



SYNTHESIS REPORT

Synthesis Study on Lessons Learned from the Basic Needs Trust Fund (BNTF)

VOLUME II

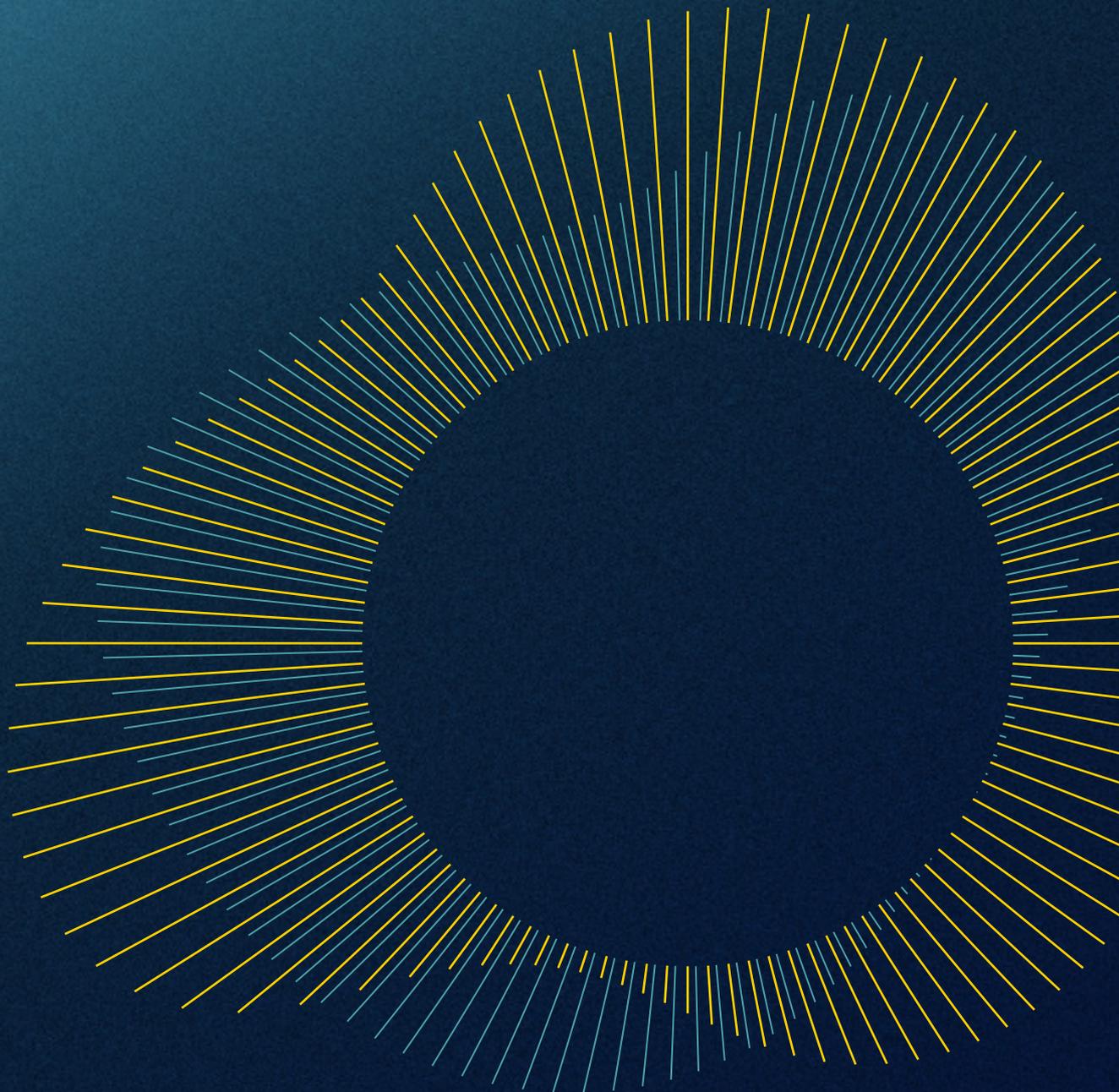


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Acronyms

AI	Artificial Intelligence	LLM	Large Language Model
ALMPs	Active Labour Market Programmes	M&E	Monitoring and Evaluation
BCADI	Basic Community Access and Drainage	MCL	Matrix of Coded Lessons
BMCs	Borrowing Member Countries	MI	Map of Interventions
BNTF	Basic Needs Trust Fund	MSMEs	Micro, Small, and Medium Enterprises
CDB	Caribbean Development Bank	MSR	Matrix of Systematic Reviews
CENA	Community Engagement and Needs Assessment	OCR	Optical Character Recognition
CLO	Community Liaison Officer	OIE	Office of Independent Evaluation
CMIs	Community Monitoring Interventions	PCs	Project Countries
CNAA	Community Needs and Assets Assessment	PTAs	Parent-Teacher Associations
CS	Case Study	PWDs	Persons with Disabilities
ECD	Early Childhood Development	RE	Renewable Energy
EE	Energy Efficiency	REEEU	Renewable Energy and Energy Efficiency Unit
EGS	Energy Generation and Supply	STEM	Science, Technology, Engineering, and Mathematics
EHRD	Education and Human Resource Development	TA	Technical Assistance
ESPS	Energy Sector Policy and Strategy	ToR	Terms of Reference
GE	Gender Equality	TVET	Technical and Vocational Education and Training
IA	Implementing Agency	WRMA	Water Resource Management Authority
ICT	Information and Communication Technology	WSSE	Water and Sanitation Systems Enhancement
JSIF	Jamaica Social Investment Fund	YCS	Youth and Citizen Security
LIV	Livelihoods		

Annexe I. Objectives

To generate strategic insights by synthesising evidence from past evaluations of the BNTF, in order to inform CDB's future poverty-reduction programming, institutional learning, and decision making.

- Extract and consolidate lessons from BNTF evaluations and reports.
- Summarise and categorise findings within a structured analytical framework (relevance, coherence, effectiveness, efficiency, sustainability, challenges, enabling factors, and cross-cutting themes).
- Identify and report practical lessons to inform CDB's poverty-reduction programming, especially those involving community engagement.
- Map interventions supported by BNTF against thematic areas and implementation cycles.

- Identify, summarise, and analyse relevant systematic reviews related to the thematic areas of the BNTF to identify evidence to inform the design, monitoring, and evaluation of future BNTF-related interventions and evaluations.
- To provide strategic lessons learned based on cross-country and cross-cycle learning to inform the design and delivery of future BNTF or similar poverty-focused initiatives.
- Identify existing examples of AI-assisted tools in Multilateral Organisations.

The value of this synthesis lies in its ability to transform fragmented knowledge into a comprehensive narrative, enabling existing lessons to be leveraged to generate future impact.



Annexe II. Detailed Findings, Lessons, and Insights by Thematic Area

As a result of this process, relevant information was acquired concerning the intervention mapping of the BNTF, the lessons learned from evaluations and institutional documents, and valuable evidence was identified through systematic reviews. This evidence includes, for example, interventions that have shown positive outcomes, supported by rigorous methodologies such as impact assessments and meta-analyses. Furthermore, systematic reviews have facilitated the identification of a collection of useful indicators for monitoring results in the medium- and long term. The subsequent section presents the outcomes of an analytical process that consolidates the findings from the three components of the analytical framework. This process discusses the findings and lessons learned obtained from the synthesis of evaluations and institutional documents, and, where applicable, reinforces or complements these findings with positive evidence from systematic reviews. In certain instances, the evidence from systematic reviews constitutes the sole source for specific sections. From this process, key findings, lessons learned, and insights of value to the BNTF, the CDB at large, and the OIE were identified. This valuable information, strategically synthesised for its inclusion in Volume I, is presented in a disaggregated manner across thematic areas throughout this section.

2.1 Basic Community Access and Drainage (BCADI)

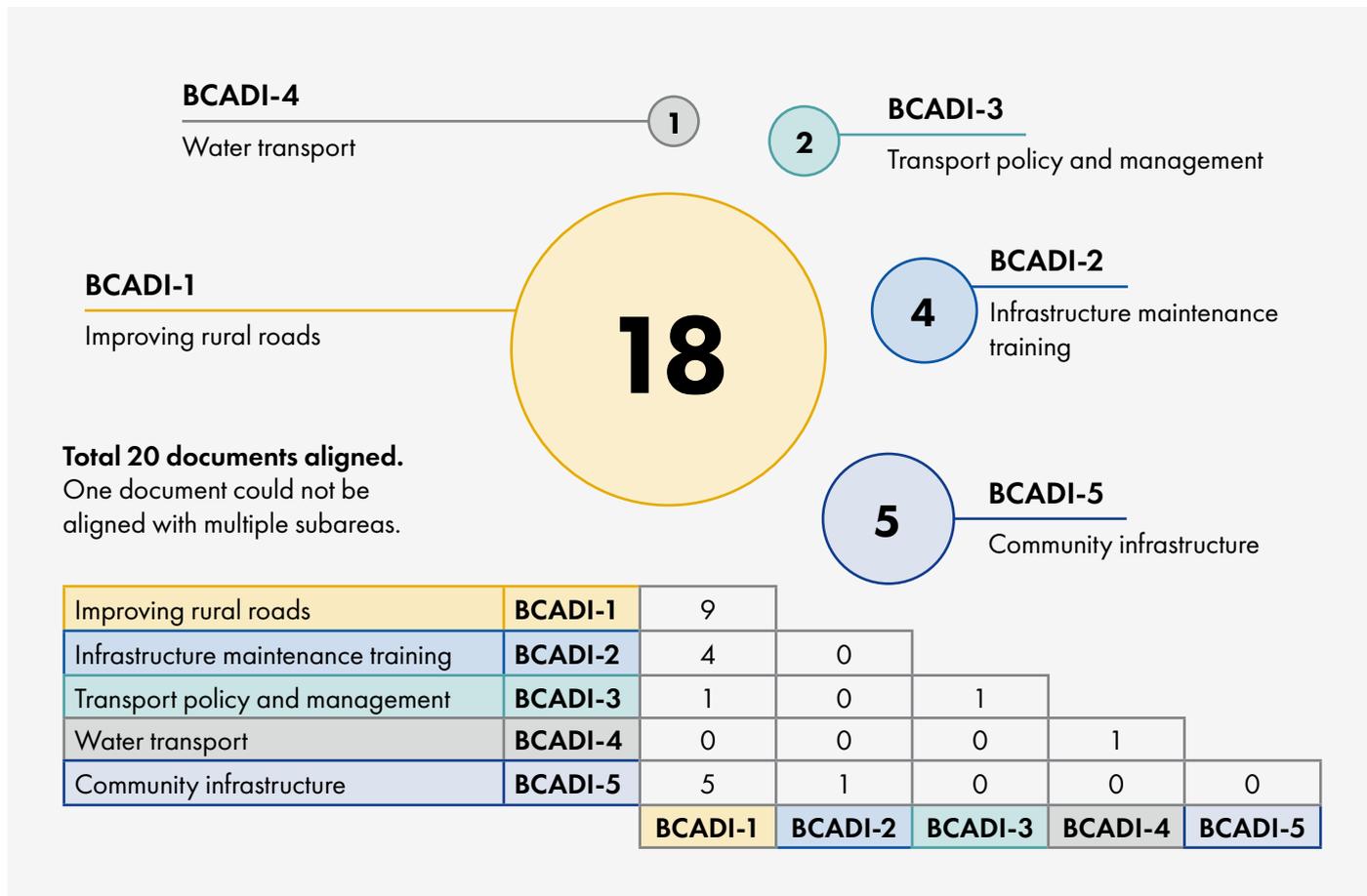
Based on the classification, there were 20 evaluations and institutional documents aligned with BCADI interventions, 10 systematic reviews and 24 sub-projects. As shown in *Figure 1*, evidence in evaluations and institutional documents is predominantly associated with the enhancement of rural roads (BCADI-1), whereas interventions related to water transportation are comparatively less frequent (BCADI-4).

The analysis identified a frequent occurrence of findings related to improving rural roads, community infrastructure and infrastructure maintenance training, within the same document. Conversely, transport intervention is addressed in three institutional documents. This insight helps pinpoint evidence gaps, thereby directing efforts to generate knowledge through evaluation and monitoring.

The evaluations and institutional documents analysed primarily focus on improving rural roads and community infrastructure. The evidence presented in these documents highlights how the interventions implemented through the BNTF projects, particularly in rehabilitating rural roads, have addressed safety and access issues that could otherwise lead to community isolation or migration. This finding is consistent with systematic reviews indicating that providing feeder roads (basic access roads) yields greater social welfare gains than higher-standard gravel or paved roads.

Regarding poverty reduction, evidence from evaluations and institutional documents suggests that BCADI BNTF interventions contribute to poverty reduction by enhancing physical access and reducing vulnerability, particularly benefiting women, children, older adults, and Persons with Disabilities (PWDs). This finding is consistent with those from systematic reviews, which show that the expansion of rural roads yields benefits across multiple domains, including employment

Figure 1. Number of evaluations and institutional documents aligned with BCADI, classified by sub-area



opportunities, traffic volumes, poverty levels, transportation costs, agricultural productivity, and access to healthcare facilities. Evidence also indicates a positive influence on school completion rates. Therefore, BNTF could consider exploring the possibility of evaluating the effects of its interventions beyond indicators limited to access improvements and road construction outputs in order to show a broader range of effects.

Additionally, systematic reviews concerning transport and mobility needs in ageing communities emphasise that transport and mobility are vital for accessing care networks, community centres, and health services, among others. Studies exploring older adults' access to various destinations have substantial potential to inform the development of age-friendly communities.

Another lesson learned is that community participation has been a frequent and significant element in the BNTF interventions in BCADI, facilitating the identification of access and transportation needs while also playing a recognised role in maintenance and sustainability. Accordingly, BNTF evaluations identify the combination of strong technical oversight with active community participation as a key success factor. Although no systematic reviews explicitly focused on community engagement and pathway development were identified, some have found that successful interventions require an understanding of the context in which they are implemented so that the intervention aligns with available resources and can effectively support needs. This participatory approach, consistently identified in the intervention mapping, is a good practice that reflects the

BNTF commitment to embedding community ownership throughout the project cycle. These practices should be continued and continuously reinforced.

Institutional, operational, and contextual factors have influenced the achievement of BCADI results, with implementation capacity and procurement identified as key areas shaping performance across interventions. After reviewing evidence from evaluations and institutional documents, it has been identified that delays in implementation have been a recurrent challenge, often linked to capacity limitations within both the Borrowing Member Countries (BMCs) and the Implementing Agencies (IAs). These challenges often relate to project management skills and a “steep learning curve” for IA staff, emphasising the need for ongoing institutional strengthening and knowledge transfer. Procurement processes are also cited as a source of procedural complexity that may affect timelines.

Additionally, the cross-country and cross-cycle evidence synthesis identified issues during design and construction phases that occasionally influence the long-term functionality and quality of outputs, suggesting that early-stage technical support can be a valuable preventive measure. Contextual factors, such as the limited availability of qualified contractors, infrastructure gaps, and external shocks like the COVID-19 pandemic, have further impacted implementation timelines. Persistent structural conditions, such as historically limited road standards and maintenance capacity, continue to shape outcomes within the sector.

Although the BCADI category encompasses sub-areas such as transport policy and administrative management, the mapped sub-projects are almost entirely focused on the construction and rehabilitation of rural roads and footpaths. Only a single project concerning storm drain rehabilitation, one involving bridge construction, and one for a river wall extension were identified. However, the desk review included some broader portfolio documents beyond the

BNTF, which concluded that CDB supports various infrastructure interventions covering these other sub-areas. The program’s narrower focus may explain the limited evidence in evaluations within the BNTF for those other sub-areas. In contrast, other CDB funding streams target those additional sub-areas. It may thus be worthwhile to explore how BNTF interventions coexist with other CDB programs in these areas, and whether such overlap leads to complementary or even mutually reinforcing effects. Identifying these links early in the design stage could be beneficial for reporting purposes.

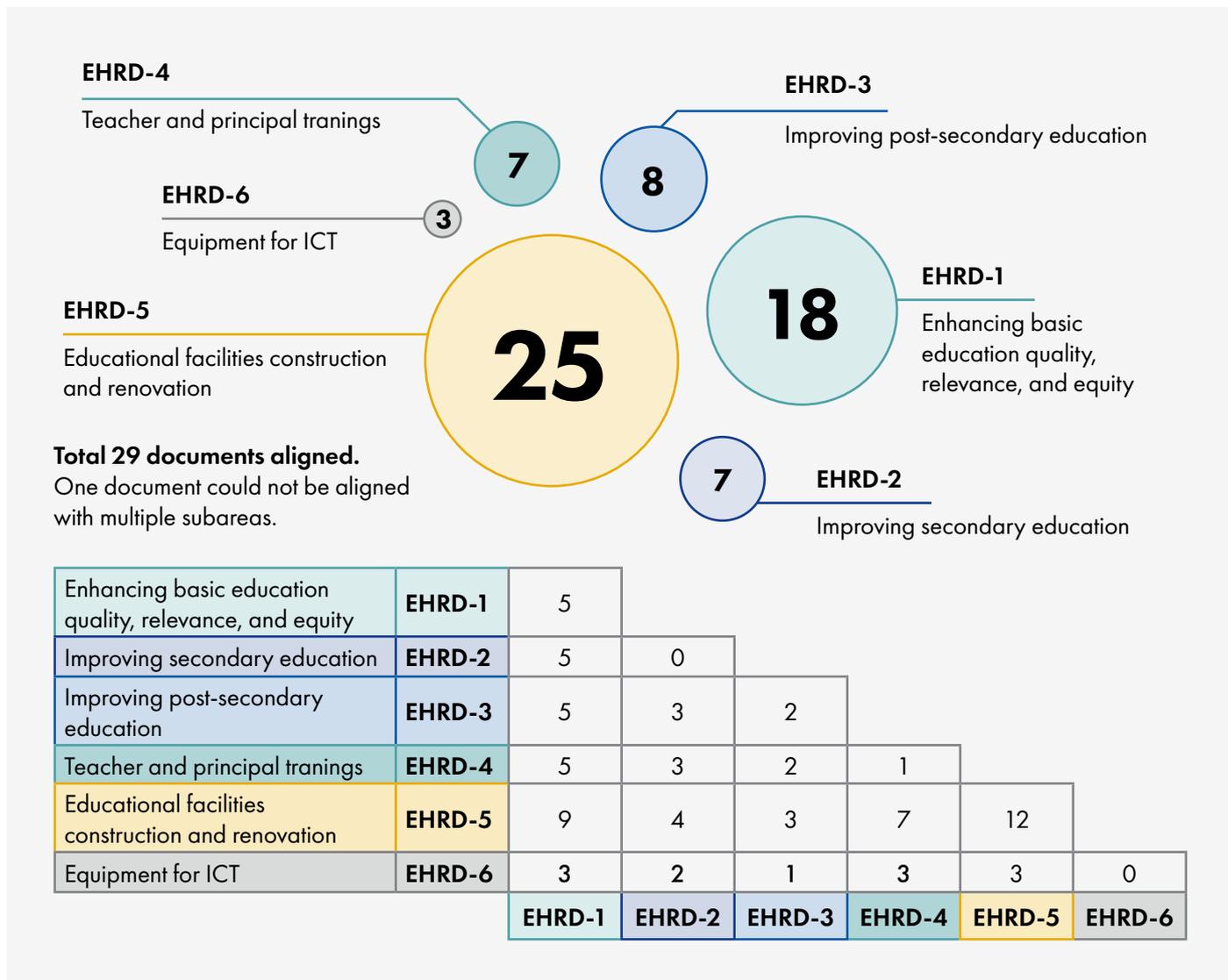
2.2 Education and Human Resource Development (EHRD)

Based on the classification, there are 29 evaluations and institutional documents which align with EHRD interventions, 96 systematic reviews, and 62 sub-projects. However, it is important to note that interventions related to Livelihoods are also included in this sector category; as a result, there is no exact number of BNTF sub-projects dedicated solely to EHRD interventions.

As shown in *Figure 2*, evidence in evaluations and institutional documents is predominantly associated with the construction and renovation of educational facilities (EHRD-5), whereas interventions to provide Information and Communication Technology (ICT) furniture and equipment (EHRD-6) are comparatively less frequent.

The analysis also identified a common occurrence of construction and renovation of educational facilities alongside other subthemes within the same evaluations and institutional documents. While a wide variety of lessons are associated with improving basic education, no documents were found that independently analyse secondary education. Intervention mapping underscores that BNTF emphasises construction, upgrades, furniture, and equipment.

Figure 2. Number of evaluations and institutional documents aligned with EHRD, classified by sub-area



The analysis of the intervention mapping indicates that the primary interventions in the BNTF subprojects for cycles 9 and 10 predominantly focus on the EHRD sector. In this context, the Matrix of Coded Lessons (MCL) based on the desk review shows that evaluations and institutional documents acknowledge that CDB, via the BNTF initiatives, has made significant efforts in this portfolio, with the aim of enhancing access to education through investments in educational infrastructure at primary, secondary, and post-secondary levels, in early childhood development (ECD), and for students with special needs. Furthermore, over half of the BNTF funds in these cycles were allocated to EHRD sub-projects.

Overall, BNTF interventions in this thematic area aim to address inequitable access, overcrowding, and the inadequate quality of the physical environment. These initiatives include expanding and rehabilitating infrastructure, providing furniture and equipment to rural schools to eliminate the shift system, improving accessibility for persons with disabilities, upgrading sanitation and hygiene, expanding after-school programs, and, in some cases, training teachers and education practitioners.

Across countries and cycles, institutional and evaluation documentation consistently recognise EHRD interventions as relevant because they are tailored to the specific needs of each context. A targeted approach ensures that actions address concrete gaps, particularly among marginalised populations. A strong convergent finding is that BNTF interventions are highly valued for their responsiveness to country and community priorities. This alignment is systematically achieved by grounding portfolios in national development plans and education sector strategies. Differences in intervention focus reflect national contexts rather than divergent strategies. The demand-driven approach to sub-project selection is frequently reported as a key mechanism for ensuring this relevance by directing efforts to specific, well-defined gaps. Consistent with the evidence presented in systematic reviews, the design and implementation of actions based on identified needs demonstrate that involving communities in the assessment of needs and the design of interventions is crucial for sustainability and impact. Although not specific to education interventions, this highlights the general importance of identifying and addressing community-level priorities.

Across the portfolio, the primary strategy is to enhance educational infrastructure by constructing, expanding, or rehabilitating schools to address overcrowding, improve learning environments, and expand access, particularly for low-income households and students with special needs. Evaluations and institutional documents in the MCL suggest that this approach directly contributes to long-term poverty reduction, as measured by the multidimensional poverty index, by improving educational outcomes, while also generating immediate employment and income opportunities during the construction phase. Institutional documents further note expected positive effects on the quality of life and social well-being at the individual, household, and community levels, including improvements in self-esteem, confidence, and social interaction, which in turn may foster community engagement.

Medium- to long-term impacts include improved student performance and stronger school–community relationships, reflected in increased support from Parent-Teacher Associations (PTAs) and greater community participation. The long-term vision is that children from underserved parishes will have access to education in adequately equipped institutions, improving prospects for social mobility as they become better prepared for higher education and employability.

However, while these anticipated results are well-articulated, there is limited evidence of a causal framework or indicators to monitor them. New schools are expected to yield better learning outcomes, but no definitions or measurement strategies are provided; instead, monitoring focuses on output-level indicators, such as increased accommodation capacity, the number of beneficiaries, and satisfaction ratings. In this context, systematic review evidence offers useful insights into how other interventions measure educational outcomes.

To address overcrowding, BNTF interventions are focused on reducing class sizes. Systematic reviews suggest that smaller class sizes may enhance student performance; however, it is also noted that reducing the number of students does not automatically guarantee improved performance, while how teachers adapt their pedagogical practices seems more relevant. Notably, research on class size in special education remains limited despite its recognised importance for students with special educational needs. Complementary strategies such as employing additional teachers or training existing staff in adaptive pedagogical methods are also cited as effective in improving outcomes for disadvantaged learners.

In response to inadequate facilities in rural areas, BNTF interventions have focused on building or upgrading classrooms and support facilities to enhance school appeal and functionality. Systematic reviews confirm that improved infrastructure tends to increase attendance, enrolment, and test scores in maths and language.

The establishment of educational institutions in regions historically lacking access significantly reduces travel time and fatigue for students, thereby increasing attendance and ensuring the continuity of learning. Moreover, the provision of gender-sensitive facilities, including segregated toilets for girls, has proven particularly effective in enhancing enrolment rates and student retention.

Similarly, the intervention mapping revealed that BNTF has made efforts to improve accessibility for students with disabilities through the installation of ramps and adapted washrooms, which aligns with findings from systematic reviews that identify accessible infrastructure as a prerequisite for inclusion and participation. Although reviews rarely quantify the direct impact of accessibility features on learning outcomes, they consistently emphasise that such infrastructure is essential for equitable participation rather than an isolated intervention variable.

To broaden access to early childhood education (ECD), the MCL identified that BNTF projects have focused on improving access for children from low-income households. These initiatives aim to improve school readiness and support stronger learning outcomes over time. Systematic Reviews consistently demonstrate that ECD interventions have a positive impact on enrolment, retention, and academic performance, particularly in mathematics and language, while promoting cognitive and social development. In addition, older siblings who may have had to care for those now in preschool will be free to attend school. Notably, the quality of teaching is highlighted as a key factor in achieving these outcomes. This finding is particularly relevant, given that BNTF also has parallel interventions focused on training ECD practitioners.

Regarding after-school music programs and facilities, the desk review identified a few examples beyond general portfolio descriptions. The presentation of these activities primarily aims to highlight their alignment with

the musical backgrounds of the communities and to offer students a valuable opportunity for enjoyment and self-expression. It is possible that BNTF may not yet be fully aware of all the potential benefits these activities can provide. Systematic Reviews suggest that music education yields multiple benefits, including enhanced emotional intelligence, creativity, concentration, and social skills (improvements in interpersonal relationships and self-esteem), as well as positive spillover effects on STEM learning. Incorporating related indicators could strengthen BNTF's theory of change, enhance monitoring efforts, and help generate evidence of outcomes.

Regarding the use of Information and Communication Technology (ICT) in teaching and learning, evidence from the MCL suggests ongoing challenges related to infrastructure and human resource capacity. While digitalisation was already a priority before COVID-19, the rapid shift to online education intensified the need to strengthen digital literacy, teacher training, and equitable access, in particular for students in rural areas and those with special educational needs. CDB has provided support through community-level education and training initiatives overseen by the BNTF, including the provision of ICT equipment in educational institutions (such as smart screens, computers, monitors, and tablets) and learning software (both open source and proprietary). Systematic Reviews indicate that providing learning materials or computers can modestly improve test scores; however, evidence on broader educational outcomes, such as enrolment, attendance, and progression, is mixed and context-dependent. One targeted dropout program did have a positive, significant impact on dropout rates, but this is an isolated case.

The additional findings from systematic reviews underscore the importance of interventions that alleviate financial barriers, such as scholarships and fee waivers, which have been shown to positively impact enrolment

and attainment. Moreover, the evidence highlights that teacher competency and effective pedagogy are pivotal for optimising learning outcomes. Although the impact of technological and incentive-based interventions varies, this suggests that focusing on quality teaching and adapting approaches to specific contexts is likely the most effective way to promote educational improvements.

In terms of barriers, challenges, and sustainability, the evidence from the MCL indicates that while responsiveness to community needs remains a core strength, there is an opportunity to standardise and document community monitoring and feedback mechanisms to enhance accountability and learning. According to the MCL, BNTF projects have community liaison officers responsible for facilitating grassroots-level consultation throughout the project cycle. However, some BMC stakeholders have observed that CDB's approach may primarily involve consultation with BMC governments, with more indirect engagement with grassroots organisations such as teacher unions, principals, and representatives of marginalised groups and communities during project preparation and guidance. This highlights the importance of enhancing the visibility of CDB, both top-down and bottom-up consultative processes within BMCs, to foster greater inclusivity and understanding.

Aligning project implementation cycles with academic calendars is recognised as a valuable approach to reducing delays and enhancing operational efficiency. Additionally, institutional capacity remains a critical factor for ensuring project sustainability. For example, the Jamaica Social Investment Fund (JSIF) is noted for its strong implementation capabilities, whereas in some other countries, resource constraints within education ministries can pose challenges to project continuity. To enhance sustainability, integrating maintenance responsibilities into project design presents valuable opportunities. Considering various approaches, such

as maintenance managed by the Ministry of Education versus school management and PTAs leading through local fundraising, could provide insights into which strategies foster greater ownership and community engagement. Evidence from existing strategies indicates positive outcomes in promoting shared responsibility and participation, but more rigorous evaluation methods would further validate these findings.

The portfolio evaluations of the education portfolio, as summarised in the MCL, underscore the importance of further clarifying the causal logic among inputs, activities, and outcomes. This perspective is consistent with the findings from the intervention mapping, where indicators largely capture outputs such as the number of classrooms, students reached, and satisfaction levels, but lack metrics on learning achievement, educational continuity, or employability. Incorporating medium and long-term indicators, such as enrolment, attendance, retention, progression, and test performance, could more effectively demonstrate educational outcomes and sustainability. Emphasising these indicators could significantly strengthen BNTF institutional learning and support continuous improvement efforts.

The cross-cycle and cross-country analysis confirms that most BNTF interventions are concentrated in school expansion, sanitation upgrades, and construction of ECD and other educational facilities. The indicators commonly used reflect completion and compliance with standards, as well as improved access to quality education and human resource development services. However, evidence from systematic reviews suggests that including additional indicators that capture continuity, maintenance, and post-intervention sustainability could enhance the understanding of long-term results.

Finally, it was also noted that EHRD sub-projects often include activities related to skills training and employability development, which are presented together in institutional documentation. This overlap makes it difficult to attribute outcomes solely to either

EHRD or Livelihoods. It may therefore be a good practice to distinguish education-focused interventions from those aimed at employability, while maintaining operational coherence. More precise categorisation of sub-projects as either “Education” or “Livelihoods” within portfolio records could enhance tracking and reporting capabilities without necessitating structural changes to the program, nor splitting teams or reorganising resources.

2.3 Livelihoods (LIV)

Based on the classification, there are 23 evaluations and institutional documents which align with LIV interventions, and 46 systematic reviews. Regarding sub-projects, interventions related to Livelihoods are incorporated within the BNTF sector category “Education, HRD and Livelihoods”; consequently, there is no specific count of BNTF sub-projects exclusively dedicated to LIV interventions.

As shown in *Figure 3*, evidence from evaluations and institutional documents is predominantly associated with developing job and entrepreneurial skills (LIV-2), whereas interventions to strengthen communities (LIV-3) are comparatively less frequent.

The analysis also identified a common occurrence of LIV-2 findings alongside capacity-building activities within the same evaluations and institutional documents. Conversely, no evaluations or institutional documents were found that independently assess BNTF interventions for community strengthening in terms of Livelihoods.

The interventions classified under the Livelihoods (LIV) thematic area were consistently reported within the broader category of “Education, HRD, and Livelihoods” in the BNTF intervention mapping. No specific evaluation focusing solely on LIV interventions was identified; as a result, the insights shared below are drawn from references to livelihood interventions

mentioned in the mid-term evaluations of BNTF 9th and 10th cycles, complemented by relevant mentions in other evaluations. Given that LIV was not the primary focus of those assessments, most findings are general and primarily operational. Accordingly, the description relies on case studies and information contained in memorandums for approval, resulting in more descriptive than analytical evidence. In this context, the insights from systematic reviews are particularly relevant for reinforcing and complementing the existing evidence.

Livelihood interventions are often described in evaluations and institutional documents as tailored to specific contexts, aimed at addressing local economic challenges, such as unemployment resulting from agricultural decline in St Lucia, or at enhancing agricultural resilience in Suriname. This strategy is primarily based on the Mid-Term Evaluation (MTE) of the BNTF-9 Program, which suggests engaging IA staff early in the development stage, including the program focus and key features, the M&E framework, and reporting requirements. BNTF-10 addresses this by conducting livelihood baseline assessments in selected countries, which help identify gaps and priority areas for livelihood development. This approach enables more targeted interventions within Project Countries (PCs), ultimately increasing both the number and quality of sub-projects.

In this context, BNTF has progressively evolved towards targeting youth, women, and other vulnerable groups, demonstrating increasing strategic sophistication. However, participation gaps remain, particularly among youth, older persons, and Persons with Disabilities (PWDs). Conducting comprehensive gender and inclusion analyses prior to project design has also been identified as an important step to ensure equitable relevance across groups.

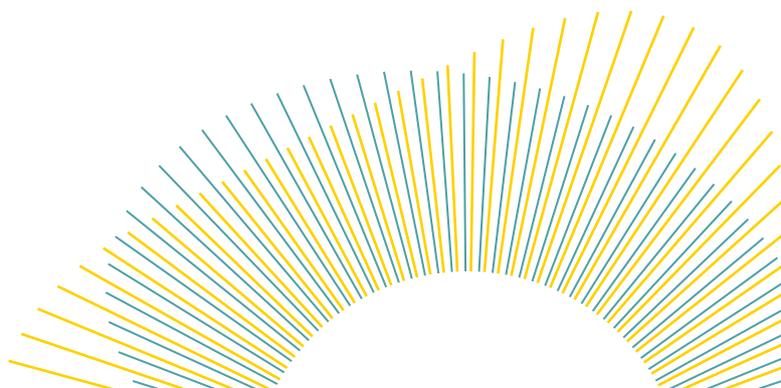
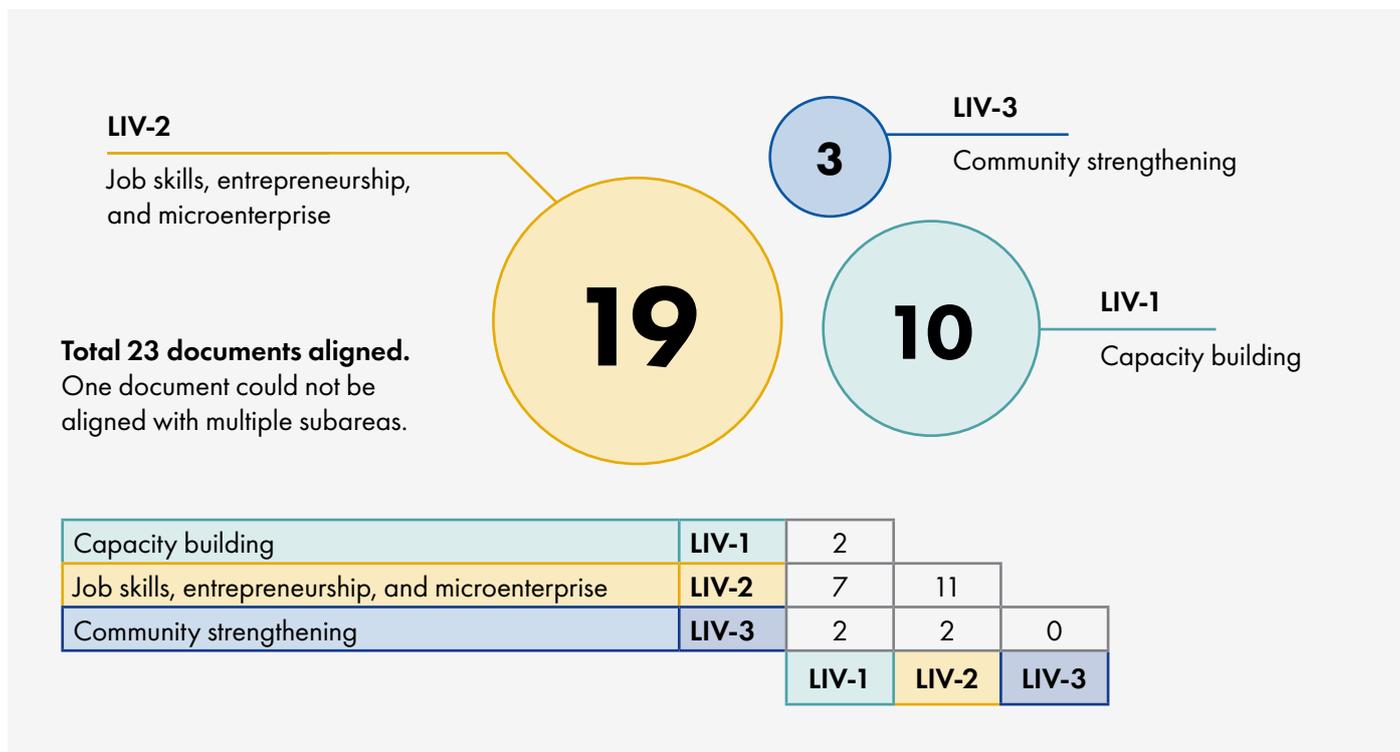


Figure 3. Number of evaluations and institutional documents aligned with LIV, classified by sub-area



While targeting approaches are relevant and grounded in context, a pilot assessment from the institutional documents revealed a gap between targeting intentions and effective engagement. Women’s participation was relatively high, yet youth, elderly persons, and PWDs were less represented. Strengthening the mechanisms to reach all intended groups is a key recommendation in the MCL.

Evidence across the MCL indicates that BNTF is recognised as a key vehicle for poverty reduction, with LIV interventions contributing through two complementary pathways:

1. Strengthening existing enterprises, such as farming or community economic activities; and
2. Creating new livelihoods through skills training, microfinance, and the provision of productive assets.

These approaches respond to local economic shifts, such as the decline of traditional sectors or climate impacts on agriculture, which, as mentioned in the previous sections, can promote ownership and effectiveness. However, the causal relationship between selecting these interventions and the expected outcomes was not explicitly identified. In this regard, evidence from Systematic Reviews reinforces the relevance of LIV strategies and highlights effective approaches to livelihoods enhancement. Interventions promoting skills development, entrepreneurship, and market access generally show improvement in employment and earnings, although their success depends on the quality of design and contextual adaptation.

Evidence from systematic reviews on Active Labour Market Programs (ALMPs) suggests positive effects on youth employment and income generation, particularly when participants are directly engaged with employers or when training is complemented by asset provision.

Vocational and entrepreneurial training for women likewise produces modest yet consistent positive outcomes in employment, earnings, and business performance, with more pronounced effects observed in gender-focused programs.

Additionally, in rural settings, MSR indicates that multi-component, market-led interventions, which combine capacity building, financial support, and information sharing, outperform single interventions. Agricultural support interventions, such as input subsidies, have led to increases in production and yields, while value-chain initiatives have modestly improved women's economic empowerment.

Based on the aforementioned, the evidence suggests that the BNTF interventions may indeed yield positive outcomes in facilitating poverty alleviation by providing pertinent training in marketable skills, enhancing the likelihood of entrepreneurship or employment among skilled trainees through the attainment of advanced introductory-level skills and certification, and improving the quality of access roads for farmers and community residents. However, evidence in the MCL suggests that outcome-level data are limited, which constrains the verification of performance against targets. Outcome indicators often focus on the "number of youths trained and certified in a marketable skill (by sex, age, PWDs)" or "change in income," while broader indicators of employability or enterprise growth are not consistently reported.

Sustainability is closely tied to institutional capacity and continuity. Frequent staff turnover within IAs is identified as a constraint, whereas stable staffing and targeted capacity-building correlate with more effective implementation. Strengthening IA capacity through training and peer exchange remains a recurring recommendation in the MCL.

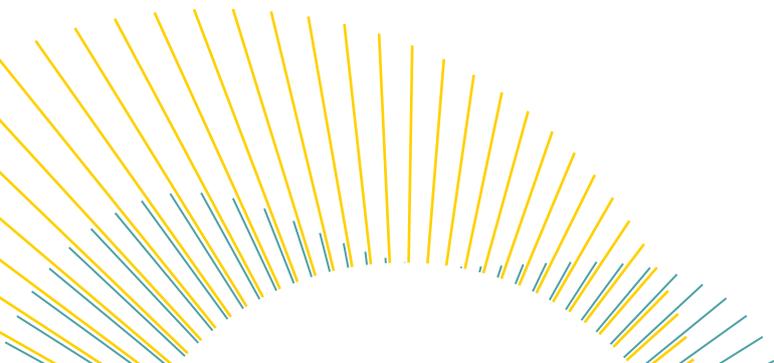
Persistent challenges include delays associated with CDB procedures, limited project management capacity, and lengthy approval timelines. Strategies reported to mitigate these constraints include engaging Implementing Agencies (IAs) earlier in program design, hiring project preparation specialists, and standardising design templates.

MCL also identified that short-term sustainability is associated with support through direct beneficiary training, community-based maintenance approaches, and training in resource mobilisation. However, the prevalence of one-off interventions limits long-term outcomes. Evidence from evaluations emphasises that sustainability necessitates a coherent sequence of initiatives, where successive projects build upon previous ones, integrating institutional strengthening, asset provision, and skills development to establish a resilient foundation for poverty reduction.

Additionally, the summary of systematic reviews presented in the MSR provides valuable information, including the identification of positive effects on outcomes from self-help groups and social assistance programs, which enhance women's participation, savings, and investment capacity. Conversely, funding delays, limited access to tools and inputs, or inappropriate site selection (e.g., remote areas with poor soil or irrigation) are cited as factors that hinder results.

Commonly reported indicators in the systematic reviews include:

- **Intermediate results:** increases in production value, income, food consumption, savings, and investment; enhanced access to healthcare; and reduced household poverty.
- **Long-term results:** improvements in nutrition, women's empowerment, quality of life, mental health, autonomy, social participation, rootedness, the ability to create jobs or generate employment, leadership and decision-making skills.



Overall, the BNTF livelihood interventions show contextual relevance and contribute to poverty reduction through enterprise enhancement and skills development. Nonetheless, challenges persist regarding outcome monitoring and maintaining capacity. The coherence of these interventions with evidence from systematic reviews suggests that incorporating multi-component designs, robust beneficiary tracking, and planning that is sensitive to gender and inclusion could enhance both the effectiveness and sustainability of the interventions.

2.4 Water and Sanitation Systems Enhancement (WSSE)

Based on the classification, 14 evaluations and institutional documents align with WSSE interventions, 13 systematic reviews and 15 sub-projects. As shown in Figure 4, evidence from evaluations and institutional documents is predominantly associated with the development and renewal of water systems (WSSE-1), whereas insights related to waste management and disposal (WSSE-4) are comparatively less frequently observed.

The analysis of evaluations and institutional documents also identified a common occurrence of WSSE-1 findings alongside training activities within the same document. Conversely, waste management and disposal have less information. This insight clarifies where the evidence falls short, thus orienting efforts to generate knowledge.

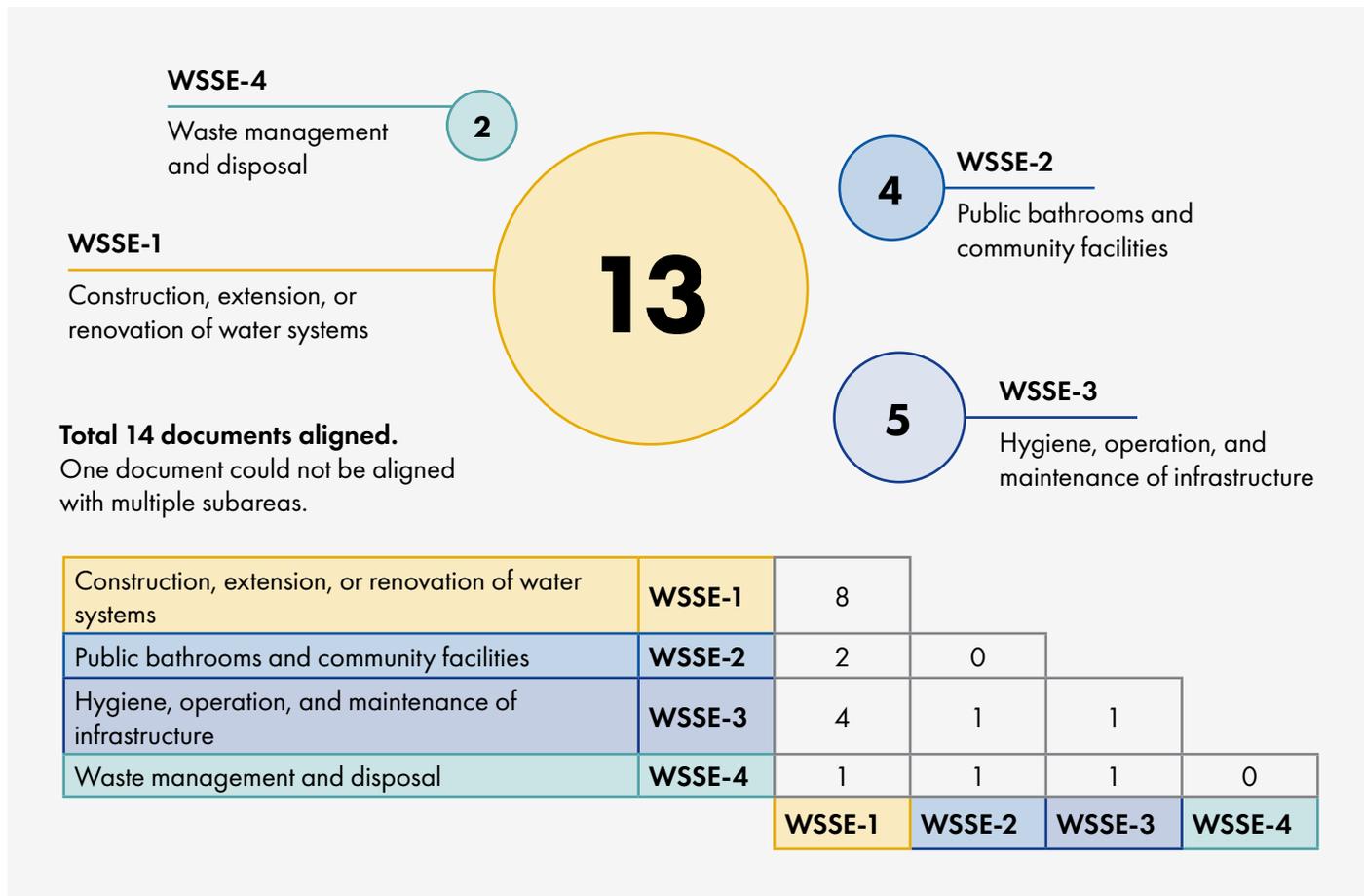
The IM indicates that WSSE sub-projects primarily focus on impoverished, rural, and underserved communities, including Indigenous and remote populations, such as the Wayana in Suriname and Mayan communities in Belize. The findings in the MCL indicated that the relevance of these projects is reinforced through structured and participatory prioritisation mechanisms, ranging from formal Community Needs Asset Assessments (CNAAs) to direct community voting. In terms of effective models, integrating national

strategic alignment with community-driven prioritisation emerges as a good practice. Additionally, a key lesson identified in the MCL is the necessity to document participatory mechanisms to enhance transparency and responsiveness to local priorities.

While alignment with community needs is a consistent feature, different approaches to prioritisation were observed. In Belize, the community unanimously voted for potable water as its highest priority, illustrating a direct, community-led approach. In contrast, St. Lucia employed a more structured process through the CNAA, whereas other contexts, such as Guyana and Jamaica, recognised the urgent need for safe water without clearly detailing the participatory mechanisms used. Evidence from systematic reviews in the MSR supports this finding by confirming that community-based approaches are more effective than top-down methods in achieving sustainable access to water and sanitation. Community-led models are reported to promote behaviour change, such as increased handwashing with soap, greater latrine use, and reduced open defecation, and demonstrate more robust and enduring outcomes when hygiene and sanitation components are integrated.

In terms of coherence, interventions demonstrate external coherence through collaboration with national and local partners. For example, the Guyana portfolio describes extensive coordination with government agencies and Village Councils, while projects in St. Lucia align with national institutions such as the Water Resource Management Authority (WRMA) and the national water company. However, MCL findings in this dimension suggest that overall coherence with other development partners' initiatives remains at a "medium level". Best practice examples demonstrate that structured collaboration with national agencies and the deployment of Community Liaison Officers (CLOs) can help ensure coherence at the community level. Systematic Reviews reinforce this by noting that implementation success in WASH programs depends

Figure 4. Number of evaluations and institutional documents aligned with WSSE, classified by sub-area



on community involvement, leadership enthusiasm, and clear communication, which together foster cooperation and ownership.

Evidence from the evaluations and institutional documents summarised in the MCL indicates that BNTF investments in WSSE have contributed to poverty reduction and human development by delivering tangible improvements in water access. Sub-projects typically describe their achievement of intended results through infrastructure upgrades, including the refurbishment of piping, repair of catchment tanks, and installation of chlorination units, which leads to improved access and expanded service coverage. Systematic review findings are valuable in this matter for corroborating these findings, showing that direct infrastructure interventions, such as improving water

supply and sanitation facilities, have positive effects on public health outcomes, notably in reducing childhood diarrhoea and improving quality of life.

A recurring lesson learned in the MCL is that the inclusion of complementary components alongside physical infrastructure enhances effectiveness. Evaluation findings highlight that WASH training and community engagement strategies are essential components for achieving behavioural change and sustaining infrastructure benefits. The findings of the systematic reviews align with this, showing that integrated programs combining infrastructure with hygiene education are more effective in achieving behavioural outcomes, such as improved sanitation practices and better hygiene behaviours, than isolated infrastructure investments.

Conversely, less successful outcomes are primarily associated with technical and financial challenges. MCL point out that deficiencies in performance and serviceability often stem from weak design and poor implementation. Furthermore, evaluations and institutional documents mention that financial viability of utilities remains a reported critical issue, as many seem to operate at a negative cash flow, suggesting that tariffs are too low to sustain maintenance and operations. Systematic Reviews reinforce this concern, indicating that the sustainability of WASH interventions depends heavily on the financial and institutional capacity of service providers, with long-term outcomes threatened when maintenance funding or user contributions are inadequate.

As mentioned in other thematic areas, implementation delays are a significant and recurring challenge across the BNTF evaluations and institutional documents. Particularly for WSSE interventions, delays appear to stem from factors such as slow CDB approval and disbursement processes, inadequate project design, and limited local capacity. For instance, delays in Dominica were linked to foreign consultants' lack of contextual knowledge, while in Guyana, insufficient coordination with the national water utility caused setbacks. Evidence in the MCL suggests that strong IAs can ensure quality but are not always able to overcome systemic inefficiencies. Systematic review evidence has demonstrated that the duration of programs, the frequency of engagement, and the expertise of local implementers are critical factors influencing the successful implementation of WASH interventions; consequently, there is a particular need for focused attention on this aspect.

Sustainability remains a consistent focus across WSSE interventions, primarily achieved through institutional collaborations, community leadership, and structured maintenance planning. Responsibilities for ownership and management are generally assigned to local or

national authorities, frequently via community Water Boards or village committees. Despite these efforts, WSSE-aligned evaluations have identified persistent challenges related to the long-term sustainability of benefits, including limited government capacity, inadequate maintenance, and financial unsustainability of water utilities.

MCD include some effective sustainability strategies, such as comprehensive, financially supported maintenance plans developed from the outset. In this matter, systematic reviews mention that community ownership and local management enhance the continued utilisation of water and sanitation services, whereas the lack of explicit ownership or financial planning diminishes outcomes.

The descriptions provided in the memorandums for approval for WSSE subprojects indicate that poverty reduction is primarily achieved through improved access to reliable and safe water, which aims to enhance health, support economic livelihoods, and reduce vulnerability. Based on this memorandum and case study descriptions, WSSE interventions aim to contribute to poverty reduction through complementary pathways:

1. Health and sanitation improvements and trainings, resulting from access to potable water and reduced exposure to waterborne diseases.
2. Economic and livelihood benefits, such as reduced water collection time, which creates opportunities for income-generating activities, especially for women and children.
3. Support to agricultural production, as improved irrigation systems enhance yields and reduce production costs.

As previously mentioned, the description of expected results was identified, but not the monitoring or evaluation of the achievement of these effects. The evidence presented in the systematic reviews reinforces these findings by demonstrating that community-

based and integrated WASH interventions not only improve access to clean water and sanitation but also contribute to enhanced well-being, increased women's empowerment, and reduced time spent on household tasks, with downstream effects on education, productivity, and overall quality of life. Therefore, in addition to confirming that BNTF's efforts could have positive effects beyond those described, it might be achieving unrecognised effects. In this context, it becomes relevant to include indicators for monitoring and evaluating the program's results. This will not only provide evidence of what works but also support building on past successes and even enhance proposals for future cycles of the program.

Additional insight from the MSR also highlights that the effectiveness of WASH interventions has shown a strong dependence on behavioural mechanisms and contextual factors such as social networks, values, and community trust. In those reviews, behavioural change was frequently achieved through social relationships. Therefore, integrating social components, including public commitment, social recognition, and community-led awareness initiatives, has been demonstrated to improve the adoption of interventions. In terms of the sustainability of sanitation outcomes, the systematic reviews indicated a limited effect when interventions depend only on messaging. In contrast, multifaceted approaches that include infrastructure development, training, and social mobilisation tend to produce more enduring results.

Reported outcomes include improved taste and smell of water, increased ease of use, and perceived improvements in quality of life, suggesting broader welfare gains beyond access and health benefits.

In summary, WSSE interventions are contextually relevant and contribute to human development and poverty reduction through infrastructure improvement, behaviour change, and strengthened local ownership. However, challenges persist in financial sustainability,

maintenance, and coordination. The following findings and lessons learned are described below to strengthen future WSSE interventions and maximise their developmental impact.

2.5 Youth and Citizen Security (YCS)

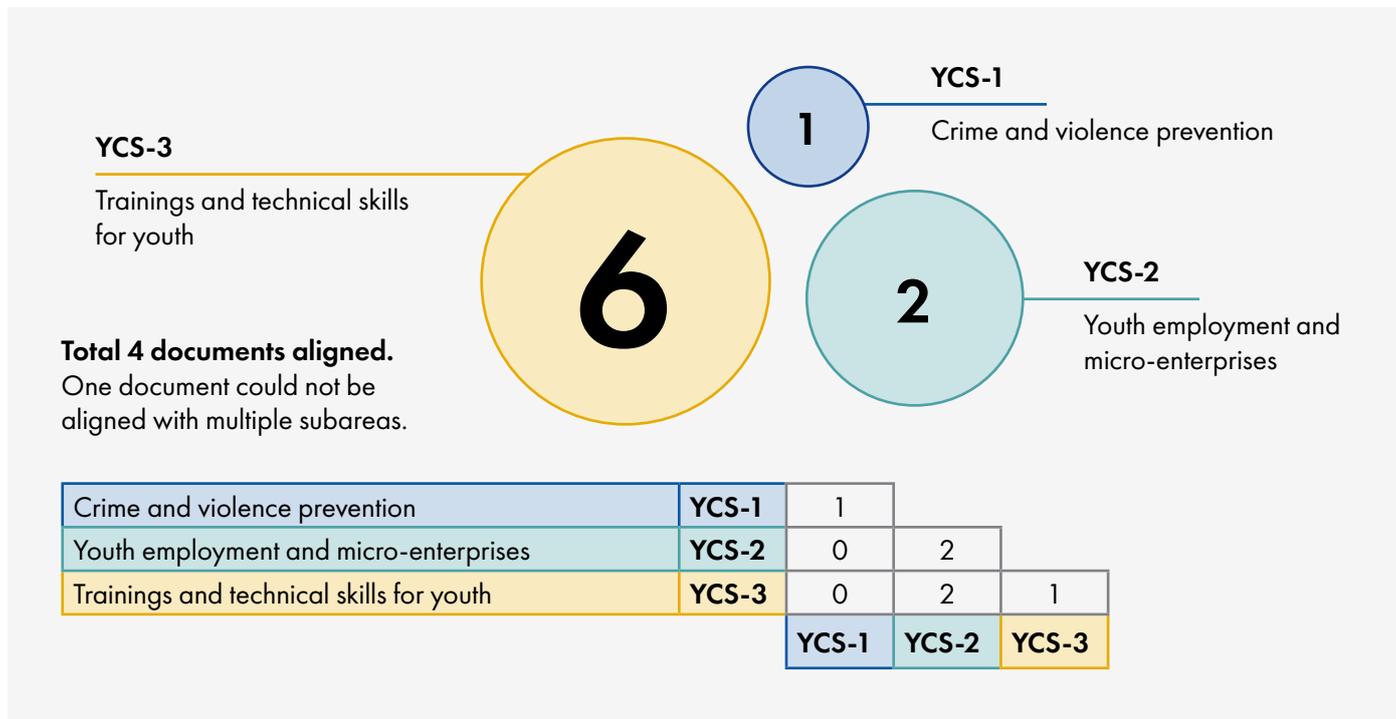
Based on the classification, there are 4 evaluations and institutional documents aligned with Youth and Citizen Security (YCS) interventions and 39 systematic reviews.

As shown in *Figure 5*, evidence from evaluations and institutional documents is predominantly associated with the development of technical skills in the youth population (YCS-3), whereas interventions for crime and violence prevention (YCS-1) are less frequently assessed.

The analysis of evaluations and institutional documents also identified a common occurrence of YCS-3 findings alongside employment and entrepreneurship activities within the same document. Conversely, no institutional documents that analyse crime prevention associated with the development of skills in youth were found. By identifying evidence gaps, this insight helps channel efforts towards developing knowledge through evaluation and monitoring.

The IM exercise highlighted that BNTF does not have a dedicated, standalone sector category specifically for Youth or Citizen Security. Instead, youth-related initiatives are broadly integrated within the portfolios of "Education, HRD and Livelihoods" and "Basic Community Access and Drainage", reflecting a comprehensive approach to these important issues. The diversity of these interventions in sub-projects is broad, ranging from youth development programs and capacity building support for social workers and caregivers in children's homes for youth at risk to alternative livelihoods for youth and PWDs, as well as maritime training.

Figure 5. Number of evaluations and institutional documents aligned



In this context, isolating the specific effects of BNTF interventions on YCS outcomes is a complex task. The findings presented below are drawn from mid-term evaluations of the 9th and 10th BNTF cycles, relevant memorandums for approval that explicitly reference YCS, and evaluations of gender equality and technical assistance. Given that YCS was not the main focus of these evaluations, the available evidence is primarily descriptive and operational, making the insights from systematic reviews particularly valuable for contextual reinforcement.

Evidence from the MCL indicates that CDB placed increased emphasis on training programs for youth under the BNTF-10 program arrangements by incorporating lessons learned to give greater attention to youth and vulnerable groups. Particularly, the evaluations recognise the importance of developing social and emotional skills for self-control and conflict resolution through education, while advancing youth priorities within the Technical and Vocational Education and Training (TVET) sector.

Descriptions on the institutional documents highlight that two main complementary targeting approaches were identified in the reviewed evidence. The first approach is centred on crime and violence prevention by sub-projects addressing social risks among youth in defined urban areas. For example, the Belize Youth and Community Transformation (YCT) initiative sought to diminish susceptibility to criminal activities and gang affiliation through activities centred on literacy, life skills, and conflict mediation across four divisions within Belize City. Furthermore, the MCL documents that the overarching objective of enhancing community security in Belize City is consistent with national priorities, thereby emphasising the significance of aligning interventions with governmental strategies and fostering collaboration among multiple stakeholders.

The second approach focuses on skills development and employability through targeted vocational training. The BNTF program design has evolved to emphasise “greater attention to youth livelihoods,” indicating a commitment to relevance; however, evaluations

observe that this strategic emphasis was not consistently translated into systematic operational measures.

The findings from the MCL suggest that there is room for growth in the collection of project performance data for YCS interventions. It appears that some evaluations have noted the absence of clearly defined outputs, which may have impacted the ability to fully gauge performance against targets. Additionally, evaluations reported that planned tracer studies aimed at assessing employment or business survival outcomes encountered challenges in implementation, limiting the scope of long-term impact analysis. These insights underscore the importance of refining monitoring frameworks and implementing a systematic approach to tracking YCS-specific outcomes.

In alignment with other thematic areas, efficiency challenges associated with YCS interventions mirror systemic issues such as staff turnover, institutional capacity constraints, and slow approval or modification procedures. Additionally, broader inefficiencies at the BNTF level, including delays in implementing digital management systems, could have also impacted the delivery of projects.

The evidence gathered on the MCL from evaluations and institutional documents underscores that sustainability is contingent upon effective project design and sustained engagement. Short-term initiatives, such as isolated training workshops, often produce temporary results. In contrast, interventions that connect youth with existing enterprises or incorporate continuous learning opportunities tend to yield more enduring outcomes. The sustainability of such initiatives is further strengthened when participants are integrated into ongoing networks, enterprises, or microfinance schemes that operate beyond the project cycle.

In terms of poverty reduction, across the reviewed documentation, three main strategies for reducing youth vulnerability and improving livelihoods were identified. Although these strategies are clearly defined,

the evidence is insufficient to compare their relative effectiveness or determine their impact on poverty reduction.

1. **Social stabilisation:** crime and violence prevention through literacy, life skills, and conflict mediation.
2. **Human capital development:** technical and vocational training for employability and poverty alleviation.
3. **Enterprise-level support:** assistance for Micro, Small, and Medium Enterprises (MSMEs) and entrepreneurship development.

With all this in context, the evidence from Systematic Reviews reinforces these findings and provides complementary insights. The evidence presented in MSR indicates that school-based prevention programs are effective in mitigating risks related to violence and abuse. For instance, interventions aimed at teaching child sexual abuse prevention have successfully enhanced students' protective knowledge and behaviours, although evidence regarding long-term retention of these benefits remains limited. Broader environmental interventions, such as housing mobility programs relocating families to safer neighbourhoods, have led to reductions in community-level violent crime rates and enhancements in adult health outcomes. Similarly, summer youth employment programs show measurable effects in decreasing arrests for violent crimes after six weeks of employment.

However, systematic reviews highlight that policing or security agency-led interventions often show mixed results. While Gender-Responsive Policing One-Stop Centres have shown to improve service accessibility, broader police-based partnership models have insufficient evidence of effectiveness. Evidence gaps persist in interventions for youth gangs, street-connected youth, and recently released young offenders, underscoring the need for more rigorous evaluation in these areas.

In terms of socio-economic outcomes, systematic reviews of Active Labour Market Programs (ALMPs) have shown positive effects on youth employment and earnings, particularly when training is combined with entrepreneurship support and cash grants for start-ups. TVET interventions have been shown to contribute to positive effects on employment, while enterprise education enhances entrepreneurial aspirations. The evidence in the MSR also notes that psychological and mentorship components improve self-efficacy and agency among youth participants.

Finally, commonly reported outcome indicators in systematic reviews include: reductions in child marriage, adolescent pregnancy, sexual assaults, and rates of reoffending; improvements in local violent crime rates, on-time high school graduation, and health outcomes; as well as place-based measures such as perceptions of safety, accessibility, inclusivity and quality of life.

Overall, BNTF interventions focused on Youth and Citizen Security, by design, are relevant and responsive to the context, national strategies, and community priorities. However, the evidence supporting their performance and impact remains somewhat limited, posing challenges to a full assessment of their transformative outcomes. The following findings and lessons learned are described to strengthen future WSSE interventions and maximise their developmental impact, based on the systematic review's findings.

2.6 Energy Generation and Supply (EGS)

Based on the classification, only one evaluation has identified relevant lessons learned aligned with EGS interventions; however, 17 systematic reviews were identified, systematised, and analysed to present valuable evidence that could inform this thematic area. As shown in *Figure 6*. The valuation associated with EGS relates to the enhancement of renewable energy use (EGS-1). Although EGS is referenced in various

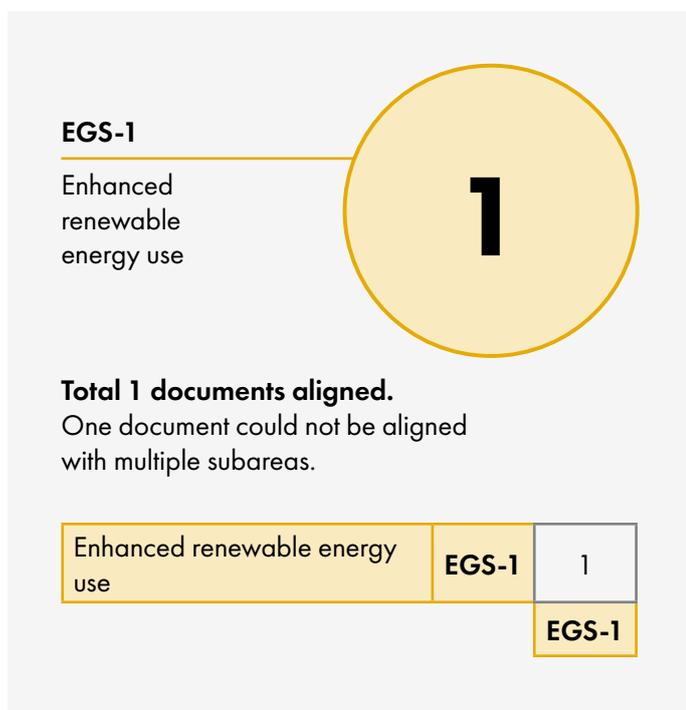
documents, no additional specific evidence has been reported in evaluations or institutional documents to assess the BNTF sub-projects.

Additionally, the interventions mapping under the 9th and 10th cycles of the BNTF revealed that the Fund does not have a designated sector category for Energy Generation and Supply (EGS). However, sub-projects related to Skills Training Renewable Energy Resilience were identified within the "Education, HRD, and Livelihoods" portfolio. It is also possible that additional actions indirectly align with EGS objectives, such as enhancing water supply systems or implementing environmentally sustainable practices within BCADI interventions.

As mentioned, during desk review, only one evaluation was identified that includes findings relevant to EGS interventions across the CDB, the "Energy Sector Policy and Strategy (ESPS) evaluation". The evaluation aimed to assess ESPS performance from 2015 to 2020 and generate recommendations to strengthen energy-related operations. While its findings are not exclusive to BNTF, they provide valuable insights into how CDB's extensive experience in the energy sector can inform and enhance BNTF's current and future interventions.

As previously indicated, the objectives of the BNTF in alleviating poverty align with the ESPS emphasis on sustainable energy as a crucial driver of resilience and inclusion. In this context, the ESPS evaluation highlights that the BNTF Operations Manual identifies sustainable energy as a cross-cutting priority under the headings of "environmental sustainability, climate change resilience, and disaster risk management". However, since energy is not a core focus of BNTF, energy-related outcomes are not tracked separately, and therefore, collaboration with the Renewable Energy and Energy Efficiency Unit (REEEU) has been limited. Projects occasionally requested REEEU technical support for project assessment, but energy components have not been systematically monitored or aggregated.

Figure 6. Number of evaluations and institutional documents aligned with EGS, classified by sub-area



Aligned with the findings in other thematic areas, the ESPS evaluation also reveals that success factors for project performance include the responsiveness and adaptability of CDB staff, as well as financial flexibility. Constraints, on the other hand, are linked to procedural ambiguities, delays, capacity limitations in BMCs and IAs, as well as financial constraints. While some technical assistance projects achieved their expected results, particularly those supporting regulatory and institutional capacity, the overall effectiveness of the portfolio was hindered by weak monitoring systems and limited sustainability planning. The characteristic demand-led approach ensured alignment with borrower priorities but resulted in underfunding in strategic areas, such as enabling environments and regulatory frameworks.

In this context, the information gathered in the MSR is valuable for understanding, from a comprehensive evidence perspective, what has been effective as well as

for reflecting on the experiences related to monitoring and evaluating these outcomes. The following section outlines the key findings identified in the EGS interventions.

Systematic Reviews provide strong evidence that renewable energy technologies serve as strategic measures for achieving sustainable development, ensuring energy access, and mitigating climate change. The most consistently documented effect is the reduction of greenhouse gas emissions and other pollutants from fossil fuels, which contributes to both environmental and health improvements. For example, grid-connected solar PV projects are projected to reduce CO₂ emissions by approximately 40,000 tonnes per year.

Evidence also suggests that the rapidly growing renewable energy sector creates employment opportunities, enhances grid resilience, and expands energy access, particularly in developing nations. Nevertheless, the effectiveness of these initiatives is highly dependent upon technological design, costs, and contextual factors. Solar energy is recognised as the most versatile renewable option for domestic utilisation, whereas large-scale hydropower may pose negative social impacts, such as displacement. This presents an opportunity for other BNTF sub-projects to potentially incorporate the EGS perspective.

Evidence from on-farm renewable energy projects indicates that financial and technological barriers often limit scalability. The cost-effectiveness of large grid-connected systems varies by country, and the success of policies mobilising private investment depends on design quality and enforcement stringency. Bottom-up, community-based service models show a higher rate of positive outcomes than top-down delivery mechanisms, particularly in ensuring equitable access for the urban poor. Additionally, integrating renewable energy with energy storage technologies enhances system reliability, although it entails trade-offs in cost and durability.

Commonly reported outcome indicators include:

- **Intermediate results:** investment risk and return, investment in renewable energy capacity, renewable generation output, carbon emissions reduction, and energy supply-demand balance.
- **Long-term results:** reduced household expenditure on energy, improved air quality and respiratory health, enhanced environmental outcomes, and social well-being indicators such as energy equity and community resilience.

In conclusion, although BNTF does not currently implement interventions exclusively classified under EGS, evidence from both CDB's institutional experience and systematic reviews suggests strong potential to integrate renewable energy and environmental sustainability principles across its existing thematic areas. For example, in Education and HRD, school infrastructure projects could incorporate sustainable construction materials and energy-efficient equipment. In Livelihoods, capacity-building initiatives could integrate renewable energy maintenance and green enterprise training modules. In BCADI, sustainable materials and low-carbon transport solutions could be prioritised in road construction and improvement. In WSSE, water systems could include renewable-powered pumping and treatment solutions to strengthen climate resilience.

Just as gender and community engagement have become transversal principles within BNTF, the promotion of renewable energy and green solutions could be established as a cross-cutting dimension. Partnerships with other CDB funds and technical units could further enhance complementarity, either through joint implementation or sequential collaboration, to maximise sustainability and facilitate long-term results monitoring. The following findings and lessons learned are described to strengthen the integration of energy and green solutions within BNTF operations.

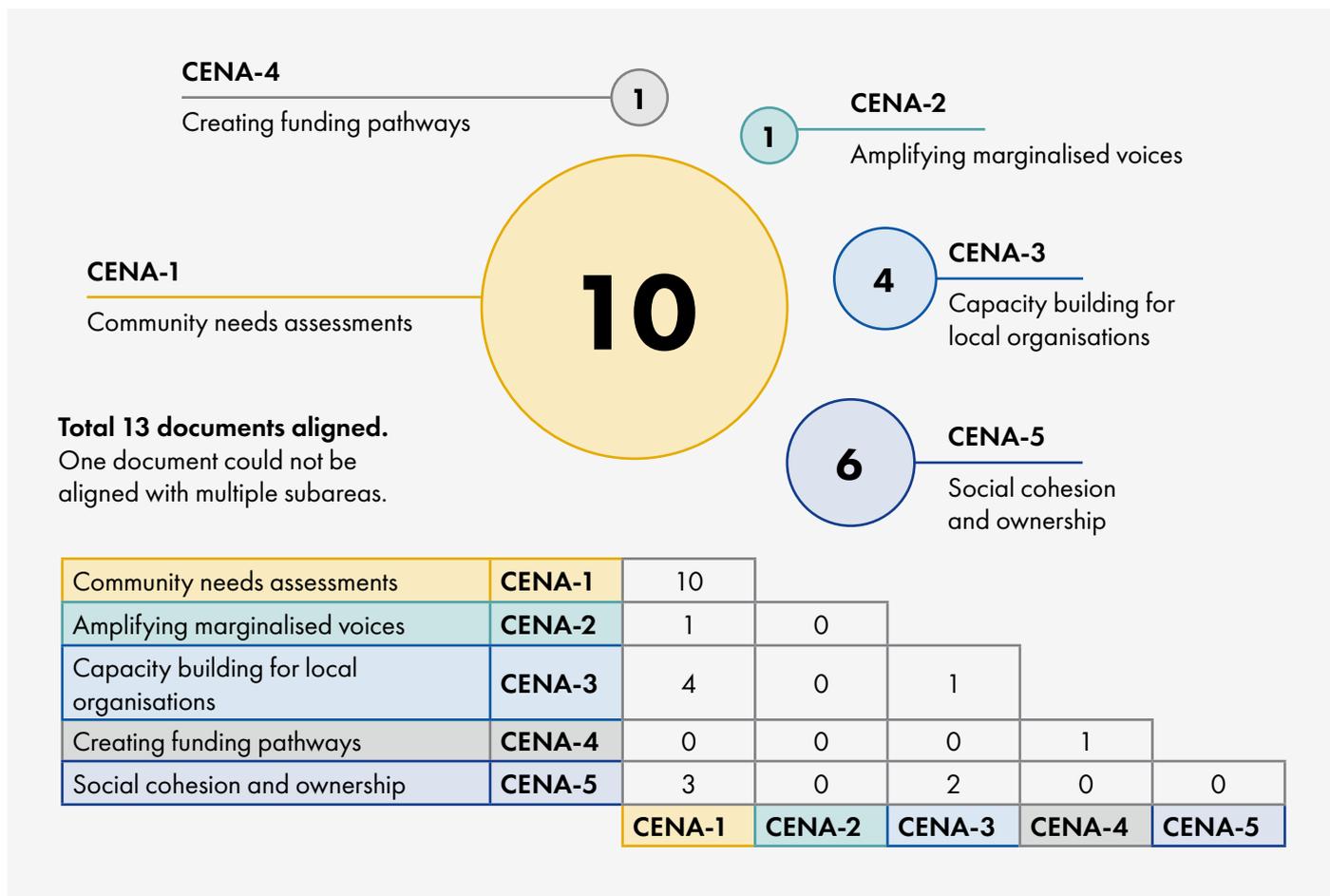
2.7 Community Engagement and Needs Assessment (CENA)

Based on the classification, 13 evaluations and institutional documents align with CENA interventions and 25 systematic reviews. As shown in *Figure 7*, evidence from evaluations and institutional documents is predominantly associated with community needs assessments (CENA-1), whereas insights concerning marginalised populations (CENA-2) and creating funding pathways are comparatively less frequently assessed (CENA-4).

The systematisation of evaluations and institutional documents additionally identified a common occurrence of findings concerning CENA-1 in conjunction with CENA-3 and CENA-5 within the same document. Conversely, no evaluations or institutional documents were found that independently amplify the voices of marginalised individuals. This insight highlights where evidence is missing and, in turn, guides efforts to generate knowledge through evaluation and monitoring.

As previously indicated, this thematic area was established as a priority identified during inception sessions as a topic of particular interest for BNTF to examine the role that community engagement plays. As previously noted, BNTF is intentionally incorporating a community engagement approach into its projects. Consequently, there is no designated sector category in the intervention mapping, and no interventions are exclusively dedicated to developing community engagement. Nevertheless, the identification of needs and community engagement are elements present in nearly all BNTF subprojects. Taking the above into consideration, CENA could be regarded as a latent variable that is evidenced through indirect actions which allow us to understand the value of community engagement.

Figure 7. Number of evaluations and institutional documents aligned with CENA, classified by sub-area



In this context, the descriptions provided in the evaluations and institutional documents, particularly the memoranda for approval, underscore that the design of the subprojects is predominantly based on identifying community needs. Additionally, efforts have been made to involve the community not only through participation and utilisation of the goods and services supplied by the subprojects but also through training aimed at maintenance, ownership, and the appropriation of resources provided by the BNTF via its interventions. It has even been observed that this sense of ownership has facilitated access to various funding sources, enabling the community to continue addressing its needs.

This section presents only some of the most relevant findings of the CENA approach; however, it is essential not to overlook the fact that these findings are framed within evaluation exercises focused on other thematic areas. To reinforce the validity of these findings, the results of systematic reviews on the aspects identified within the CENA approach are also presented.

Although no evaluation focuses exclusively on CENA, findings extracted from the multiple thematic evaluations suggest that community engagement is central to the BNTF operational model. Evidence from the MCL suggests that BNTF interventions are highly relevant to national and community needs, primarily achieved through mechanisms that align with country poverty

reduction strategies and foster community participation in priority-setting. Targeting approaches consistently focus on poor and vulnerable populations, including women, youth, the elderly, and PWDs. However, findings from the BNTF-10 pilot assessment reveal that while women's engagement rates were high, participation among youth, older persons, and PWDs was comparatively low, signalling a potential gap between inclusive policy intent and implementation outcomes.

Findings on the MCL suggest that community engagement is effective in fostering local ownership and ensuring project relevance, though significant challenges remain regarding community organisational capacity. Many community groups reportedly lacked formal governance structures, constitutions, or action plans, which increases risks of instability and weak decision-making. These limitations suggest that while participatory approaches have succeeded in identifying community needs, insufficient organisational capacity can hinder effective management or long-term maintenance. Similarly, deficiencies identified in earlier design and construction phases might highlight opportunities to better align needs assessments with the technical execution of projects.

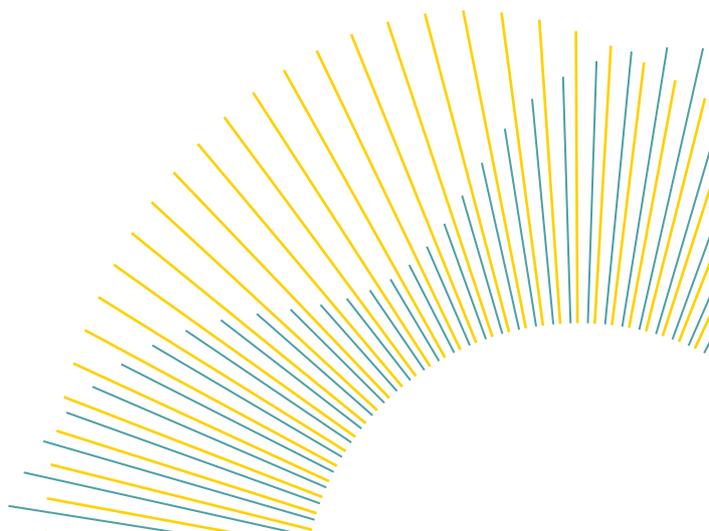
Evidence from evaluations and institutional documents on sustainability consistently highlights community participation as a key driver of local ownership and long-term success. Interventions that embed community involvement throughout the project cycle, particularly through formal governance structures such as Project Monitoring Committees, are associated with higher levels of sustainability. Moreover, evaluations suggest that strengthening institutional capacity within existing local government structures offers a more sustainable approach than creating temporary Project Implementation Units. Sustainability planning, including clear exit strategies and defined maintenance responsibilities, is widely recognised as essential to ensuring continued benefits after project completion.

A recurring lesson in the MCL is the transformative power of community capacity-building to reduce poverty and enhance resilience. Strengthening local institutions and equipping communities with resource mobilisation skills are key elements in sustaining progress beyond project life cycles. Nevertheless, evaluations highlight the challenge of scaling up successful local initiatives and warn that insufficient inclusion of marginalised or vulnerable groups in participatory processes can limit poverty reduction outcomes and even risk exacerbating inequalities.

Systematic Reviews reinforce the positive effects of community engagement and need assessment approaches. Evidence in the MSR shows that community-based and participatory interventions outperform top-down or social marketing models in improving service delivery, behavioural outcomes, and social accountability. Citizen engagement and community monitoring interventions (CMIs) demonstrate measurable effects on the access and quality of public services, including improved child immunisation coverage, higher student test scores, and reduced corruption. Programs are more effective when implemented collaboratively rather than confrontationally, and when they tailor services to needs identified through community assessments.

However, systematic reviews also reveal important nuances. The effectiveness of engagement strategies largely depends on the presence of robust accountability mechanisms and on citizens' capacity to act on the information provided. In cases where these elements are lacking, the connection between participation and broader development outcomes may be less strong. Context-sensitive design, active involvement of local leaders, and early stakeholder engagement are crucial factors for success. In line with this understanding, the BNTF's emphasis on community-led needs assessment and participatory implementation exemplifies best practices, promoting sustainability and fostering local ownership.

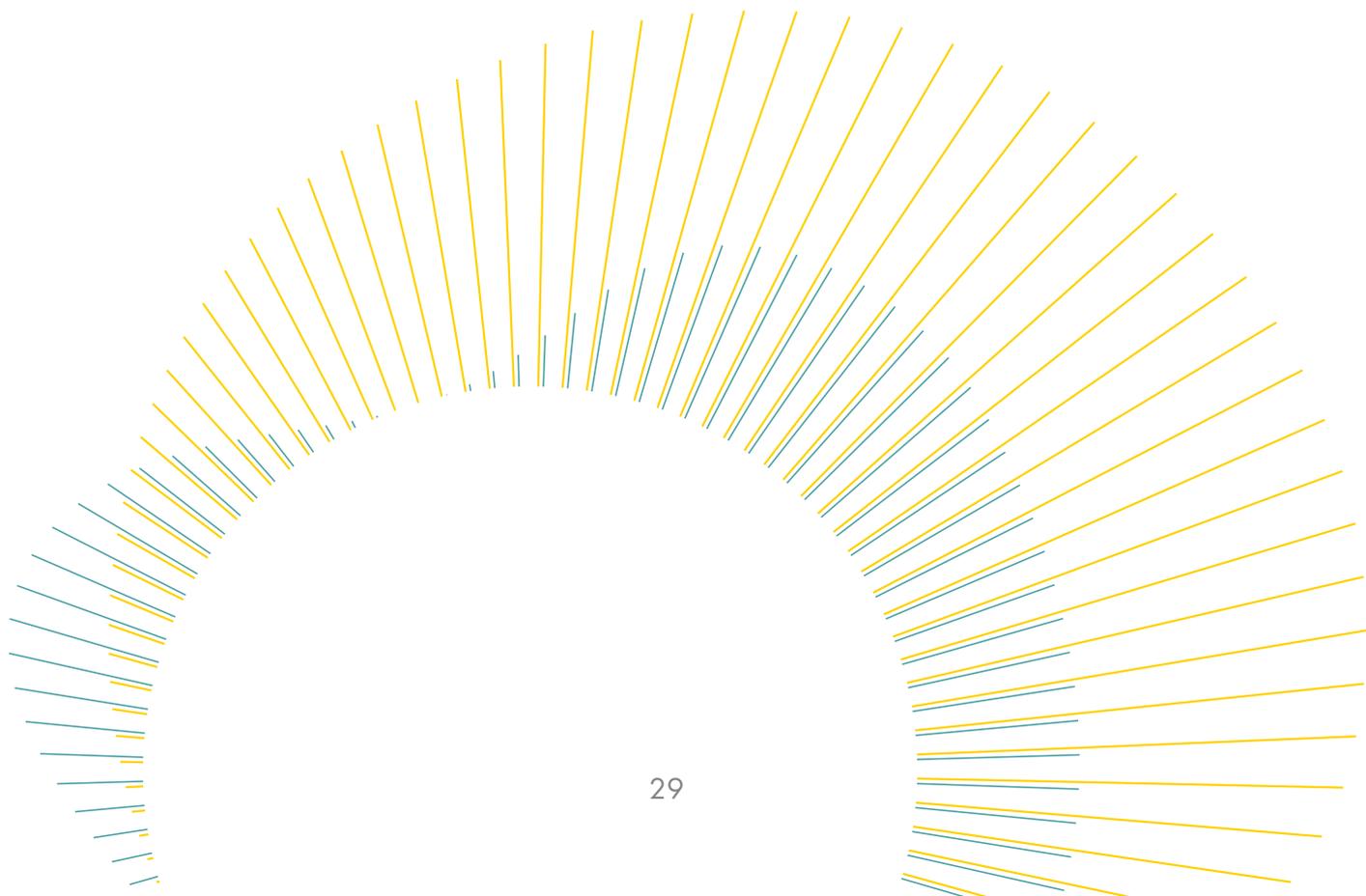
Additional evidence from systematic reviews also highlights that participatory approaches contribute indirectly to improved quality of life by promoting social inclusion, trust, and cooperation among stakeholders. Effective engagement mechanisms are associated with increased community cohesion and responsiveness to local needs, suggesting that the BNTF's long-standing commitment to participatory design represents a strong foundation for future interventions.



Annexe III. Thematic Areas and Sub-Areas

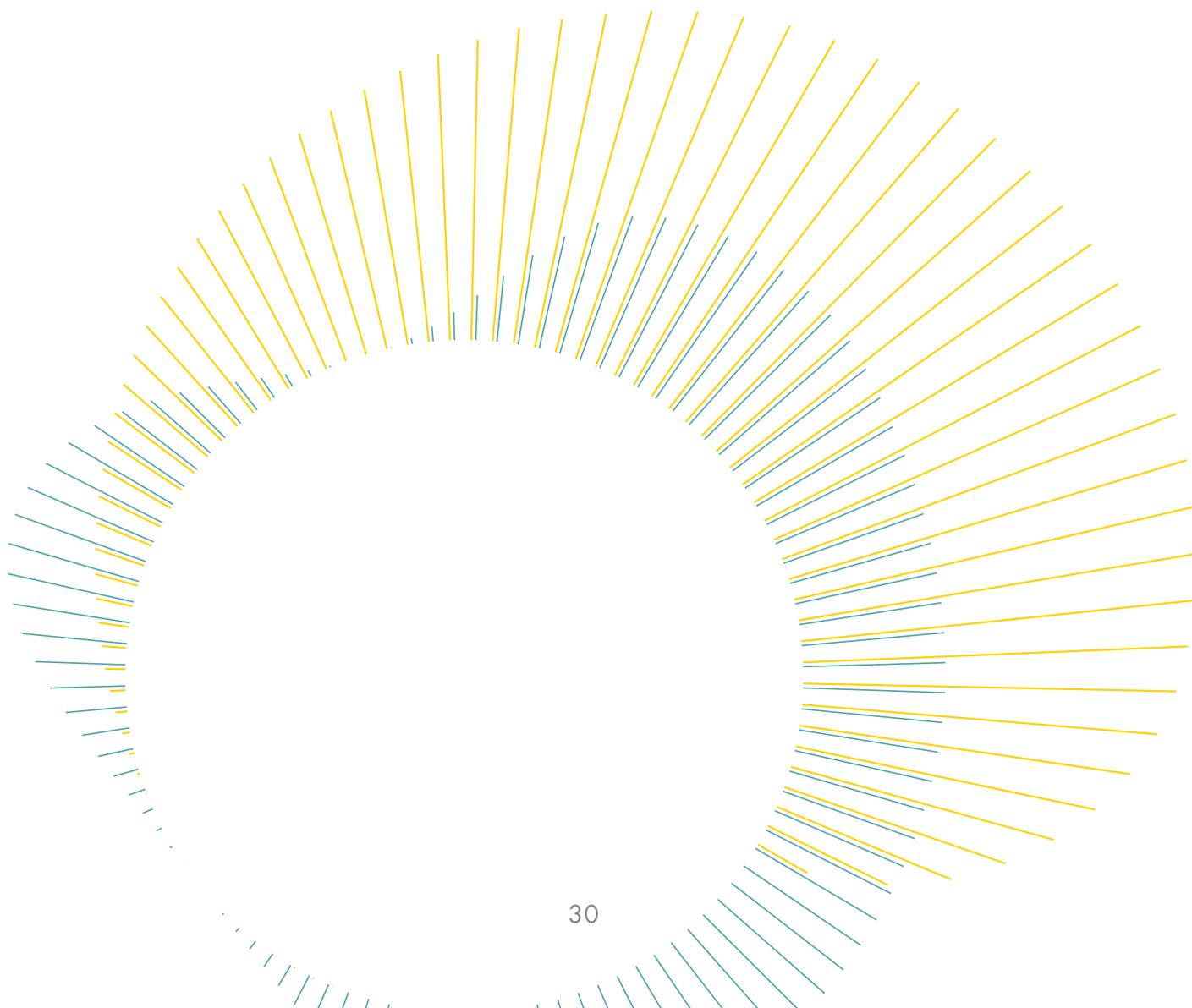
Thematic Area	Thematic Sub-Areas for Analysis	Outcomes
Education and Human Resource Development (EHRD)	EHRD-1 Improvement of the quality, relevance, and equity of basic education	Improved access to quality education and HRD services
	EHRD-2 Improvement of the quality, relevance, and equity of Secondary education	
	EHRD-3 Improvement of the quality, relevance, and equity of post-secondary education	
	EHRD-4 Teacher and principal training programs and capacity building	
	EHRD-5 Construction, renovation, or expansion of educational facilities, resource centres, special education schools, and school feeding facilities.	
	EHRD-6 Provision of furniture, equipment, and educational technology (ICT) tools.	
Livelihoods (LIV)	LIV-1 Capacity building	Livelihoods and employment opportunities enhanced
	LIV-2 Development of job skills, entrepreneurship, and microenterprise	
	LIV-3 Community strengthening.	
Water and Sanitation Systems Enhancement (WSSE)	WSSE-1 Construction, extension, or renovation of treatment plants, water tanks, catchment, and distribution systems.	Improved access to quality water supply and sanitation services
	WSSE-2 Public bathrooms, laundry facilities, and community installations.	
	WSSE-3 Training in hygiene, operation, and maintenance of these infrastructures, water supply, and sanitation	
	WSSE-4 Waste management and disposal	
Basic Community Access and Drainage (BCADI)	BCADI-1 Construction and rehabilitation of rural roads, footpaths, drains, pedestrian bridges, small jetties, and systems that ensure year-round accessibility.	Improved access to basic services
	BCADI-2 Training in infrastructure maintenance is carried out by beneficiaries and community committees.	
	BCADI-3 Transport policy and administrative management	
	BCADI-4 Water transport	
	BCADI-5 Community infrastructure	

Thematic Area	Thematic Sub-Areas for Analysis	Outcomes
Community Engagement and Needs Assessment (CENA)	CENA-1 Participatory community needs assessments and consultations to identify priorities.	Involve the community in assessing needs and priorities and ensuring that interventions are appropriate to the context.
	CENA-2 Engagement processes that amplify marginalized voices (women, youth, persons with disabilities, indigenous and rural populations).	
	CENA-3 Building capacity of local organisations to actively participate in project design and monitoring.	
	CENA-4 Creating pathways for communities to leverage BNTF-supported projects to access additional funding opportunities from international donors and development partners.	
	CENA-5 Strengthening social cohesion and ownership, ensuring that solutions are sustainable and transformative at the community level.	
Youth and Citizen Security (YCS)	YCS-1 Crime and violence prevention	Citizen security enhanced, Sustainable youth employment increased
	YCS-2 Youth employment, micro-enterprises, and other initiatives	
	YCS-3 Training and technical skills for young people	
Energy Generation and Supply (EGS)	EGS-1 Enhanced use of renewable energy technology	Enhanced use of renewable energy technology



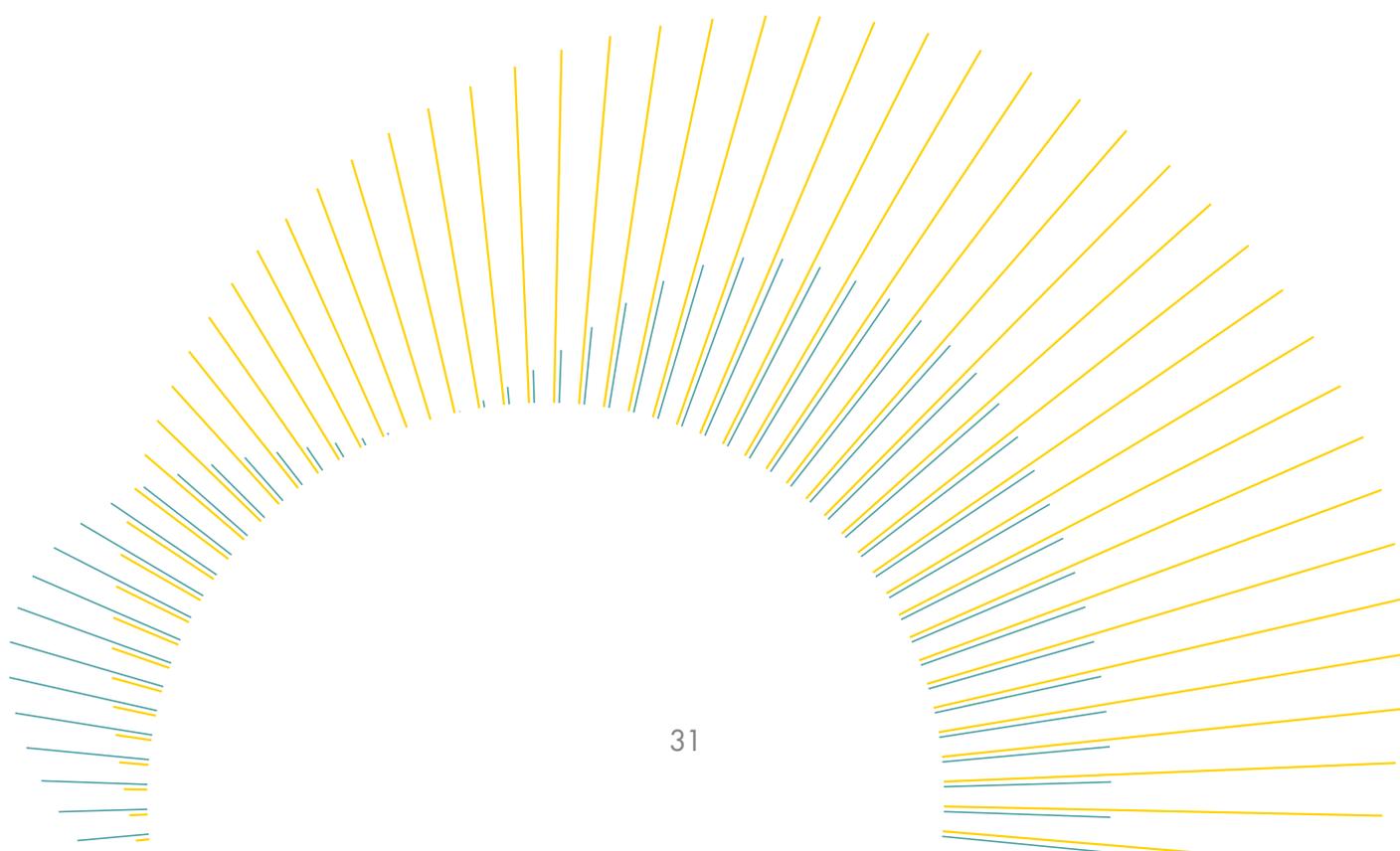
Annexe IV. Impact Dimensions

Thematic Dimension	Indicative Sub-Dimensions
Relevance	Alignment with country needs, community priorities, and targeting mechanisms
Coherence	Community involvement, beneficiary feedback mechanisms
Effectiveness	Achievement of intended results, implementation performance.
Efficiency	Use of resources (cost-effectiveness), timeliness, delivery mechanisms, and resource optimisation to produce outputs
Sustainability	Community ownership, maintenance plans, institutional capacity, results tracking, learning, and use of evidence in decision-making
Cross-cutting Themes	Gender responsiveness, inclusion of persons with disabilities, youth focus, climate resilience, digital inclusion, innovation, local capacity, and community.



Annexe V. Categories of Lessons Learned description

Thematic Categories	Indicative Sub-Categories
Poverty Reduction	Contribution of interventions to improving living standards, reducing vulnerability, and breaking cycles of poverty.
Institutional Arrangements	The structures, roles, and coordination mechanisms among government, community, private sector, and partner institutions that influence implementation.
Community Engagement	The degree to which communities participate in planning, decision-making, and ownership of interventions.
Targeting Strategies and Implementation Modalities	The approaches used to identify, reach, and deliver benefits to the intended vulnerable groups.
Enabling Factors	Institutional, operational, and contextual conditions, resources, or practices that support and facilitate successful implementation and outcomes.
Hindering / Constraining Factors	Institutional, operational, and contextual barriers, limitations, or weaknesses that reduce effectiveness or delay progress.
Risks or Challenges	Potential threats, uncertainties, or difficulties that could affect implementation, outcomes, or sustainability.
External or Additional Funding	Opportunities to leverage co-financing, partnerships, or donor support to scale up or sustain interventions.



Annexe VI. Quality Assurance

For the Matrix of Coded Lessons (MCL), the study incorporates advanced methods such as the use of a large language model (LLM) to extract and synthesise relevant content into concise entries. These outputs are strictly guided by the analytical framework carefully designed by the consultant. The prior processing of evidence through transformer-based sentence embeddings enables documents to be segmented and aligned with thematic areas and the type of information expected from each source. The manual and thoughtful design of the methodological framework developed by the consultant ensures the automated process remains structured, consistent, and relevant to the study's objectives.

The study employs a human-in-the-loop process, where human quality assurance is integrated throughout the workflow, not just as a final validation step. At each stage of the pipeline, the consultant reviews and validates the intermediate outputs, verifying that they remain aligned with the analytical framework and the study's objectives. This iterative engagement ensures continuous quality control and progressive improvement of the outputs.

Once an initial synthesis was generated, the consultant conducted a thorough review of the identified findings, validating their alignment with the framework and the types of lessons emerging. This iterative review process enabled the refinement of outputs, therefore improving accuracy and relevance.

It is essential to emphasise that, while AI-based methods, specifically LLM tools, contribute to efficiency in processing and summarising large volumes of information, they do not replace human judgement.

The consultant's expertise in evaluation and evidence synthesis provides the necessary context, interpretive depth, and methodological rigour to ensure the reliability and quality of the results. In other words, AI-based methods assist the process, but the analysis, interpretation, and validation remain fundamentally human-driven.

For the Matrix of Systematic Reviews (MSR), quality assurance relies on the methodological rigour of the repositories from which the reviews are sourced. Since this task involves synthesising and analysing existing evidence, the quality of each systematic review is presumed based on the methodological standards provided by the respective repositories. The main criterion for including a review in the MSR is the alignment with the analytical framework of this study, ensuring that the extracted evidence is thematically relevant and comparable across thematic areas and dimensions of impacts. Additionally, the consultant conducted a basic critical assessment of each review, focusing on the clarity of the target population, transparency of the methodology, and clear identification of outputs to improve the reliability and usefulness of the synthesis.

To ensure methodological rigour and transparency, the evidence synthesis applied a Human-in-the-Loop (HITL) approach combining Gemini 2.5 Pro with human expert validation. The workflow integrated a combined semantic and keyword search for document retrieval, followed by structured summarisation and thematic synthesis.

Validation was conducted collaboratively by two reviewers, who manually assessed and refined AI-generated outputs to ensure factual alignment and thematic coherence. The process also included two rounds of quality review, which led to iterative improvements and stricter review standards across the corpus.

Estimated indicators (based on validation of approximately one-tenth of the overall corpus):

- **Agreement rate:** ~90 % consistency between reviewers' assessments and subsequent project-level feedback.
- **Error (or detriment) rate:** ~10 % share of outputs within the validated sample requiring substantial manual revision or re-generation.
- **Factual alignment rate:** ~90–95 % proportion of AI-generated summaries in the reviewed sample judged as factually consistent with their source documents.
- **Model temperature:** 0.2 maintained at a low level to prioritise factual accuracy and reproducibility.

These indicators, derived from sample-based validation, reflect a transparent, multi-reviewer quality-assurance process ensuring that AI-assisted synthesis complements expert judgement and maintains analytical integrity throughout the exercise.

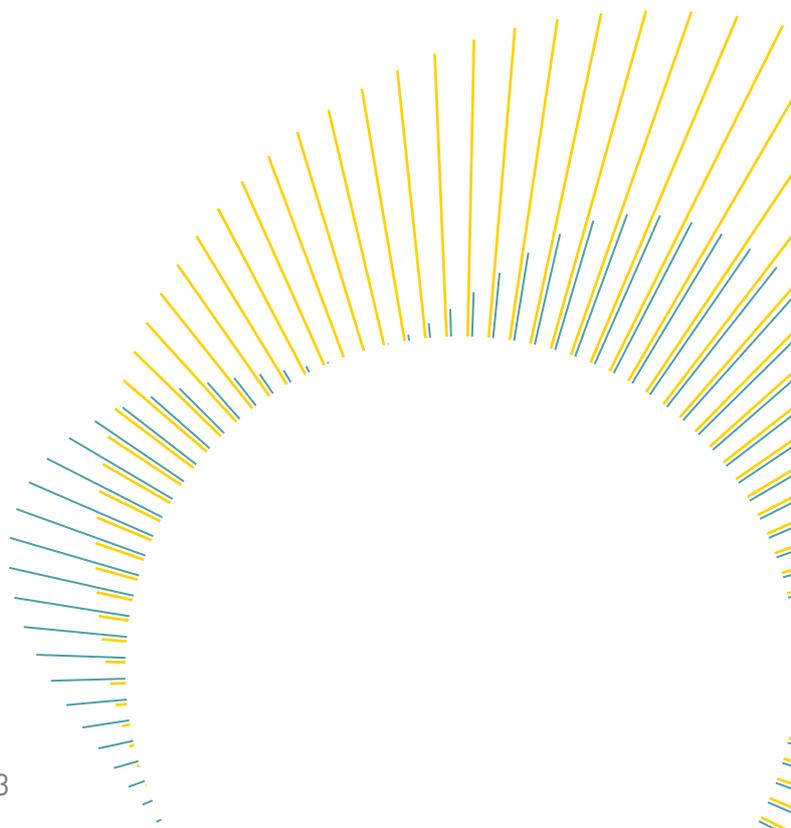
Disclosure

For the preparation of this report, as well as for subsequent stages of the study, the consultant will utilise additional AI-based tools primarily to ensure fluency of reading, adherence to British English grammar standards, assist with style and formatting revisions, and, where appropriate, design visual elements. It is important to emphasise that these tools are used strictly as auxiliary resources applied at different stages of the process. The design of the methodological framework, the analytical process, the drafting of findings, and the development of the reports are entirely carried out by the consultant, drawing on her professional expertise in evidence synthesis and evaluation. All outputs are also subject to review and discussion with the OIE team.

The AI-based tools that may be applied in this study, to varying degrees, include Grammarly, Gemini, OpenAI, Copilot, Canva, Slidesgo, and Adobe AI. Their use is managed with careful safeguards, under the following conditions:

- Input text is always decontextualised, provided in small, non-sensitive excerpts.
- No information that could identify CDB, BNTF or that contains financial details is included.
- The information used is provided under the assurance that it is not stored or used for algorithmic training by the platforms.

This approach is fundamentally different from prompting an AI system to conduct the analysis independently. Rather, the analytical process is led by the consultant and supported by a range of professional tools and software, including Python, Excel, Word, Google Workspace, Canva, and Adobe, to organise, analyse, and present the findings. This ensures that the study remains human-driven, methodologically rigorous, and transparent, with AI tools serving only as complementary supports.



Annexe VII. Limitations, Risks and Mitigation Measures

Despite the careful design of the study, certain limitations and risks may affect its implementation and should therefore be acknowledged. First, the analysis relies primarily on secondary sources, namely evaluation reports and related documentation provided by CDB and OIE. This means that the depth and scope of the findings will ultimately depend on the quality and completeness of the information contained in those documents. In addition, the heterogeneity of methodologies, reporting styles, and levels of detail across documents may pose challenges for comparability when analysing results across thematic areas, countries, or implementation cycles.

A second limitation relates to the Matrix of Systematic Reviews. Only full systematic reviews will be considered for inclusion. In cases where a review is not available in its entirety or only a summary can be accessed, it will be excluded. This decision ensures that the evidence synthesised is robust, transparent, and replicable, but it may reduce the overall number of reviews available for analysis.

Another risk concerns the use of AI-assisted tools in the coding and synthesis process. While these tools offer efficiency in managing large volumes of information, they also carry the possibility of misalignment or

misclassification. To address this, the study follows a human-in-the-loop approach, where the consultant is actively involved at each stage of the process, continuously reviewing and validating intermediate outputs to ensure that they remain aligned with the analytical framework and study objectives.

A further consideration relates to the comparative analysis. This component depended on the availability and maturity level of the CDB AI-based chatbot, as well as the quality of its synthesised output. The current limitations in the chatbot's performance and output quality prevented the development of a comparative exercise. Consequently, some examples illustrating how Multilateral organisations are implementing AI tools replaced that section, along with a training session aimed at enhancing understanding of the MCL and MSR appropriation.

Finally, there is always the possibility of minor adjustments to the work plan depending on the timing of feedback on draft deliverables. This risk will be mitigated through ongoing and proactive communication with OIE, including regular touchpoints and the assurance that the consultant can reach out by email whenever clarification is needed. This approach is expected to foster close collaboration and reduce the likelihood of significant delays.

By recognising these limitations and risks and adopting clear mitigation strategies, the study aims to ensure that its findings remain credible, transparent, and useful for informed decision-making.

Annexe VIII. Cross-Cutting Lessons Learned

VIII.I Common Enabling and Constraining Factors

Evidence across the BNTF portfolio indicates that results are shaped by recurring factors related to institutional capacity, process efficiency, project design, and community engagement.

Enabling Factors

Projects consistently align with national development priorities, which has been a key factor enabling results. The design of BNTF 10 incorporated lessons from previous cycles, strengthening focus on resilience, vulnerable groups, youth, gender, and livelihoods. Integrating cross-cutting themes, such as gender equality, environmental sustainability, and climate resilience, has contributed to more holistic and sustainable outcomes, supported by gender analyses and climate risk assessments across portfolios.

Strengthening IAs by adding engineers, monitoring and evaluation officers, and procurement consultants has enhanced execution capacity. Training and technical workshops provided by CDB in areas such as procurement, maintenance, and gender equality have further built institutional capacity, complemented by peer exchanges and clear governance structures that define the roles of IAs and oversight entities.

Community participation has been a critical enabler of success. The use of community needs and assets assessments ensures demand-driven interventions, while Project Monitoring Committees involving community members support local monitoring, ownership, and contributions. Process improvements have also played

a role, including early preparation for new cycles, greater delegation of authority to IAs, the continuation of financial floats to ease cash-flow constraints, and the introduction of digital management systems to improve project tracking and reporting.

Constraining Factors

Persistent delays in project approval and disbursement processes continue to be a significant constraint. Lengthy procedures for grant signing and condition fulfilment have prolonged implementation timelines. Institutional capacity gaps, including high staff turnover, limited technical expertise, and inadequate contractor supervision, have impacted project quality and pace. Limited national engineering and financial capacity also poses challenges, particularly in newer thematic areas.

Weaknesses in monitoring, evaluation, and reporting systems have hindered performance management and learning. Issues such as late report submissions, underutilisation of information systems, and poor-quality completion documents have been common.

Finally, external shocks, including the COVID-19 pandemic, natural disasters, and political transitions, have disrupted implementation, delayed activities, and reduced community participation and oversight.

VIII.II Cross-Cutting Lessons for Future Interventions

Based on the evidence provided, several cross-cutting lessons and themes emerge to inform the design and implementation of future Basic Needs Trust Fund (BNTF) interventions. These lessons span the entire project cycle, from initial program design to sustainability and learning.

I. Enhancing Program Cycle Efficiency

Convergent evidence from multiple evaluations highlights significant and recurring delays in the initial phases of BNTF program cycles, which constrain the time available for sub-project execution. Specific bottlenecks identified in BNTF 9 include the time taken for signing grant agreements, meeting conditions precedent to first disbursement and appraisal and approval of sector portfolios. To accelerate program start-up, future interventions could adopt strategies proposed for BNTF 10, such as conducting high-level government discussions to expedite approvals, preparing draft grant agreements prior to Board Approval, and requiring Participating Countries (PCs) to establish necessary bank accounts and promptly renew staff contracts. The use of BNTF 9 funds to advance BNTF 10 preparation was noted as a good practice. Additionally, there is a consistent call to engage IAs more directly and earlier in the design phase, before the Staff Report is completed. This facilitates IA input, allows for peer exchange on lessons learned, and increases buy-in and readiness for implementation

II. Strengthening Project Design and Implementation Quality

Evidence suggests the critical importance of robust technical design and effective supervision in avoiding deficiencies and delays during construction. Future projects could benefit from the inclusion of technical consultants, such as suitably qualified surveyors and geotechnical experts, in design teams to enhance IA due diligence of submitted designs.

Inadequate supervision of contractors and consultants is also a recurring challenge. To mitigate this, contractor screening could be improved to ensure they have adequate resources, and the Bank could also support the development of training or e-courses for contractors on standards for resilience, environmental protection, and procurement.

III. Deepening Integration of Cross-cutting Themes

The integration of gender equality and climate resilience is a consistent objective, though implementation effectiveness can be improved. In terms of equality, future designs should build on BNTF 10's growing attention to gender-based dimensions, ensuring that gender analysis informs project design and monitoring and evaluation (M&E), and addresses the differing needs and benefits for women, such as reducing the burden of care, which disproportionately affects women.

On the other hand, there is a strong portfolio-wide emphasis on building resilience to climate change and natural hazards. However, past interventions sometimes focused more on avoiding environmental harm than on actively increasing resilience. Future projects could systematically apply climate risk screening tools (e.g., CNA, Environmental Screening Checklists) during project identification and design to ensure resilience measures are proactively incorporated.

IV. Strengthening Sustainability through Maintenance and Capacity Building

Convergent evidence underscores that planning for maintenance and building local capacity are fundamental to the long-term success of BNTF interventions. A consistent lesson learned is that maintenance planning is a necessary part of sub-project design. Future interventions must ensure that funded Maintenance Plans are developed for all infrastructure sub-projects. As previously identified, community involvement is key to sustainability; therefore, a good practice could be to continue providing maintenance training for beneficiaries and government partners, facilitate the formation of community-based Project Monitoring Committees (PMCs) with maintenance responsibilities, and provide maintenance kits or tools to empower local action.

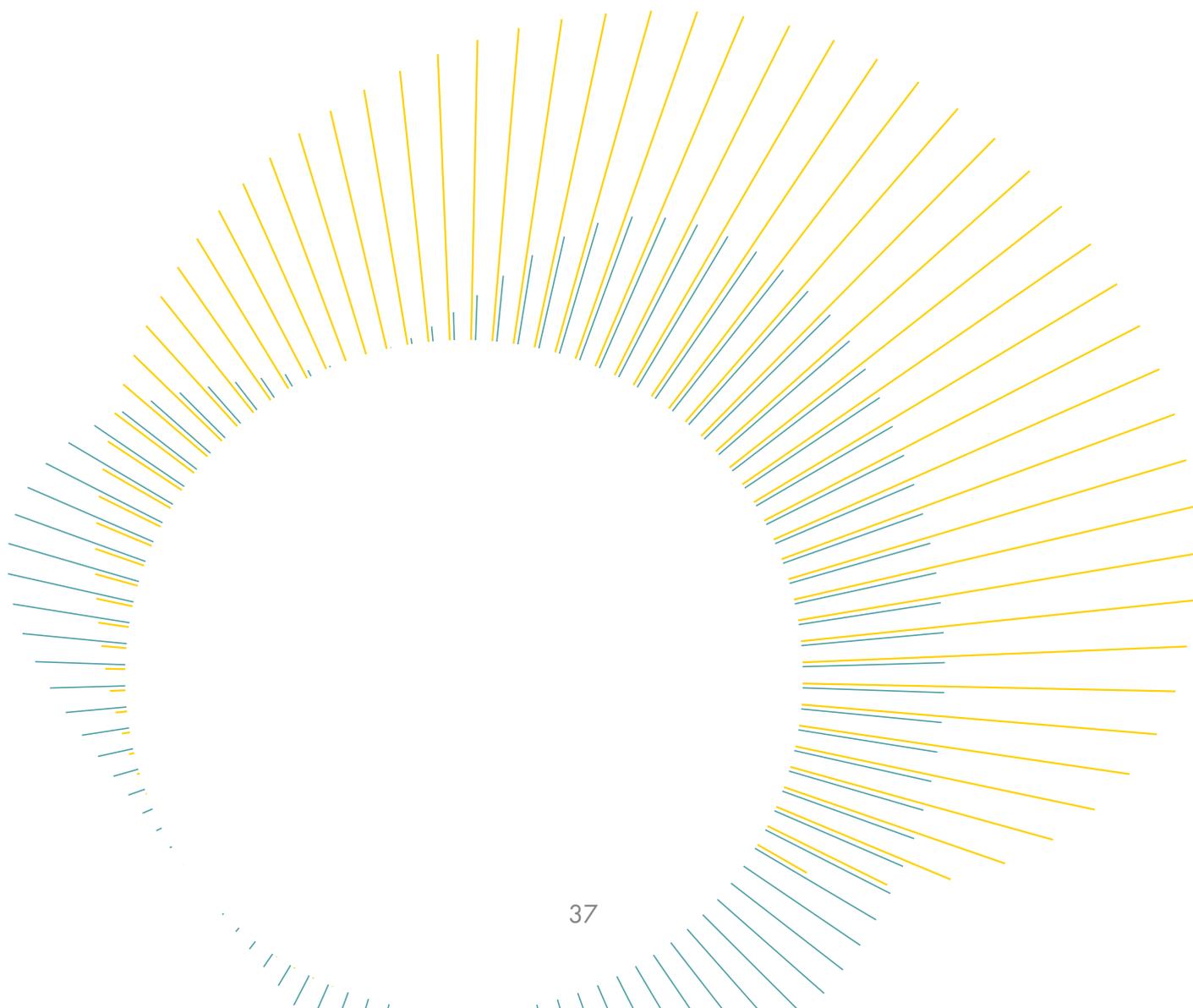
V. Improving Monitoring, Evaluation, and Learning (M&E)

The evidence indicates a need for better systems, higher-quality reporting, and a more systematic approach to learning from experience. Several sources indicate that there is room for improvement in the utilisation of the BNTF Information System (BIS) and suggest the advantage of implementing a more user-friendly digital solution. Future interventions could benefit from operationalising and providing training on new project management systems to improve day-to-day management, monitoring and evaluation (M&E), and reporting consistency.

Additionally, there is a recognised need to move beyond output monitoring to better understand the medium- and long-term impacts of BNTF programming.

Future programs could include allocations for tracer studies to evaluate the impact and outcomes of previous cycles, as recommended in multiple evaluations. IA-led symposiums to discuss lessons and peer exchanges are identified as a good practice that could be encouraged and systematised across CDB.

Finally, explore alternative approaches to identifying and leveraging the valuable knowledge BNTF has already developed. Such knowledge, including this document or through the use of AI-assisted tools, could serve as effective options for identifying, presenting, sharing, and socialising what BNTF does well and what has been learned.





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