of high-impact, cost-effective interventions validated through stakeholder consultation. Two coverage trajectories were also defined: an ambitious scale-up, modelled as a linear progression towards PNDS target coverage levels by 2029, and a moderate scale-up, defined as the midpoint between baseline coverage and PNDS targets. Baseline coverage values were derived from the most recent DHS and related surveys.

Costs were estimated by multiplying the population in need by target coverage and intervention-specific unit costs. Cost components included commodities, personnel time, service delivery contacts, logistics, supervision, programme management, and infrastructure investment. Incremental costs were calculated relative to a baseline scenario of constant coverage.

Health impacts were projected in terms of deaths averted, cases of stunting avoided, and disability-adjusted life years (DALYs) averted under each scenario. Interaction effects between interventions were accounted for within the Spectrum platform to avoid double counting.

#### ***Cost–benefit analysis***

The economic value of projected health gains was estimated using the human capital approach. DALYs averted were monetized at 1.5 times GDP per capita, reflecting direct productivity gains and broader social contributions.<sup>20</sup>

Mortality reductions were valued based on expected years of productive life saved. Reductions in morbidity, including stunting and anaemia, were monetized through projected lifetime productivity gains.<sup>21,22,23,24</sup> All future costs and benefits were discounted at an annual rate of 3%. Benefit–cost ratios (BCRs) were calculated as total discounted benefits divided by total incremental costs for each scenario.

### ***Cost of inaction analysis***

The cost of inaction was defined as the foregone economic value associated with maintaining baseline coverage levels. It was estimated as the difference between the economic benefits projected under each scale-up scenario and those under the baseline scenario. This approach captured productivity losses attributable to preventable mortality, malnutrition, and morbidity over the projection period.

### ***Fiscal space analysis***

Fiscal space was assessed using a macro-fiscal programming framework informed by IMF projections. The analysis examined projected revenue growth, expenditure trends, and debt sustainability constraints to assess the feasibility of financing incremental RMNCAH+N investments. Potential sources of fiscal expansion included budget reprioritization within the health sector, improved expenditure efficiency, enhanced domestic revenue mobilization, innovative financing mechanisms, and strategic use of external assistance. Financing gaps were estimated by comparing projected resource needs under each scenario with projected available fiscal space.

### ***Stakeholder engagement and ethical considerations***

The investment case was developed through structured consultation with the Ministry of Health and Public Hygiene, development partners, and technical stakeholders. Preliminary assumptions and findings were reviewed during national workshops.

The study relied exclusively on secondary data from nationally representative surveys and administrative sources. No primary data involving human participants were collected; therefore, formal ethical approval was not required.

## **Results**

The findings of the investment case are presented across six analytical components.

### ***Situational analysis***

Guinea continues to face a high burden of preventable maternal, neonatal, and child morbidity

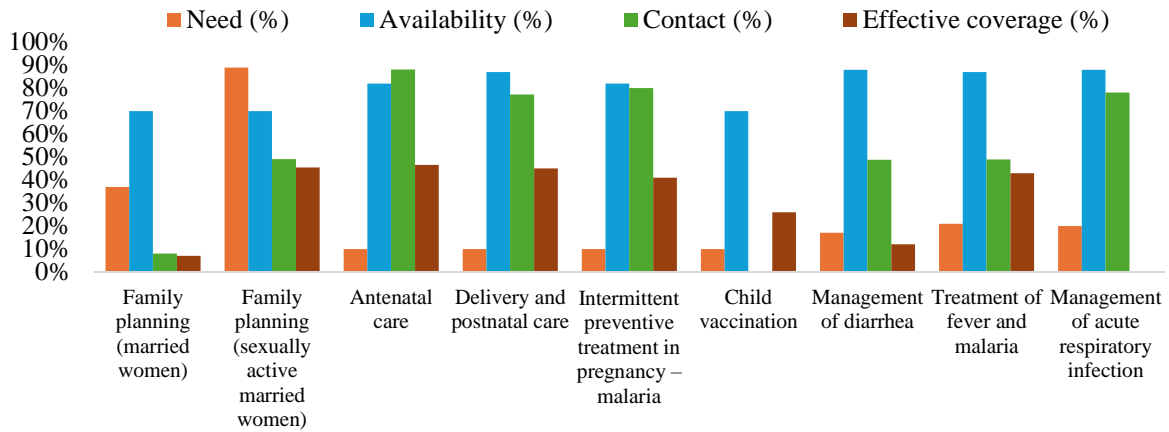
and mortality despite relatively broad availability of primary healthcare services. Maternal health indicators reveal important gaps in continuity and quality of care. While 88% of women attend at least one antenatal care visit, only 47% complete four visits, and early postnatal care coverage remains low at 45%. Skilled birth attendance reaches 77%, yet only 63% of deliveries occur in health facilities. Child health outcomes are similarly constrained by limited effective coverage: only 36% of children with diarrhoea receive oral rehydration salts, and just 26% of children aged 12–23 months are fully immunized. Adolescent reproductive health needs are also substantial, with 23% of girls aged 15–19 years having experienced pregnancy. Chronic malnutrition remains widespread, with stunting affecting 34% of children.

The Tanahashi analysis shows systematic losses across the coverage cascade, from service availability to effective coverage (Figure 1). Although approximately 70% of facilities provide key RMNCAH+N services, readiness remains limited, with adolescent service preparedness at 32% and neonatal resuscitation available in about 40% of facilities. Supply-side constraints, quality gaps, and sociocultural barriers limit the conversion of service contact into effective coverage, resulting in substantial unrealized health gains across the continuum of care.

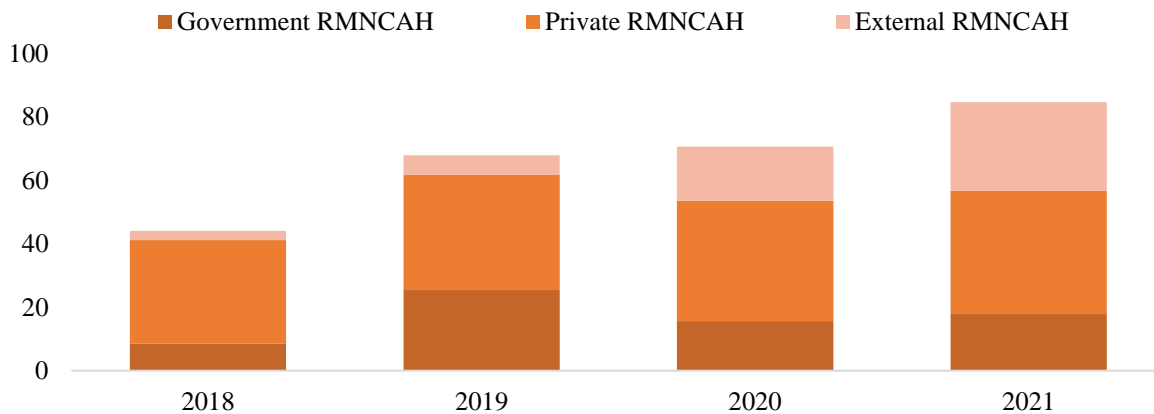
### ***Budget analysis***

The budget analysis examined trends in health financing and resource allocation for RMNCAH+N in Guinea. Between 2018 and 2022, total health expenditure increased substantially from USD 443 million to USD 776 million, reflecting rising nominal investment in the health sector. However, health spending remained relatively stable as a share of GDP, fluctuating between 3.7% and 4.1%, which indicates limited structural expansion in fiscal commitment. Public health expenditure nearly doubled, increasing from USD 73 million in 2018 to USD 143 million in 2022, yet private financing continued to dominate total health spending, accounting for 61%–73%.

RMNCAH+N expenditure also increased in nominal terms between 2018 and 2021, representing approximately 10%–14% of total health expenditure. External financing rose markedly from USD 3 million to USD 28 million, while private



**Figure 1:** Tanahashi coverage cascade for selected RMNCAH+N services in Guinea



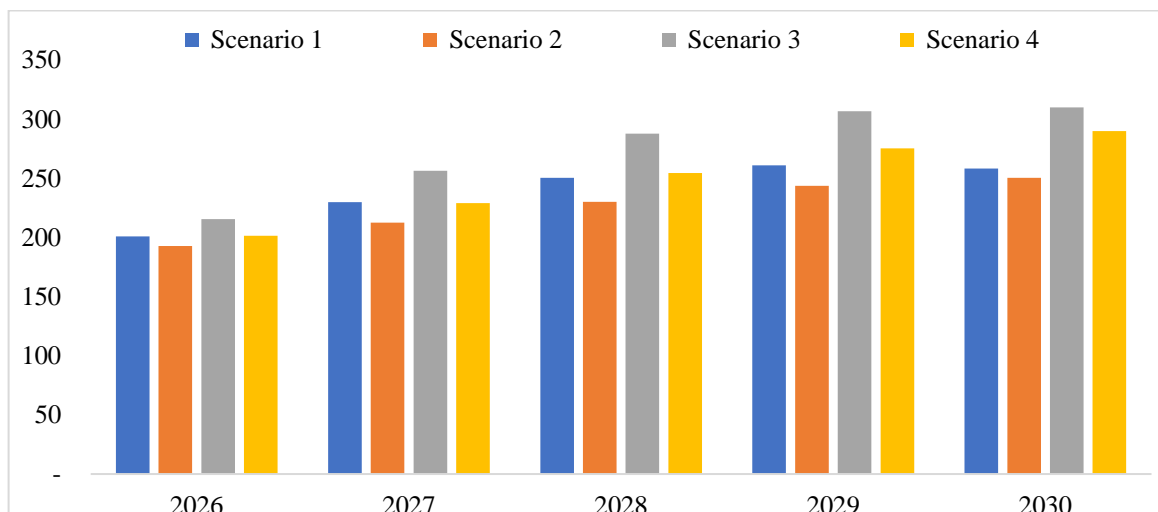
**Figure 2:** RMNCAH+N expenditure by financing source in Guinea, 2018–2021 (USD millions)

expenditure, largely driven by household OOP payments, remained higher than government allocations, increasing from USD 32.6 million to USD 38.8 million. OOP expenditure per capita rose from USD 23 to USD 31 between 2018 and 2022, with households financing 53%–67% of total health expenditure. Overall, the results indicate rising investment levels alongside continued dependence on households and external partners, underscoring the need for stronger domestic financing to support sustainable scale-up of RMNCAH+N services. Figure 2

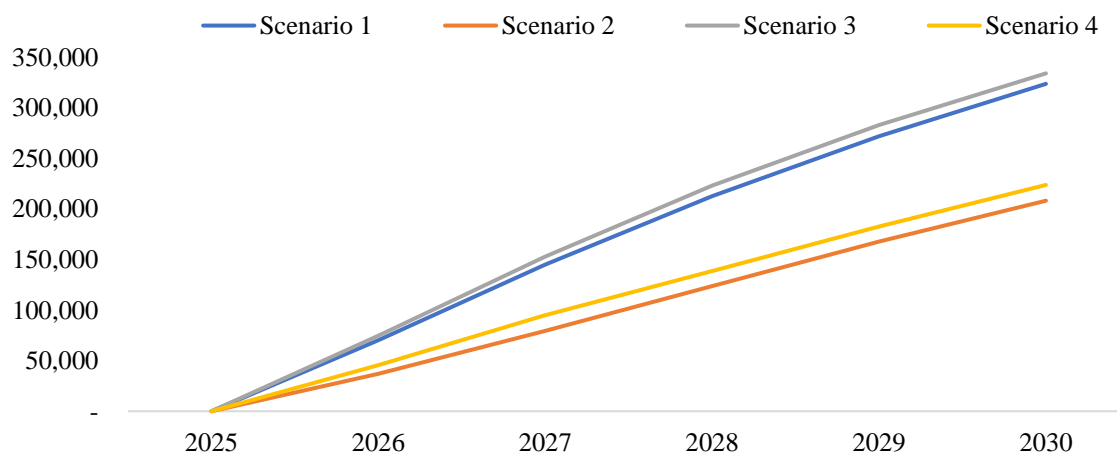
**Costing and scenario modelling**

The costing analysis estimated the additional resources required to scale up RMNCAH+N

interventions in Guinea between 2026 and 2030 under four investment scenarios. Scenario 1, representing an ambitious scale-up of a prioritized package of high-impact interventions, would require approximately USD 271 million in incremental investment above the baseline over the scale-up period. Scenario 2, which models moderate expansion of the prioritized package, is the least resource-intensive pathway and would require about USD 200 million in incremental investments. Scenario 3, representing the ambitious scale-up of the comprehensive national intervention package, would require the highest level of investment at an estimated USD 447 million incremental costs above the baseline. Scenario 4, combining the comprehensive package with moderate coverage expansion, would require an additional USD 321



**Figure 3:** Projected incremental costs of RMNCAH+N scale-up scenarios in Guinea, 2026–2030 (USD millions)



**Figure 4:** Projected DALYs averted under RMNCAH+N scale-up scenarios in Guinea, 2026–2030

million. Across all scenarios, costs rise over 2026–2030 because of expanded service delivery, workforce requirements, commodities, logistics, and health system strengthening inputs. Figure 3

Projected health gains are substantial under all scenarios. By 2030, DALYs averted range from 208,314 in Scenario 2 to 334,297 in Scenario 3, with 323,941 DALYs averted in Scenario 1 and 223,900 in Scenario 4. Most gains are attributable to reductions in child mortality, accounting for more than 273,000 DALYs averted in Scenario 1 and 283,432 in Scenario 3. Maternal mortality reductions contribute a further 29,542–50,866 DALYs across scenarios. Although ambitious scenarios generate the largest absolute gains, moderate expansion pathways also yield substantial

improvements in survival, nutrition outcomes, and long-term human capital development. Figure 4

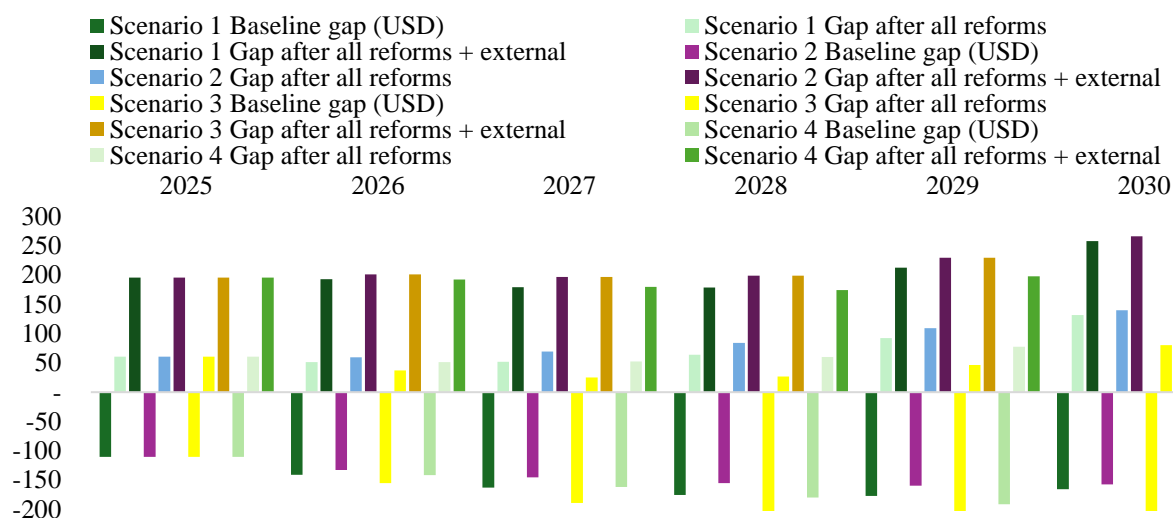
**Cost–benefit analysis**

In the short term, from 2026 to 2030, monetized benefits range from USD 1.82 billion in Scenario 2 to USD 3.22 billion in Scenario 3. Over the longer term to 2050, Scenario 3 generates the highest total benefits at USD 29.30 billion, followed closely by Scenario 1 at USD 28.32 billion, while Scenarios 2 and 4 produce lower but still substantial returns.

BCRs exceed 1 in all scenarios and across all time horizons, indicating strong economic justification for investment. Over the period 2026–2030, ratios range from 6.7 in Scenario 4 to 12.0 in Scenario 1. Returns increase substantially over

**Table 1:** Monetized benefits, benefit–cost ratios, and cost of inaction under RMNCAH+N scale-up scenarios in Guinea, 2026–2050

	Monetized benefits (USD millions)			Cost-benefit ratios			Cost of inaction (USD millions)		
	2026-30	2026-34	2026-50	2026-30	2026-34	2026-50	2026-30	2026-34	2026-50
<b>Scenario 1</b>	\$ 3 064	\$ 7 498	\$ 28 323	12	22	111	\$ 2 808	\$ 7 158	\$ 28 068
<b>Scenario 2</b>	\$ 1 821	\$ 4 614	\$ 17 858	9.9	15	23	\$ 1 637	\$ 4 301	\$ 17 091
<b>Scenario 3</b>	\$ 3 215	\$ 7 807	\$ 29 298	7.5	11.1	20.4	\$ 2 785	\$ 7 103	\$ 27 862
<b>Scenario 4</b>	\$ 2 019	\$ 5 073	\$ 19 478	6.7	8.8	11.5	\$ 1 719	\$ 4 498	\$ 17 778



**Figure 5:** Projected effect of domestic revenue mobilization, efficiency gains, and innovative financing on the RMNCAH+N financing gap in Guinea, 2025–2030 (USD millions)

time: by 2026–2034, ratios range from 8.8 to 22.0, and by 2026–2050 from 11.5 to 111.0, with Scenario 1 generating the highest long-term return. Table 1

**Cost of inaction analysis**

The cost of inaction analysis estimates the economic losses Guinea would incur if RMNCAH+N interventions are not scaled up. Between 2026 and 2030, foregone benefits range from USD 1.6 billion in Scenario 2 to USD 2.8 billion in Scenario 1. These losses rise substantially over time, reaching USD 4.3–7.2 billion by 2034 and USD 17.1–28.1 billion by 2050. The findings indicate that delayed or insufficient investment would generate escalating productivity and human capital losses that far exceed the costs of implementing any of the scale-up scenarios.

**Fiscal space analysis**

Guinea's macroeconomic outlook appears favourable for expanding domestic health financing. Real GDP growth is projected to rise from 7.2% in

2025 to more than 11% by 2030, while nominal GDP is expected to increase from USD 27.5 billion in 2025 to approximately USD 43.2 billion by 2029. Inflation is projected to stabilize at around 3% annually from 2025 onwards, improving budget predictability. At the same time, the public debt-to-GDP ratio is forecast to decline from about 38% in 2025 to roughly 25% by 2030, suggesting that debt dynamics are unlikely to constrain increased health spending.

Despite this favourable macroeconomic context, the modelled scenarios show persistent financing gaps under baseline assumptions. Across all scenarios, financing gaps remain substantial and increase over time, rising from approximately USD 111 million in 2025 to USD 158–217 million by 2030, with consistently larger gaps observed in the more ambitious scenarios. The analysis therefore examined three main levers for expanding fiscal space: domestic revenue mobilization, efficiency gains in public spending, and innovative and private-sector financing.

Domestic revenue mobilization emerges as the most important lever. Resources available for RMNCAH+N increase from about USD 195 million in 2025 to nearly USD 240 million by 2030 following reforms. Efficiency gains provide additional, though smaller, improvements, with available resources increasing only modestly, for example from USD 201 million to USD 203 million in 2026 and from USD 219 million to USD 221 million in 2030. Innovative financing mechanisms also contribute incrementally, with available resources reaching approximately USD 202 million in 2026, USD 205 million in 2029, and nearly USD 220 million in 2030.

Taken together, these results show that domestic revenue mobilization accounts for the largest share of financing gap reduction, while efficiency gains contribute approximately 20%–25% of the total reduction and innovative and private financing mechanisms contribute less than 5%. Combined, these measures allow Guinea to move progressively from large financing deficits towards near-full financing over the medium term. Overall, the fiscal space analysis suggests that sustainable expansion will depend primarily on stronger domestic revenue generation and improved expenditure efficiency, with innovative financing playing a complementary rather than transformative role. Figure 5

## Discussion

This study contributes to a growing body of work that uses investment-case analytics to inform priority-setting in maternal and child health by linking epidemiological need, intervention scale-up, costs, and financing feasibility within a single policy framework. Rather than treating burden, service delivery, and financing as separate policy questions, this approach enables decision-makers to assess whether proposed health gains are not only technically achievable, but also economically justified and fiscally realistic over the medium term.

A key implication of the findings is that Guinea's challenge is not solely one of service coverage, but of effective coverage. As recent work on quality health systems has emphasized, contact with services does not necessarily translate into health gain when readiness, quality, and continuity of care remain weak.<sup>25,26,27</sup> The value of the Tanahashi framework in this context is therefore not only descriptive; it helps explain why relatively

broad availability of services can coexist with persistently poor outcomes. For Guinea, this suggests that future RMNCAH+N strategies should place greater emphasis on the conditions under which services generate real benefit, including workforce readiness, essential inputs, referral continuity, and the user experience of care.

The study also reinforces the policy relevance of viewing RMNCAH+N investment through a human capital lens. The economic case for maternal, newborn, child, and adolescent health extends beyond the health sector because gains in survival, nutrition, and reproductive health influence educational attainment, labour productivity, and broader development trajectories.<sup>20</sup> In that sense, the importance of the investment case lies not only in demonstrating favourable returns, but in helping reposition RMNCAH+N within national development planning as a productive social investment rather than a recurrent expenditure pressure.

At the same time, the financing findings suggest that sustainability will depend less on one-off resource mobilization efforts than on the structure of public financing itself. Recent global work has stressed that progress in primary healthcare and universal health coverage depends fundamentally on stronger public financing, while fiscal space for health is shaped by macroeconomic conditions, budget prioritization, domestic revenue mobilization, and spending efficiency.<sup>28,29</sup> From this perspective, Guinea's continued reliance on household spending and external assistance is important not only because it limits financial protection, but because it makes expansion more vulnerable to volatility and weakens the predictability required for sustained service delivery.

These considerations also help place innovative financing in a clearer perspective. Although such mechanisms may support targeted investments or improve short-term flexibility, the broader literature suggests that they are not substitutes for durable public financing arrangements.<sup>28,29</sup> Their main value is likely to be catalytic or complementary, particularly where they are aligned with wider public financial management and sector planning reforms. For Guinea, the central policy question is therefore not whether innovative instruments should be pursued in principle, but how they can be used selectively without distracting

from the larger task of strengthening domestic budgetary commitment to essential RMNCAH+N services.

More broadly, the study highlights the importance of institutionalizing economic and fiscal analysis within routine health sector planning. Investment cases are most useful when they function not as one-off advocacy products, but as iterative tools for comparing scenarios, revising assumptions, and aligning technical ambition with implementation and financing realities.<sup>30</sup> This is especially relevant in settings where demographic pressures, aid uncertainty, and evolving macro-fiscal conditions require continuous reprioritization. In Guinea, embedding this type of analysis within planning and budgeting processes could support more transparent trade-offs, stronger intersectoral dialogue, and more credible pathways for scaling high-impact interventions over time.

## Limitations

This analysis has several limitations that should be considered when interpreting the findings. First, the modelling relied on assumptions regarding baseline and target intervention coverage drawn from multiple data sources, some of which were not recent. Where possible, preliminary estimates from the 2024–25 DHS were used. However, these data had not yet been formally ratified by the Ministry of Health and Public Hygiene of Guinea at the time of analysis and should therefore be interpreted with caution. In addition, target coverage levels were derived from the most recent available National Health Development Plan covering the period 2015–2024, as the subsequent plan had not yet been finalized. Updating the investment case once finalized DHS data and new national targets become available would improve the precision and policy relevance of the estimates.

Second, the analysis was conducted at the national level and does not capture regional variation in health needs, service coverage, or implementation capacity within Guinea. Given the country's substantial geographic inequalities in health outcomes and access to care, subnational modelling could help identify priority regions and support more tailored scale-up strategies. However, key indicators from the 2024–25 DHS were not yet fully disaggregated by region at the time of analysis. Future subnational analysis would therefore

strengthen the evidence base for more targeted planning.

Third, the prioritized package of interventions was validated through consultation with the national technical working group (TWG), drawing on global guidance and national priorities. While this approach supported policy relevance and country ownership, further assessment of intervention-specific budget impact and comparative cost-effectiveness could help refine the package and support more explicit financial prioritization.

Finally, as with all scenario-based modelling, the estimates are sensitive to assumptions related to coverage expansion, unit costs, intervention effects, and macro-fiscal projections. Although the modelling approach provides a useful basis for strategic planning, actual results will depend on implementation performance, financing execution, and the broader economic context over time.

## Implications for policy and practice

The findings of this investment case underscore the need to reposition RMNCAH+N as a central pillar of Guinea's national development strategy rather than a narrowly defined health sector priority. The strong economic returns and substantial long-term benefits identified in the analysis suggest that investments in RMNCAH+N should be treated as productive investments in human capital formation. In this context, emerging macro-fiscal opportunities, particularly those associated with future mining revenues under the Simandou 2040 National Development Program, could provide a critical window to expand sustainable financing for social sectors. However, translating this potential into tangible health gains will require deliberate policy choices to prioritize equitable allocation, strengthen governance, and ensure that resource flows are effectively channelled into high-impact interventions.

From a sectoral perspective, the results highlight the importance of shifting from a focus on service availability to improving effective coverage and quality of care across the RMNCAH+N continuum. Persistent gaps between contact and effective coverage indicate that expanding access alone will not be sufficient to achieve meaningful

health improvements. Policy efforts should therefore prioritize strengthening health system foundations, such as workforce capacity, supply chain reliability and service readiness.

The analysis points to the critical role of sustainable and predictable financing in supporting long-term scale-up. While innovative financing mechanisms and external assistance can play a complementary role, the findings reinforce that durable progress will depend primarily on strengthened domestic resource mobilization, improved budget prioritization, and enhanced efficiency in public spending. Such an approach requires renewed prioritisation of the health sector. Institutionalizing investment-case approaches within routine planning and budgeting processes could support more transparent prioritization, better alignment between technical and fiscal strategies.

## Conclusion

This study shows that scaling up prioritized RMNCAH+N interventions in Guinea between 2026 and 2030 is not only a public health imperative, but also a strategically sound economic investment. The analysis demonstrates that substantial gains in survival, nutrition, and long-term human capital can be achieved through additional but feasible investment, while failure to act would carry significant economic and social costs. Importantly, the findings suggest that the main challenge is not whether investment is justified, but how to translate evidence into sustained financing and effective implementation.

For Guinea, this requires moving beyond short-term expansion of services towards a more durable financing and planning approach that places RMNCAH+N at the centre of national development strategy. Stronger domestic resource mobilization, improved expenditure efficiency, and closer integration of health priorities into fiscal decision-making will be essential to sustain progress. Framed in this way, investment in the health and wellbeing of women, children, and adolescents is not simply a sectoral expenditure, but a foundational investment in equity, productivity, and long-term national development.

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## Conflicts of interest

No conflicts of interest are declared.

## Data availability

Further data is available upon request to the authors.

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