

Harnessing SDG Synergies in Post-pandemic Recovery to Accelerate Achievement of SDGs 6, 7, 9 and 11

Dr. Xin Zhou

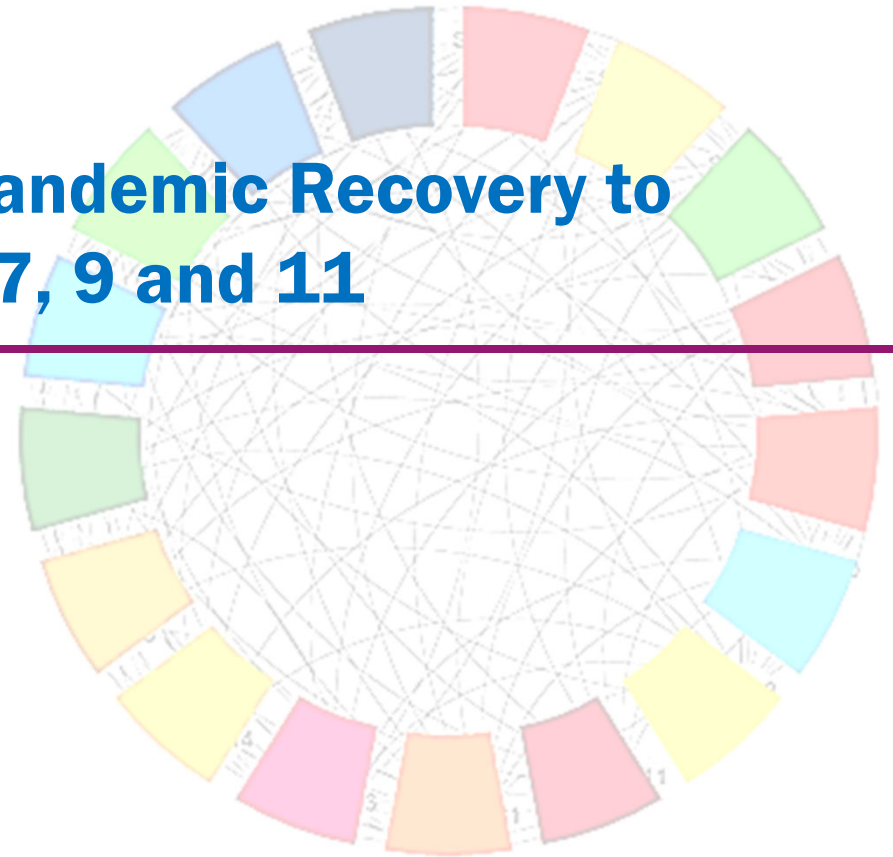
Research Director of Integrated Sustainability Centre
Institute for Global Environmental Strategies (IGES)

Dr. Mustafa Moinuddin

Deputy Director of Integrated Sustainability Centre
Institute for Global Environmental Strategies (IGES)

HLPF 2023 Side Event: Reviving the Decade of Action: exploring interlinkages and partnerships in water, energy, sustainable production and cities

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Sustainable Development Goals (SDG): An Interacted and Indivisible System



Importance of Understanding the SDG Interlinkages and Harnessing the Synergies

Understanding the interlinkages is important for taking an integrated approach which helps address policy issues such as:

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

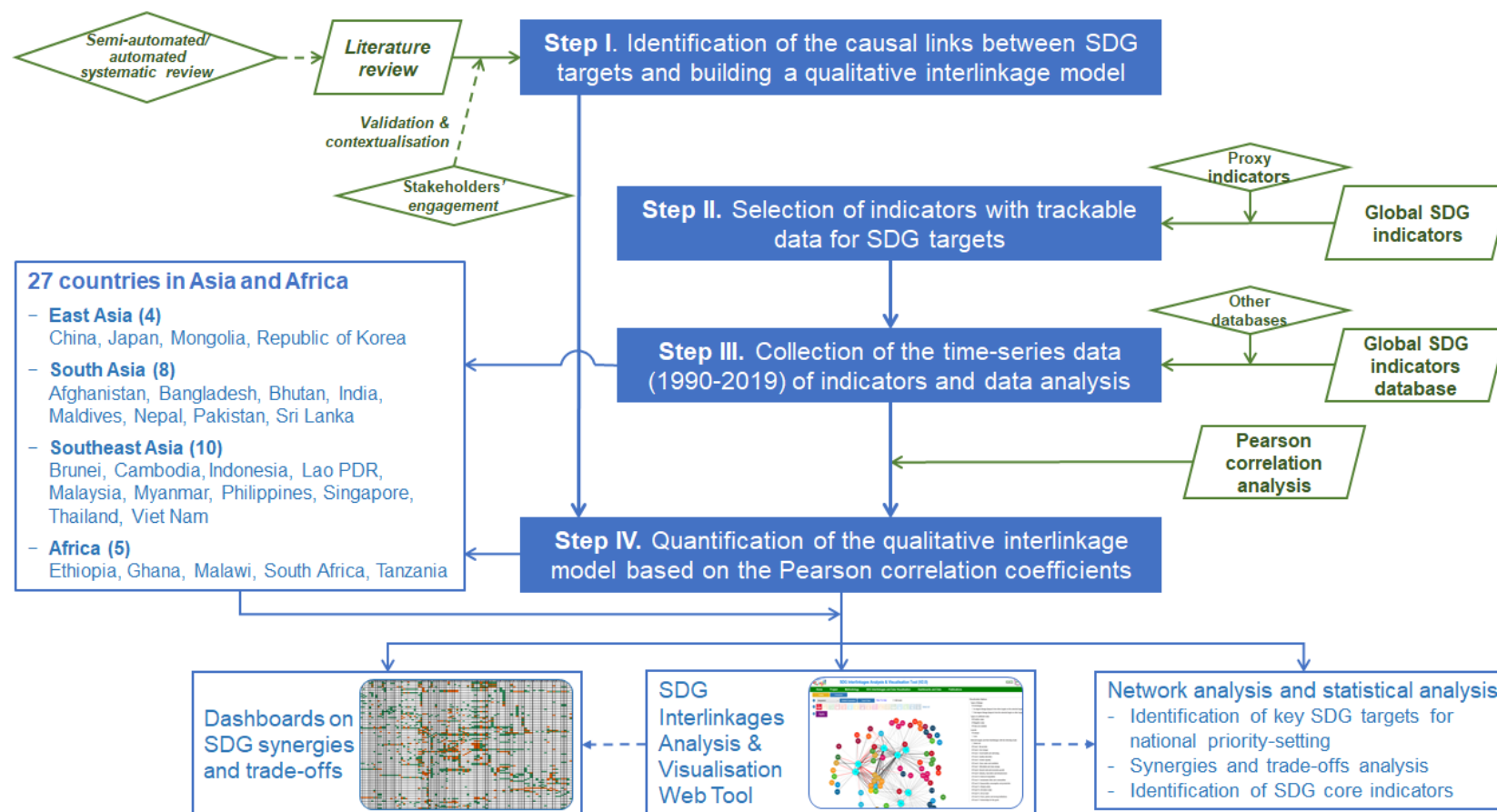


A siloed approach cuts off the interlinkages



An integrated approach takes account of the interlinkages

SDG Interlinkages Analysis: Methodology



Source: Zhou, et al., 2021 (<https://sdginterlinkages.iges.jp/methodology.html>)

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



- Integrated Sustainability Centre (ISC), IGES**

Usage of the SDG Interlinkages Tool (as of 11 July 2023)

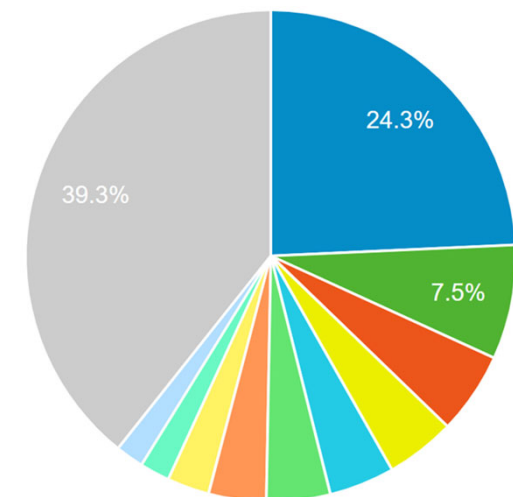
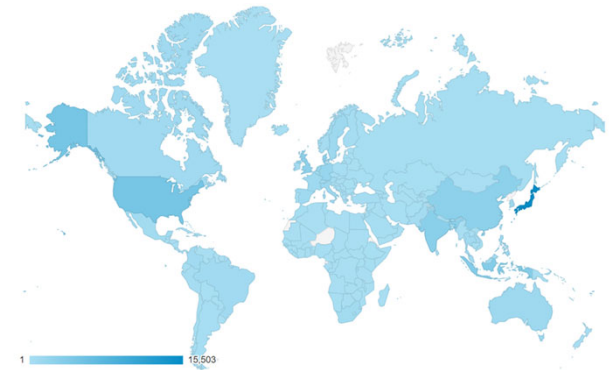
Overall usage of tool

- Since its launching, accessed from **195 countries** around the world
 - Accessed 2 or more times from **170 countries**
- Total sessions: **63,830**

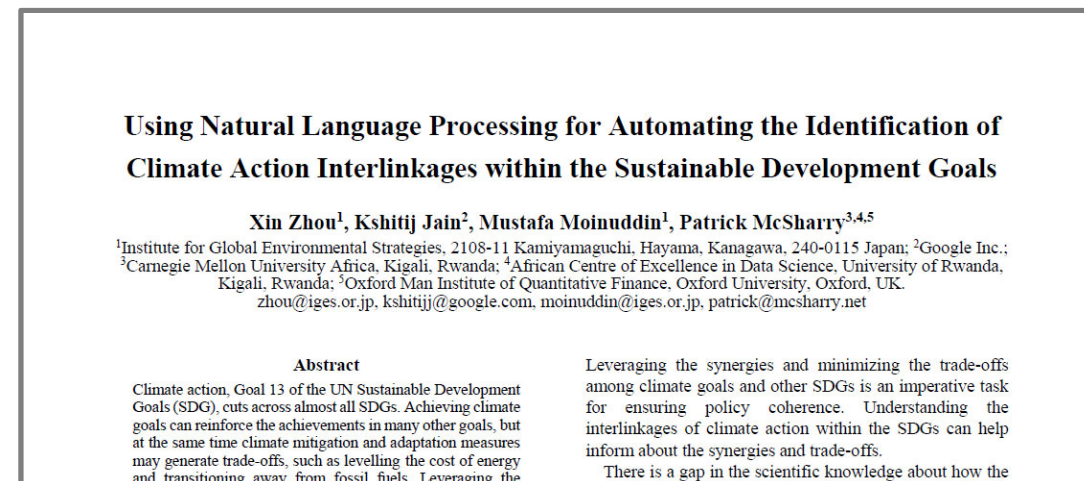
Top 10 countries

- **Increased access worldwide**
 - More than three-fourth accesses are from outside of Japan

1.		Japan
2.		United States
3.		Indonesia
4.		India
5.		Denmark
6.		China
7.		United Kingdom
8.		Germany
9.		Italy
10.		Netherlands



Application of SDG Interlinkages Analysis at the River Basin Scale



6 CLEAN WATER AND SANITATION



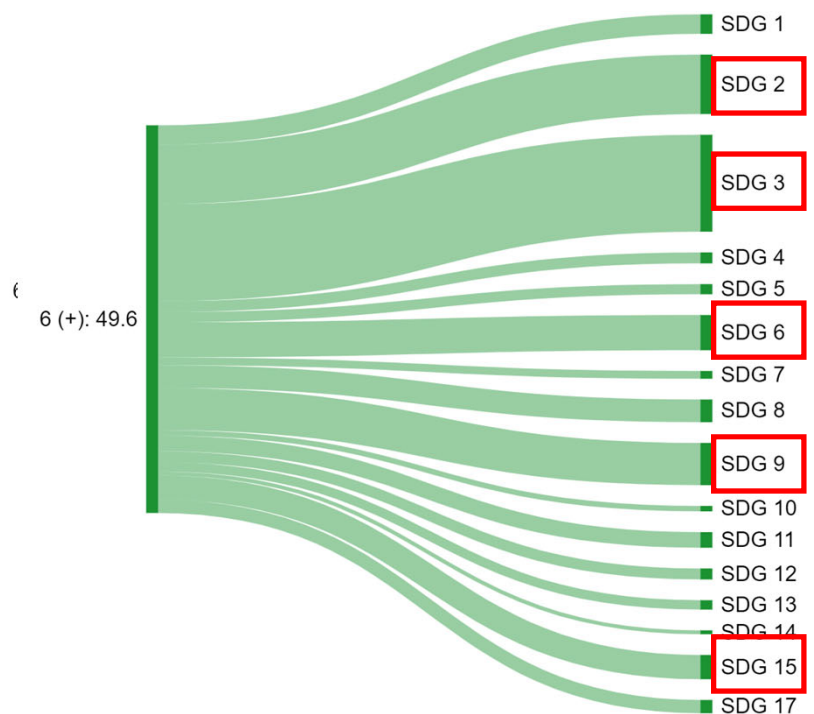
Linkages between SDG 6 and other SDGs from an Asian perspective

	Clean water and sanitation reduce poverty.
	Reliable water access supports agriculture and food security.
	Clean water improves public health.
	Water and sanitation in schools enhance learning.
	Water access empowers women for gender equality.
	Energy supports water and sanitation services.
	Water infrastructure generates employment and economic growth.
	Sustainable water infrastructure drives innovation and industrialization.
	Water access reduces inequalities for marginalized communities.
	Water management promotes resilient and inclusive cities.
	Sustainable water practices align with responsible consumption.
	Water management addresses water challenges in a changing climate.
	Protecting water resources conserves biodiversity below water.
	Protecting water resources conserves biodiversity on land.
	Equitable water access fosters stability, justice and human right.
	Collaboration addresses water challenges through partnerships.

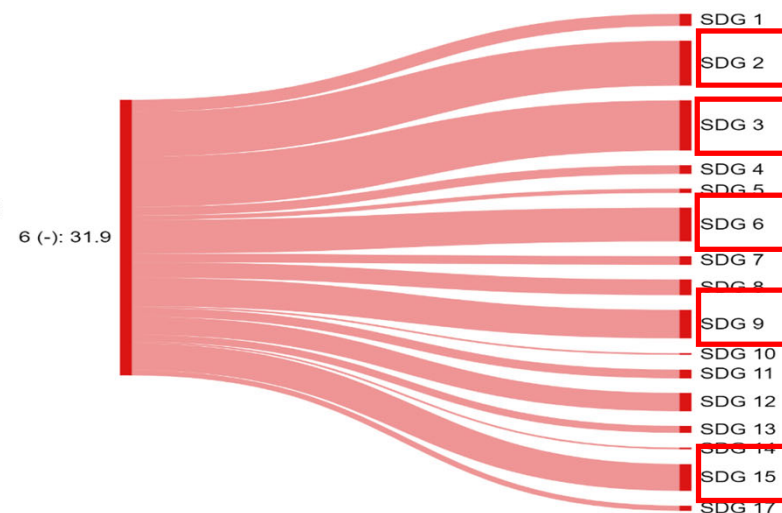
6 CLEAN WATER AND SANITATION



Synergies and trade-offs of SDG 6 with other SDGs from an Asian perspective



Positive linkages



Negative linkages

Source: Compiled by authors based on the data of 22 countries in Asia using the SDG interlinkages tool.

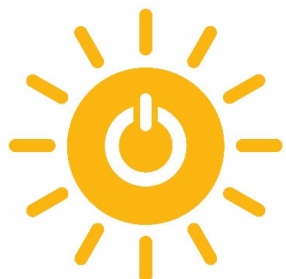
7 AFFORDABLE AND CLEAN ENERGY



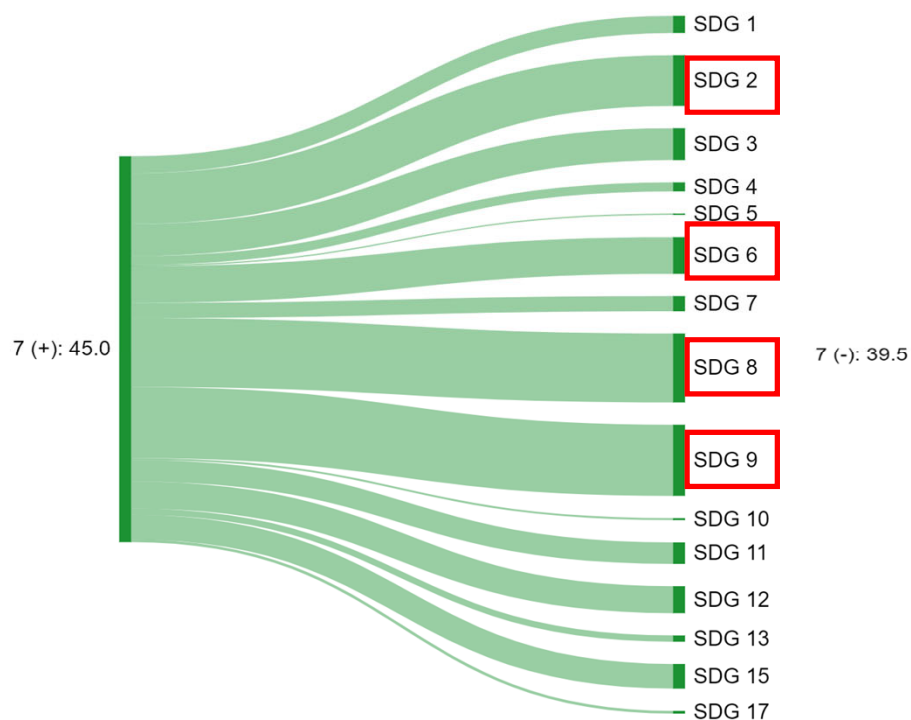
Linkages between SDG 7 and other SDGs from an Asian perspective

	Affordable, clean energy reduces poverty in Asia.
	Sustainable energy improves agriculture and food security.
	Clean energy ensures quality healthcare services.
	Reliable energy enhances educational outcomes.
	Clean energy access empowers women and advances gender equality
	Energy is a critical enabler for clean water and sanitation services
	Affordable, clean energy drives economic growth and job creation.
	Clean energy promotes sustainable industry and innovation.
	Equitable energy access reduces inequalities.
	Clean energy builds sustainable cities and communities.
	Clean energy aligns with responsible consumption and production.
	Clean energy mitigates climate change impacts.
	Clean energy protects marine and terrestrial ecosystems.
	Clean energy supports land conservation and biodiversity.
	Clean energy contributes to peace, justice, and strong institutions.
	Partnerships are essential for sustainable energy development.

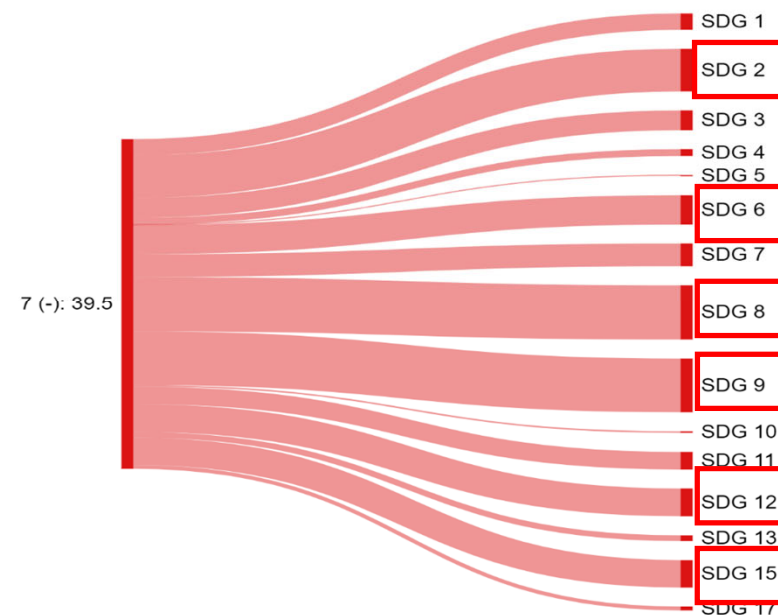
7 AFFORDABLE AND CLEAN ENERGY



Synergies and trade-offs of SDG 7 with other SDGs from an Asian perspective



Positive linkages



Negative linkages

Source: Compiled by authors based on the data of 22 countries in Asia using the SDG interlinkages tool.

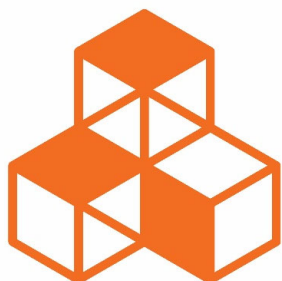
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



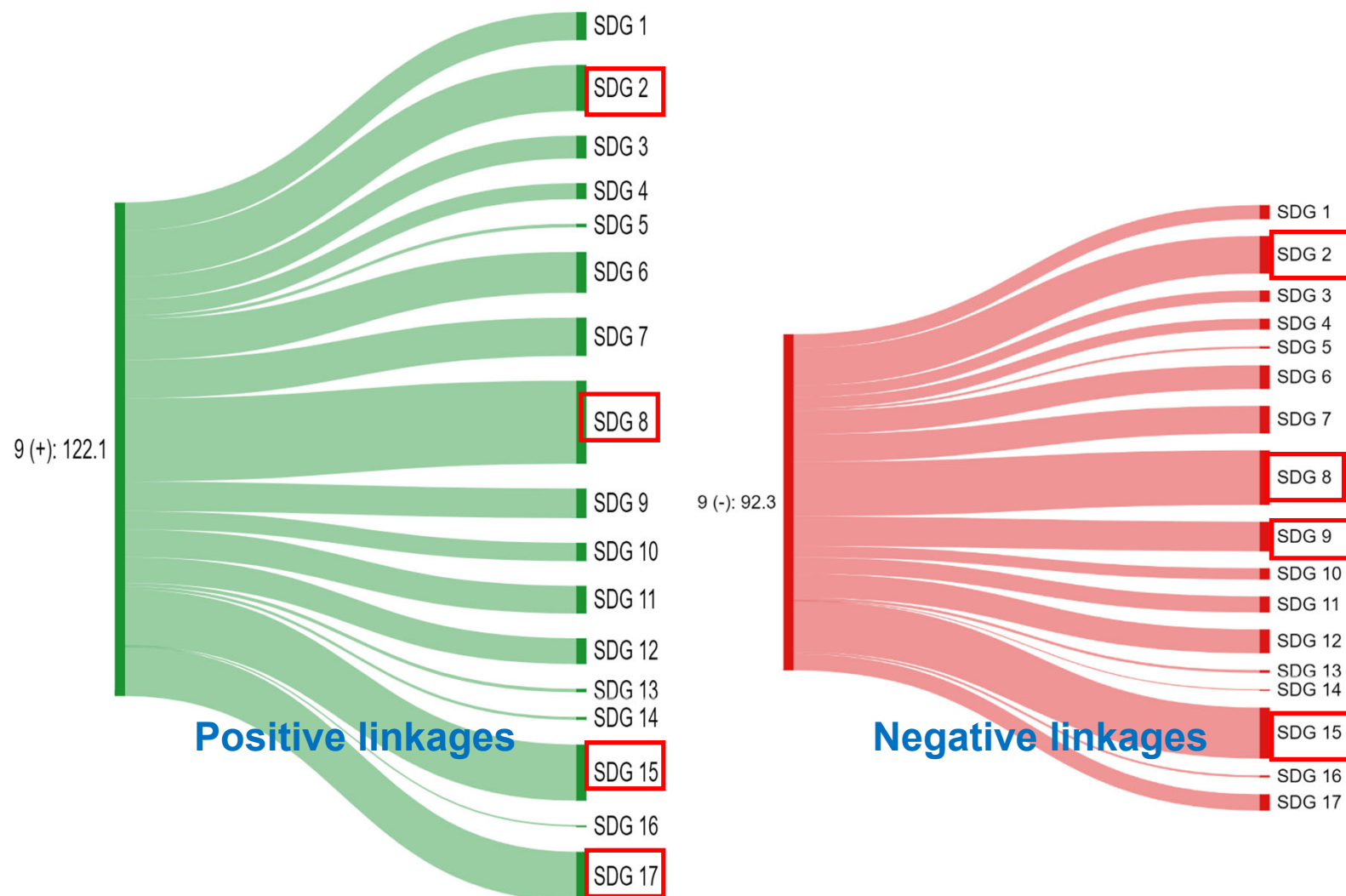
Linkages between SDG 9 and other SDGs from an Asian perspective

	SI promotes economic growth and poverty reduction.
	Improved agricultural infrastructure enhances food security.
	Accessible healthcare infrastructure links with better health outcomes.
	Educational infrastructure ensures inclusive quality education.
	Gender-responsive infrastructure promotes equality and safety.
	Infrastructure improves clean water and sanitation access
	Renewable energy and efficient transmission ensures energy access.
	Infrastructure development promotes decent work and economic growth.
	Equitable and resilient infrastructure reduces inequalities.
	SI (e.g. transport) builds inclusive, resilient, and sustainable cities.
	SI promotes SCP patterns, waste management and circular economy .
	SI contributes to renewable energy deployment and building resilience.
	SI considers marine and terrestrial ecosystem conversation.
	SI considers marine and terrestrial ecosystem conversation.
	SI improves disaster response and public safety contributing to peace.
	Mobilize resources and foster technology transfer through partnerships.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Synergies and trade-offs of SDG 9 and other SDGs from an Asian perspective



















Source: Compiled by authors based on the data of 22 countries in Asia using the SDG interlinkages tool.

11 SUSTAINABLE CITIES AND COMMUNITIES



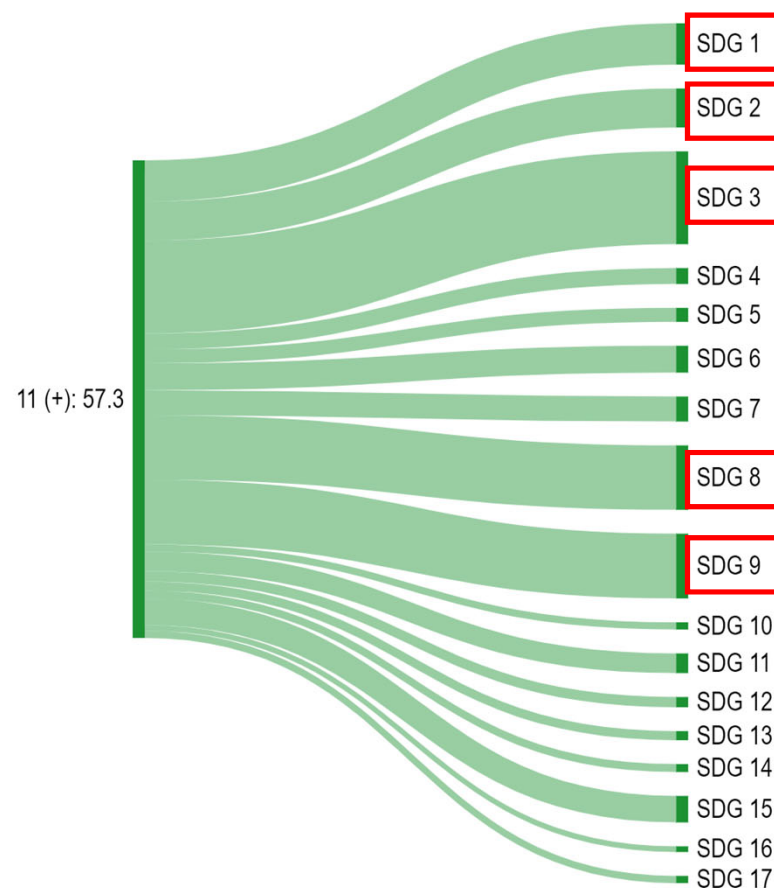
Linkages between SDG 11 and other SDGs from an Asian perspective

	Promotes housing and services for slums, leading to poverty reduction.
	Urban agriculture in Asian cities supports food security and nutrition.
	Inclusive urban environments promote good health and well-being.
	Accessible educational infrastructure for quality and lifelong learning.
	Gender-responsive urban planning ensures safe public spaces for women.
	Water and sanitation infrastructure supports universal access.
	Efficient energy systems enhance energy access and affordability.
	Inclusive and resilient infrastructure support decent work and growth.
	Sustainable urban infrastructure promote industrialization.
	Inclusive access to services and housing reduces urban inequalities.
	SCP supports responsible urban development.
	Climate-resilient urban planning contributes to climate action.
	Sustainable urban development aligns with biodiversity conservation.
	Sustainable urban development aligns with biodiversity conservation.
	Inclusive and resilient urban environments foster peace and justice.
	Partnerships are essential for sustainable urban development.

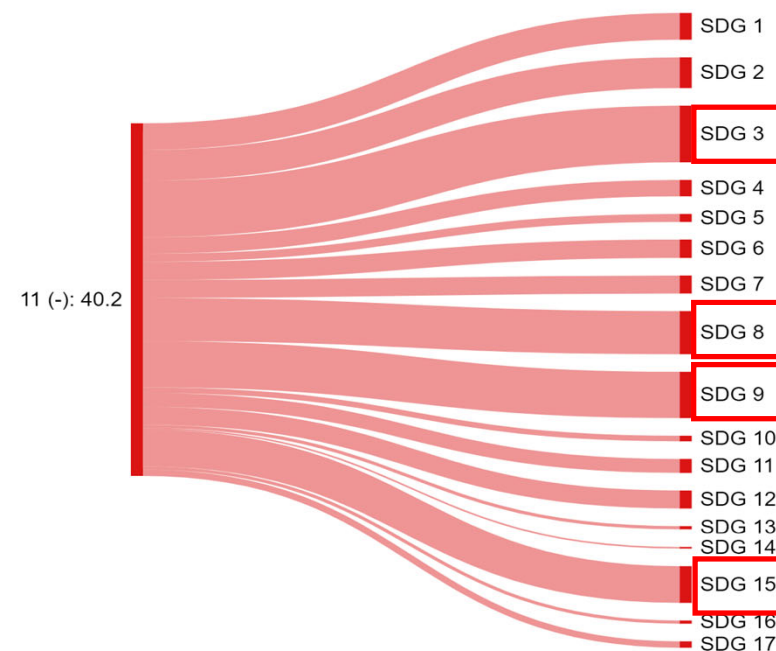
11 SUSTAINABLE CITIES AND COMMUNITIES



Synergies and trade-offs of SDG 11 and other SDGs from an Asian perspective



Positive linkages



Negative linkages

Source: Compiled by authors based on the data of 22 countries in Asia using the SDG interlinkages tool.

The Way Forward: Accelerating SDGs 6, 7, 9, and 11 Through Harnessing Synergies and Managing Trade-offs

- 🌐 Two ways for SDG acceleration: Harnessing the synergies and managing the trade-offs.
- 🌐 Integrated Approach: Align policies, foster collaboration, and coordinate efforts across sectors to reinforce progress in SDGs 6, 7, 9, and 11.
- 🌐 Sustainable Infrastructure: Develop resilient, low-carbon infrastructure with energy-efficient buildings, renewable energy, and sustainable water systems.
- 🌐 Technology Transfer and Innovation: Facilitate the adoption of clean technologies, promote partnerships, and encourage research institutions and industries to develop innovative solutions.
- 🌐 Financial Investments and Partnerships: Mobilize resources, attract investments, and engage in public-private partnerships to leverage synergies and mitigate trade-offs.
- 🌐 Stakeholder Engagement: Involve communities, civil society, and marginalized groups in decision-making and project implementation.
- 🌐 Data Monitoring and Reporting: Establish robust systems to track progress and inform evidence-based decision-making.
- 🌐 Policy Coherence and Governance: Strengthen regulatory frameworks, promote transparency, and enhance accountability through effective governance structures.

Integrating climate actions and the SDGs at the sub-national level from an SDG interlinkage perspective

Background: IGES activity related to integrating climate actions and SDGs in West Java, Indonesia

Rationale

- Climate change – a pressing challenge of our time
- Response to the crisis: Rapid action across society needed
 - Paris Agreement, various mitigation and adaptation measures at global, national and local levels
- Climate mitigation/adaptation measures impact many sectors and actors
 - Involves synergies/trade-offs, which should be a key element of climate policy.
 - A systems-based integrated approach is needed
 - SDGs offer a suitable framework to understand these synergies / trade-offs
- Particularly relevant at the local level, where integrated planning is feasible
 - Smaller size and lesser number of agencies
 - Limited availability of financial and human resources
- However, integrated policymaking is often absent at local levels.

Purpose and objective of this study

- To develop a qualitative approach to identify the synergies and trade-offs between climate actions and SDGs through local stakeholders' engagement.
- West Java was selected for empirical analysis, due to Indonesia's diversity and commitment to climate and SDG agenda.

Background: IGES activity related to integrating climate actions and SDGs in West Java, Indonesia (cont'd)

Methodology used: Stakeholders' consultation

- Online survey (100 participants) to identify the challenges, synergies & trade-offs between climate actions and the SDGs
- Focus group discussion (20 participants) to validate the results and receive feedback.

Potential impact

- By integrating the local context through stakeholder engagement, the results of this study can be used to support practical policymaking based on a systems approach at the local levels.

Partnership



Institute for Global Environmental
Strategies (IGES), Japan



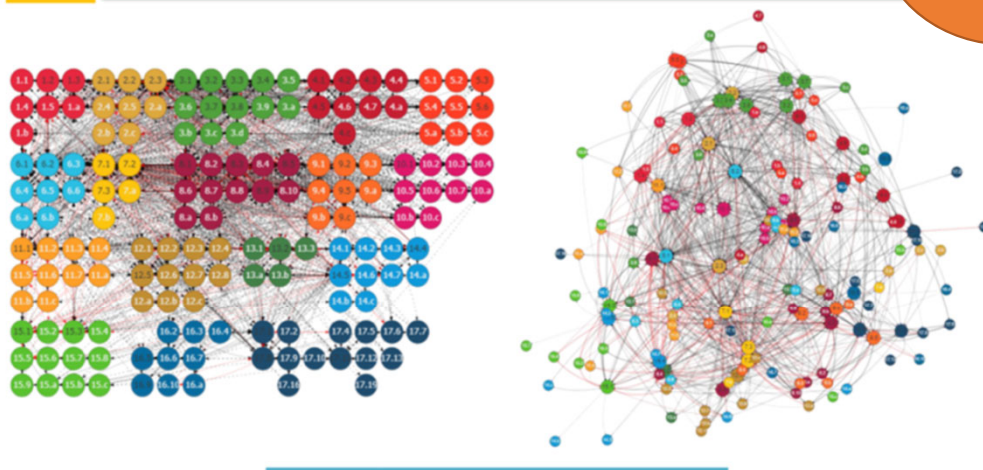
Center for Sustainable
Development Goals Studies
(SDGs Center) Universitas
Padjadjaran

Use of the IGES methodology in SDG processes in Indonesia

Contributions to Indonesia's SDGs Roadmap and VNR/2021/2019

3.4

MAPPING OF INTERLINKAGES



The results of the analysis of the 43 SDGs targets indicate that there are **17 targets of 9 goals** that have strong influence to other targets, with a low level of dependency. These targets are called to have the high driver power.

Roadmap of SDGs Indonesia 99

Indonesia
SDGs
Roadmap

Source: BAPPENAS (2019). Roadmap of SDGs Indonesia: A Highlight.

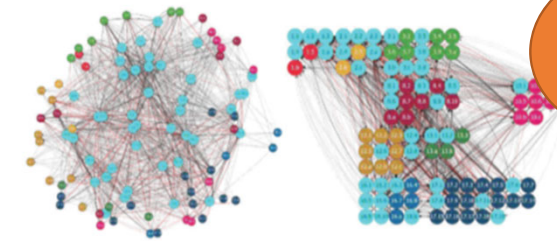


Figure 3.8 The linkages among the selected targets in the 9 VNR SDGs Indonesia 2021 goals

Positive relations exist between many targets in all the goals under review. Some examples of this linkage include Goal 2 in ensuring access to food availability (Target 2.1) which supports the achievement of poverty alleviation (Targets 1.1 and 1.2). Other positive relations are on the information disclosure (Target 16.10), which can support data availability (Target 17.19), increase access for micro, small and medium enterprises (MSMEs) to financial services (Target 8.3), and reduce unemployment (Targets 8.5 and 8.6). Meanwhile, the trade-offs between targets occurs in the efforts to maintain economic growth (Target 8.1), if the implementation is not green, it can negatively affect the sustainable food production system and infrastructure (Targets 2.4 and 2.a) which can increase pollution in the form of GHG (Figure 3.9). Based on the positive relations and trade-offs between these targets, relevant priority policies in the recovery from the COVID-19 pandemic are aligned with several SDGs target achievements.

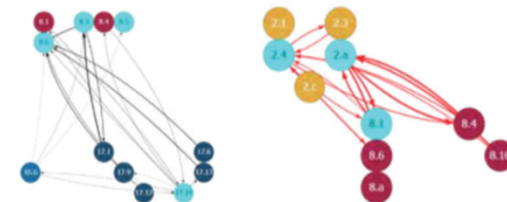


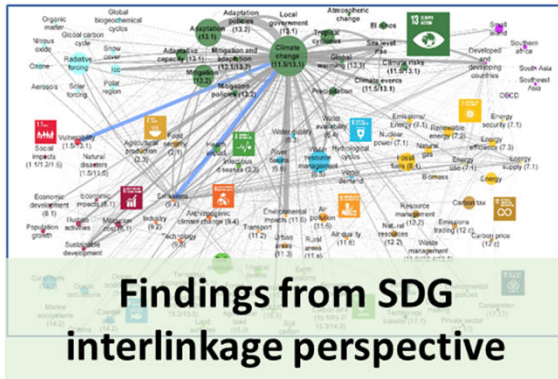
Figure 3.9 Positive relations between targets (black line) and trade-offs (red line)

In Indonesia's VNR 2021 (p.25-26), IGES Interlinkages Tool was used to visualise positive relations (e.g. access to food and poverty reduction) and trade-offs between pursuing economic growth and impacts on sustainable food production and infrastructure).

Indonesia
VNR 2021

Source: Indonesia Voluntary Local Review (VNR) 2021

Stakeholders consultation in West Java

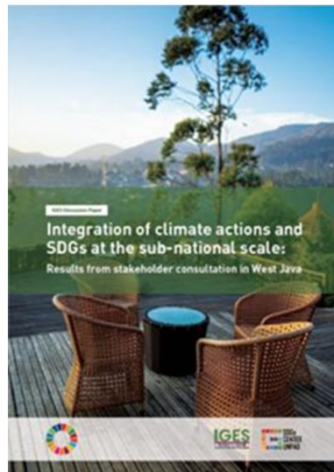


Stakeholders' consultation on the synergies and trade-offs of climate actions with the SDGs

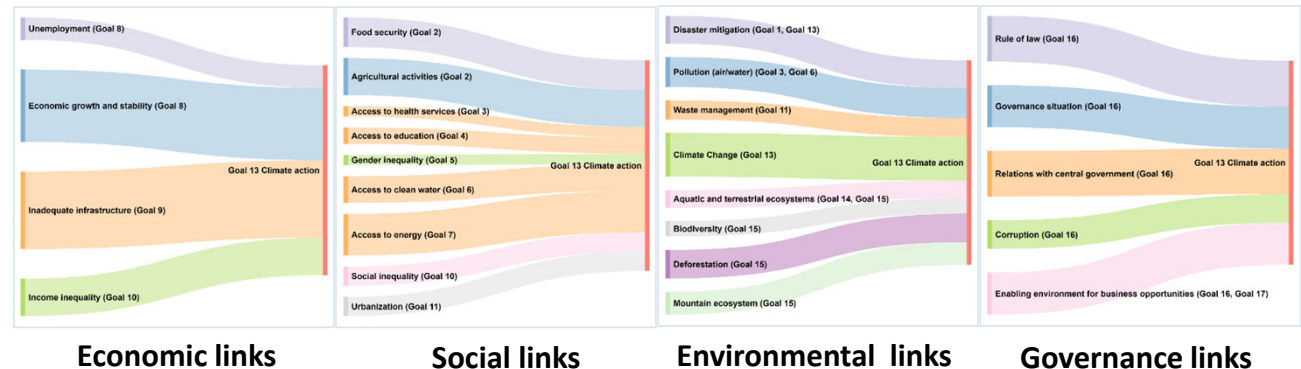
**Online questionnaire survey
(100 respondents)**

**Focus group discussion
(20 participants)**

Raise awareness and co-generation knowledge on CC-SDG linkages



**IGES Discussion Paper
(Moinuddin et al., 2021)**



The process of combining the survey and FGD

Section 1 of 16

Survei oleh IGES-SDGs Center UNPAD:
Melokalisasi Tujuan Pembangunan
Berkelanjutan (SDGs) di Jawa Barat melalui
keterkaitan SDGs

Section 17 of 18

Question 16 of 17

Apakah ada isu dan tantangan utama yang dihadapi Jawa Barat, khususnya dalam konteks SDGs/TPB dan pembangunan ekonomi? Harap tuliskan jawaban Anda pada tabel di bawah ini:

Tolong diperhatikan hal-hal berikut ini:

- (1) Anda dapat memilih mengisi sebanyak mungkin pada kolom "Masalah / Tantangan" (kolom 1).
- (2) Anda dapat memilih lebih dari satu tujuan SDGs/TPB (kolom 2) jika menurut Anda terdapat beberapa tujuan SDGs/TPB yang relevan dengan masalah yang Anda pilih.
- (3) Jika menurut Anda ada masalah yang tidak termasuk dalam daftar, silakan tulis di bagian bawah setelah kata-kata "lainnya" yang tersedia.
- (4) Anda dapat menambahkan tempat kosong untuk memberikan komentar atau alasan apa pun untuk masalah yang Anda pilih atau tambahkan.

SDGs Center UN
di Jepang berke-
SDG di tingkat d-
tentang melalui
(Akar Analisa 5



Questionnaire survey
(100 participants)

Educational/research institution	NGOs	Government	Private entities
<ul style="list-style-type: none"> Majority of economic sector is supported by informal activities. Lack of job opportunity. Low Human Resource quality. 	<ul style="list-style-type: none"> Low commitment to empowerment of small-medium enterprises. Lack of infrastructure. Low Human Resource quality due to low education services. Low concern to environmentally safe development approach. Local economic resources are not maximally utilized. Income inequality. Social inequality. Limited land availability for agriculture. 	<ul style="list-style-type: none"> Economic development inequality among regions. Low utilization of local economic resources. Low Human Resource quality due to lack of training. High population growth. Low use transformation from agriculture to industry. Low attention to development of small enterprise and cooperative. High poverty rate. High prone of disaster triggered by climate change. Lack of regulation related to investment. Low agriculture production. Industrial development that do not use environmentally safe approach. 	<ul style="list-style-type: none"> Lack of concern to small-medium enterprises. Low commitment to industrial waste management. Low Human Resource quality. Economic development inequality among regions.

Educational/research institution	NGOs	Government	Private entities
<ul style="list-style-type: none"> Low public awareness on the importance of social development. Unequal access to education services. Gender inequality. 	<ul style="list-style-type: none"> High poverty rate. Unequal access to basic public services. Low critical thinking ability of the public. Social inequality. Social and economic inequality. Low Human Resources quality that contributes to high unemployment rate. Low education service quality. Social violence and discrimination. 	<ul style="list-style-type: none"> Unmanaged demographic bonus. Change of public value to more individual society. Higher poverty rate. Lack of basic social service provision (education and health). Low Human Resources quality that contributes to high unemployment rate. Lack of disaster management system. Low coverage of social protection. COVID-19 pandemic. 	<ul style="list-style-type: none"> High population growth that contributes to low Human Resources quality. Inequality in access to education. Low public awareness on the importance of social development. Low public adaptability capacity to face new social and political change.

Type of institution	Environmental problems
	<ul style="list-style-type: none"> Pollution-related Major resource use related Conservation-related Other environmental problems
Educational/research institution	<ul style="list-style-type: none"> Unmanaged industrial waste Low stock of clean water Highly economic based development
NGOs	<ul style="list-style-type: none"> High exploitation of natural resources. High rate of land use shifting for housing and industrial need. Low stock of clean water. Storage of excess environmental waste. High rate of land use shifting for housing and industrial need. High exploitation of natural resources. High rate of land use shifting for housing and industrial need. Low stock of clean water. Storage of excess environmental waste.
Government	<ul style="list-style-type: none"> Unmanaged industrial waste Air pollution from transportation vehicle. High rate of land use shifting for housing and industrial need. Shifting of land use for industry and mining purposes. Low stock of clean water. High rate of land use shifting for housing and industrial need. High exploitation of natural resources. High rate of land use shifting for housing and industrial need. Low stock of clean water. Storage of excess environmental waste.
Private entities	<ul style="list-style-type: none"> Unmanaged industrial waste Lack of green space. High volume of domestic waste. Low stock of clean water. High rate of land use shifting for housing and industrial need. High exploitation of natural resources. High rate of land use shifting for housing and industrial need. Low stock of clean water. Storage of excess environmental waste.

Survey results

Focus group discussion (20 participants)

Core issues and problems identified at the FGD meeting

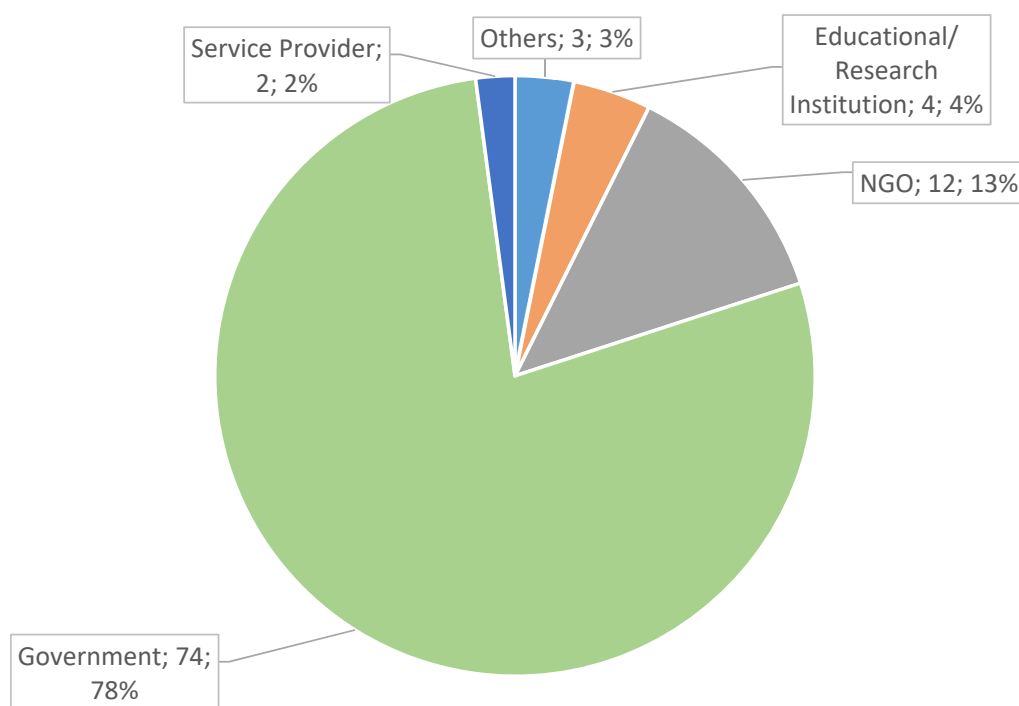
Major linkages of economic issues with other SDGs in West Java	Major linkages of social issues with other SDGs in West Java
<p>Specific issues identified in the survey</p> <ul style="list-style-type: none"> Low human resources quality. Lack of job opportunity. Dependence of economic sector of informal activities. Low concern to environmentally safe development approaches. Economic development inequality. 	<p>Specific issues identified in the survey</p> <ul style="list-style-type: none"> High poverty rate. Unequal access to basic public services. Low critical thinking ability of the public. Social inequality. Social and economic inequality. Low Human Resources quality that contributes to high unemployment rate. Low education service quality. Social violence and discrimination.
Major linkages of environmental issues with other SDGs in West Java	Major linkages of governance issues with other SDGs in West Java
<p>Specific issues identified in the survey</p> <ul style="list-style-type: none"> Unmanaged industrial waste. Low stock of clean water. Highly economic based development. 	<p>Specific issues identified in the survey</p> <ul style="list-style-type: none"> Corruption is the most important problem in West Java. It is strongly correlated with low integrity of the personnel of West Java Government.

Economy	Society	Environment and climate change	Governance
<ul style="list-style-type: none"> Low human resources quality. Lack of job opportunity. Dependence of economic sector of informal activities. Low concern to environmentally safe development approaches. Economic development inequality. 	<ul style="list-style-type: none"> High poverty rate. Low human resources quality due to low education service quality. Social and economic inequality. Gender inequality. Inequality in access to education. 	<ul style="list-style-type: none"> Pollution-related problems (industrial waste and domestic waste). Major resource-use related problems. Conservation-related problems. Other environmental problems. 	<ul style="list-style-type: none"> Corruption is the most important problem in West Java. It is strongly correlated with low integrity of the personnel of West Java Government.

Major topics covered in the survey questionnaire

Queries related to the respondents' institution (type of business, familiarity with and relevance of SDGs and climate change issues)	Relationships of planning and implementation of SDGs at the national level and at the regional/provincial/local levels	SDG planning and implementation at national and provincial levels
Major progresses and challenges in SDG implementation	Agencies involved in SDG implementation in West Java	Involvement of stakeholders in SDG promotion and implementation
Major agriculture, industry and service sectors in West Java	Major economic, social, environmental, climate, and governance-related issues and challenges in West Java, including their linkages with the 17 SDGs	Relevance and significance of climate change for West Java

Multistakeholders participation

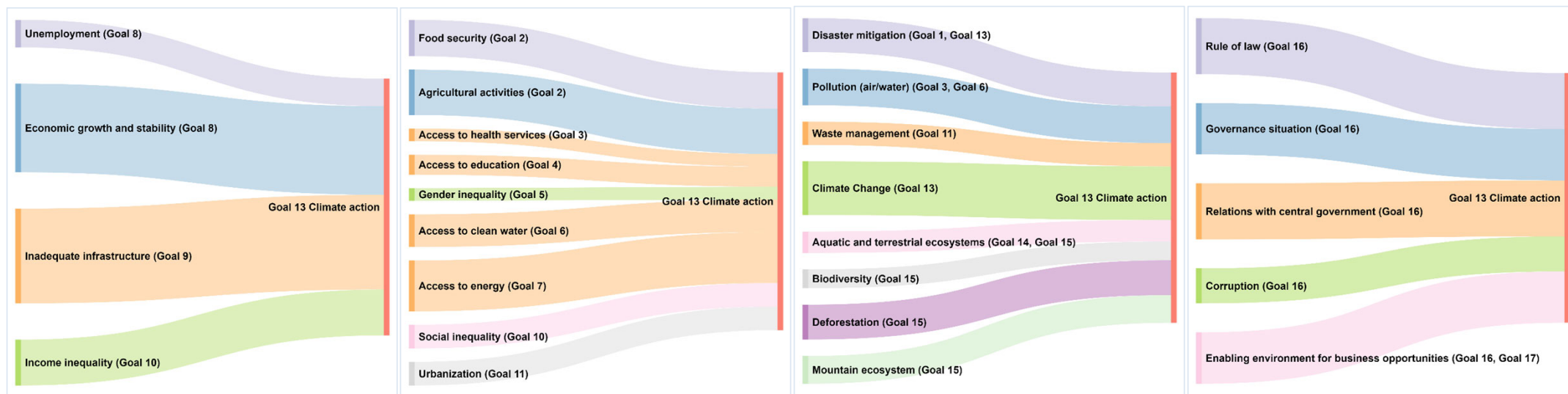


Type of Institutions	Field of Work
Educational/research institution	<ul style="list-style-type: none"> Improving Human Development Index Training, research and community empowerment SDGs localization
NGOs	<ul style="list-style-type: none"> Policy advocacy Promoting gender equality. Disaster management. Community development Research
Government	<ul style="list-style-type: none"> Planning, monitoring, evaluation, research and development. Advocacy Provision of public services Drugs eradication Food provision
Private sectors	<ul style="list-style-type: none"> Energy and water management Managing airport Service provider

Core issues and problems identified by the experts at the FGD meeting

Economy	Society	Environment and climate change	Governance
<ul style="list-style-type: none"> • Low human resources quality. • Lack of job opportunity. • Dependence of economic sector of informal activities. • Low concern to environmentally safe development approaches. • Economic development inequality 	<ul style="list-style-type: none"> • High poverty rate. • Low human resources quality due to low education service quality. • Social and economic inequality. • Gender inequality. • Inequality in access to education. 	<ul style="list-style-type: none"> • Pollution-related problems (industrial waste and domestic waste) • Major resource-use related problems • Conservation-related problems • Other environmental problems 	<ul style="list-style-type: none"> • Corruption and governance-related problems

Interlinkages of key economic, social, environmental and governance issues in West Java with climate change



ECONOMY

All four key economic issues – especially infrastructure and economic growth and stability – are linked with SDG 13 on climate action.

SOCIETY/COMMUNITY

Many social issues are linked with climate actions (almost 30% respondents highlighting access to energy as a major area)

ENVIRONMENT

Environmental issues linked with climate actions and other SDGs. Climate action itself was linked with health, water, poverty and hunger, energy, and biodiversity.

GOVERNANCE

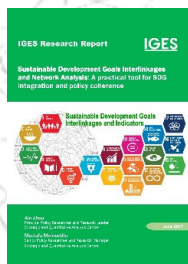
Rule of law and relations with the central government are highly relevant in West Java's climate actions

Takeaways from this study

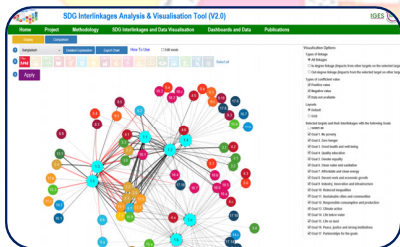
- **Overlapping nature of sustainable development and climate actions**
 - Integration and co-development of their implementation plans needed
- **Understanding these interactions needed to integrate SDGs and climate actions**
 - Stakeholder consultations can help design the integrated approach: socio-economic and biophysical characteristics, priorities/challenges facing the region within broader national development plans.
- **Integrated approaches can bridge the gap between national and local policy processes.**
- **Important to provide support for localising the SDGs and climate actions (enabling conditions, such as strengthened governance, institutional arrangements and clarified budget lines)**
- **Empowering civil society can boost accountability for spending and policy decisions on climate and SDGs**
- **Knowledge gained from science-based studies, such as an in-depth SDG interlinkage analyses, can provide important insights and support for local policy processes including the development of Voluntary Local Reviews**
- **Further, the experience gained from this stakeholder engagement activity is expected to feed into similar activities other regions, cities and provinces within and beyond Indonesia**

Thank you!

Contact: zhou@iges.or.jp; moinuddin@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.



Zhou, X., Moinuddin, M., Li, Y., 2021. SDG Interlinkages Analysis & Visualisation Tool (V4.0). Hayama: IGES. Available at: <https://sdginterlinkages.iges.jp/visualisationtool.html>.