Overview of the ESCAP Methodology for the Integration of the SDGs: SDG 6 at the Core

Aneta Nikolova, Environment Affairs Officer, EDPS, EDD and Zulfiya Suleimenova, ESCAP/UNDP Consultant
2030 Agenda - requires integrated policy approaches

“The 17 goals represent an indivisible tapestry of thinking and action that applies in every community everywhere in the world. They are universal…and also indivisible. Though they are presented as individual goals, they actually represent a total, completely intertwined lattice of action that is relevant for every human being everywhere.”

David Nabarro, Under-Secretary General, Special Adviser on 2030 Agenda
The 2030 Agenda for SD with Emphasis on SDG 6
ESCAP Methodology for Integration of the SDGs into National Planning
Interlinkages of SDG 6 with other SDG targets
Achieving the SDGs require shifts in implementation strategies.

- The achievement of SDGs requires fundamental transformations at all levels.
- Beyond finance, a much more comprehensive means of implementation needs to be mobilized to enable implementation.
- Meaningful stakeholder engagement will be critical in achieving the SDGs.
- There is an urgent need for integrated policy approaches.
ESCAP Methodology supporting the Implementation of the 2030 Agenda
“A system is a set of related components that work together in a particular environment to perform whatever functions are required to achieve the system’s objective”

-Donella Meadows-
System Thinking

- System mindsets are needed for dealing with complex problem solving
- 4 fundamental concepts:
  - INTERCONNECTEDNESS
  - SYNTHESIS
  - FEEDBACK LOOPS
  - CASUALITY
**Analysis**

Is about dissection of complexity into manageable components. Analysis fits into the mechanical and reductionist worldview, where the world is broken down into parts.

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**Synthesis**

sees the interconnectedness

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**Synthesis**

Is about understanding the whole and the parts at the same time, along with the relationships and the connections that make up the dynamics of the whole.
The Tools of Systems Thinking
The Tools of Systems Thinking

Positive CAUSAL linkage

Negative CAUSAL linkage

Delay marker

Reinforcing (or "positive") feedback loop

Balancing (or "negative") feedback loop

Feedback loop indicators
CAUSALITY

To understand the feedback loops we need to gain perspective of causality: how one thing results in another thing in a dynamic and constantly evolving system.

The cause and effect concept in system thinking is about being able to understand the way things influence each other in a system (on agency, feedback loops, connections, and relationships).
System mapping

Systems mapping is one of the key tools of the systems thinker.
## System Dynamics vs. Strategic Intervention

<table>
<thead>
<tr>
<th>System Dynamics</th>
<th>Strategic Intervention</th>
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<tbody>
<tr>
<td>System is stagnant or stalled</td>
<td>• Look for constraints</td>
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<tr>
<td>Vicious cycles</td>
<td>• Identify “brakes”</td>
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<tr>
<td></td>
<td>• Examine intervention points to return process to virtuous cycle</td>
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<tr>
<td>Reinforce virtuous feedback cycles</td>
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<tr>
<td>Find the strongest feedback structure operating then review the implications and generic leverage points.</td>
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<td>Examine each link and consider the consequences of strengthening it or weakening it</td>
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Addressing Trade-offs through Systems Thinking
### Examples of Addressing the Trade-Offs

<table>
<thead>
<tr>
<th>Tradeoff source/ Questions to be asked</th>
<th>Strategic intervention</th>
<th>Example</th>
</tr>
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</table>
| **1. Valuation Gap**  
What are the values which are impacted positively and negatively but are not recognized? | Internalize social and economic values in economic decision-making - market interventions, financial and other incentives | Tax/subsidy reform & recycling of savings/revenue  
Global carbon markets  
Payments for ecosystem services |
| **2. Time Gap**  
What are the time horizons of stakeholders in the different dimensions – how do they differ? How can the short-term time horizons be lengthened? | Change stakeholder time horizons - policy/financing interventions | Tax/subsidy reform & recycling of savings/revenue  
Green accounting |
| **3. Information Gap**  
What types of information can influence consumer choices and preferences?  
What scientific uncertainties need to be addressed?  
What are the economic benefits of social and environmental investments? | Strengthen integrated analysis, science-policy interface | Eco-labelling  
Green accounting |
| **4. Governance Gap**  
Who are the stakeholders?  
Which are excluded from participation in decision-making?  
How can common interests be capitalized upon, or differences bridged through governance interventions?  
What relevant environmental, social and economic limits need to be defined and implemented in policy? | Strengthen provisions related to social justice, environmental protection, set policy targets, standards and codes of conduct that acknowledge environmental limits, establish social protection floors | Viet Nam green growth strategy  
Central bank green finance initiative – Bangladesh  
Green accounting |
| **5. Policy Making Gap**  
What are the reasons behind the inertia of policy-making? | Strengthen technical and information capacity about integrated approaches | Systems-thinking applied to policy-making |
Creating Synergies during Public Policy Cycle
Aspirational Envisaging Policy Cycle

1. Aspirational Envisioning of SD Future
   Systems diagram

2. Identify Stakeholders
   Stakeholder map

3. Create Systems Diagram
   Baseline system model/ causal loop design

4. Systems Model
   Leverage points

5. Qualitative Modeling
   Apply data to qualify the causal effects

6. Adjustment of the Aspirational Model
   Connect to aspirational model
Developing causal Loop Diagram based focused on SDG 6 targets
Developing causal Loop Diagram based focused on SDG 6 targets
Target 6.b – Support and strengthen the participation of local communities in improving water and sanitation management.

Fourth most inter-linked target:
Direct causal inter-linkages with 48 other targets from 14 SDGs;
Indirectly linked with another 28 targets;
Directly driven/influenced by 27 other targets and is a key driver / influencer of 21 other targets;
Most strongly influenced by SDG 5, 16, and 17
Has the most direct influence on SDG 1, 6, 11, 12, 13, and 14.
DONELLA MEADOWS’ 12 LEVERAGE POINTS FOR SYSTEM INTERVENTION

CONSCIOUSNESS

SOCIAL

INFORMATIONAL

PHYSICAL

Levels: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Small problem solving force

High leverage point

Large effect on system behavior
High Leverage points for SDG 6.3 target

- **Target 1.1**: Important in ensuring effective and efficient water management, which is crucial for achieving sustainable water.
- **Target 6.4**: Focuses on water use efficiency, which is vital for water quality and sustainability.
- **Target 11.3**: IWRM and Public Participation are key for achieving sustainable water.
- **Target 17.1**: Crucial for sustainable financing and resource mobilization.
- **Target 9.1/9.4**: Essential infrastructure in urban commercial, residential, and industrial sectors, including water treatment and infrastructure.
- **Target 2.1/2.2**: Provides health and productive population for sustainable development.
- **Target 1.3**: Focuses on social protection floors, important for human wellbeing.
- **Target 6.3**: Ultimate target and indicator for sustainability, considering GDP and human health.
- **Target 4.7**: Highest impact leverage for long-term human sustainability.
Lessons learned from the quantitative modelling

**Globally Agreed Indicators:** These are linear and were created to measure the progress of individual targets or aspect of these. These do not support sufficiently analysis of inter-linkages. Since the SDGs are viewed as one indivisible whole, additional variables that reflect inter-linkages and integration may need to be identified.

** Availability of Data:** While a substantive amount of data is available, there are some gaps within the data, which has cased inconclusive results. In order to improve upon our findings new data would need to be produced. (E.g. 6.3 Annual treatment of wastewater flows.)

**Water Storyline:** Unfortunately, several SDG indicators were not tailored for the water context and therefore, do not fit our storyline. Although secondary indicators (e.g. World Bank) were identified, which fit the storyline, they are not globally-agreed.

**Systems-Thinking:** The analytical framework is addressing inter-relationships based on causality and can be a valuable tool for policy makers to identify the leverage points for most effective interventions.
Transformation towards Sustainable and Resilient Societies
Low Carbon Green Growth-transformation to the New Climate Economy
The Way Forward

Integrated SDG planning with transformative stakeholder engagement

Sustainable financing, including for climate resilient development and infrastructure

Integrated planning to optimize resources; scale up the use of nature-based solutions, including green and blue infrastructure in urban and peri-urban areas

Circular economy approaches to reduce waste and address pollution issues

Low carbon green growth/new climate economy for sustainable development
ESCAP Knowledge Products

Integrating the Three Dimensions of Sustainable Development: A Framework and Tools
http://www.unescap.org/sites/default/files:Integrating%20the%20three%20dimensions%20of%20sustainable%20development%20framework.pdf

Analytical Framework for Integration of Water and Sanitation SDGs and Targets Using Systems Thinking Approach

Integrated Approaches for Sustainable Development Goals Planning: The Case of Goal 6 on Water and Sanitation
http://www.unescap.org/publications/integrated-approaches-sustainable-development-goals-planning-case-goal-6-water-and

Low Carbon Green Growth Roadmap for Asia and the Pacific

E-Learning Course: Low Carbon Green Growth Roadmap
https://sdghelpdesk.unescap.org/e-learning/Low-Carbon-Green-Growth-Roadmap

E-Learning Course: Integration of SDG Into National Planning
https://sdghelpdesk.unescap.org/e-learning/Integration-SDGs-into-National-Planning-course
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