

# Alignment of climate actions and SDGs and implications for low-carbon development indicators

**Dr. Xin Zhou**

Research Leader, Strategic and Quantitative Analysis Centre (QAC)  
Institute for Global Environmental Strategies (IGES)

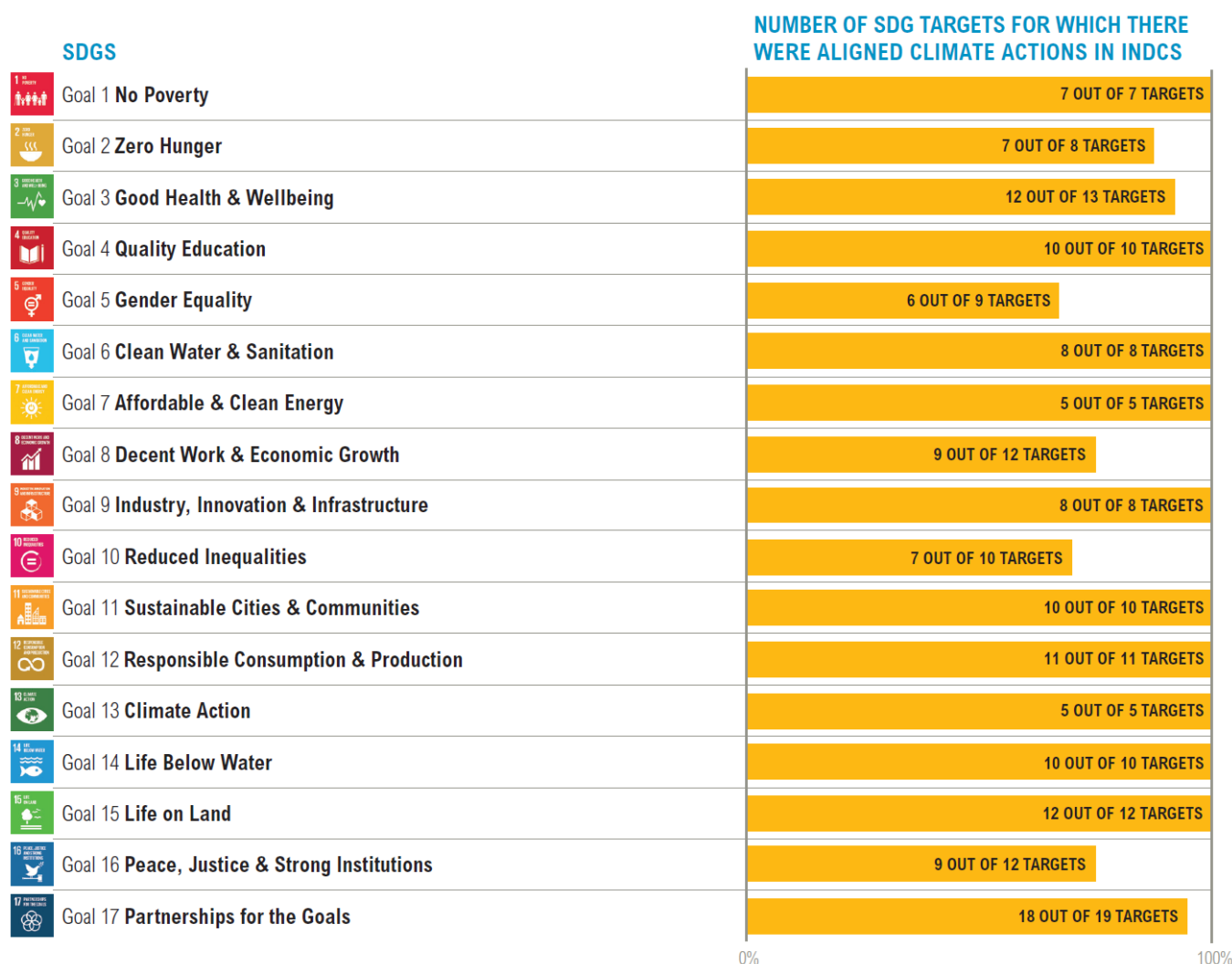
*Japan-China Policy Research Dialogue 2018*  
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# ***The 2030 Agenda for Sustainable Development and the Paris Agreement***

-  The 2030 Agenda with 17 Sustainable Development Goals (SDGs) and 169 targets adopted in September 2015 aims to eradicate poverty, reduce inequalities, protect the environment and accelerate the transition to low-carbon and climate-resilient development pathways.
-  The Paris Agreement adopted in December 2015 at COP 21 aims to limit global temperature increase to below 2°C with the parties setting out their climate action strategies and targets, i.e. the nationally determined contributions (NDCs).
-  Having great potential for co-benefits and mutually supportive implementation, however, the two processes are being operated parallel.
-  The alignment of the two agendas is imperative to reduce overlapping efforts and effectively allocate resources by maximising the synergies and minimising the trade-offs.

# Alignment between NDCs and SDGs



- High-level alignment between NDCs and SDGs
  - Climate-related SDGs: Goal 13, 11 explicit targets and 27 specific targets;
  - Of 92 INDCs, climate actions align with 154 SDG targets.
- Different approaches for agenda setting and implementation indicate the risk of implementation in silos.

Source: WRI Working Paper, 2016.

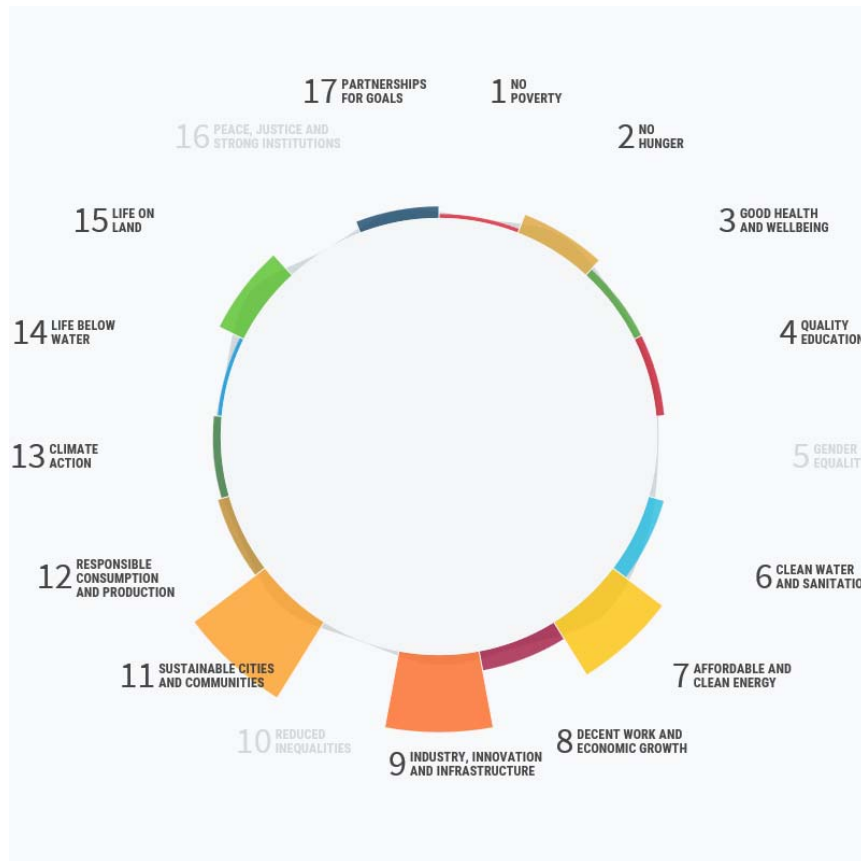
# NDCs and SDGs linkages in China and Japan



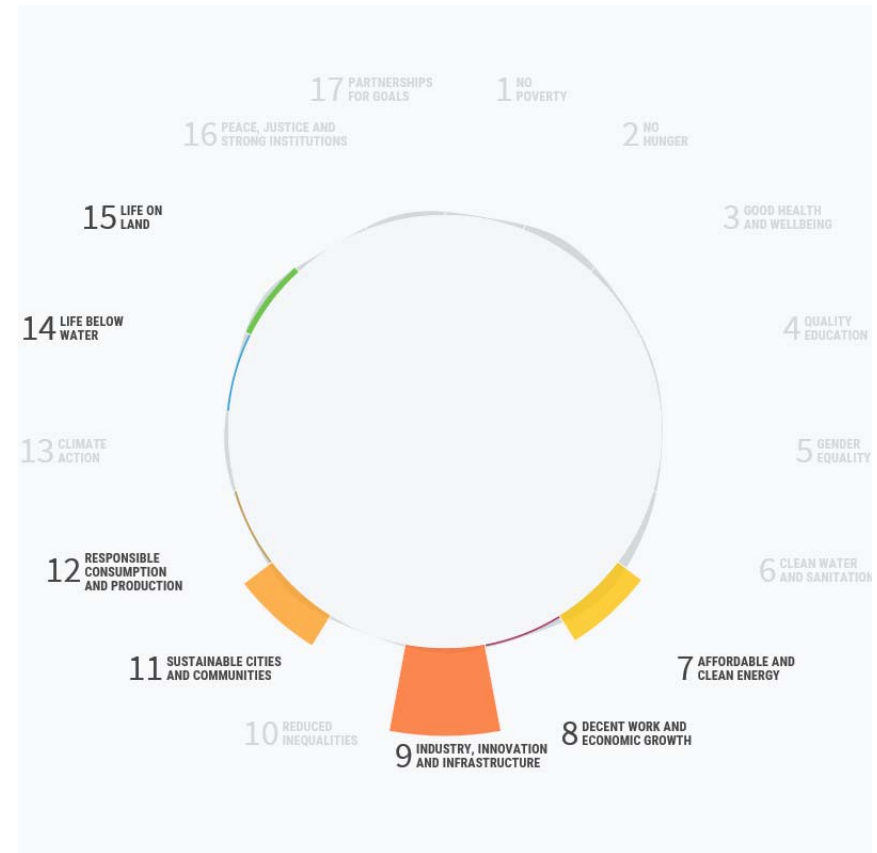
- **CHN:** More linkages with Goals **7, 9, 11, 12** and 17;
- **JPN:** More linkages with Goals **7, 9, 11, 12** and 15.

Source: Compiled based on Climate Watch, WRI.

# NDCs and SDGs linkages in China and Japan



**CHN:** More linkages with Goals **7, 8, 9, 11** and **15**;

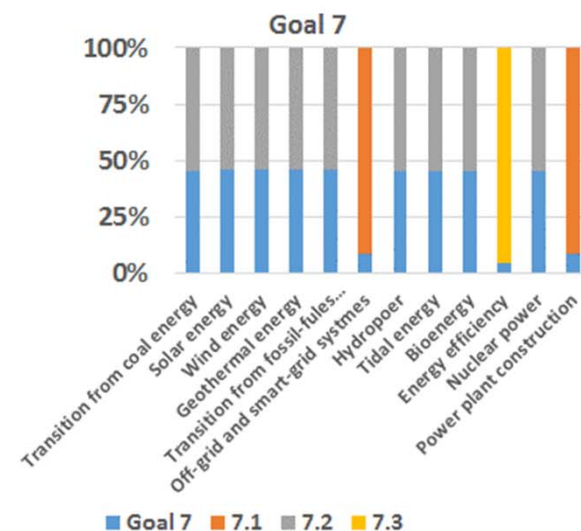
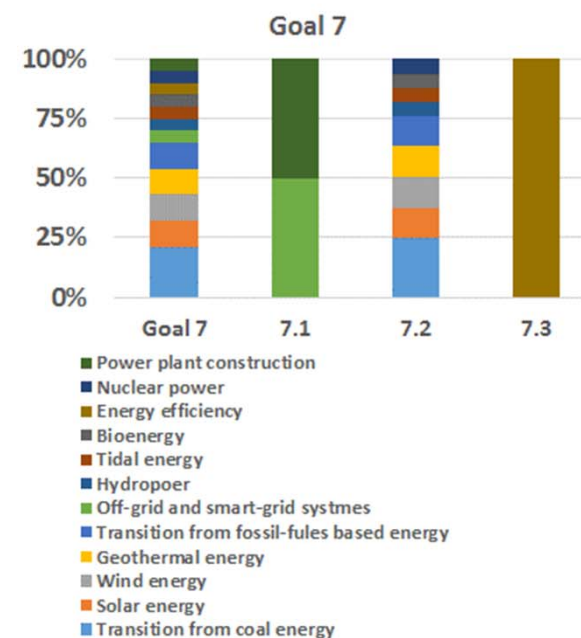
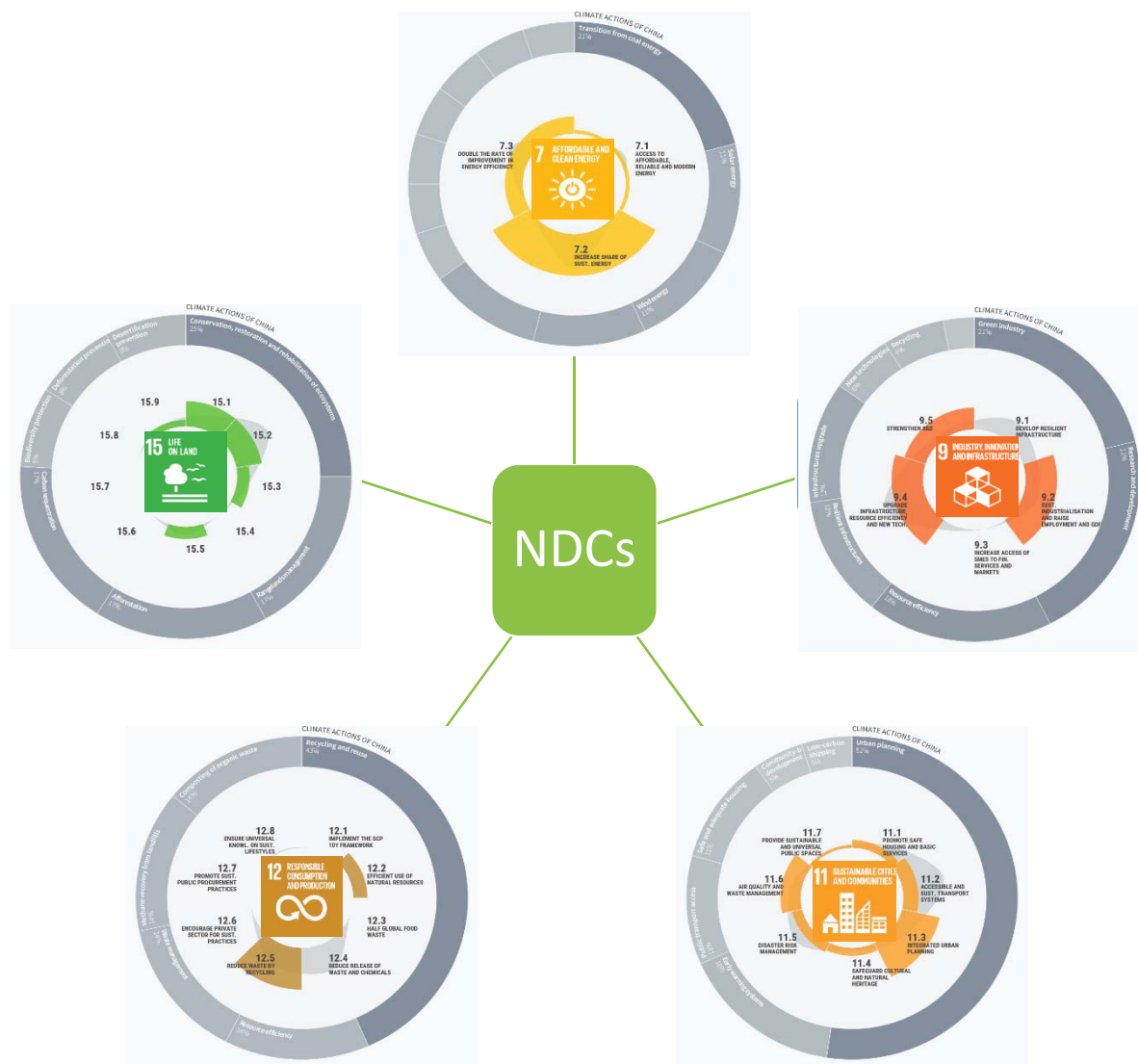


**JPN:** More linkages with Goals **7, 9, 11** and **15**.

Source: NDC-SDG Connections, DIE & SEI

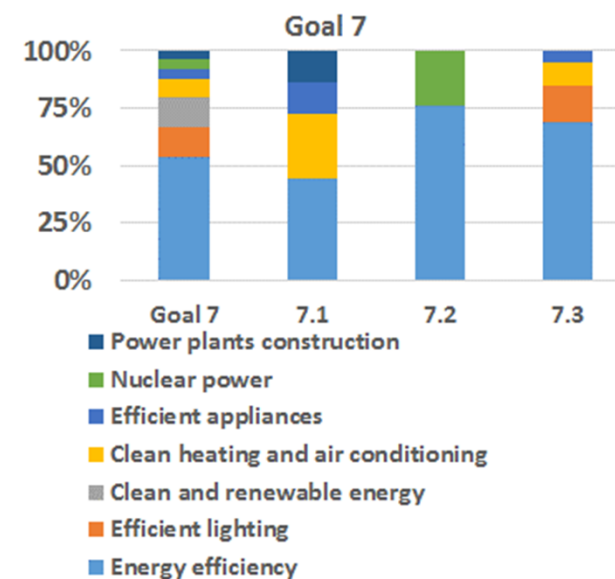
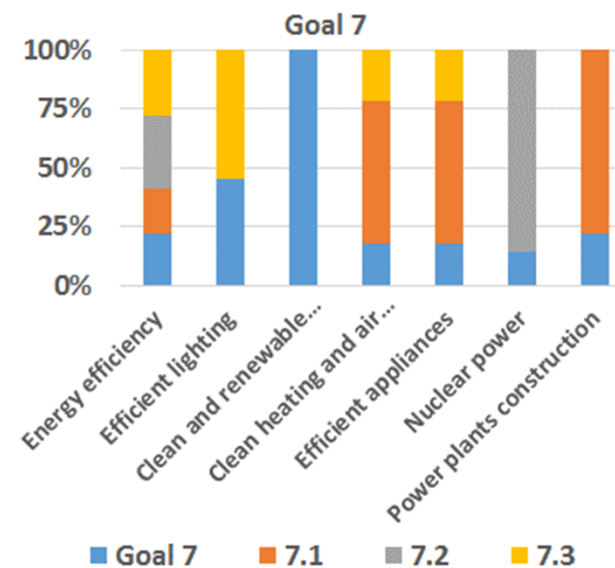
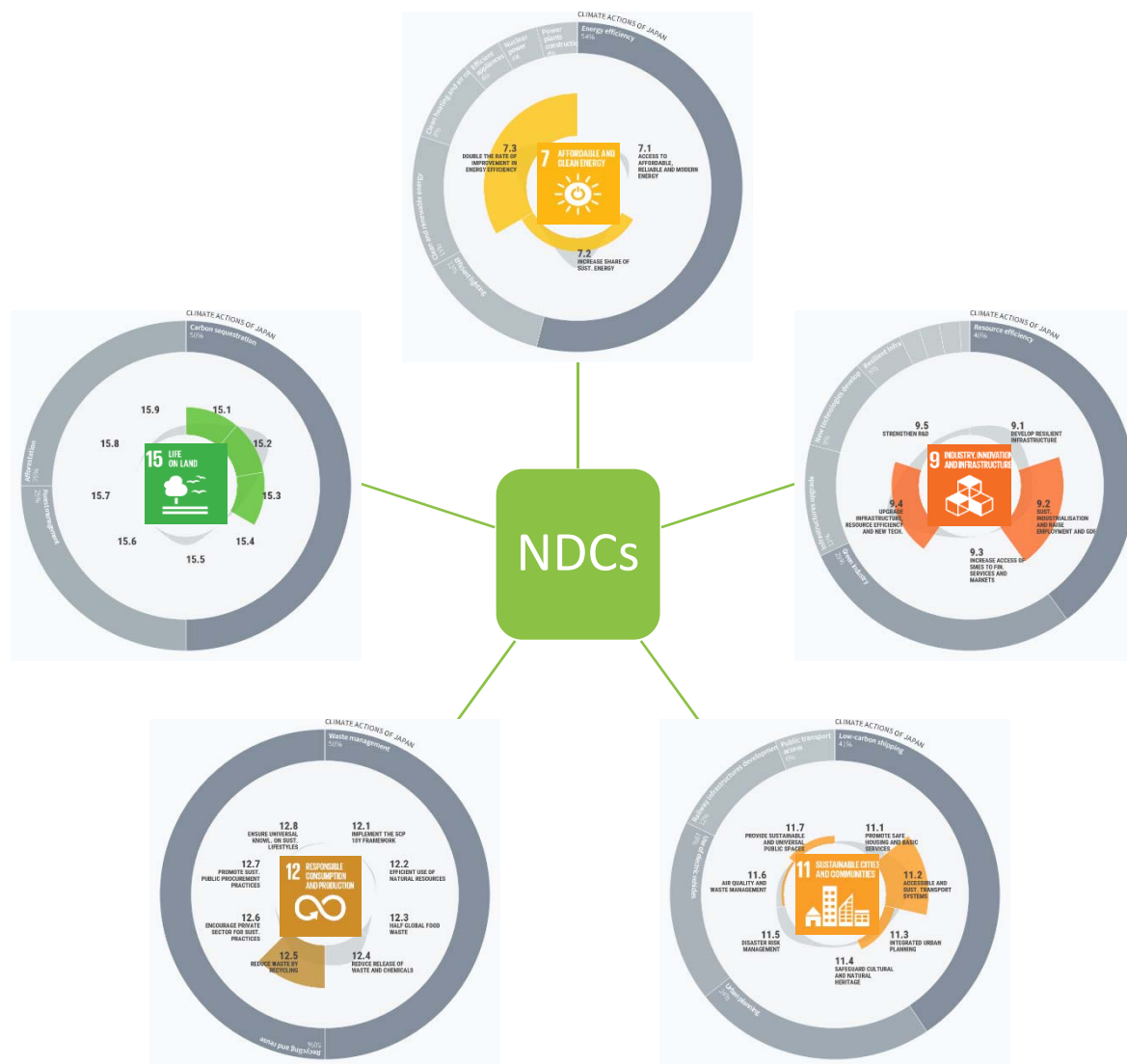


# NDCs and SDGs linkages in China



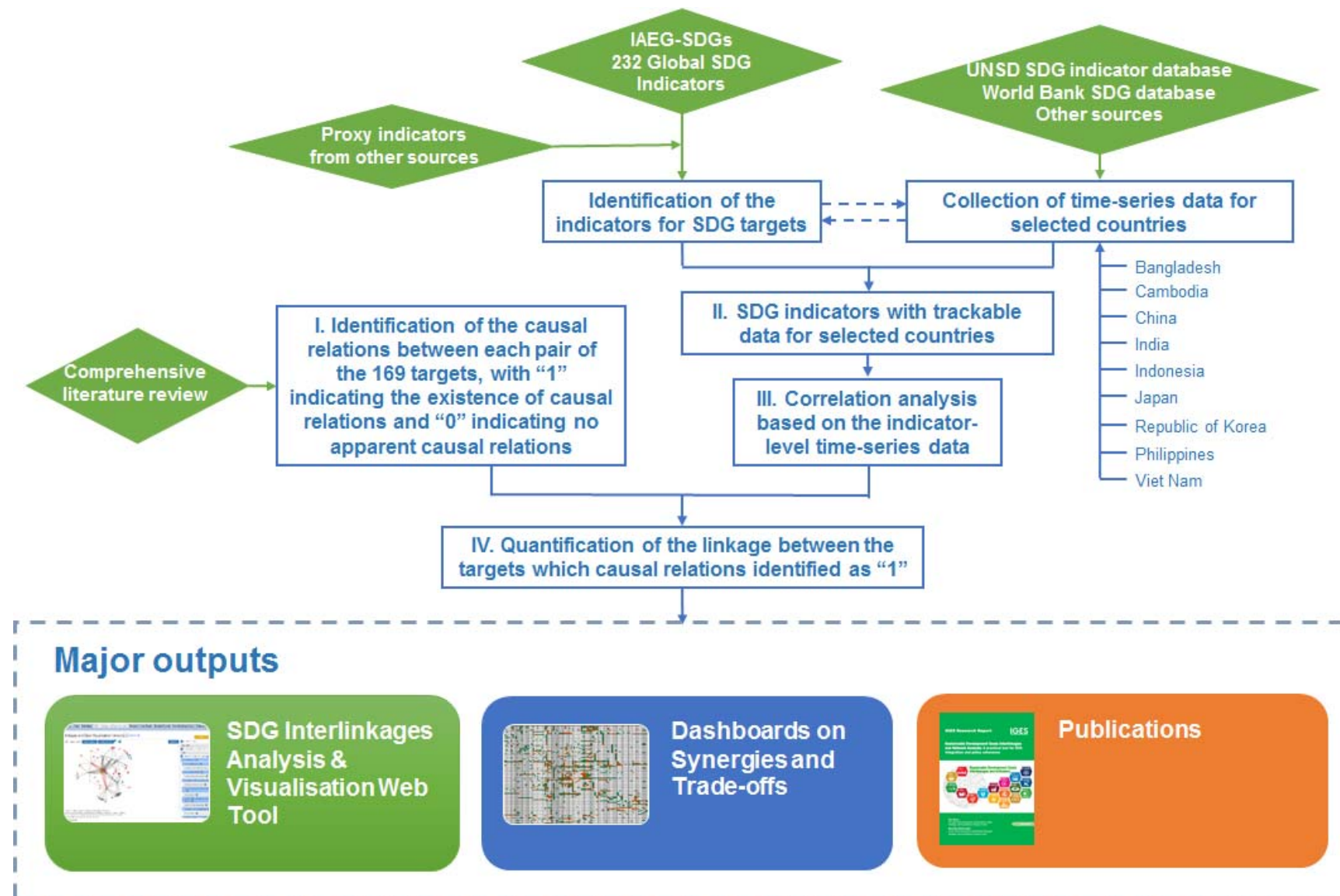
Source: Compiled based on NDC-SDG Connections, DIE & SEI

# NDCs and SDGs linkages in Japan



Source: Compiled based on NDC-SDG Connections, DIE & SEI

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





# Identification of SDG interlinkages based on literature review

Reference no.	Reference code	SDG coverage	Type of interlinkages/goal to goal (G-G), goal to target (G-T), target to goal (T-G) and target to target (T-T)	Source
1	IAEG-SDGs	All	T-T	IAEG-SDGs, 2015. List of Indicator Proposals (11 August 2015). Available at: <a href="https://unstats.un.org/sdgs/files/List%20of%20Indicator%20Proposals%201-8-2015.pdf">https://unstats.un.org/sdgs/files/List%20of%20Indicator%20Proposals%201-8-2015.pdf</a>
2	SDSN-1	All	T-T through shared indicators.	Leadership Council of the Sustainable Development Solutions Network (SDSN), 2015. Indicators and a Monitoring Framework for the Sustainable Development Goals: Launching a data revolution for the SDGs. A report to the Secretary-General of the United Nations. Available at: <a href="http://unsdsn.org/wp-content/uploads/2015/05/FINAL-SDSN-Indicator-Report-WEB.pdf">http://unsdsn.org/wp-content/uploads/2015/05/FINAL-SDSN-Indicator-Report-WEB.pdf</a>
3	SDSN-Shared indicators	All	T-T through shared indicators.	2015. Indicators for the SDGs: Identifying inter-linkages. SDSN Issue Brief. Available at: <a href="http://unsdsn.org/wp-content/uploads/2015/09/150816-Identifying-inter-linkages-SDSN-Briefing-for-IAEG.pdf">http://unsdsn.org/wp-content/uploads/2015/09/150816-Identifying-inter-linkages-SDSN-Briefing-for-IAEG.pdf</a>
4	ESCAP-SDG6	SDG6	T-T	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 2016. Analytical Framework for Integration of Water and Sanitation SDGs and Targets: Using Systems Thinking Approach, Annex I: Full Matrix of Analysis of Direct and Indirect Linkages Between the SDG 6 Targets and the Targets of the Other SDGs. UNESCAP Working Paper. Bangkok: UNESCAP. Available at: <a href="https://sustdev.unescap.org/Files/resource/300add205ca64d4ee4b1c4d1116855ce.pdf">https://sustdev.unescap.org/Files/resource/300add205ca64d4ee4b1c4d1116855ce.pdf</a>
5	WEF-Nexus	SDG2, SDG6 and SDG7.	T-T	Weitz, N., Nilsson, M., Davis, M., 2014. A Nexus Approach to the Post-2015 Agenda: Formulating Integrated Water, Energy and Food SDGs. Available at: <a href="https://www.oecd.org/pcd/Art%20Nexus%20SAIS%20weitz.pdf">https://www.oecd.org/pcd/Art%20Nexus%20SAIS%20weitz.pdf</a>
6	UNECOSOC	All	G-T (for all SDGs except SDG17), G-G (SDG17)	Author(s) and publication date unknown. A Nexus Approach for the SDGs: Interlinkages between the goals and targets. Retrieved from the

## *Identification of SDG interlinkages based on literature review (2)*

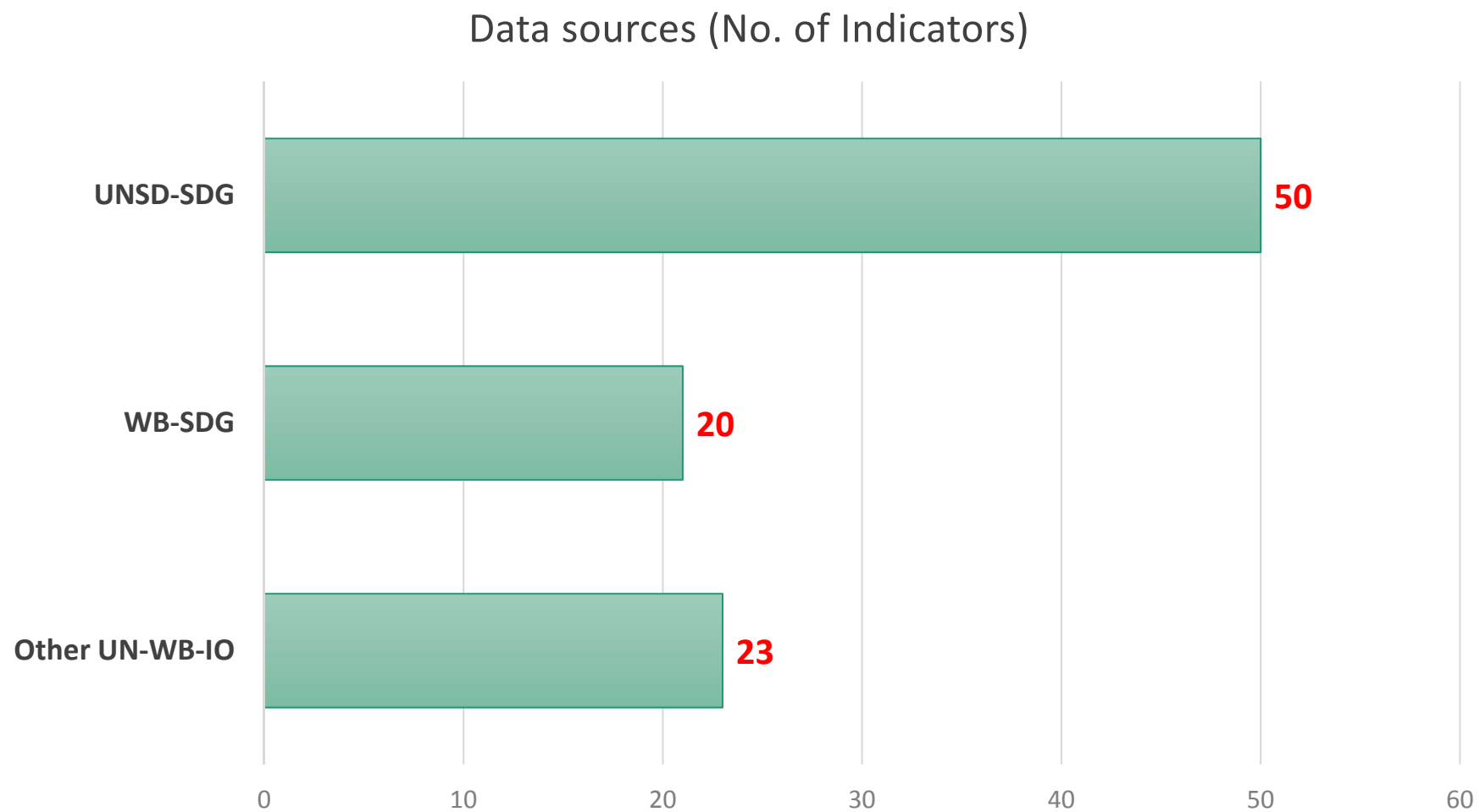
Reference no.	Reference code	SDG coverage	Type of interlinkages/goal to goal (G-G), goal to target (G-T), target to goal (T-G) and target to target (T-T)	Source
				website of the United Nations Economic and Social Council: <a href="https://www.un.org/ecosoc/sites/www.un.org.ecosoc/files/files/en/2016/doc/interlinkages-sdgs.pdf">https://www.un.org/ecosoc/sites/www.un.org.ecosoc/files/files/en/2016/doc/interlinkages-sdgs.pdf</a>
7	UNCTAD-Trade	Trade-related SDGs	T-T (trade-related targets link with each other)	United Nations Conference on Trade and Development (UNCTAD), 2016. Trading into Sustainable Development: Trade, Market Access, and the Sustainable Development Goals. Geneva: United Nations. Available at: <a href="http://unctad.org/en/PublicationsLibrary/ditctab2015d3_en.pdf">http://unctad.org/en/PublicationsLibrary/ditctab2015d3_en.pdf</a>
8	IOM-Migration	Migration-related SDGs	T-T (migration-related targets link with each other)	International Organization for Migration (IOM), publication date not known. 2030 Agenda for Sustainable Development. Available at: <a href="https://unofficeny.iom.int/2030-agenda-sustainable-development">https://unofficeny.iom.int/2030-agenda-sustainable-development</a>
9	Stakeholder Forum_1	All except for SDG17	G-G, T-G, T-T	Cutter, A., Osborn, D., Romano, J., Ullah, F., publication date unknown. Sustainable Development Goals and Integration: Achieving a better balance between the economic, social and environmental dimensions. Available at: <a href="http://www.stakeholderforum.org/fileadmin/files/Balancing%20the%20dimensions%20in%20the%20SDGs%20FINAL.pdf">http://www.stakeholderforum.org/fileadmin/files/Balancing%20the%20dimensions%20in%20the%20SDGs%20FINAL.pdf</a>
10	Stakeholder Forum_SDG12	SDG12	T-T	Coopman, A., Osborn, D., Ullah, F., Auckland, E., Long, G., publication date unknown. See the Whole: Implementing the SDGs in an integrated and coherent way. A Research Pilot by Stakeholder Forum, Biregional and Newcastle University. Available at: <a href="http://www.stakeholderforum.org/fileadmin/files/SeeingTheWhole.ResearchPilotReportOnSDGsImplementation.pdf">http://www.stakeholderforum.org/fileadmin/files/SeeingTheWhole.ResearchPilotReportOnSDGsImplementation.pdf</a>
11	ICSU-2017	SDGs 2, 3, 7, 14	G-G and T-T	ICSU, 2017. A guide to SDG interactions: From science To implementation. Available at: <a href="https://www.icsu.org/cms/2017/05/SDGs-Guide-to-Interactions.pdf">https://www.icsu.org/cms/2017/05/SDGs-Guide-to-Interactions.pdf</a> .

Source: Zhou and Moinuddin, 2017. IGES Research Report.

# ***SDG indicators and data collection***

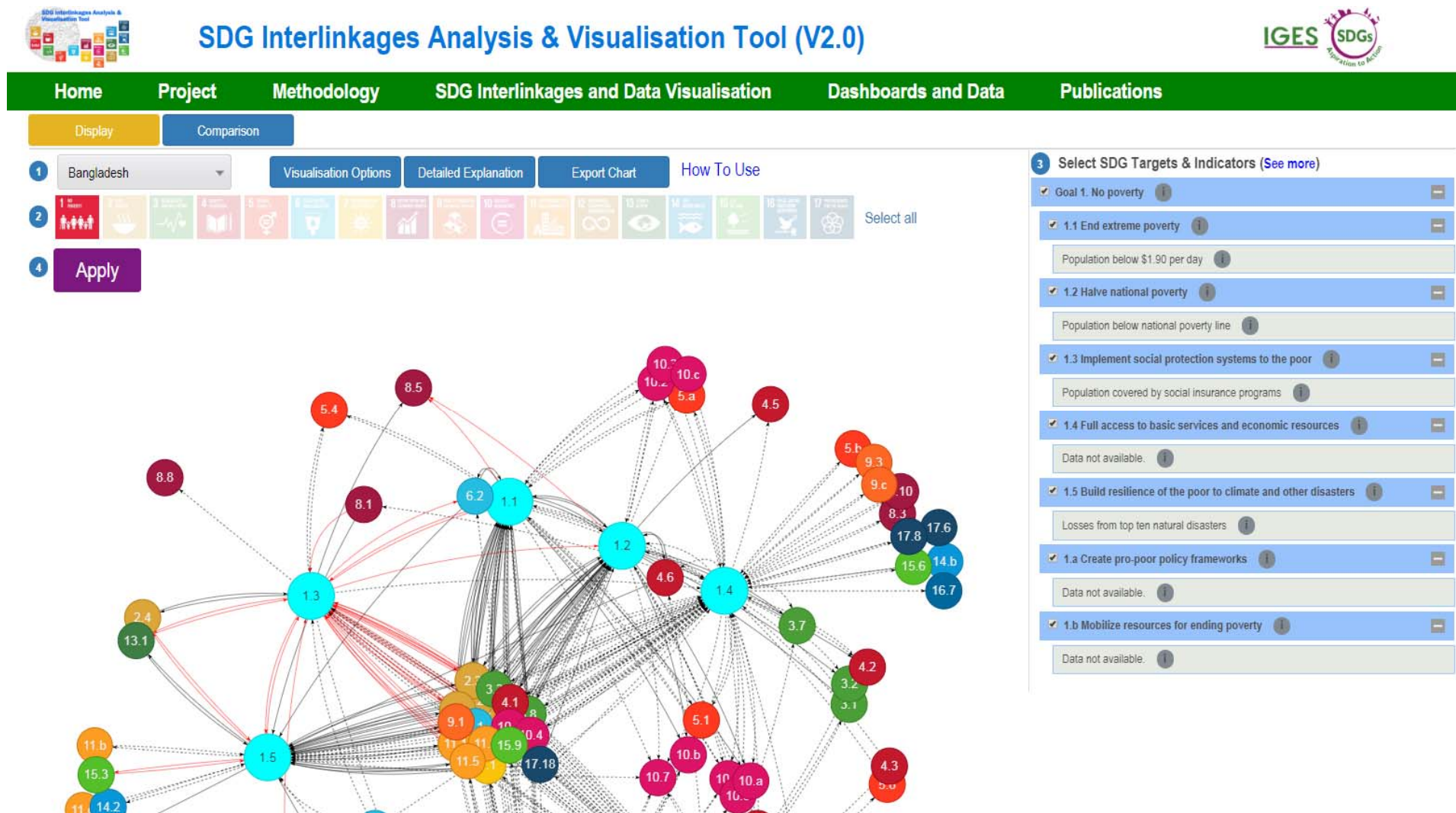
- 🌐 232 indicators of the Global Indicators Framework adopted by the UN General Assembly in July 2017 are used.
- 🌐 Identification of target-level indicators with trackable time-series data is based on the following steps
  - Check major data sources for data availability for the SDG/proxy indicators
    - UNSD SDG indicators database
    - World Bank SDG database
    - Other UN/World Bank databases
    - Other sources
  - Identification of the best representative indicator (only one) for each of the targets

# 93 SDG indicators and data sources



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

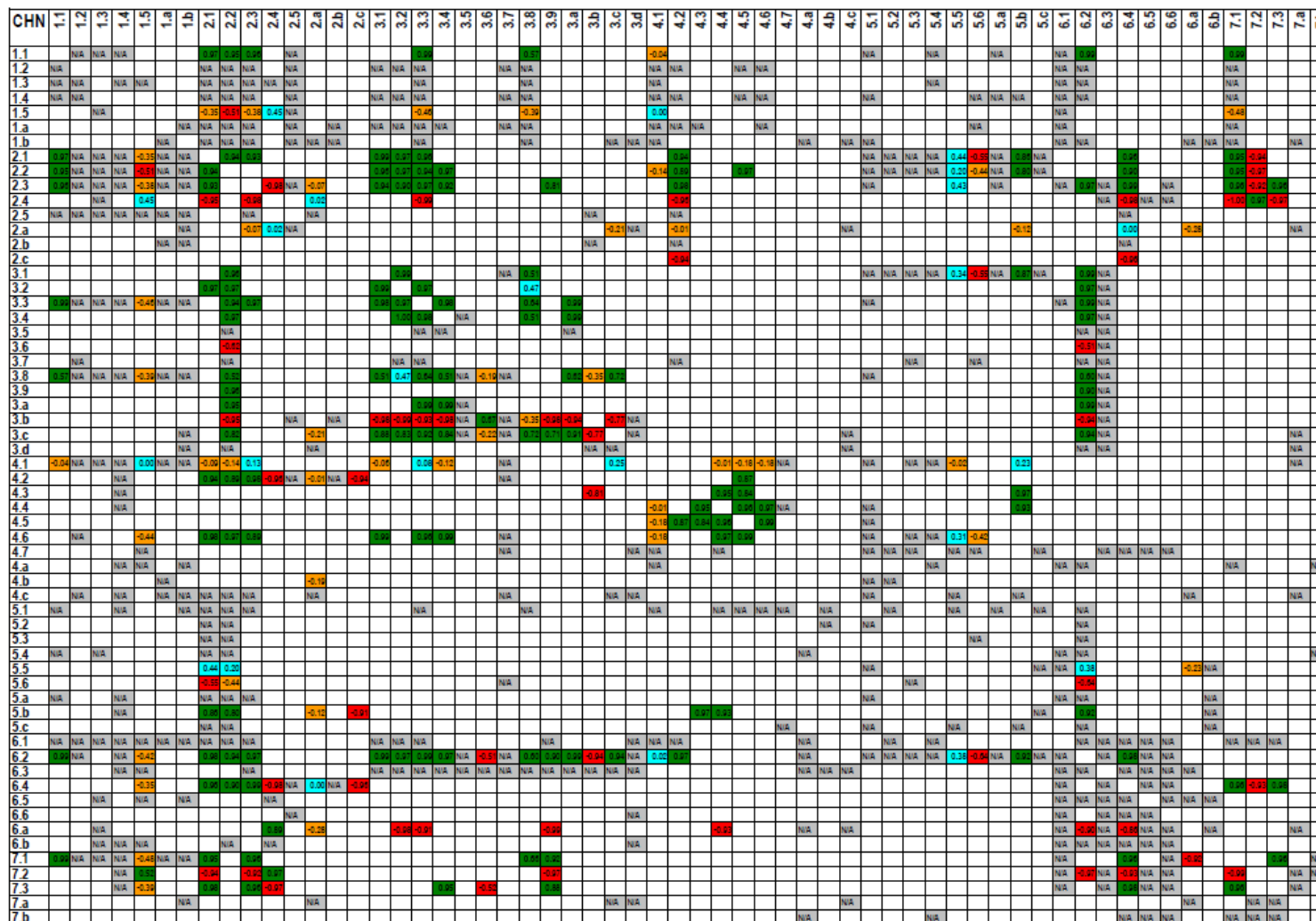
(<https://sdginterlinkages.iges.jp/visualisationtool.html>)



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



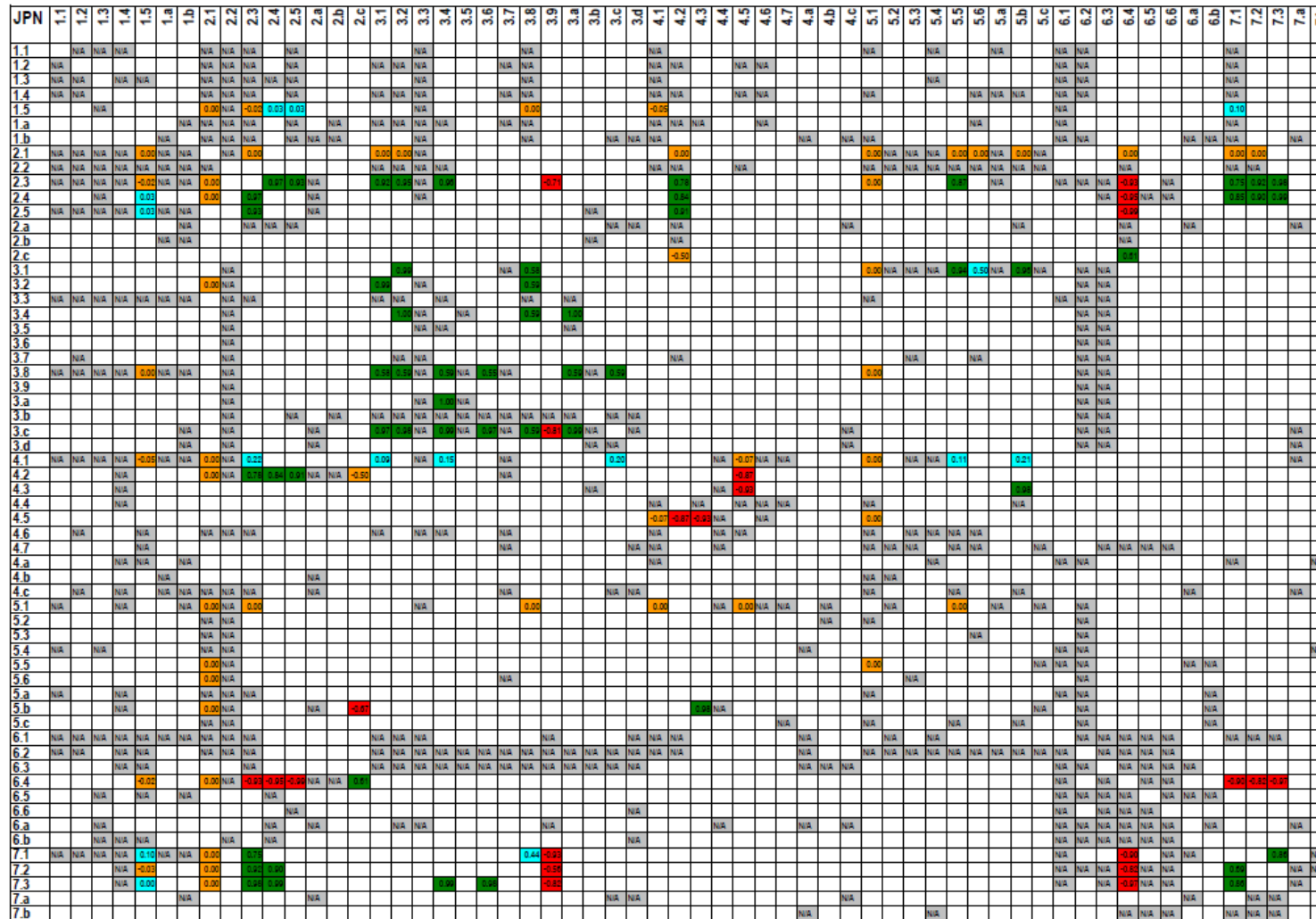
# The dashboard for China indicating potential reinforcing (green) and conflicting (red) interlinkages



Colors: Strong negative Weak negative Weak positive Strong positive

Source: Zhou, et al., 2018. IGES. <https://sdginterlinkages.iges.jp/visualisationtool.html>

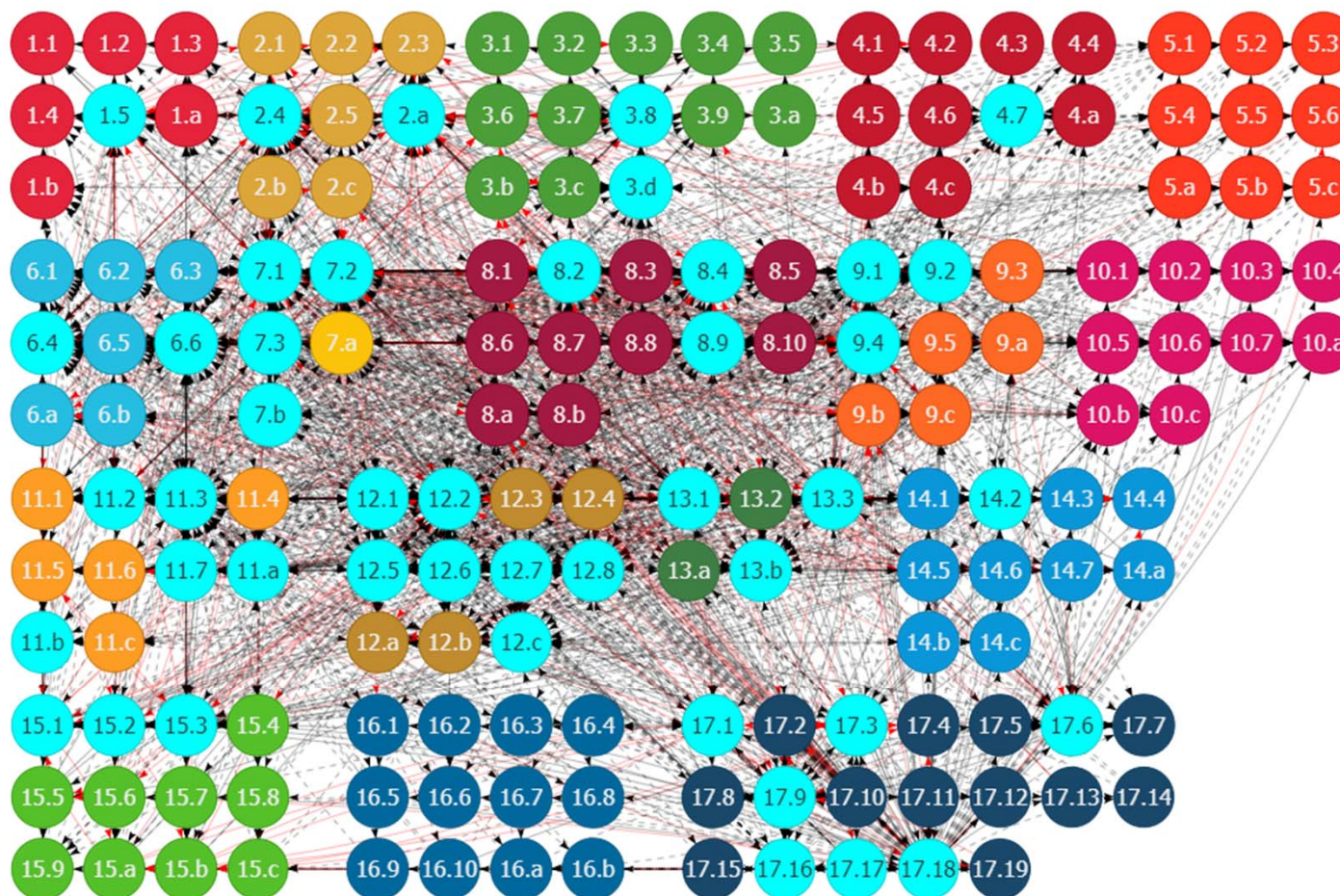
# The dashboard for Japan indicating potential reinforcing (green) and conflicting (red) interlinkages



Colors: **Strong negative** **Weak negative** **Weak positive** **Strong positive**

Source: Zhou, et al., 2018. IGES. <https://sdginterlinkages.iges.jp/visualisationtool.html>

# China: NDCs and SDGs interlinkages



Source: IGES SDG Interlinkages Analysis and Visualisation Tool. Selection of NDCs aligned targets are based on the WRI's Climate Watch.



# China: Preliminary results on the existing key synergies between NDCs and SDGs



Source: IGES SDG Interlinkages Analysis and Visualisation Tool

## China: Preliminary results on the existing key trade-offs between the NDCs and SDGs



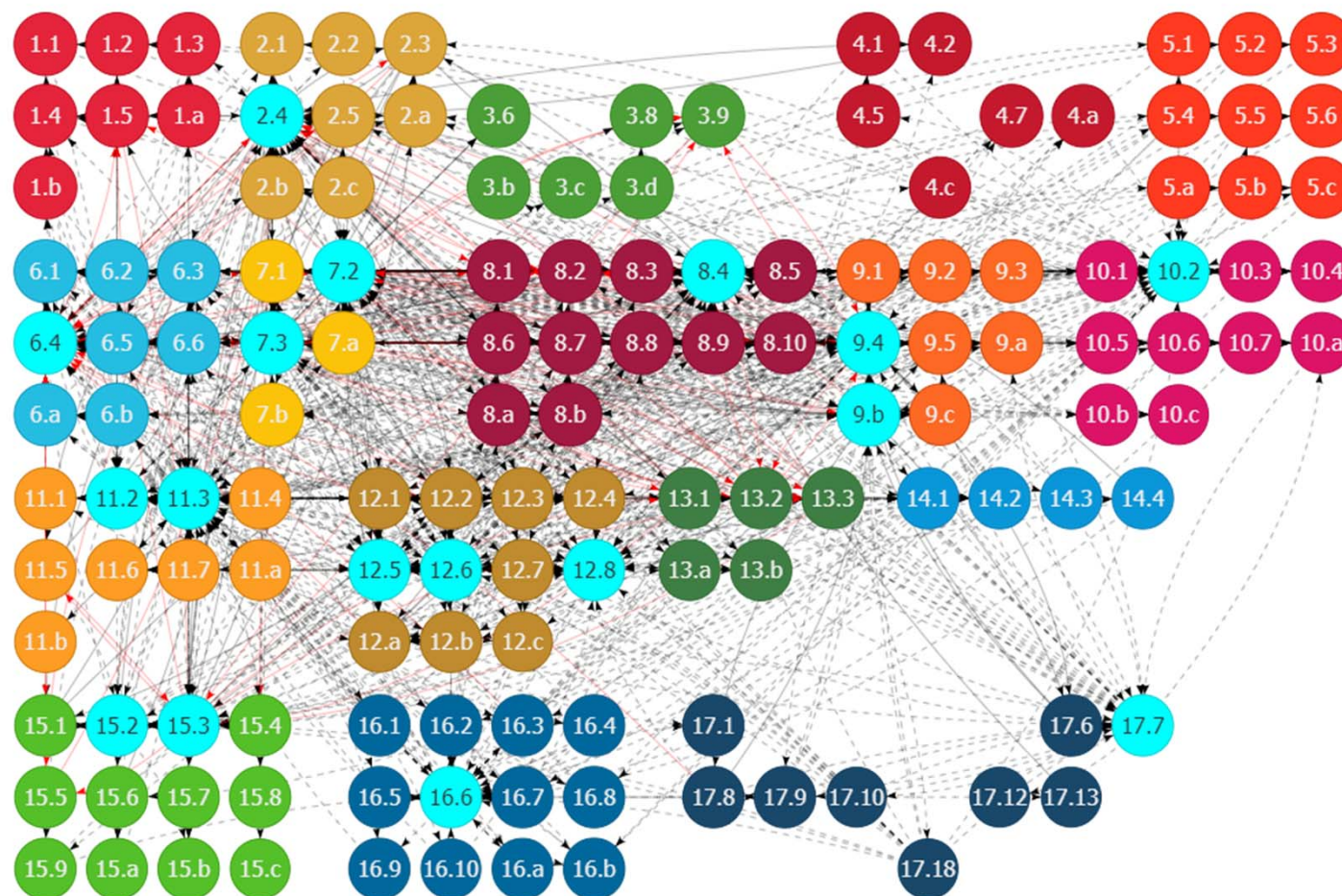
Source: IGES SDG Interlinkages Analysis and Visualisation Tool



## China: Additional indicators can be considered

<i>Targets/Short name</i>	<i>Indicators/Short name</i>	<i>Unit</i>
2.3 Double agriculture productivity	Agriculture value added per worker	US\$ (2010 constant)
2.4 Build sustainable food production systems	Nitrogen fertilizers consumption	tonnes of nutrients
3.b Access to essential medicines	Total official disbursements for medical research and basic health	billion US\$ (constant)
6.4 Increase water-use efficiency	Annual freshwater withdrawals	percent of internal resources
6.a Enhance international cooperation on water and sanitation	Total official disbursements for water supply and sanitation	billion US\$ (constant)
7.1 Universal access to energy	Population with access to electricity	percent
7.3 Double energy efficiency	Primary energy intensity of GDP	MJ per USD constant 2011 PPP GDP
8.1 Sustain inclusive economic growth	Real GDP growth per capita	percent
8.4 Improve resource efficiency	Material footprint per capita	metric tonne
8.a Increase Aid for Trade	Total official disbursements for aid for trade	billion US\$ (constant)
9.b Policy support for industrial value addition	Proportion of medium and high-tech industry in total value added	percent
12.2 Sustainable resource use	Material footprint per capita	metric tonne
12.a Support R&D capacity of developing countries for SCP	No. of researchers	per million inhabitants
15.1 Sustainable use of terrestrial and inland freshwater	Share of forest area	percent

# Japan: NDCs and SDGs interlinkages



Source: IGES SDG Interlinkages Analysis and Visualisation Tool. Selection of NDCs aligned targets are based on the WRI's Climate Watch.

## Japan: Preliminary results on the existing key synergies between NDCs and SDGs

2 ZERO HUNGER	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	17 PARTNERSHIPS FOR THE GOALS
2.3	7.1	8.4	9.2	12.2	17.6
2.4	7.2	8.5	9.4	12.a	
	7.3	8.6	9.5		
			9.b		
			9.c		

Source: IGES SDG Interlinkages Analysis and Visualisation Tool

## *Japan: Preliminary results on the existing key trade-offs between the NDCs and SDGs*



*Source: IGES SDG Interlinkages Analysis and Visualisation Tool*

## ***Japan: Additional indicators can be considered***

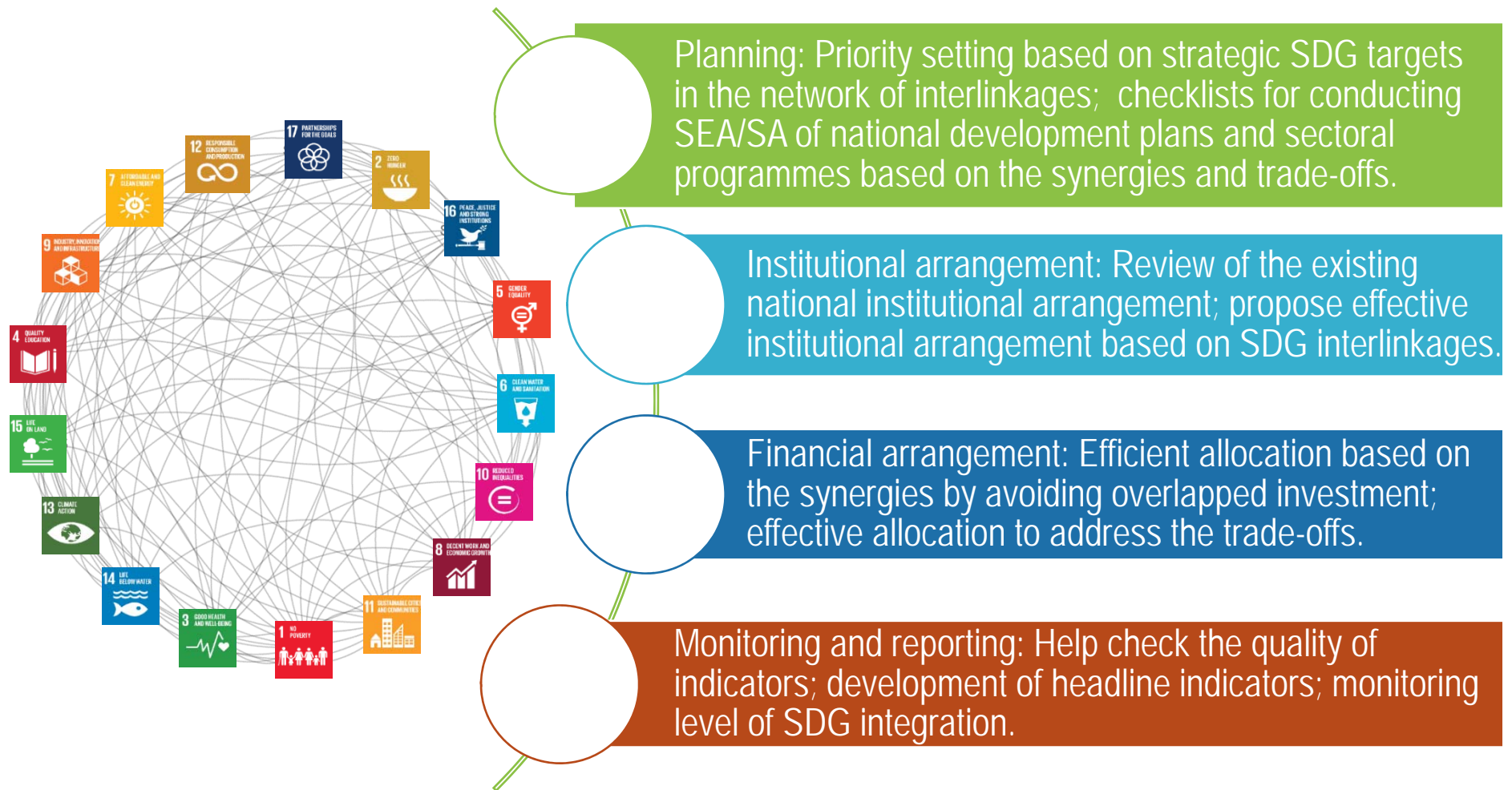
<i>Targets/Short name</i>	<i>Indicators/Short name</i>	<i>Unit</i>
3.9 Reduce deaths/illnesses from pollution	Mortality rate attributed to unintentional poisonings	per 100,000 population
6.4 Increase water-use efficiency	Annual freshwater withdrawals	percent of internal resources
8.1 Sustain inclusive economic growth	Real GDP growth per capita	percent
8.2 Improve economic productivity	Real GDP growth per employed person	percent
13.2 Integrate climate change measures into national policies	Rating countries ambition in climate mitigation	Levels 1-4 for inadequate, medium, sufficient and role model
13.3 Raise awareness on mitigation and adaptation	Rating countries ambition in climate mitigation	Levels 1-4 for inadequate, medium, sufficient and role model
15.5 Protect natural habitat and biodiversity	Red List Index	index (the larger the better)



# Conclusions

- 🌐 High-level alignment between SDGs and NDCs provides many multiple benefits and co-benefits.
- 🌐 Climate change and its responses greatly impact the progress on SDG achievement and mainstreaming climate actions is important to ensure achieving the SDGs.
- 🌐 Placing climate actions under the overarching framework of SDGs can help develop more comprehensive INDCs which make climate actions benefits all.
- 🌐 The existing trade-offs between NDCs and SDG targets should be taken into account through policy integration and effectively allocation of financial resources.

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

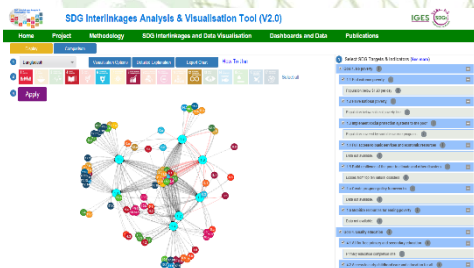


# Thank you!

Contact: [zhou@iges.or.jp](mailto:zhou@iges.or.jp)



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](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>.