

Prioritisation of SDGs in national development planning using IGES SDG Interlinkages Tool

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Importance of taking an integrated approach for SDGs planning and implementation through an interlinkage perspective

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



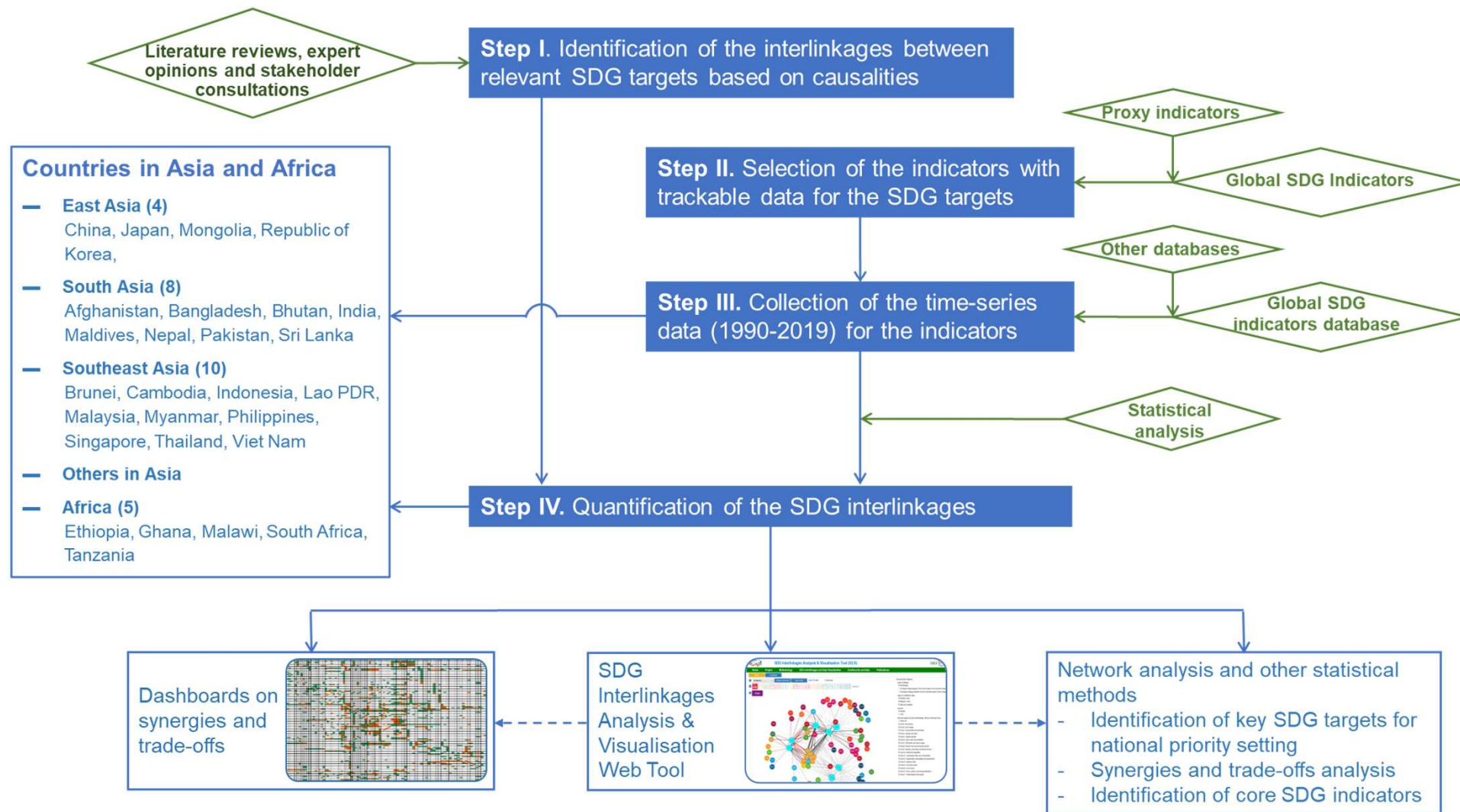
A siloed approach cutting off the interlinkages



An integrated approach through SDG interlinkages

- *How will achieving one target impact on achieving others and how strong are the impacts?*
- *Where are the synergies or trade-offs between the SDG targets?*
- *How countries are different in terms of SDG interlinkages?*
- *What are the policy implications for priority setting and institutional and financial arrangement, etc.*

IGES developed a methodology on SDG interlinkages analysis and visualisation



Source: Based on <https://sdginterlinkages.iges.jp/methodology.html> (Zhou, et al., 2019)

IGES SDG Interlinkages Analysis & Visualisation Tool (V3.0)

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



SDG Interlinkages Analysis & Visualisation Tool (V3.0)



Home Project Methodology SDG Interlinkages and Data Visualisation Dashboards and Data Publications

1 Ethiopia Detailed Explanation Export Chart Edit mode *i*

2 Select all

3 Apply

How To Use **Visualisation Options**

Types of linkage

- All linkages
- Out-degree linkages (directed links pointing from the selected target to other targets)
- In-degree linkages (directed links pointing from other targets to the selected target)

Positive/Negative linkages

- Positive linkages (synergies)
- Negative linkages (trade-offs)
- Data not available

Layouts

- Default
- Grid

Line thickness levels for the strength of the linkages

2

Selected targets and their interlinkages with the following goals

- Select all
- Goal 1. No poverty
- Goal 2. Zero hunger
- Goal 3. Good health and well-being
- Goal 4. Quality education
- Goal 5. Gender equality
- Goal 6. Clean water and sanitation
- Goal 7. Affordable and clean energy
- Goal 8. Decent work and economic growth

Source: A screenshot taken from the SDG Interlinkages Analysis and Visualisation Web Tool (Zhou, et al., 2019)

An application of the SDG Interlinkages Tool to support prioritisation of SDGs in national development planning in Ethiopia

🌐 Growth and Transformation Plan II, GTPII, focuses on creating good conditions for macroeconomic stability, promoting fast economic growth, infrastructure development and human resources and technology enhancement, and building good governance;

🌐 The priority areas of the GTP II have been well integrated with the SDGs with the policy matrix linking SDGs with relevant policy objectives of the priority areas and SDG indicators or national proxy indicators to monitoring the progress in achieving SDGs.



Source: Compiled by the authors based on the Policy Matrix (National Planning Commission, 2016a) and the Main Text (National Planning Commission, 2016b) of GTP II.

A network analysis based on the SDG interlinkages for the identification of key targets by ranking the centralities

Rank	Target	Degree	Outdegree	Weighted degree	Weighted outdegree	Closness	Betweenness	Eigenvector	Average rank
1	9.a	94	50	78.79	42.65	0.73	216.16	0.65	5.14
2	13.1	90	44	75.37	37.94	0.68	113.86	0.77	5.86
3	12.2	88	39	78.34	35.57	0.66	92.42	0.83	7.14
4	8.1	92	43	67.74	26.90	0.69	301.45	0.79	8.43
5	2.3	95	36	76.19	29.65	0.64	119.16	0.96	9.57
6	8.4	85	39	75.02	34.84	0.65	76.05	0.78	10.00
7	11.2	88	46	55.75	29.94	0.70	101.05	0.69	11.29
8	11.1	73	39	66.33	35.76	0.66	84.96	0.59	12.57
9	15.2	75	34	66.76	31.30	0.64	68.32	0.67	15.14
10	15.5	75	34	63.86	30.02	0.64	65.01	0.67	17.43
11	15.1	73	33	65.22	31.16	0.63	55.99	0.67	18.43
12	17.9	109	79	72.23	52.53	1.00	324.63	0.33	8.29
13	16.6	81	65	66.02	54.10	0.85	108.00	0.23	12.71
14	5.5	60	40	53.79	36.38	0.67	99.68	0.31	16.00
15	1.5	70	35	57.66	29.80	0.63	46.11	0.62	20.00
16	15.3	68	34	58.44	30.46	0.64	35.84	0.60	21.00
17	7.2	66	33	57.05	28.40	0.62	57.37	0.61	22.43
18	11.5	68	34	56.13	28.85	0.63	35.54	0.60	24.00
19	8.5	74	27	66.96	25.21	0.59	149.05	0.81	19.14
20	1.2	85	26	77.49	24.53	0.58	120.64	1.00	19.29
21	7.1	67	32	58.61	28.54	0.62	50.65	0.68	21.86
22	8.2	80	33	37.57	15.23	0.63	114.40	0.76	26.71
23	10.b	59	40	49.62	33.99	0.67	76.45	0.21	19.86
24	17.17	62	50	44.53	36.85	0.73	47.69	0.18	22.14
25	1.1	84	25	76.22	23.68	0.57	112.17	1.00	22.29
26	2.4	80	27	68.45	23.70	0.59	51.29	0.89	22.86
27	16.8	52	36	45.92	30.81	0.65	63.77	0.23	24.14
28	17.13	57	39	43.32	30.80	0.66	60.39	0.20	24.29
29	6.1	70	28	63.89	26.52	0.59	43.01	0.81	24.43
30	9.2	66	30	52.67	24.42	0.60	67.33	0.56	26.00

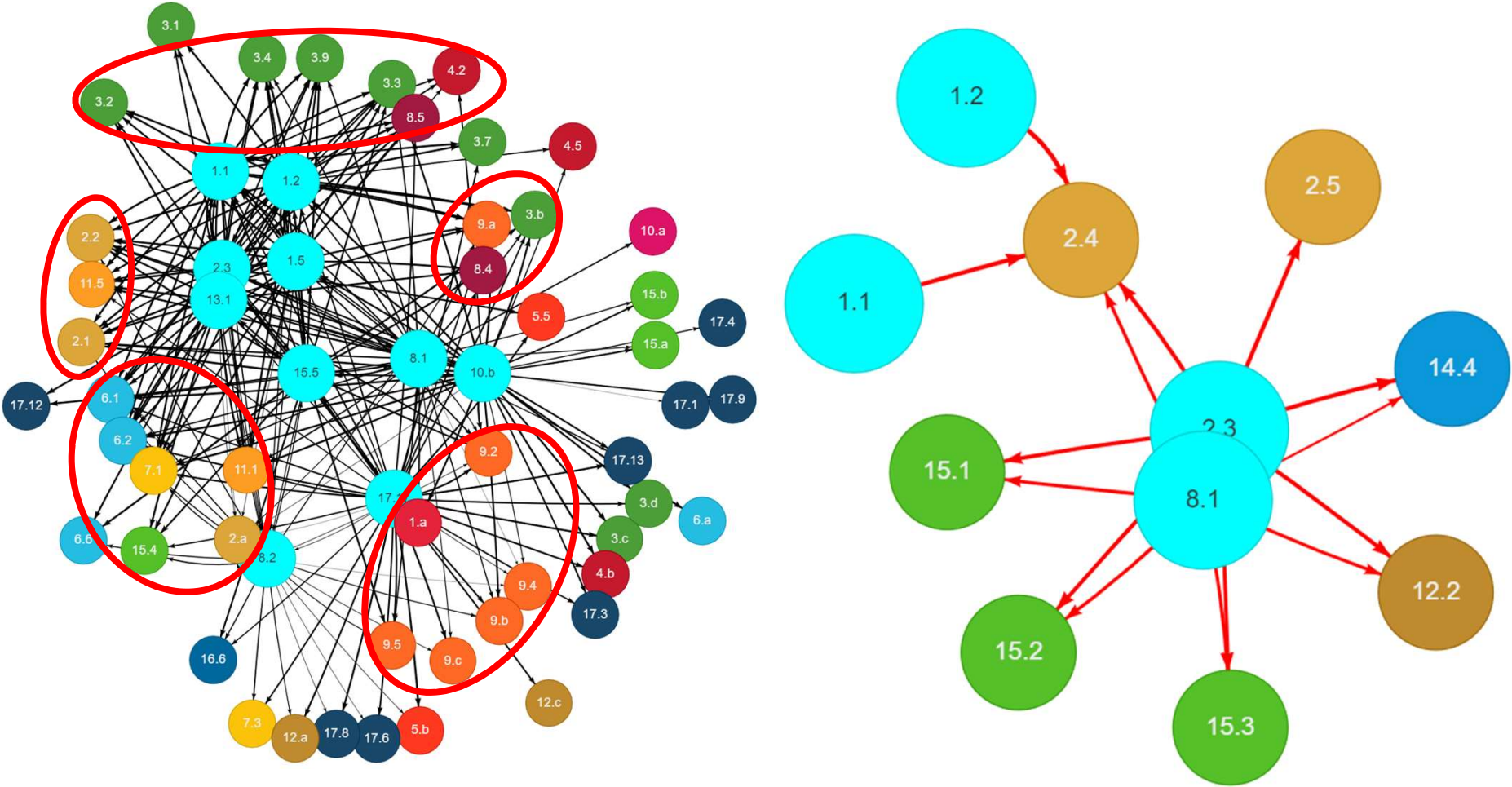
Source: Calculated based on the data of the quantified SDG interlinkages for Ethiopia provided by the SDG Interlinkages Tool (Zhou, et al., 2019) by using Cytoscape, a software for network analysis and visualisation.

Comparison of 30 key targets with the national priority strategies of GTP II

GTP II policy priorities	Common priority targets (25)	Priority targets identified in GTP II (67)	Priority targets identified through network analysis (5)
Macroeconomic plan	1.1, 1.2, 1.5, 2.3, 8.1, 8.5, 9.2, 17.13	1.3, 8.3, 8.6, 9.3, 10.1, 10.4, 17.1 (68), 17.2, 17.3 (66), 17.5, 17.11 (57)	10.b
Agriculture development and rural transformation	1.1, 1.2, 1.5, 2.3, 2.4, 8.1, 8.2, 12.2, 13.1, 15.1, 15.2, 15.3, 15.5	1.3, 1.4, 2.1 (48), 2.2 (46), 2.5 (60), 2.a (39), 6.5, 6.6 (45), 10.2, 13.2, 15.6, 15.8, 15.9, 17.5, 17.11 (57)	10.b, 17.17
Industrial development	1.1, 8.1, 8.2, 8.5, 9.2	6.3, 9.1, 9.4 (38), 9.5 (50), 12.4, 12.5, 12.6, 17.5, 17.11 (57)	9.a, 17.17
Economic infrastructure development	1.1, 2.4, 6.1, 7.1, 7.2, 8.1, 8.2, 8.4, 8.5, 11.1, 11.2, 11.5, 12.2, 13.1, 15.5	2.1 (48), 2.a (39), 3.6 (74), 3.9 (49), 5.1, 6.2 (40), 6.3, 6.4, 6.5, 6.6 (45), 7.3 (44), 8.3, 8.9, 9.1, 9.3, 11.3, 11.4, 11.6, 12.5, 13.2, 15.7, 16.10, 17.3 (66), 17.8 (41), 17.11 (57)	9.a, 10.b, 17.17
Human development and technology capacity building	8.2	2.2 (46), 3.1 (73), 3.2 (69), 3.4 (47), 3.5 (76), 3.8, 3.9 (49), 4.1, 4.3, 5.1, 17.6 (53)	10.b
Good governance	5.5, 16.6	3.6 (74), 5.1, 5.2, 5.3, 10.2, 16.1 (77), 16.3, 16.5	16.8, 17.9, 17.17
Cross-cutting issues	5.5, 8.5, 15.2	1.4, 3.2 (69), 3.9 (49), 4.2 (78), 4.4, 4.5 (36), 4.6, 5.1, 5.3, 8.3, 8.6, 8.7, 8.8, 8.10 (75), 10.2, 10.4, 10.7, 11.6, 12.8, 13.3, 16.2, 16.7, 16.9, 17.3 (66)	

Note: 45 targets in red indicate that there is no trackable data for the relevant indicators. Numbers in bracket for Column 3 indicate the ranking results of respective targets.

Synergies and trade-offs through outward linkages of key targets aiming for achieving agriculture and rural development under GTPII







Source: SDG Interlinkages Analysis & Visualisation Tool (V3.0) (Zhou et al., 2019)

Tailored recommendations for SDG prioritisation based on synergies and trade-offs of key targets for achieving GTP II

Major development areas of GTP II	Targets on track and implications			Targets on track and implications	
	Key targets	Major positive synergies	Major trade-offs	Key targets	Negative synergies
Macroeconomic plan	1.1, 1.2, 1.5, 2.3, 8.1, 8.5, 9.2, 10.b, 17.13	1.a, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.9, 3.b, 4.5, 5.5, 6.1, 6.2, 7.1, 8.2, 8.a, 9.a, 11.1, 11.5, 13.1	2.4, 2.5, 12.2, 14.4, 15.1, 15.2, 15.3	-	-
Agriculture development and rural transformation	1.1, 1.2, 1.5, 2.3, 8.1, 8.2, 10.b, 13.1, 15.5, 17.17	1.a, 2.1, 2.2, 2.a, 3.2, 3.3, 3.4, 3.9, 3.b, 4.2, 6.1, 6.2, 7.1, 8.4, 8.5, 9.2, 9.4, 9.5, 9.a, 9.b, 9.c, 11.1, 11.5, 15.4	2.4, 2.5, 12.2, 14.4, 15.1, 15.2, 15.3	2.4, 12.2, 15.1, 15.2, 15.3	2.5, 2.c, 11.2, 10.6, 14.4, 16.8
Industrial development	1.1, 8.1, 8.2, 8.5, 9.2, 9.a, 17.17	1.2, 1.5, 2.2, 2.3, 3.b, 6.1, 7.1, 9.5, 9.b, 9.c, 11.1, 13.1, 17.6	2.4, 2.5, 12.2, 14.4, 15.1, 15.2, 15.3	-	-
Economic infrastructure development	1.1, 6.1, 7.1, 7.2, 8.1, 8.2, 8.4, 8.5, 9.a, 10.b, 11.1, 11.5, 13.1, 15.5, 17.17	1.2, 1.5, 2.1, 2.2, 2.3, 2.a, 3.2, 3.3, 3.4, 3.7, 3.9, 3.b, 3.c, 5.b, 6.2, 6.6, 7.3, 8.a, 9.2, 9.4, 9.5, 9.b, 9.c, 10.a, 12.a, 12.c, 15.4, 17.13, 17.19	2.4, 2.5, 12.2, 14.4, 15.1, 15.2, 15.3	2.4, 11.2, 12.2	2.5, 2.c, 3.6, 10.6, 14.4, 15.1, 15.2, 15.3, 16.8, 17.11
Good governance	5.5, 16.6, 17.9, 17.17	1.1, 1.2, 2.1, 2.2, 2.a, 3.2, 3.7, 3.9, 3.b, 3.c, 3.d, 4.2, 4.5, 4.b, 6.1, 6.a, 7.1, 7.2, 7.3, 8.1, 8.2, 8.5, 9.5, 9.a, 11.1, 13.1, 15.5, 16.1, 17.8	-	16.8	2.5, 3.5, 10.6, 12.2, 15.2, 17.11

Applications of IGES SDG Interlinkages Tool

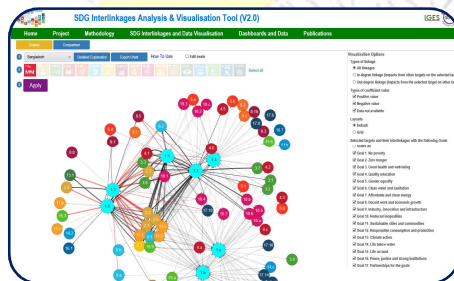
-  UN ESCAP SDG Helpdesk Toolboxes
https://sdghelpdesk.unescap.org/toolboxes?field_sdgs_target_id=All&title=&page=2 .
-  United Nations Interagency Task Team on STI for the SDGs (IATT), STI Roadmaps related information <https://sustainabledevelopment.un.org/TFM>
-  A case study for Bangladesh on integrated priority setting and institutional arrangement supporting Bangladesh's PMO in SDG planning and implementation;
-  Capacity building workshop in Indonesia and supporting BAPPENAS in the development of the national SDG roadmap, October, 2018;
-  IGES SDG synergies and trade-offs analysis included in the 2019 VNR report of Ghana is presented as a basic template for exploring interlinkages between SDG targets in the UNDESA's VNR Guidebook 2020 Edition (p.25).
-  Projects: UNDESA's project on capacity building on integrated policy making in developing countries, KEI's project on environmental SDGs in Cambodia, SWITCH Asia project on SCP action plan development in Viet Nam, JST-TaSE project on SDG interlinkages at the river-basin level, etc.
-  Applications to thematic issues
 - Synergies of climate change and SDGs
 - Aichi Biodiversity Targets and SDG interlinkages
 - Integration SCP in national development plan
 - SDG core indicators

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>.