

The role of infrastructure in the 2030 Agenda for Sustainable Development

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The SDGs: 17 Goals, 169 Targets and 232 Indicators form an integrated and indivisible framework for achieving sustainable development from a systemic perspective



Importance of taking an integrated approach through SDG interlinkages

- Shifting from a siloed approach to an integrated approach is imperative for achieving the SDGs.
- Understanding the interlinkages between SDG targets is important for taking an integrated approach which help address the following issues:

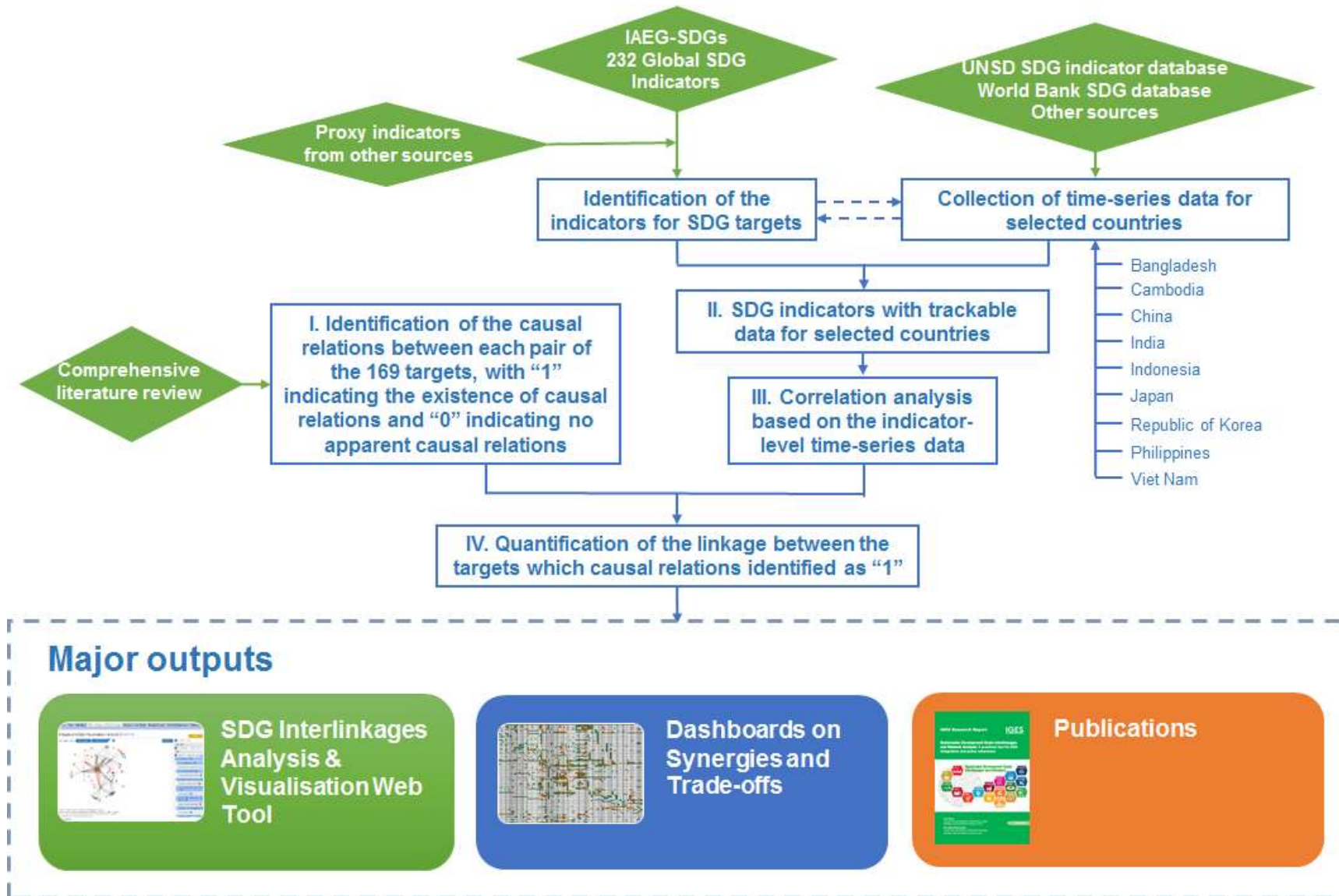
- *How will achieving one target impact on achieving others and how strong are the impacts?*
- *Where are the synergies or trade-offs between SDG targets?*
- *How countries are different in terms of SDG interlinkages and what are the policy implications? Etc.*



A siloed approach cutting off the interlinkages

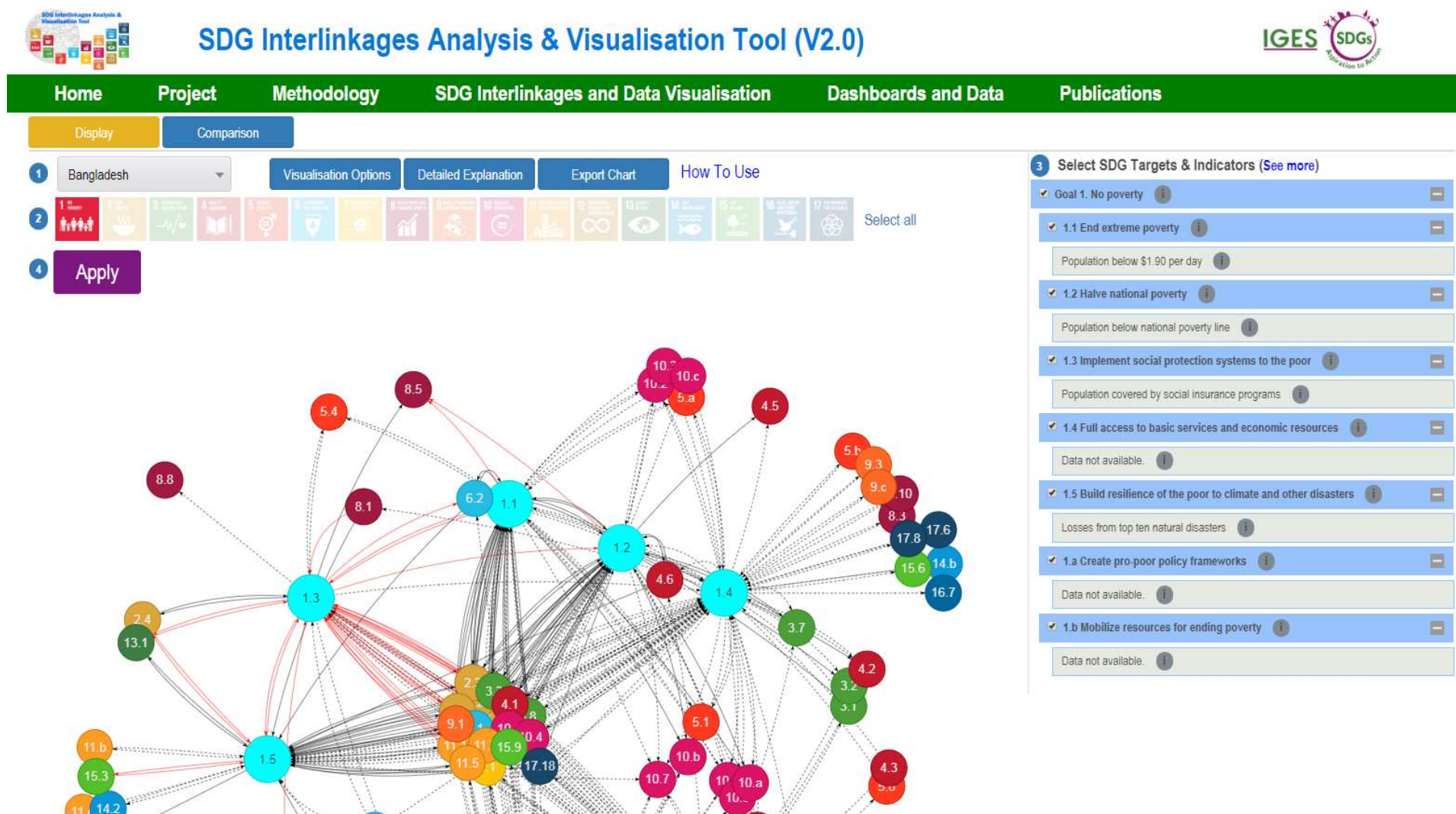
An integrated approach through SDG interlinkages

IGES initiated a project on SDG interlinkages and indicators (FY2015-2018)



IGES SDG Interlinkages Analysis & Visualisation Tool (V2.0)

(<https://sdginterlinkages.iges.jp/visualisationtool.html>)



Source: A snapshot taken from IGES SDG Interlinkages Analysis and Visualisation Web Tool.


The dashboard for Bangladesh indicating potential reinforcing (green) and conflicting (red) interlinkages



Source: Zhou & Moinuddin, 2017. IGES Research Report No. RR1602.


https://sdginterlinkages.iges.jp/files/IGES_Research%20Report_SDG%20Interlinkages_Publication.pdf

Infrastructure and SDGs: Universal access, quality service, resilience, low emissions and resource efficiency

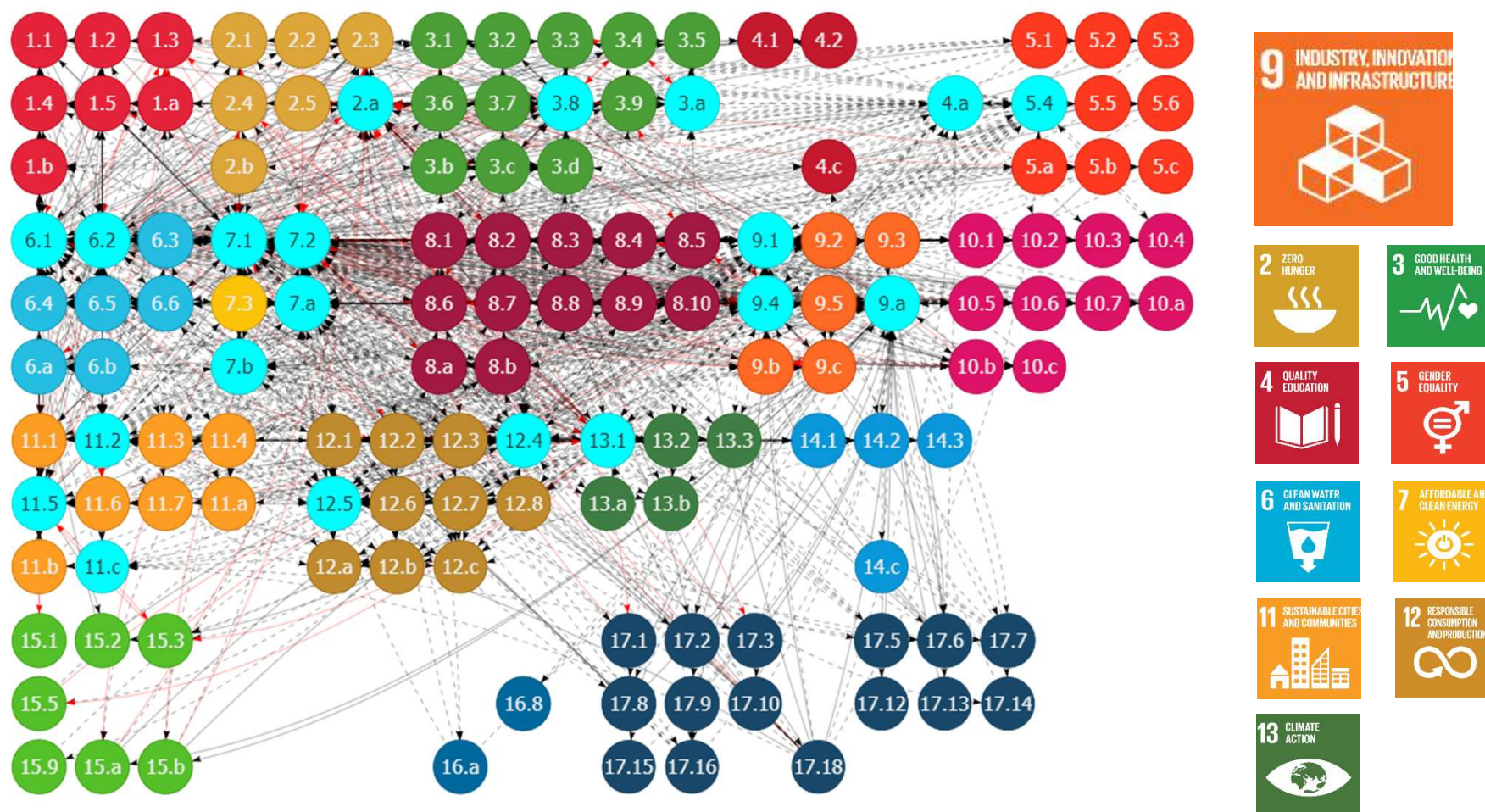
 Infrastructure is a key driving force for poverty reduction, job creation, economic growth and welfare improvement.

Facts about infrastructure

- 2.4 billion people lack access to basic sanitation and about 800 million people lack access to clean water;
- Infrastructure constraints cut businesses' productivity by around 40 percent in some African countries;
- 2.6 billion people in developing countries have no access to constant electricity;
- More than 4 billion people do not have access to the Internet.

 Achieving SDGs requires large investment in infrastructure to ensure universal access, quality services and resilience provided in a low-carbon and resource-efficient way.

Infrastructure and the interlinkages with SDGs



Source: Zhou, et al. 2018. IGES SDG Interlinkages Analysis and Visualisation Tool (V2.0)

Bangladesh: Key infrastructure targets

	Out degree	Weighted out-degree	Closness centrality	Betweenness centrality	Eigen centrality
1	6.2	6.2	6.2	6.2	7.1
2	7.1	3.b	7.1	6.1	6.1
3	6.1	7.1	7.2	7.1	6.2
4	7.2	6.1	6.1	2.a	13.1
5	3.b	3.8	9.4	9.a	7.2
6	3.8	7.2	2.a	3.b	9.a
7	9.4	9.a	3.b	13.1	2.a
8	2.a	11.5	9.a	9.4	9.4
9	9.a	2.a	3.8	7.2	3.8
10	13.1	13.1	13.1	3.8	11.5
11	11.5	9.4	11.5	11.5	3.b


















China: Key infrastructure targets

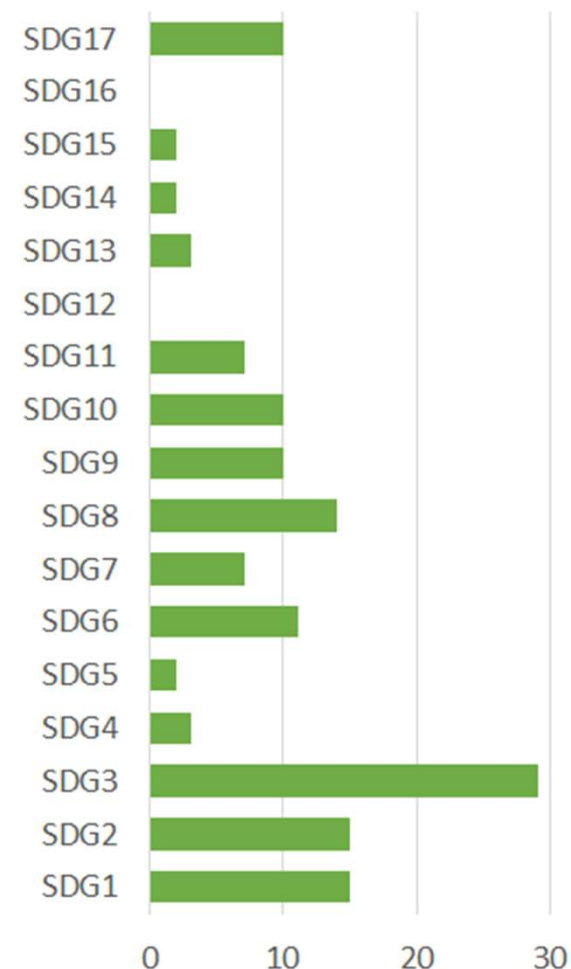
	Out degree	Weighted out-degree	Closness centrality	Betweenness centrality	Eigen centrality
1	6.2	6.2	6.2	6.2	7.1
2	7.1	3.b	7.1	2.a	6.2
3	7.2	7.1	7.2	7.1	9.a
4	3.b	11.2	2.a	9.a	7.2
5	2.a	7.2	9.4	3.b	2.a
6	9.4	3.8	3.b	7.2	9.4
7	9.a	9.4	11.2	11.2	3.8
8	3.8	11.5	9.a	9.4	3.b
9	11.2	2.a	3.8	3.8	11.5
10	11.5	9.a	11.5	11.5	11.2

















Bangladesh: Existing key synergies

	1.1, 1.2, 1.5
	2.1, 2.2, 2.3, 2.4, 2.5
	3.1, 3.2, 3.3, 3.6, 3.7, 3.8, 3.9, 3.a, 3.b, 3.c
	4.1, 4.2
	5.3, 5.6
	6.1, 6.2
	7.1, 7.3
	8.1, 8.2, 8.5, 8.7, 8.a
	9.2, 9.4, 9.b, 9.c
	10.a, 10.b
	11.1, 11.5
	13.1
	14.6
	15.2
	17.2, 17.6, 17.8, 17.9, 17.11, 17.12, 17.13

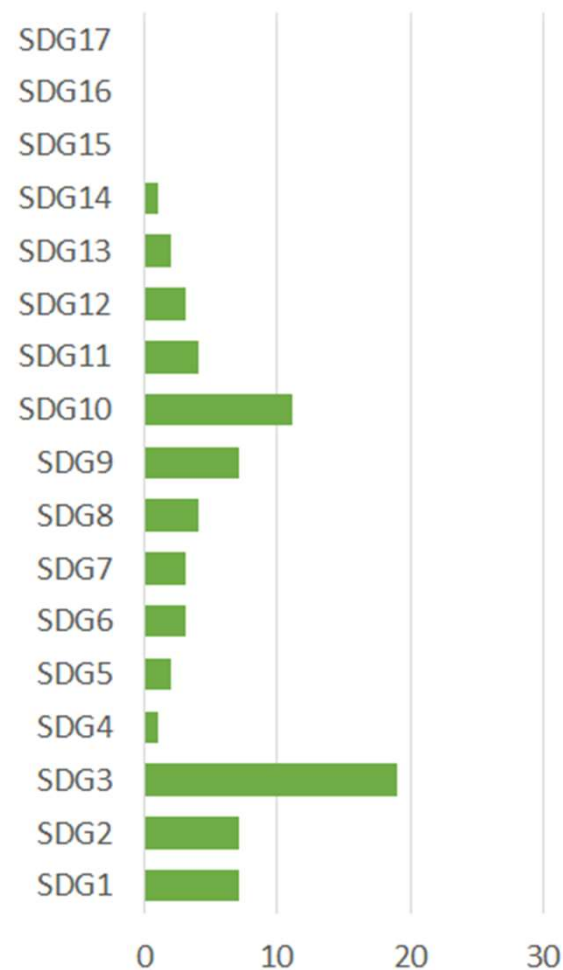
Strong positive linkages
















China: Existing key synergies

	1.1, 1.5
	2.1, 2.2, 2.3, 2.4
	3.1, 3.2, 3.3, 3.4, 3.6, 3.8, 3.9. 3.a, 3.c
	4.2
	5.b
	6.2, 6.4
	7.2, 7.3
	8.1, 8.4, 8.a
	9.2, 9.5, 9.b, 9.c
	10.1, 10.a, 10.b
	11.1
	12.2, 12.a
	13.1
	14.5

Strong positive linkages















Bangladesh: Existing key trade-offs

	1.3, 1.5
	2.1, 2.3, 2.4
	3.9
	6.1, 6.2
	7.1, 7.2
	8.1, 8.2, 8.5, 8.6, 8.7, 8.a
	9.2, 9.4, 9.b, 9.c
	10.a, 10.b
	11.6
	13.1
	14.4
	15.1, 15.3, 15.5
	17.3

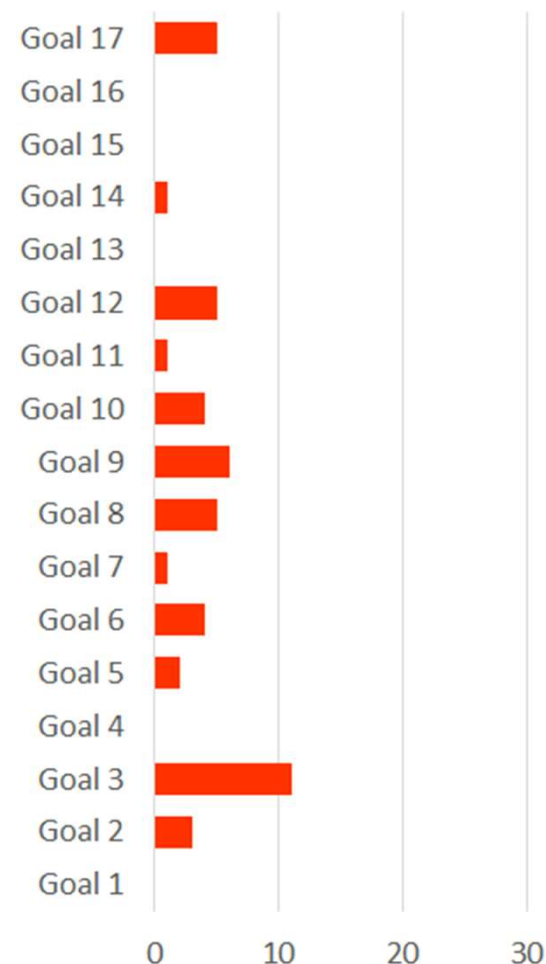
Strong negative linkages



China: Existing key trade-offs

	2.1, 2.2, 2.3
	3.1, 3.2, 3.3 3.4, 3.6, 3.8, 3.9, 3.b 3.c
	5.6
	6.2, 6.4, 6.a
	7.1
	8.1, 8.2, 8.4, 8.a
	9.2, 9.5, 9.b, 9.c
	10.1, 10.a, 10.b
	11.6
	12.2, 12.a
	14.6
	17.6, 17.8, 17.9, 17.11, 17.12

Strong negative linkages



Applications of the SDG interlinkages tool for SDG integration at different stages of the policy cycle



Thank you!

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Zhou, X., Moinuddin, M., 2017. Sustainable Development Goals Interlinkages and Network Analysis: A practical tool for SDG integration and policy coherence. IGES Research Report. Hayama: IGES. Available at: https://sdginterlinkages.iges.jp/files/IGES_Research%20Report_SDG%20Interlinkages_Publication.pdf.

Zhou, X., Moinuddin, M., Li, Y., 2017. SDG Interlinkages and Data Visualisation Web Tool. Hayama: IGES. Available at: <https://sdginterlinkages.iges.jp/visualisationtool.html>.

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