

Circular Built Environment in Africa Workshop 15 October 2020

Dr. Jeremy Gibberd from Gauge South Africa presented highlights from his State of Play of Circular Built Environment in Africa report that will be published in the <https://beyond2020.se/> Conference 2-4 November concluding the following models for circularity in the built environment in Africa

1. Appropriate building regulations and standards: Work with local professionals and officials on regulations and standards to create high quality, adaptable, long-life built environments
2. Circular economy products: Develop local circular built environment products and manufacturing capacity, support through procurement
3. Enhance informal systems: Recognise the value of the informal economy, refine to create inclusive circular systems
4. Hybrid buildings: Combine local materials and skills with new technologies to create high-performance circular buildings
5. Capable neighbourhoods: Use synergies to rapidly and affordably establish sustainable circular systems.

Christina Cheong from GGGI supported Jeremy's viewpoints highlighting Africa's uniqueness of being the least urbanized continent with a growing population

- to build neighbourhoods and settlements right at once to meet local needs
- to apply circularity in design of buildings and cluster of buildings
- to benefit from vernacular architecture and use of local materials since skills for that still exist
- to develop hybrid buildings combining modern technologies suiting local climate
- to exploit the immense opportunity with very young population to train people and create jobs.

Pekka Huovila and Usha Iyer-Raniga from the One Planet Sustainable Buildings and Construction Programme (SBC) explained their work on circularity in the built environment that is not explicitly mentioned in the 2030 Agenda even though many of its targets relate closely with circularity. SBC has conducted a survey to seek feedback from built environment experts on the core indicators for circular built environments (CBE) globally, through ranking the importance of the SDGs and prioritising the indicators corresponding to respective targets. Based on 100 completed survey responses by global experts, the most relevant SDGs to circularity have been identified as

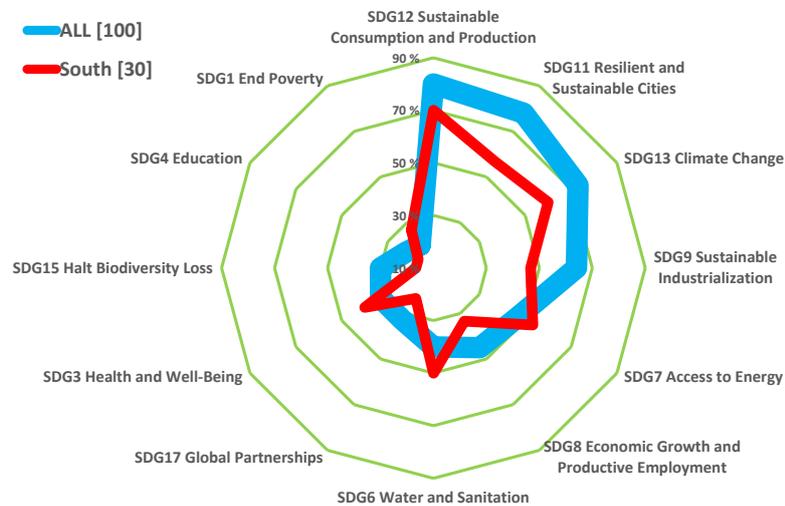
- **SDG12** Ensure sustainable consumption and production patterns
- **SDG11** Make cities and human settlements inclusive, safe, resilient and sustainable
- **SDG13** Take urgent action to combat climate change and its impacts
- **SDG9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- **SDG7** Ensure access to affordable, reliable, sustainable and modern energy for all
- **SDG8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **SDG6** Ensure availability and sustainable management of water and sanitation for all

followed by

- **SDG17** Strengthen the means of implementation and revitalize the global partnership for sustainable development
- **SDG3** Ensure healthy lives and promote well-being for all at all ages
- **SDG15** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

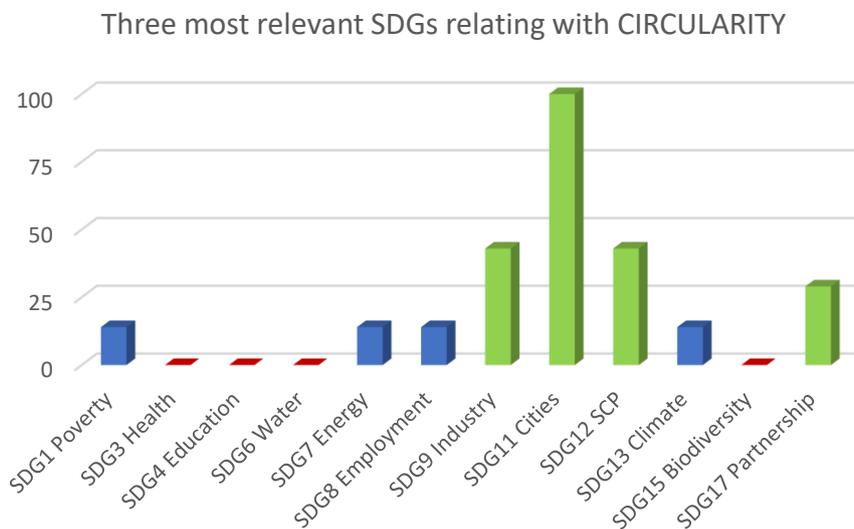
- **SDG4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- **SDG1** End poverty in all its forms everywhere.

30 survey respondents from Asia, Africa and Latin America put more emphasis than the overall sample to **SDG7** Energy, **SDG6** Water, **SDG3** Health and **SDG1** Poverty.



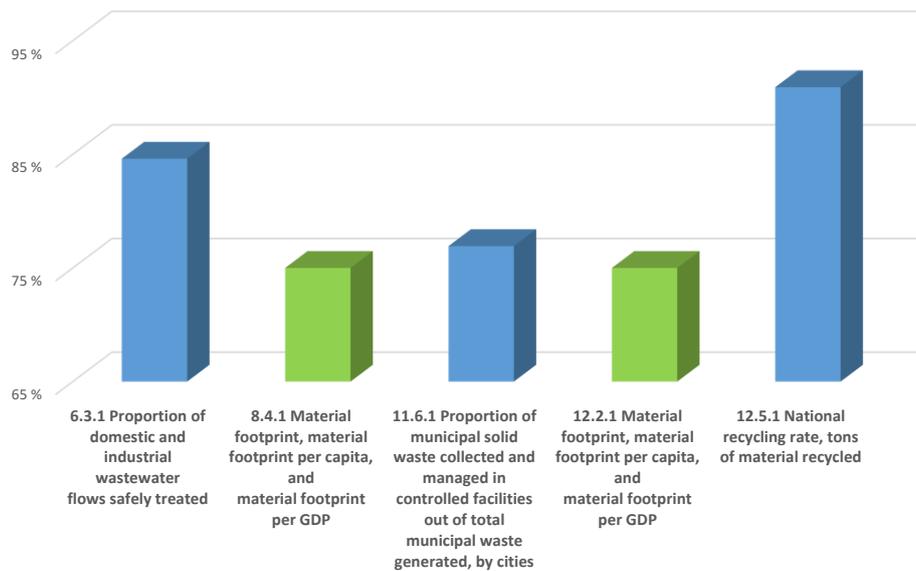
In the poll on SDGs during the workshop highest scores were given to

- **SDG11** Cities
- **SDG9** Industry and **SDG12** Sustainable Consumption and Production
- **SDG17** Partnerships.



In the survey in Africa before the workshop, the following indicators scored highest

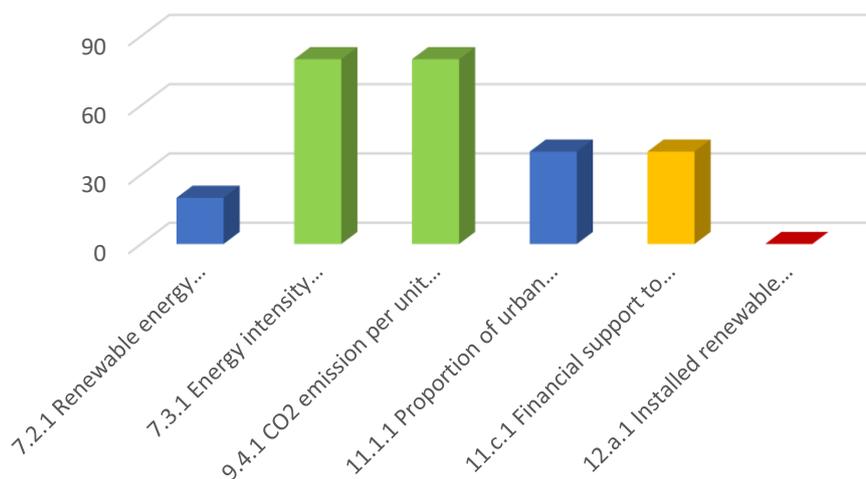
- **12.5.1** National recycling rate, tons of material recycled (**SBC Core Indicator**)
- **6.3.1** Proportion of domestic and industrial wastewater flows safely treated (*SBC secondary indicator*)
- **11.6.1** Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities (*SBC secondary indicator*)
- **8.4.1/12.2.1** Material footprint, material footprint per capita, and material footprint per GDP (**SBC Core Indicator**).



In the poll during the workshop the following second set of indicators scored highest

- **7.3.1 Energy intensity** measured in terms of primary energy and GDP and **9.4.1 CO2 emission** per unit of value added (*SBC secondary indicator*)
- **11.1.1 Proportion of urban population living in slums**, informal settlements or inadequate housing (*SBC secondary indicator*) and **11.c.1** Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials (**SBC Core Indicator**) – a better indicator for it is sought in the annual refinement and comprehensive review process
- **7.2.1 Renewable energy share** in the total final energy consumption (*SBC secondary indicator*).

TOP3 Circularity Indicators



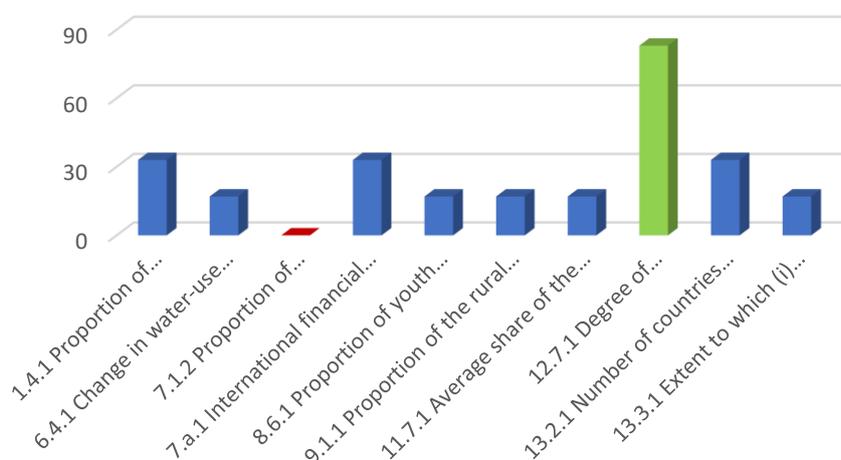
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¹ Indicator **12.a.1** addressing target 12.a ‘Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production’ has been updated from Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies to Installed renewable energy-generating capacity in developing countries (in watts per capita).

In the poll during the workshop the following third set of indicators scored highest

- **12.7.1** Degree of sustainable public procurement policies and action plan (*SBC secondary indicator*)
- **1.4.1** Proportion of population living in households with access to basic services, **7.a.1** International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems and **13.2.1** Number of countries with nationally determined contributions, long-term strategies, national adaptation plans, strategies as reported in adaptation communications and national communications (*SBC secondary indicator*).

TOP3 Circularity Indicators



Some of the issues that were raised during the one-hour workshop included

- important role of procurement (Indicator 12.7.1) that could include circularity criteria already
- proper indicator for local materials (Indicator 11.c.1) is missing at present
- applying circularity in material recycling (Indicator 12.7.1) wastewater treatment (Indicator 6.3.1), municipal solid waste (Indicator 11.6.1) and material footprint (Indicator 8.4.1/12.2.1) is seen important in Africa.

With better time, e.g. the following aspects could have been discussed more in depth

- how training (Indicators 8.6.1 and 13.3.1) could be included or complemented by circularity, as well as NDCs and national adaptation plans (Indicator 13.2.1)
- how circularity relates with access to basic services (Indicator 1.4.1), 2 km of an all-season road (Indicator 9.1.1) or open space for public use (Indicator 11.7.1)?
- if urban population living in slums, informal settlements or inadequate housing footprint (Indicator 11.1.1) measures circularity principles already applied what is the target?

Next steps

- SBC will have workshops based on this feedback in the LAC region 22 October and in Asia 28 October
- SBC will have a WCEFOonline Side Event focussing on North America, Europe and Middle East 20 October
- SBC will launch seven reports from Europe, US, Australia and New Zealand, GCC countries, Asia, Africa and the LAC region in the <https://beyond2020.se/> Conference 2-4 November 2020 complemented by the eighth report on global conclusions.

Our work in the SBC Programme on regional, even local indicators continues towards 2022 and we are happy to learn more about how the set of relevant local indicators can serve to form a baseline, to set objectives and to monitor the trends. In parallel, the One Planet Network explores extension of the duration of the framework to 2030 in a different configuration, building on achievements, lessons learnt and new emerging trends.