Mapping interactions between Sustainable Development Goals

Pilot study

Niall O’Connor
Stockholm Environment Institute
Principles for the Sri Lanka pilot study

- Co-Creation & Government-led process.
- Responsiveness to the national policy community’s priorities.
- Support interagency dialogue on SDG targets.
- Support Agenda 2030 policy coherence.
- Added value for national policy planning and budgeting.
Why care about multi-stakeholder partnerships?

1. Coherent policies and strategies are more effective.

2. If you want policy coherence, you need to know how the pieces fit together.

3. Inducing valuable policy dialogue and learning processes.

4. Knowing your friends and foes – who should you cooperate with and who do you need to negotiate with?

5. More bang for your buck – where can you get the most impact and knock-on effects?
A G A U I D E TO SDG INTERACTIONS: FROM SCIENCE TO IMPLEMENTATION

Interactions and science-management agency (such as the FAO, the UN Environment Programme, regional fisheries management organizations, and scientdataGridView)

Mitigating losses of biodiversity and oceans have been at the heart of fisheries management policies. In this view, these should be a much stronger emphasis on human health. This would mean recent trends in agricultural policy that respond to the health needs of the population.

These policy changes are possible. We believe that improvements in fisheries management and marine conservation can serve as nutritional food systems.

A meta-analysis of nearly 5,000 fisheries worldwide found that applying sound management reforms to global fisheries could increase catch by more than 10%.

Without these changes, the health of the world is at risk.

Christopher D. Golden is a research scientist at the Harvard T.H. Chan School of Public Health, and an associate director of the Harvard Health Alliance for the Environment.

Matthew Smith, Bupa Yatkin, Derek Geller and Samuel S. Myers - email: goldenknap@harvard.edu


Map the interactions between Sustainable Development Goals

Mans Nilsson, Dave Griggs and Martin Visbeck

Next month in New York, the United Nations’ 2030 Agenda on Sustainable Development will have its first global progress review. Adopted by the UN General Assembly in 2015, the agenda represents a new coherent way of thinking about how issues as diverse as poverty, education and climate change fit together; it connects economic, social and environmental targets in 17 Sustainable Development Goals (SDGs) as an “indivisible whole” (IPBES 2018). Implicating the SDG logic is that the goals depend on each other — but no one has specified exactly how. International negotiations gloss over this delicate balance. While balancing interests and priorities is what policy makers do — and the need will continue when the goals are being implemented, it countries ignore the interlinkages and simply try tying to tick off targets one by one, they risk perverse outcomes. For example, using coal to improve energy access (goal 7) in Asia
### GOALS SCORING
The influence of one Sustainable Development Goal or target on another can be summarized with this simple scale.

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Name</th>
<th>Explanation</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>+3</td>
<td>Indivisible</td>
<td>Inextricably linked to the achievement of another goal.</td>
<td>Ending all forms of discrimination against women and girls is indivisible from ensuring women’s full and effective participation and equal opportunities for leadership.</td>
</tr>
<tr>
<td>+2</td>
<td>Reinforcing</td>
<td>Aids the achievement of another goal.</td>
<td>Providing access to electricity reinforces water-pumping and irrigation systems. Strengthening the capacity to adapt to climate-related hazards reduces losses caused by disasters.</td>
</tr>
<tr>
<td>+1</td>
<td>Enabling</td>
<td>Creates conditions that further another goal.</td>
<td>Providing electricity access in rural homes enables education, because it makes it possible to do homework at night with electric lighting.</td>
</tr>
<tr>
<td>0</td>
<td>Consistent</td>
<td>No significant positive or negative interactions.</td>
<td>Ensuring education for all does not interact significantly with infrastructure development or conservation of ocean ecosystems.</td>
</tr>
<tr>
<td>−1</td>
<td>Constraining</td>
<td>Limits options on another goal.</td>
<td>Improved water efficiency can constrain agricultural irrigation. Reducing climate change can constrain the options for energy access.</td>
</tr>
<tr>
<td>−2</td>
<td>Counteracting</td>
<td>Clashes with another goal.</td>
<td>Boosting consumption for growth can counteract waste reduction and climate mitigation.</td>
</tr>
<tr>
<td>−3</td>
<td>Cancelling</td>
<td>Makes it impossible to reach another goal.</td>
<td>Fully ensuring public transparency and democratic accountability cannot be combined with national-security goals. Full protection of natural reserves excludes public access for recreation.</td>
</tr>
</tbody>
</table>
A quantitative network analysis on the scores produced provide an analysis of interactions between targets and captures both direct and indirect impacts on SDG targets. It provides a more robust ranking of the most impactful targets, and develops a useful visualisations of the relationships between targets.
The Interactions Matrix: First Order Impacts

Influenced Targets

Influencing Targets

Most positively influencing targets

16.6 Effective institutions

12.1 Sustainable consumption/production

8.4 Resource efficiency
Both directions
Fig 4: Sub-network of indivisible (+3) interactions. Directed as shown by arrows. The size of the nodes (targets) are proportional to the degree of influence (out-degree) with bigger nodes representing more influential nodes. The color is proportional to the degree of being influenced with darker color for nodes more influenced by other nodes.
### Identifying the most influential targets

<table>
<thead>
<tr>
<th>RANK</th>
<th>TARGET</th>
<th>NET INFLUENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>16.6</strong> Effective institutions</td>
<td>567</td>
</tr>
<tr>
<td>2</td>
<td><strong>12.1</strong> Sustainable consumption/production</td>
<td>513</td>
</tr>
<tr>
<td>3</td>
<td><strong>8.4</strong> Resource efficiency</td>
<td>509</td>
</tr>
<tr>
<td>4</td>
<td><strong>12.5</strong> Waste</td>
<td>381</td>
</tr>
<tr>
<td>5</td>
<td><strong>9.5</strong> Research/development</td>
<td>364.5</td>
</tr>
<tr>
<td>6</td>
<td><strong>4.4</strong> Technical/vocational skills</td>
<td>364</td>
</tr>
<tr>
<td>7</td>
<td><strong>5.5</strong> Women’s participation</td>
<td>362.5</td>
</tr>
<tr>
<td>8</td>
<td><strong>8.5</strong> Employment</td>
<td>351</td>
</tr>
<tr>
<td>9</td>
<td><strong>9.4</strong> Infrastructure</td>
<td>349.5</td>
</tr>
<tr>
<td>10</td>
<td><strong>7.3</strong> Energy efficiency</td>
<td>322</td>
</tr>
</tbody>
</table>

How is the approach useful for policy-makers?

• Identify “accelerator interventions” and critical clashes.
• Identify resource effective options:
  – Potentially dedicate more resources than planned to the most impactful targets (both positive and negative).
  – Potentially dedicate less resources than planned to the most impacted targets.
• Inducing partnership policy dialogue and partnerships.
• Greater guidance for coherent policies.
• Priority setting - identify subsets of targets that unlock progress in many other targets
• Mitigation in areas where critical trade-offs exist;
• Partnership coordination, learning and dialogue.
• Knowledge to support the development of robust and coherent strategies for comprehensive SDG implementation even with limited data.
Key learning from pilot, and for business

- Ensure the working group’s ownership of the overall process.
- Ensure that selected targets are highly relevant to the national context and national policies.
- Ensure that the three dimensions of sustainability are covered by the selection.
- Plan for a number of targets that will be manageable in the scoring process.