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Health and Development Resilience in the Face of COVID-19



Bill & Melinda Gates Institute for Population and Reproductive Health Department of Population, Family and Reproductive Health



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onsidering the health and socioeconomic impacts of COVID-19, and its close relationship with policies that enable a DD-favorable policy environment, this DDEI has integrated a module to assess the resilience and sustainability of systems in each sector. The scoring follows existing frameworks and key principles of sustainable and resilient systems that can effectively respond to adverse events, security attacks, emerging infectious disease threats and other public health emergencies.

Figure 13. A conceptual framework: Health and Development Systems resilience domains.

Our framework, presented in Figure 13, is an adaptation of existing frameworks to measure resilience in different sectors by Blanchet et al. and Linkov et al. This framework combines the National Academy of Sciences (NAS) recommended four stages of event management cycle that are needed for a system to be resilient and the four domains proposed by the Network-Centric Warfare (NCW) doctrine that ensure a shared awareness of the situation and inform effective decision making across system levels.^{13, 14} Due to the critical importance of timely intervention and frequently irreversible impact of delayed action as proven by the COVID-19 pandemics, an additional element was added to assess timeliness of interventions to mitigate the impact of the crisis.^{15, 16}



Sectoral Resiliency Summary Results

Up to 25 questions were asked over the 4 Command and Control Domains, pertaining to each of the Resiliency Dimensions. Responses were recorded on a Likert scale of 1 to 10, where 1 represents the lowest score (poor state/ capability) and 10 represents the highest score (great state/ capability). This resulted in a total of **76** surveys completed for the module across all sectors: FP (30), MCH (13), ED (8), WE (11), LM (7), GEI (7). Results by sector are presented in Figure 14. The score values are as follows:

пШП

1. FP: **5.4** (95% CI: 4.6-6.1)4. WE: **6.1** (95% CI: 4.7-7.4)2. MCH: **6.1** (95% CI: 4.8-7.3)5. LM: **5.9** (95% CI: 4.0-7.8)3. ED: **5.0** (95% CI: 3.5-6.5)6. GEI: **4.6** (95% CI: 3.5-5.7)

Confidence intervals are presented in the dotted lines to show the upper and lower bounds.

The overall resiliency score of the six sectors is 5.5 (95% CI: 5.1-6.0).



Resiliency Module Results Across Resiliency Dimensions

The resiliency module results across sectors, by resilience dimension, are presented in Figure 15. This demonstrates the wide variations in scores within and across DDEI sectors.



Figure 15: Bar chart of resilience module results across DDEI sectors, by resiliency dimensions in Tanzania.

📕 Family Planning 📕 Maternal and Child Health 📕 Education 📕 Women's Empowerment 📕 Labor Market 📕 Governance and Economic Institutions





The FP sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 17. The results are based on responses from **30** FP experts working in Tanzania. The scores for each dimension within FP are as follows:

- 1. Preparedness: 5.4 (95% CI: 4.7-6.0)
- 2. Absorptive Capacity: 5.1 (95% CI: 4.4-5.9)
- 3. Recovery Capacity: 5.5 (95% CI: 4.8-6.3)
- 4. Adaptive Capacity: **5.4** (95% CI: 4.6-6.2)
- 5. Timeline: **5.0** (95% CI: 4.1-5.9)

Based on weighted statistical analysis, the overall score for the level of resiliency in the FP sector is **5.4** (95% CI: 4.6-6.1).

Figure 17. Bar chart of resiliency results in the FP sector in Tanzania, by dimension.



Maternal and Child Health Resiliency Scores

The MCH sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 18. The results are based on responses from 13 MCH experts working in Tanzania. The scores for each dimension within MCH are as follows:

- 1. Preparedness: 5.9 (95% CI: 4.7-7.0)
- 2. Absorptive Capacity: 6.0 (95% CI: 4.7-7.3)
- 3. Recovery Capacity: 6.2 (95% CI: 4.9-7.4)
- 4. Adaptive Capacity: 6.4 (95% CI: 5.0-7.7)
- 5. Timeline: 5.9 (95% CI: 4.5-7.4)

Based on weighted statistical analysis, the overall score for the level of resiliency in the MCH sector is **6.1** (95% CI: 4.8-7.3).

Women's Empowerment Resiliency Scores

The WE sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 19. The results are based on responses from 11 WE experts working in Tanzania. The scores for each dimension within WE are as follows:

- 1. Preparedness: 6.1 (95% CI: 4.7-7.4)
- 2. Absorptive Capacity: 5.9 (95% CI: 4.6-7.3)
- 3. Recovery Capacity: **6.1** (95% CI: 4.7-7.5)
- 4. Adaptive Capacity: 6.2 (95% CI: 4.9-7.5)
- 5. Timeline: 6.5 (95% CI: 4.9-8.0)

Based on weighted statistical analysis, the overall score for the level of resiliency in the WE sector is **6.1** (95% CI: 4.7-7.4).

Figure 18. Bar chart of resiliency results in the MCH sector in Tanzania, by dimension.



Figure 19. Bar chart of resiliency results in the WE sector in Tanzania, by dimension.





The ED sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 20. The results are based on responses from 8 ED experts working in Tanzania. The scores for each dimension within ED are as follows:

- 1. Preparedness: 4.8 (95% CI: 3.4-6.3)
- 2. Absorptive Capacity: 4.9 (95% CI: 3.4-6.4)
- 3. Recovery Capacity: 4.9 (95% CI: 3.5-6.4)
- 4. Adaptive Capacity: 5.2 (95% CI: 3.5-7.0)
- 5. Timeline: 5.9 (95% CI: 3.2-8.6)

Based on weighted statistical analysis, the overall score for the level of resiliency in the ED sector is **5.0** (95% CI: 3.5-6.5).



Labor Market Resiliency Scores

The LM sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 21. The results are based on responses from 7 LM experts working in Tanzania. The scores for each dimension within LM are as follows:

- 6. Preparedness: 5.8 (95% CI: 4.0-7.6)
- 7. Absorptive Capacity: 5.9 (95% CI: 3.7-8.0)
- 8. Recovery Capacity: 6.0 (95% CI: 4.0-8.0)
- 9. Adaptive Capacity: 6.0 (95% CI: 4.4-7.7)
- 10. Timeline: 5.4 (95% CI: 2.7-8.1)

Based on weighted statistical analysis, the overall score for the level of resiliency in the LM sector is **5.9** (95% CI: 4.0-7.8).

Figure 20. Bar chart of resiliency results in the ED sector in Tanzania, by dimension.



Figure 21. Bar chart of resiliency results in the LM sector in Tanzania, by dimension.





Governance and Economic Institutions Resiliency Scores

The GEI sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 22. The results are based on responses from 7 GEI experts working in Tanzania. The scores for each dimension within GEI are as follows:

- 11. Preparedness: 4.4 (95% CI: 2.8-6.0)
- 12. Absorptive Capacity: 5.0 (95% CI: 3.8-6.3)
- 13. Recovery Capacity: 4.6 (95% CI: 2.7-6.6)
- 14. Adaptive Capacity: **4.1** (95% CI: 2.8-5.4)
- 15. Timeline: 4.0 (95% CI: 2.7-5.3)

Based on weighted statistical analysis, the overall score for the level of resiliency in the GEI sector is **4.6** (95% CI: 3.5-5.7).

Figure 21. Bar chart of resiliency results in the GEI sector in Tanzania, by dimension.



Preparedness

- 1. FP: Increase domestic resources and funding for family planning programs.
- 2. MCH: Develop RMNCAH coordination framework that will highlight specific roles, function and mandate between MoHCDGEC and PO-RALG and their respective interministerial departments.
- 3. ED: Design and implement a country wide campaign to support and sensitize girls to proceed with secondary and tertiary education for delaying their fertility.
- 4. WE: Review gender descriptive policies and laws that restrict women from enjoying civil and human rights, including the marriage act, (1971) which perpetuates early marriages.
- 5. GEI: Promote Good Governance, transparency, and the rule of law.
- 6. LM: Strengthen coordination of Tanzania Private Sector Foundation (TPSF) and other institutions for mobilizing domestic capital and foreign direct investment for stimulating economic growth.

Absorptive capacity

- 1. FP: Increase provision and access to quality family planning services and methods to adolescent girls and young women in order to decline fertility.
- 2. MCH: Improve quality of MCH data and always use data for planning implementation monitoring and evaluation of MCH programs.
- 3. ED: Review curriculum for primary and secondary schools and tertiary colleges to tailor education to the emerging needs of the labour market.
- 4. WE: Review labour policies and laws to enhance gender quality in employment opportunities, equal respect and recognition at the workplace between men and women and ensure that women are attractively paid as of their similar qualifications, profession and seniority
- 5. GEI: Promote good political and ensure separation of power among three bodies of the State: Parliament, Judiciary, and the executive.
- 6. LM: Engage multi-stakeholders to strategically stimulate small and mid-size enterprises (SMEs) and entrepreneurship that are critical in creating employment opportunities and increasing tax revenues.

Recovery capacity

1. FP: Strengthen coordination capacity of Government staff at ministry level and within Council/Regional Health Management Teams (C/RHMTs) at Local Government Authorities (LGAs).

- 2. MCH: Increase human resource for health, strengthen capacity of health staff and motivate them to ensure provision of quality health care services.
- 3. ED: Ensure multisectoral collaboration in efforts to ensure increased enrolment in primary and secondary schools and addressing issues of school drop-out due to teenage pregnancy, poverty and bad behavior.
- 4. WE: Strengthen country initiatives in mobilizing the Government stakeholders and the public on gender equity and addressing all barriers towards women empowerment and put in place a joint supporting women effort in the country.
- 5. GEI: Promote democracy and citizen participation in governance and development process for sustainable and inclusive economic development.
- 6. LM: Coordinate strategic collaboration among all actors (the growing workforce, employers, workers association and other relevant authorities) to reflect on labour laws and market transformation and develop a joint plan towards realization of DD in Tanzania.

Adaptive Capacity

- FP: Enhance integration of family planning into relevant MCH services such as labor and delivery, antenatal care (ANC), Postnatal care (PNC), Post-abortion care (PAC), and HIV/ AIDS Care and Treatment (CTC) services in order to increase access to family planning information and contraception among clients at all points of service delivery at health facilities.
- 2. MCH: Create strong, resilient and adaptive health systems that can respond shocks and crisis similar to COVID-19 pandemic.
- 3. ED: The Government to collaborate with stakeholders to develop, disseminate and operationalize re-entry policy for teen mothers in order to provide them with the second chance to pursue their education career and realize their lifetime goal in all spheres.
- 4. WE: Support state and non-state institutions to conduct research activities for generating evidence which inform evidence-based advocacy for gender equity, women empowerment and SRHR.
- 5. GEI: Review business and investment laws to attract more local and foreign investors, including decline of multiplicity of taxes, duplicate process by various authorities not falling under one roof.
- 6. LM: Mobilize Government and stakeholders to finalize the national strategy for harnessing the demographic dividend and supporting its dissemination and operationalization in order to foster the utilization of national workforce.

References

- ¹ Bloom D, Canning D, Sevilla J. The demographic dividend: A new perspective on the economic consequences of population change: Rand Corporation; 2003.
- ² Cardona C, Rusatira J, Cheng X, Silberg C, Salas I, Li Q, et al. Generating and capitalizing on the demographic dividend potential in sub-Saharan Africa: a conceptual framework from a systematic literature review [version 1; peer review: 1 approved with reservations]. Gates Open Research. 2020;4(145).
- ³ Ahmed SA, Cruz M, Go DS, et al.: How Significant is Africa's Demographic Dividend for its Future Growth and Poverty Reduction? The World Bank. 2014.
- ⁴ UN Population Division. World Population Prospects. Available at https://population.un.org/wpp/Graphs/ DemographicProfiles/Pyramid/231.
- ⁵ World Bank. 2020. Population growth (annual %) Tanzania. Available at https://data.worldbank.org/ indicator/SP.POP.GROW?locations=TZ.
- ⁶ UN Population Division. World Population Prospects. Available at https://population.un.org/wpp/Graphs/ DemographicProfiles/Pyramid/231.
- ⁷ DHS Program. Tanzania Country Quickstats. Available at https://dhsprogram.com/Countries/Country-Main. cfm?ctry_id=39&c=Tanzania&Country=Tanzania&cn=&r=1.
- ⁸ UN Population Division. World Population Prospects. Available at https://population.un.org/wpp/Graphs/ DemographicProfiles/Pyramid/231.

- ⁹ UN Population Division. World Population Prospects. Available at https://population.un.org/wpp/Graphs/ DemographicProfiles/Pyramid/231.
- ¹⁰ DHS Program. Tanzania Country Quickstats. Available at https://dhsprogram.com/Countries/Country-Main. cfm?ctry_id=39&c=Tanzania&Country=Tanzania&cn=&r=1.
- ¹¹ DHS Program. Tanzania Country Quickstats. Available at https://dhsprogram.com/Countries/Country-Main. cfm?ctry_id=39&c=Tanzania&Country=Tanzania&cn=&r=1.
- ¹² DHS Program. STATcompiler. Available at https://www. statcompiler.com/en/#.
- ¹³ Linkov I, Eisenberg DA, Plourde K, Seager TP, Allen J, Kott A. Resilience metrics for cyber systems. Environment Systems and Decisions. 2013;33(4):471-6.
- ¹⁴ Linkov I, Eisenberg DA, Bates ME, Chang D, Convertino M, Allen JH, et al. Measurable resilience for actionable policy. ACS Publications; 2013.
- ¹⁵ Baldwin R, Tomiura E. Thinking ahead about the trade impact of COVID-19. Economics in the Time of COVID-19. 2020;59.
- ¹⁶ Lauer SA, Grantz KH, Bi Q, Jones FK, Zheng Q, Meredith HR, et al. The incubation period of coronavirus disease 2019 (COVID-19) from publicly reported confirmed cases: estimation and application. Annals of internal medicine. 2020;172(9):577-82.
- ¹⁷ Blanchet K, Nam SL, Ramalingam B, Pozo-Martin F. Governance and capacity to manage resilience of health systems: towards a new conceptual framework. International Journal of Health Policy and Management. 2017;6(8):431.





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