

Online Appendix 6. Quality assessment of prioritized SDH action indicators

Measurement concept	Candidate indicator	Tier	Quality assessment
Domain 1: Governance			
1.1 Level of intersectoral collaboration for health and health equity	1.1.1 National and/or subnational policy addressing the reduction of health inequities established and documented.	Tier II	<p>1. Measurement concept match rating (3/7). This indicator does not align very well with the measurement concept.</p> <p>2. Technical quality rating: (2/8). This indicator seeks to measure national policies aimed at reducing health inequities. However, this indicator only meets 2 of the technical quality criteria. There is data currently available for this indicator.</p>
	1.1.2 Whether a national policy exists that addresses at least two priority determinants of health in target populations	Tier II	<p>1. Measurement concept match rating (3/7). This indicator does not align very well with the measurement concept.</p> <p>2. Technical quality rating: (4/8). This indicator seeks to measure national policies aimed at reducing health inequities. However, this indicator only meets 2 of the technical quality criteria. This indicator is also a binary indicator. There is data currently available for this indicator.</p>
	<i>No candidate indicator captures the measurement concept well, is technically feasible, and has data availability. There may be the opportunity to leverage off WHO EURO and PAHO indicators. Investment in the development of a new indicator may be beneficial (e.g., a standard indicator for intersectoral action for health).</i>		
1.2 Level of implementation of health equity impact assessment for relevant government policies	1.2.1 Proportion of seats held by women in (a) regional parliaments and (b) local governments	SDG (a) Tier I, (b) Tier III	<p>1. Measurement concept match rating (4/7). This indicator does not align very well with the measurement concept.</p> <p>2. Technical quality rating: (5/8). This indicator seeks to measure proportion of seats held by women on key decision-making bodies. Whereas this indicator meets most of the technical quality criteria, the</p>

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			unavailability of data at the local government level does makes it challenging to recommend this for inclusion. Only the first aspect of this indicator has data readily available.
	<i>The candidate indicator does not capture the measurement concept and does not meet the minimum mark to be included in the monitoring system. Therefore, we recommend that a new indicator is developed.</i>		
1.3 Level of public social protection	1.3.1 Percentage of the population covered by social protection floors / systems	SDG Tier I	1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (6/8). This indicator aligns with the SGDs and is highly accepted in various countries. There is data readily available for this indicator.
	<i>The candidate indicator captures the measurement concept, if technically feasible, and has data availability. It is a suitable for inclusion in the monitoring system. The indicator could be further refined (e.g., could limit it to only the population living in poverty).</i>		
1.4 Gender equity in level of public social protection	1.4.1 Parity index (female/male) for the percentage of the population covered by social protection floors / systems		1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (6/8). This indicator aligns with the SGDs and is highly accepted in various countries. There is data readily available for this indicator and the parity index can be computed based on the data.
	<i>The candidate indicator captures the measurement concept, if technically feasible, and has data availability. It is a suitable for inclusion in the monitoring system. The indicator could be further refined (e.g., could limit it to only the population living in poverty).</i>		
1.5 Level of public provision of early childhood education	1.5.1 Participation rate in organized learning (one year before the official primary entry age)	SDG Tier I	1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (6/8). This is an SGD indicator and is accepted in various countries. There is data readily available for this indicator.

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	1.5.2 Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic hand washing facilities (as per the WASH indicator definitions)	SDG Tier II	1. Measurement concept match rating (5/7). This indicator does capture the measurement concept. 2. Technical quality rating: (6/8). This indicator aligns with the SGDs and is highly accepted in various countries. There is data readily available for this indicator.
	<i>The candidate indicator 6.1 is prioritized over 6.2, because it is a better fit with the measurement concept and has full data availability. The prioritized indicator is fit for purpose and does not require further development.</i>		
1.6 Income equity in level of early childhood education	1.6.1 Parity index (bottom/top wealth quintile) for participation rate in organized learning (one year before the official primary entry age)	SDG Tier I	1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (7/8). This indicator aligns with the SGDs and is highly accepted in various countries. There is data readily available for this indicator and the parity index can be computed based on the data.
	<i>The candidate indicator captures the measurement concept, if technically feasible, and has data availability. The indicator is fit for purpose and does not require further development.</i>		
1.7 Provision of public laws ensuring human rights	1.7.1 Whether laws and regulations are in place that guarantee women and adolescents access to sexual and reproductive health services, information and education (official records)	SDG Tier III	1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (5/8). This indicator aligns with the SGDs and is highly accepted in various countries. However, this indicator is a binary indicator and data is not readily available for this indicator.
	1.7.2 Whether a legal framework (including customary law) is in place that guarantees women's equal rights to land ownership and/or control	SDG Tier III	1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (5/8). This indicator aligns with the SGDs and is highly accepted in various countries. However, this indicator is a binary

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			indicator and data is not readily available for this indicator.
	1.7.3 Whether legal frameworks are in place to promote equality and non-discrimination on the basis of sex	SDG Tier III	1. Measurement concept match rating (6/7). This indicator does capture the measurement concept. 2. Technical quality rating: (5/8). This indicator aligns with the SDGs and is highly accepted in various countries. However this indicator is a binary indicator and data is not readily available for this indicator.
	All three indicators are a good match with measurement concepts, but have data availability over the long term only.		
	OVERALL ASSESSMENT DOMAIN 1: A number of indicators in this domain tap into the prioritized measurement concepts. Most indicators in this domain are also SGD indicators that are collected in different countries. The underlying level of measurement for some indicators in this domain is binary. Efforts should be made to obtain other quantitative indicators. The proposed prioritized indicators capture the measurement concepts fairly well.		
Domain 2: Participation			
2.1 Level of transparency in policy-making	2.1.1 Whether country has adopted and implemented constitutional, statutory and/or policy guarantees for public access to information	SDG Tier II	1. Measurement concept match rating (6/7): Public access to information is an integral part of transparency in policy-making. For this reason the <i>measurement concept – indicator</i> match rating was considered moderate to high. This indicator is also well-aligned with Domain 5 (Monitoring and accountability). 2. Technical quality rating (5/8): This indicator refers to a specific, measurable government action (criteria 1 and 6) that is applicable across diverse country contexts (criteria 7). Given that the indicator is aligned with the SDGs (criteria 2), it will likely have high acceptability (criteria 8). As Tier II, the data is not readily available (criteria 3 and 4). Further work could be done to transform this binary regional indicator into a national-level indicator (criteria 5).
	2.1.2Whether or not the country has systems to track and make public allocations for gender equality and	SDG Tier III	1. Measurement concept match rating (5/7): This indicator does align with tracking and sharing information on funding for initiatives that address gender

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	women's empowerment		equity but this indicator is more specific than 2.1.1. 2. Technical quality rating (4/8): This indicator is aligned with SDGs (criteria 2), acceptable (criteria 8), applicable across diverse country contexts (criteria 7) and well-defined government action (criteria 1). Given that this indicator is Tier III, information may not be available in the near future and could require data collection.
	2.1.3 Whether country has met their commitments and obligations in transmitting information as required by each relevant agreement on hazardous waste and other chemicals	SDG Tier I	1. Measurement concept match rating (4/7): This indicator does address transparency in policy making but it does not specifically measure transparency with the public, which is central to increase participation as defined in the Rio pledge 2. 2. Technical quality rating (6/8): Given that this indicator is Tier I, data is already available, routinely collected and utilized (criteria 2, 4 and 6). It will thus be low/no cost and have high acceptability (criteria 3, 7 and 8).
	<i>The candidate indicator 2.1.1 best captures the measurement concept, is technically feasible, and has some data availability. If data availability is limited, then 2.1.3, which is immediately available, could be used as a placeholder indicator, until 2.1.1 becomes available.</i> <i>Co-indicator for Domain 5: Monitoring and accountability.</i>		
2.2 Level of implementation of mechanisms for participation of civil society in policy-making	2.2.1 Percentage of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management	SDG Tier III	1. Measurement concept match rating (4/7): This indicator measures the implementation of mechanisms well but it is very specific to water and sanitation management. 2. Technical quality rating (4/8): This continuous indicator is aligned with the SDGs (criteria 5 and 2) which will increase acceptability across countries (criteria 7 and 8). However, given that data is Tier III and not yet available, technical quality is hard to assess at this point.
	2.2.2 Proportion of cities with a direct participation structure of civil society in urban planning and	SDG Tier III	1. Measurement concept match rating (5/7): This indicator measures the implementation of mechanisms in a broader sense that emphasizes participation in policy-

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	management that operate regularly and democratically		making. 2. Technical quality rating (3/8): This regional indicator does not yet have data available (Tier III). However, it is aligned with the SDGs (criteria 2, 7 and 8).
	<i>Indicators align moderately well with the measurement concepts, but have data availability over the long term only.</i>		
2.3 Level of between-country exchange of good practices around participation in policy-making	2.3.1 Whether or not country has communicated the establishment or operationalization of an integrated policy/strategy/plan which increases its ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)	SDG Tier III	1. Measurement concept match rating (1/7): This indicator indirectly measures exchange of good practices. It does not address participation in policy-making. 2. Technical quality rating (3/8): This indicator is aligned with the SDGs and thus theoretically has high acceptability across countries. Data is not currently available.
	2.3.2 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities	SDG Tier III	1. Measurement concept match rating (0/7): This indicator does not align with the measurement concept. 2. Technical quality rating (3/8): This indicator is aligned with the SDGs and thus theoretically has high acceptability across countries. Data is not currently available.
	<i>Neither indicators are a good match with measurement concept nor is data available. Further work is needed to</i>		

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	identify other potential indicators.		
	OVERALL ASSESSMENT DOMAIN 2 The only indicator recommended at this time is 2.1.1 (<i>Whether country has adopted and implemented constitutional, statutory and/or policy guarantees for public access to information</i>) because it aligns best with the measurement concept and has high quality data available in the short-term. If data cannot be accessed in time, indicator 2.1.3 (<i>Whether country has met their commitments and obligations in transmitting information as required by each relevant agreement on hazardous waste and other chemicals</i>) which is more specific can be used as a proxy because data is currently available. For all other measurement concepts, there were no indicators that aligned well with measurement concepts and had high-quality data available.		
Domain 3: Health system reorientation			
3.1 The level of comprehensive, [equitable] service coverage by health systems (including primary health care and the right to health) ALTERNATIVE MEASUREMENT CONSTRUCT [Inequities in the level of comprehensive service coverage by health systems]	3.1.1.[SDG 16.9.1] Proportion of children under 5 years of age whose births have been registered with a civil authority, by age [Gender disaggregation is possible with this indicator, therefore a parity index between females and male registration could be used to look at inequities in comprehensive service coverage by health services...]	SDG Tier I	1.Measurement concept match rating (4/7): It deals with identify as an important vehicle for demanding the right to health services. There are several complications however, which need to be addressed in thinking through the match. These may arise from the formulation of the measurement concept. The first issue is whether or not equity should be included in the measurement concept or measured separately, making the measurement focus on comprehensive, implying the full spectrum of care (including addressing key food, water and other environmental determinants as identified as part of primary health care and the right to health. For this reason the measurement concept – indicator match rating was considered moderate. 2. Technical quality rating (4/8): As Tier I, there is a suggested methodology that has been tested and an international standard and therefore it meets criterion 1 (SMART). It is feasible and acceptable given alignment with Sustainable Development Goal (SDG) indicators and the associated process used for international agreement. It would also therefore meet criteria 2,3,7,8. Some evidence on the usefulness of this indicator-concept in being associated with access to determinants for health equity is available but needs further documentation

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			(criterion 6). Continuousness of indicator (criteria 5) is fulfilled. Regular availability of data would be fulfilled as part of the SDGs (criterion 4).
	<p>3.1.2.[SDG 6.1.1] Percentage of population using safely managed drinking water services</p> <p><i>[Regarding inequities, as with the previous indicator of 3.1.1. parity indices by rural/urban and by lowest/highest wealth quintiles could be constructed based on available data.]</i></p>	SDG Tier I	<p>1. Measurement concept match rating (6/7): A single rating process was adopted here as the right to drinking water, sanitation and safety from harmful exposures are included in the right to health and the policies for primary health care. For this reason the <i>measurement concept – indicator</i> match rating was considered moderate to high.</p> <p>2. Technical quality rating (6/8): As Tier I, there is a suggested methodology that has been tested and an international standard and therefore indicators 3.1.2. and 3.2.3. meet criterion 1 (SMART). They are feasible and acceptable given alignment with Sustainable Development Goal (SDG) indicators and the associated process used for international agreement. They would also therefore meet criteria 2,3,7,8. Some evidence on the usefulness of this indicator-concept in being associated with access to determinants for health equity is available but needs further documentation (criterion 6). Continuousness of indicator (criteria 5) is fulfilled given the “coverage” nature of this indicator. Regular availability of data would be fulfilled as part of the SDGs (criterion 4). An overall technical rating of 8/8 was given.</p> <p>There are other considerations: there may be a hierarchy in the indicator concepts and their alignment with the measurement concept. If so, water may be prioritized, or a combined index could be created from individual level data (percentage of population with coverage in 1,2 and 3). This indicator has been tested previously and would require a little data burden. One advantage would be to increase relevance in countries with high water provision rates as</p>
	<p>3.1.3.[SDG 6.2.1] Percentage of population using safely managed sanitation services including a hand washing facility with soap and water</p> <p><i>[Regarding inequities, as with the previous indicator of 3.1.1. parity indices by rural/urban and lowes/highest wealth quintile could be constructed based on available data.]</i></p>	SDG Tier I	

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	3.1.4. [SDG 6.3.1] Percentage of wastewater safely treated	SDG Tier III	<p>sanitation often lags behind water provision.</p> <p>1.Measurement concept match rating (5/7): There is a link between the responsibility of public and private companies to maintain a safe and healthy environment and the health system actions for prevention and health promotion in light of Alma Ata and the right to health. In particular, unsafe water is inequitably distributed resulted in deteriorated environments for more disadvantaged groups. For this reason the <i>measurement concept – indicator</i> match rating was considered moderate to high.</p> <p>2.Technical quality: (2/8) Because of technical problems with data collection, this indicator should be excluded for now.</p>
	<p><i>The SDH emphasis in Universal coverage envisaged by the measurement concept relates to pledge 3.2 of Rio Political Declaration. [Strengthen health systems towards the provision of equitable universal coverage and promote access to high quality, promotive, preventive, curative and rehabilitative health services throughout the life-cycle, with particular focus on comprehensive, integrated primary health care.] A key feature of the pledge is the comprehensive nature of health systems – stretching along the care continuum, including primary health prevention and promotion services as described in the primary health care movement of Alma Ata and in the right to health. Another key feature is equity. In view of this combined focus, the best possible combination of indicators to measure this construct would be two parity indices, one related to identify (gender parity) and one related to urban/rural parity for a combined coverage indicator of drinking water and sanitation. The question as to whether these indicators are sufficient to describe the full measurement concept needs some discussion.</i></p>		
3.2 Level of integration of equity into health systems, policies and programs	3.2.1. Country Policy and Institutional Assessment (CPIA) policies for social inclusion/equity for gender equality, equity of public resource use, building human resources, social protection and labor, and policies and institutions for environmental sustainability (average from a 1=low to 6=high)	World Bank [see description *]	<p>1.Measurement concept match rating (2-4/7): The <i>measurement concept – indicator</i> match rating was considered moderate. There is an assumption that the social and public health institutions will move in parallel. There may be some support for this in institutional theory. However, further study of this indicator would be need to assess how this indicator covers the private sector, and associated resource use.</p> <p>. It needs further assessment based on our on criteria and more information on the exact focus and the construction.</p>

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	[The Country Policy and Institutional Assessment (CPIA) rates countries against a set of 16 criteria grouped in four clusters: (a) economic management; (b) structural policies; (c) policies for social inclusion and equity; and (d) public sector management and institutions.]		<p>The element of <i>Equity of Public Resource Use</i> could be particularly interesting: “Criterion assessing the consistency of government spending with the poverty reduction priorities taking into account the extent to which: (a) individuals, groups, or localities that are poor, vulnerable, or have unequal access to services and opportunities are identified; (b) a national development strategy with explicit interventions to assist the groups identified in (a) has been adopted; and (c) the composition and incidence of public expenditures are tracked systematically and their results feedback into subsequent resource allocation decisions. The assessment of the revenue collection dimension takes into account the incidence of major taxes, e.g., whether they are progressive or regressive, and their alignment with the poverty reduction priorities.” A potential problem with this indicator is the inclusion of multiple sectors and being able to extract the health component. When relevant, expenditure and revenue collection trends at the national and sub-national levels should be considered. but may be moderate due to the fact it is existing.</p> <p>2. Technical quality: the indicator covers 95 countries dating back (not for all) to 2005. Further assessment on criteria on needed once it is established how the health sector component can be extracted.</p>
.3 Level of knowledge exchange on equity-oriented policies and programmes	Missing		
	<p>OVERALL ASSESSMENT DOMAIN 3</p> <p>Overall, there is a weakness in the extent of indicators presented to cover reorientation of the health sector. In particular, two out of three measurement concepts do not appear to have feasible indicators with good conceptual matches.</p>		

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	<p>No indicator has yet been found for knowledge exchange on equity-oriented policies and programmes. Consideration may need With regard to the latter concept, perhaps WHO programme budget indicator could be used on a temporary basis. It refers to : <i>[Number of] Country[ies] has implemented at least two WHO-supported activities to integrate gender, equity and human rights in their health policies and programmes]</i> and covers all WHO member states.</p> <p>It may be unacceptable to start monitoring with so few indicators unless they are complemented by other governance indicators which relate to intersectorality to address the social determinants of health equity.</p> <p>Other options are to reconsider basic expenditure indicators (as a percent of GDP (public versus private (for-profit). National health accounts definitions need to be consulted. But some empirical work has linked equity orientation with public health expenditure as a percent of total health expenditure (ref).</p>		