



# Asia Pacific GPP Network Webinar Series #3

## Integrated Approaches to Sustainable Infrastructure

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28 September 2021

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# Infrastructure influences all 17 SDGs – Overall 92% of targets

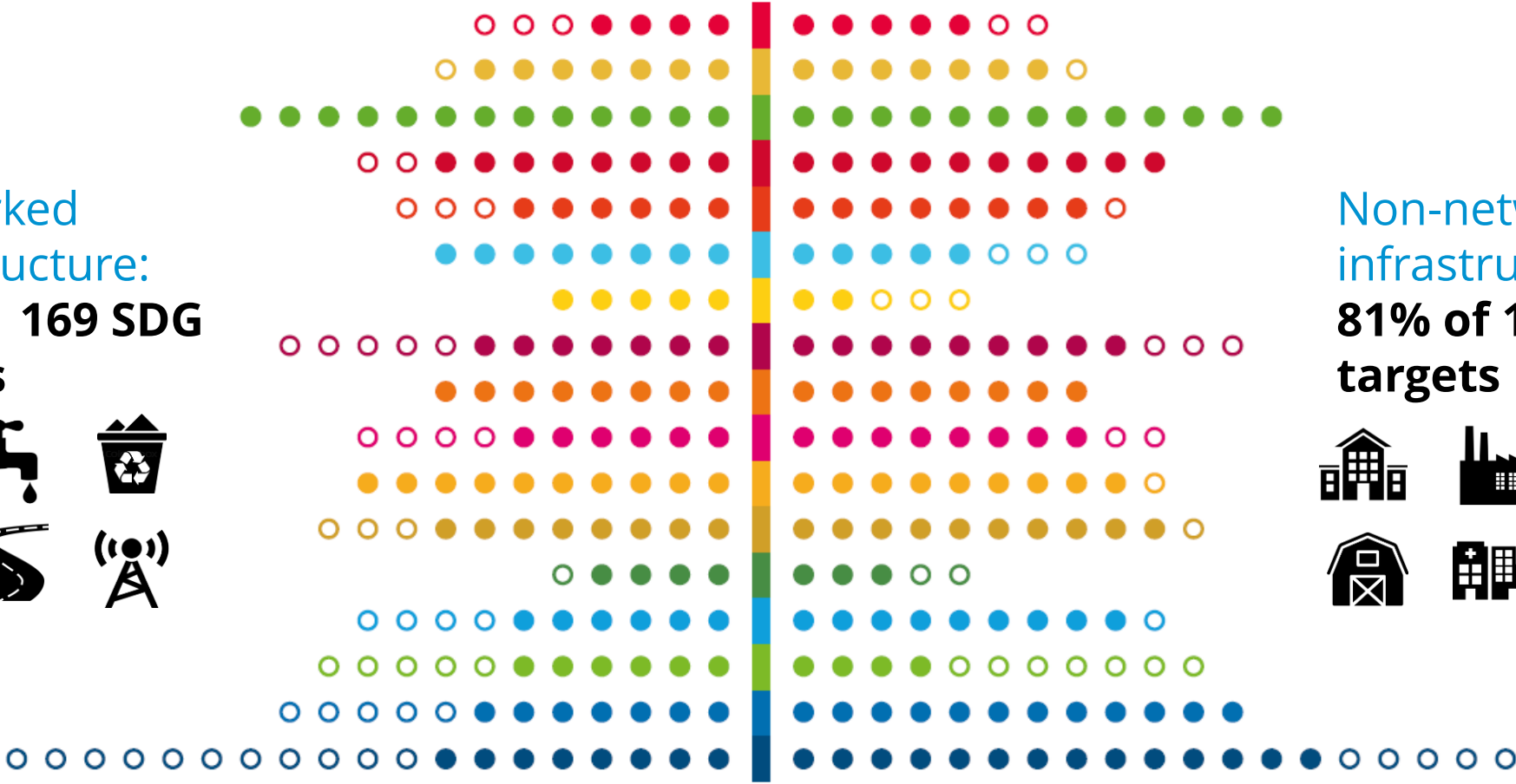
Networked infrastructure influence on targets of the SDGs

Non-networked infrastructure influence on targets of the SDGs

Networked infrastructure:  
72% of 169 SDG targets



Non-networked infrastructure:  
81% of 169 SDG targets



# UNEA Resolution 4/5 on Sustainable Infrastructure

- Member States to “develop and strengthen national and regional systems-level strategic approaches to infrastructure planning”
- UNEP to support Member States to develop sustainable infrastructure as a means of implementing the SDGs
- UNEP to collect and share best practice, building on existing initiatives and identifying knowledge gaps, to assist Member States in promoting and strengthening the sustainability of their infrastructure, and to submit that report to the Environment Assembly at its fifth session



# Scoping Sustainable Infrastructure

## Gaps identified

- Narrow conception of sustainability
- Sustainability usually addressed at the project level, often relying on safeguards connected to financing
- Not much on incorporating sustainability at the “systems-level”



# Sustainable Infrastructure Partnership



**1. Raise awareness**

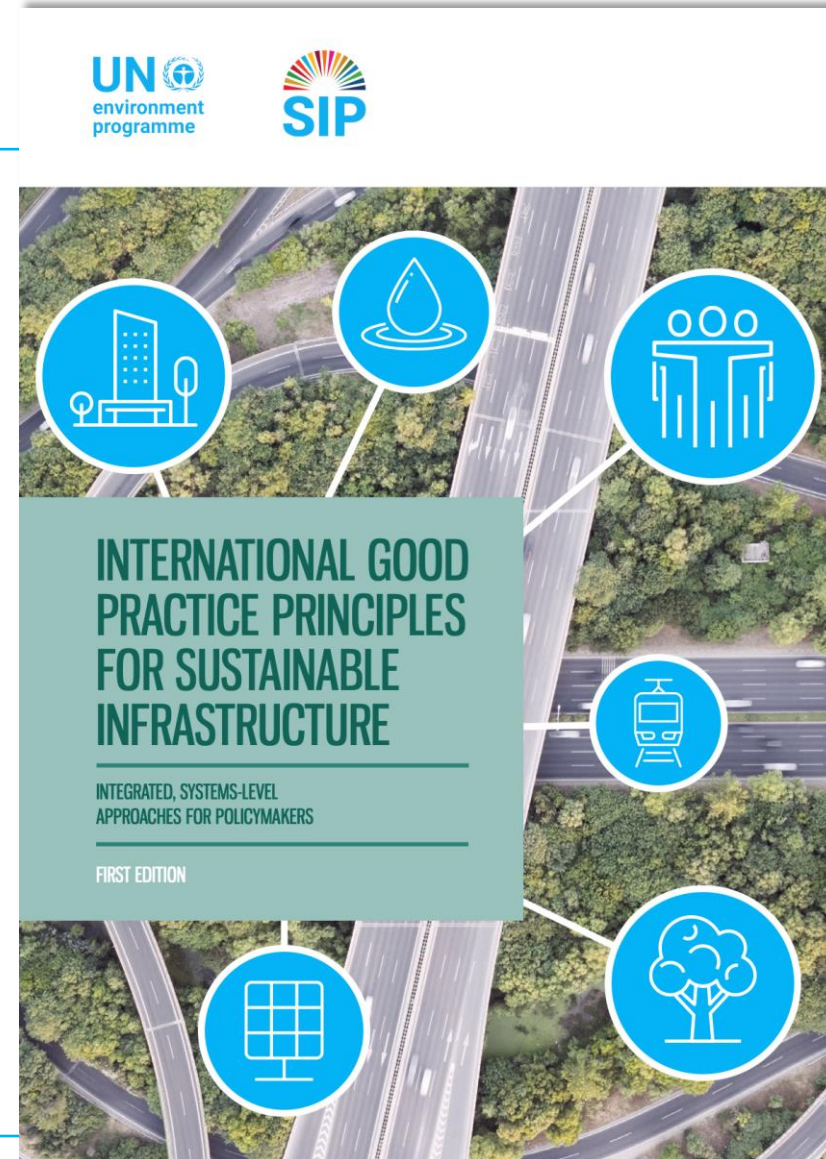
**2. Develop streamlined normative and technical guidance**

**3. Strengthen the technical and institutional capacity of developing countries**

# Good Practice Principles

- 10 principles for policymakers
- Needs-based, systems-level, integrated approaches
- Emphasis on the enabling environment and “upstream” interventions

<https://wedocs.unep.org/bitstream/handle/20.500.11822/34853/GPSI.pdf>



# Infrastructure Systems

## Built Infrastructure



## Natural Infrastructure

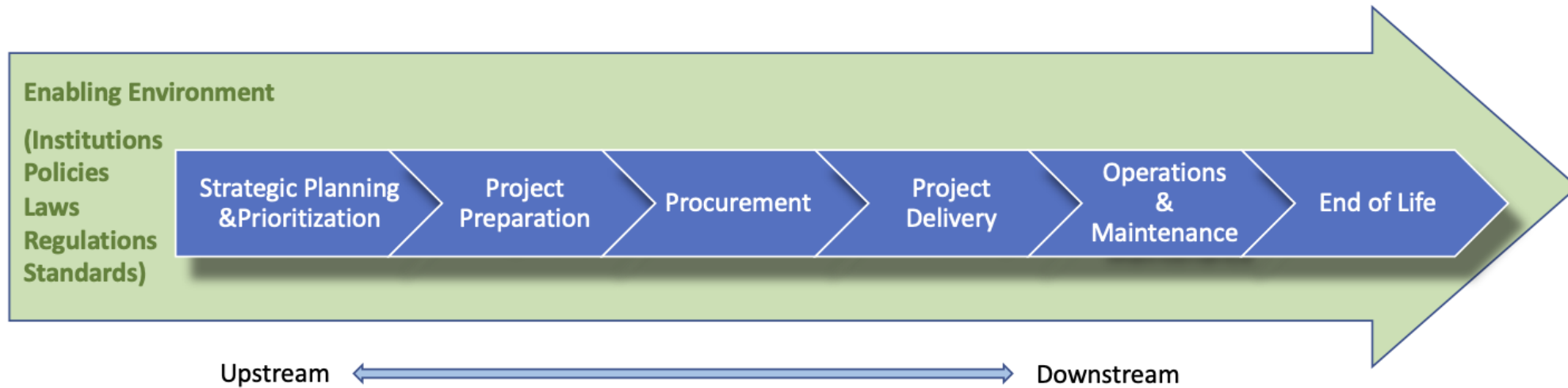


## Hybrid Infrastructure



# Sustainable Infrastructure

**Sustainable infrastructure** systems are those that are planned, designed, constructed, operated, and decommissioned in a manner to ensure economic and financial, social, environmental (including climate resilience), and institutional sustainability over the entire infrastructure lifecycle.

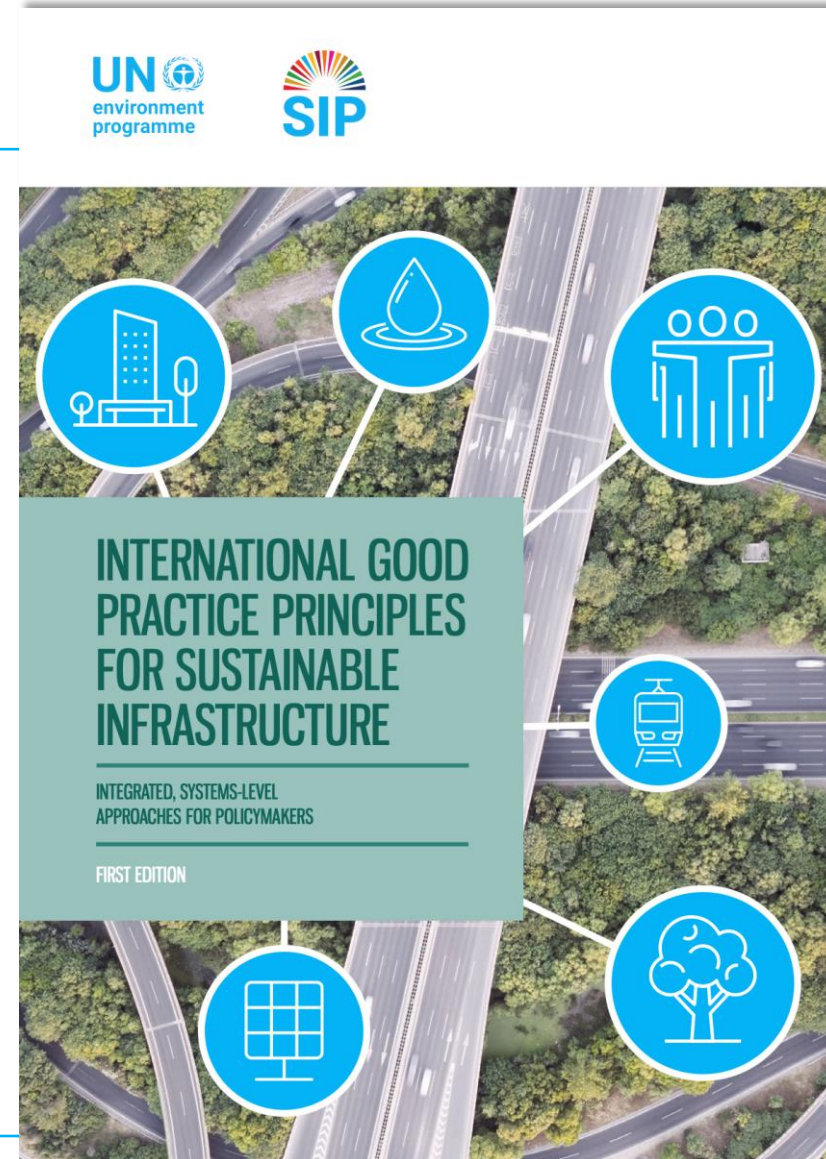


\*This definition is adapted from the Inter-American Development Bank's definition of sustainable infrastructure in: Inter-American Development Bank (IDB). *What is Sustainable Infrastructure? A Framework to Guide Sustainability Across the Project Cycle*. (Washington, DC, IDB, 2018).



# Good Practice Principles

1. Strategic Planning
2. Responsive, resilient, and flexible service provision
3. Comprehensive lifecycle assessment of sustainability
4. Avoiding environmental impacts and investing in natural infrastructure
5. Resource efficiency and circularity
6. Equity, inclusiveness, and empowerment
7. Enhancing economic benefits
8. Fiscal sustainability and innovative financing
9. Transparent, inclusive and participatory decision-making
10. Evidence-based decision-making



# Good Practice Principles

## 1. Strategic Planning

- Base infrastructure development decisions on **long-term strategic planning**
- Align planning with **global sustainable development agendas** (e.g. 2030 Agenda for Sustainable Development)
- Planning should be supported by an **enabling environment** that facilitates **institutional coordination**



# Good Practice Principles

## 2. Responsive, Resilient, and Flexible Service Provision

- Infrastructure planning should be based on clearly identified **service needs**
- Infrastructure planning projects should **promote synergies** for improved connectivity
- **Flexibility and resilience** should be built into infrastructure plans



# Good Practice Principles



## 3. Comprehensive Lifecycle Assessment of Sustainability

- Consider both **financial and non-financial factors** in the analysis of infrastructure options
- Consider the **cumulative impacts** of infrastructure projects
- Assess a **project beyond its immediate vicinity** and take account of transnational impacts

# Good Practice Principles



## 4. Avoiding Environmental Impacts and Investing in Nature

- Choose development sites such that **impacts on biodiversity** from infrastructure development are **minimized**
- **Prioritize nature-based solutions:** Use services that nature provides to **replace or complement** built infrastructure options

# Good Practice Principles

## 5. Resource Efficiency and Circularity

- **Decouple** infrastructure development from resource use, pollution and waste
- Design **principles of circularity** into the entire lifecycle of infrastructure
- Incorporate sustainability criteria into **public procurement processes**



# Good Practice Principles

## 6. Equity, Inclusiveness, and Empowerment

- Infrastructure investment must be **balanced** between social and economic priorities
- Infrastructure should provide **accessible and affordable services equitably to all**
- Infrastructure development should **avoid harm** to communities and users, be safe and protect human rights



# Good Practice Principles



## 7. Enhancing Economic Benefits

- Systematically seek opportunities to **create economic, environmental and social (co)-benefits** from infrastructure development
- Include measures to **optimize employment impacts** in design and procurement strategies and processes for infrastructure
- E.g. : Involve local businesses to create **multiplier effects** on economic benefits in the local community



# Good Practice Principles

## 8. Fiscal Sustainability and Innovative Financing

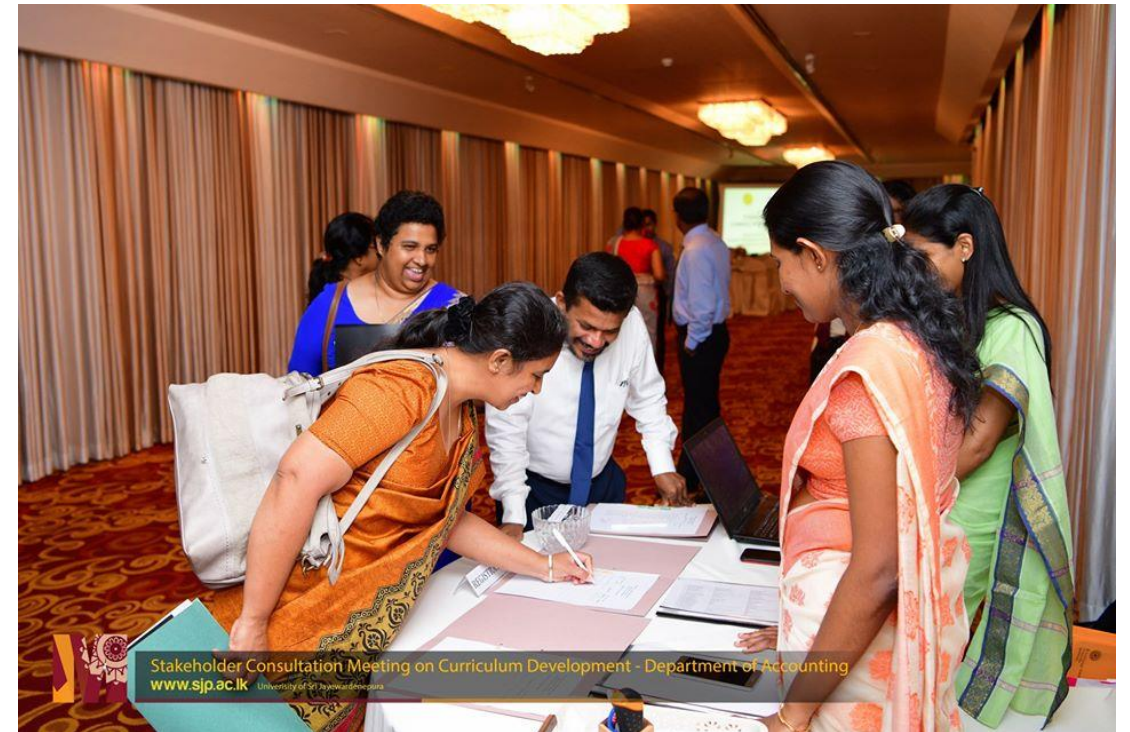
- The results of **debt sustainability assessments** should help to inform the development of sustainable infrastructure investment plans
- **Integrated, systems level** planning is essential for understanding fiscal sustainability across the lifespan of infrastructure
- **Fiscal and financial transparency** are an essential part of sustainability



# Good Practice Principles

## 9. Transparent, Inclusive, and Participatory Decision Making

- **Stakeholder consultations** are essential for the successful implementation of sustainable infrastructure projects
- Need to be **integrated** throughout the infrastructure lifecycle, **identify all affected groups** and **disclose all relevant information**
- **Judicial and non-judicial mechanisms** should be available to respond to stakeholders' grievances



# Good Practice Principles

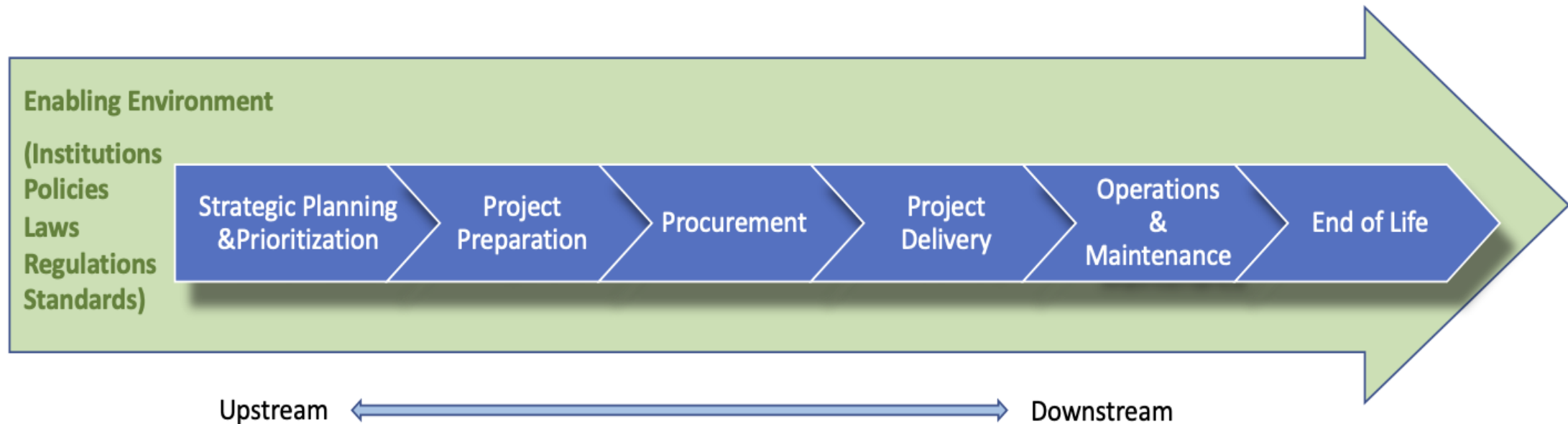
## 10. Evidence-Based Decision Making

- The planning and management of infrastructure throughout the lifecycle should be informed by **key performance indicators**
- **Allocate adequate resources to data collection** to ensure availability of data on all levels and aspects
- **Disaggregate social data** by the various population groups affected by infrastructure, particularly those that are more vulnerable



# Good Practice Principles

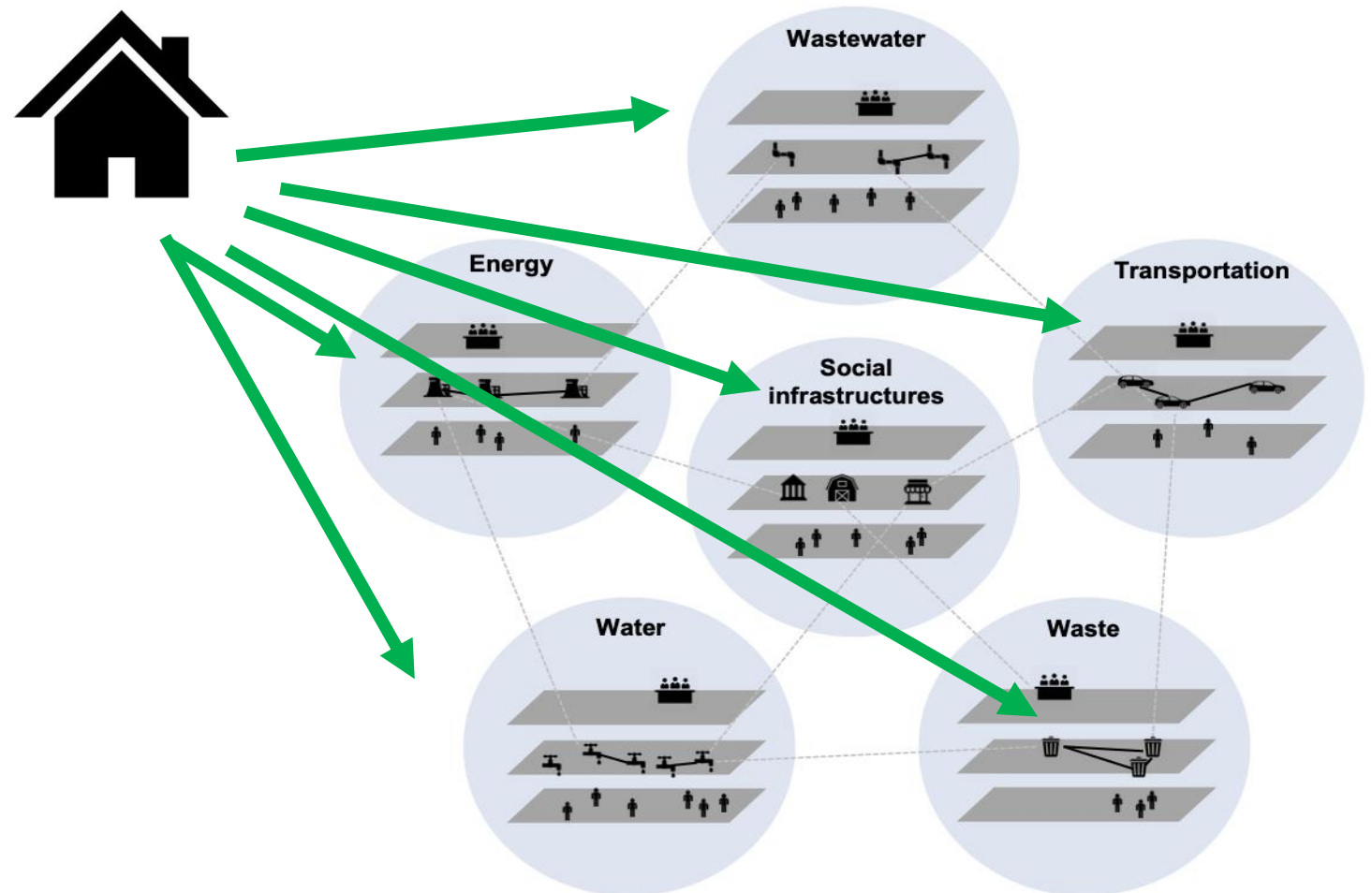
- **Needs-based** = people centered, data and demand driven
- Focused on **systems-level** interventions, emphasis on the early planning phases and enabling environment (institutions, processes, policies)



# Good Practice Principles

- **Integrated approaches:**

- Integration of all aspects of sustainability
- Integration of different infrastructure systems across time and space
- Nature as infrastructure
- Understanding impacts and benefits at the aggregate level
- Integrated governance, policies, and processes



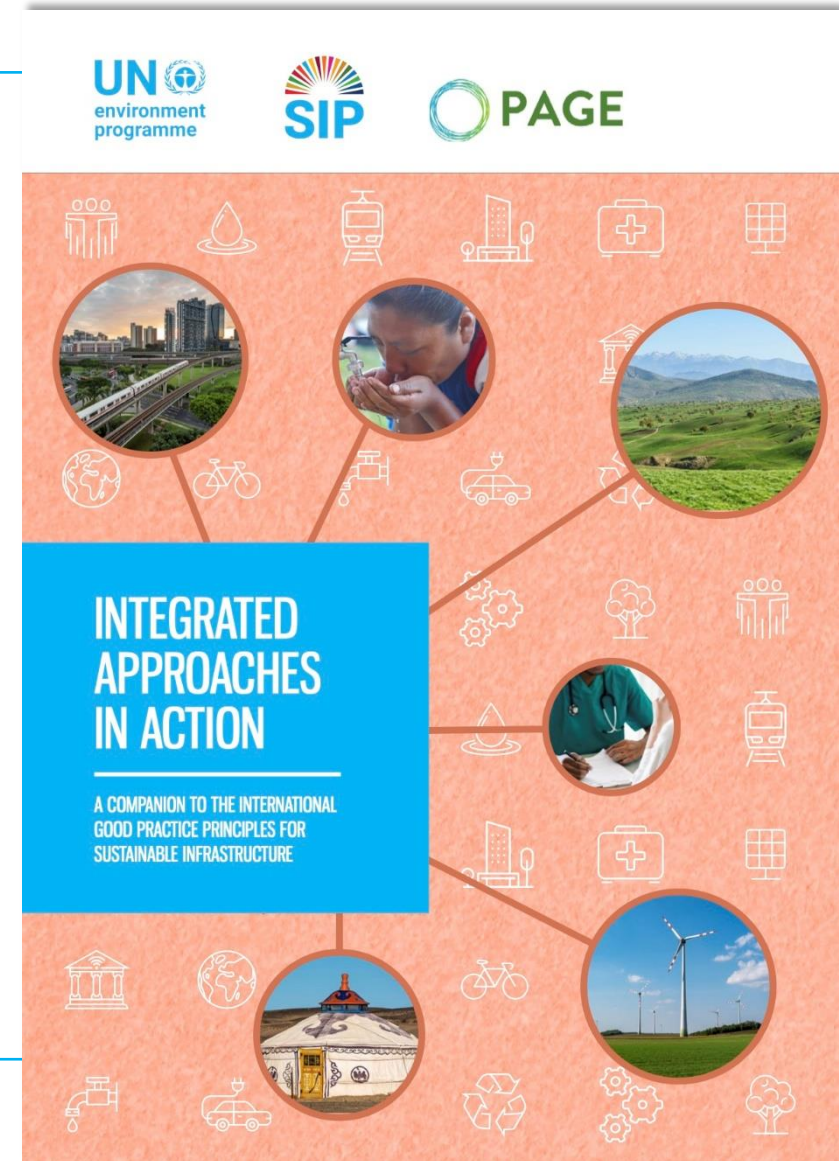
# Benefits of Integrated Approaches

- Aligned with users' needs - delivers more with less
- Optimize the balance between environmental, social, and economic outcomes
- Infrastructure development that strengthens nature's ability to provide services.
- Longer-lasting infrastructure that is flexible and resilient to risks associated with climate change.
- Identification and mitigation of potential risks early in the planning process reduces likelihood of conflict

→ Investing money better

# Integrated Approaches in Action

- 10 case studies from around the world
- Illustrating the Principles
- Case study database



# Integrated Approaches in Action

## Example Case Study: Singapore's Green Buildings

- Case Study illustrating **principle 5** (Resource Efficiency and Circularity)
- Singapore: Densely populated country facing **natural resource constraints**
- 2005: Series of innovations to **integrate environmental sustainability into built infrastructure** – Green Buildings





# Integrated Approaches in Action

## Example Case Study: Key Success Factors

- Buildings incorporate principles of circularity **throughout the lifecycle**
- Use of **sustainable building designs** and **green technologies**
- **Enabling environment:** Strategic policies, incentives and regulations, partnerships



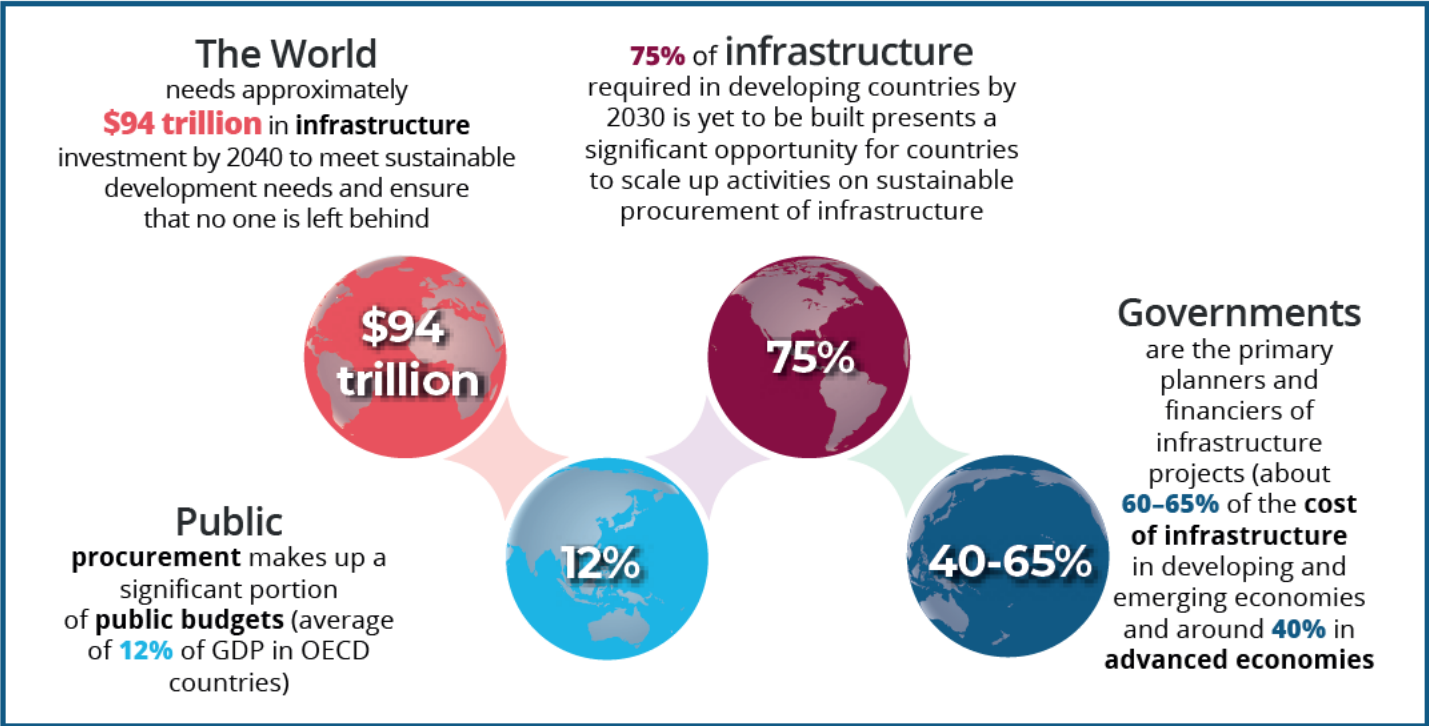
# Sustainable Infrastructure Tool Navigator

- Database of tools
- User friendly navigation interface
- Matching stakeholders with the tools they need



**SUSTAINABLE**  
INFRASTRUCTURE TOOL  
**NAVIGATOR**

# Sustainable Infrastructure and Public Procurement



# Sustainable Infrastructure and Public Procurement

## Towards Sustainable Public Procurement of Infrastructure

- Develop and apply **sustainability criteria** (especially social) for procurement of infrastructure
- Increase **awareness** about SPP tools in developing countries
- Use **certification and rating schemes** for embedding sustainability into infrastructure contracts



# Sustainable Infrastructure and Public Procurement

## Towards Sustainable Public Procurement of Infrastructure

- Use **performance-based specifications** in procurement
- Recognize important role of **funding partners** and **other stakeholders**
- More **coordination**
- Inform procurement by **needs-based integrated, strategic planning** of infrastructure investments



# Thank you



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