New Economics for Sustainable Development

Global trends and the SDG Framework:

Data needs and issues

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Shanghai, China
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Main Messages

• Trends in globalization, technology, inequalities and climate change have far reaching consequences for societies … need to revisit conventional thinking

• Strong economic performance has not been people and planet friendly … need to think beyond GDP

• Adoption of SDG framework is a step in the right direction … need change in mindset for its effective implementation

• Implementation of SDG framework require additional investments and policy actions … need comprehensive financing strategies and integrated policy frameworks

• Available data shows that all SDGs will be missed in 2030 at current progress … need more and better data
1. Major Global Mega Trends

Globalization, Technology, Inequalities, and Climate Change
Unlike advanced countries, Asia-Pacific developing countries remain positive about globalization …

... but some aspects of globalization have been excessive; e.g. cross-border financial flows

Rapid technological advancements have boosted economic growth and productivity...

Source: ESCAP
...but new **technologies** also bring new risks and challenges

- **Financial technologies** (FinTech)
  - Digital payment platforms could undermine central banks’ ability to influence money demand and supply
  - Without prudent regulations, online financial transactions could pose higher default risks or be used for illicit activities

- The potential impact of **artificial intelligence (AI) and automation** on job losses, especially low-skilled.
Overall *between-country inequality* in Asia-Pacific declined in recent years …

Source: ESCAP.
... but within-country income inequality has risen in Asia-Pacific

Source: ESCAP.
Environmental degradation: Global CO$_2$ emissions have increased dramatically.

Annual CO$_2$ emissions in billion tonnes (GT)

Source: Carbon Dioxide Information Analysis Centre (CDIAC).
2. Going Beyond GDP

Thinking about alternatives

“GNP measures everything, except that which makes life worthwhile”

Robert F. Kennedy
Growth moderated in 2018 but outlook remains broadly stable

Source: ESCAP and DESA
Growth moderated in 2018 but outlook remains broadly stable

Global and regional growth

Source: ESCAP and DESA
Stable economic conditions provide an opportunity to raise our ambitions beyond GDP

“critics indict both economic science and economic policy for blind obeisance to aggregate material ‘progress’, and for neglect of its costly side effects. Growth, it is charged, distorts national priorities, worsens the distribution of income, and irreparably damages the environment”

William Nordhaus and James Tobin, 1972
Focusing on economic growth alone has come at a cost to social inclusiveness…

Average income in Asia
1980 = 100

Source: World Inequality database.
The region witnessed the sharpest increase in premature deaths as a result of ambient air pollution between 1990 and 2015.
In 2017, carbon emissions from Asia-Pacific consumption of oil, gas and coal alone rose to nearly 49 per cent of the world total.
Climate disasters

The Asia Pacific region lost assets worth $1.3 trillion as a result of floods, storms, droughts, earthquakes and tsunamis in 1970-2016.
Thinking beyond GDP: understanding theoretical reasons for its popularity

• Preoccupation with GDP is rooted in the belief that:
  • maximization of consumption or income is a principle goal of individual human activity and source of utility or satisfaction;
  • society’s welfare can be evaluated by considering the sum total of utilities of all individuals; and
  • there is agreement in a society on such a welfare criterion.
Thinking beyond GDP: examples of some alternatives

- UNDP’s Human Development Index (HDI)
  - not only extends the dimensionality - simultaneous focus on GDP per capita, education and life expectancy – but also attempts to capture the diminishing importance of income with increasing GDP.

- OECD’s framework for measuring well-being and progress,
  - based on the recommendations of the Stiglitz-Sen-Fitoussi led Commission in 2009, is built around three distinct domains of a society’s welfare: material conditions, quality of life and its sustainability over time.
Thinking beyond GDP: examples of some alternatives

- **Inclusive Wealth Indicator (IWI)**
  - based on the high-level panel set up by UN-SG in 2012. The social welfare in the IWI framework is defined as private consumption adjusted for income inequalities; public services consumed by households; and environment services adjusted for pollution, exhaustion of fossil resources and damages to biodiversity.

- **The 2030 Agenda for Sustainable Development**
  - Endeavors to pursue multi-dimensional human wellbeing, social inclusiveness and environmental sustainability. It includes 17 Sustainable Development Goals that form a shared vision of humanity – people, planet, prosperity, peace, and partnership.
The SDG framework: Need to go beyond the system of national accounts

• SDGs emphasize synergies across economic, social and environmental dimensions of development.

• GDP measures economic activity, but does not reflect peoples well-being and environment aspects.

• A need for ‘physical’ accounts to complement traditional ‘monetary’ accounts
  • A platform to integrate economic, social and environment statistics
  • Comprehensive view, e.g. all natural inputs, whole ocean, and all uses and users.
The journey on economic statistics and environmental-economic accounts

1925: Beginning of CPI standards
1947: Beginning of the SNA
1948: First Bop manual published
1945: First "Labour Force Survey" recorded
1960: First SNA revision based on national experience
1964: Second SNA revision (consistent with Bop manual)
1968: Third SNA revision (more comprehensive in scope)
1993: First SEEA "Handbook of National Accounting: Integrated Environmental and Economic Accounting"
2003: SEEA revised based on national experience
2008: SNA 2008 links to SEEA for understanding importance of nature to the economy
2012: SEEA CF becomes the second international statistical standard (after SNA)
2013: FDES expanded, linked to SEEA and included extreme events and human health
2014: SEEA EEA published: based on the premise that nature is more than a source of commodities, it’s also a source of important regulation and cultural services
2017: UN-ECE (CES) publishes “a set of key climate change-related statistics using the SEEA” as one of SEEA applications
2018: UNWTO publishes a technical note linking the Tourism Satellite Account (TSA) and the SEEA
2019: ESCAP drafts Ocean Accounts Framework, which links SNA, SEEA-CF and SEEA-EEA to guide measurement on the sustainable use of the ocean
3. Pursuing the SDG Framework

Examples from ESCAP
Implementing the SDG Framework: Perspectives from two recent ESCAP publications

Estimating SDG investment needs
(*Economic and Social Survey of Asia and the Pacific 2019*)

Financing strategies

Implementation

Tracking SDG progress
(*Asia and the Pacific SDG Progress Report 2019*)
3.1 Estimating SDG investment needs

Methodologies and data issues
Framework to estimate SDG investment requirements: An example from ESCAP

Considered five major investment areas:

1. **People**: Achieve basic human rights through no poverty and hunger (Goals 1 and 2);

2. **Capacity development**: Human capacities through health, education and gender (Goals 3, 4, 9, 11, and 15);

3. **Secure humanity’s future through clean energy and climate action (Goals 7 and 13); and**

4. **Transport, ICT and water and sanitation (Goals 6, 9, 11, and 17);**

5. **Live in harmony through sustainable consumption and production, and biodiversity (Goals 8, 12, 14, and 15).**
From 17 Goals to 5 investment areas and 3 dimensions… spanning people, prosperity and the planet …
General methodology

• Builds on costing models used by specialized agencies in their respective area of work
  • DESA, FAO, IEA, ILO, UNCTAD, UNDP, UNESCO, UNICEF and WHO

• **Intervention- and unit cost**-based costing for most social and infrastructure sectors

• **Integrated models** for energy and the environment

• Aggregation issues
Data requirements for estimating SDG investment needs

• Data on SDG targets and indicators
  • e.g. poverty incidence, malnutrition, household spending on education, etc

• Current spending or investment flows, from public and private sources

• Long-term projections of key variables, e.g. population, GDP and urbanization rate.

• Detailed administrative data to compute the unit costs of interventions needed.

• Time-series data help create future scenarios.
### Data availability on SDG areas vary notably

Number of Asia-Pacific countries with available data for each SDG costing area

<table>
<thead>
<tr>
<th>Category</th>
<th>Countries with Available Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>People</strong></td>
<td></td>
</tr>
<tr>
<td>Poverty gap transfers</td>
<td>25</td>
</tr>
<tr>
<td>Social protection floor</td>
<td>24</td>
</tr>
<tr>
<td>Agriculture</td>
<td>16</td>
</tr>
<tr>
<td>Nutrition</td>
<td>17</td>
</tr>
<tr>
<td>Education</td>
<td>37</td>
</tr>
<tr>
<td>Health</td>
<td>19</td>
</tr>
<tr>
<td><strong>Prosperity</strong></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>47</td>
</tr>
<tr>
<td>ICT</td>
<td>47</td>
</tr>
<tr>
<td>Water and sanitation</td>
<td>47</td>
</tr>
<tr>
<td><strong>Planet</strong></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>45</td>
</tr>
<tr>
<td>Climate change</td>
<td>47</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>0</td>
</tr>
<tr>
<td>Resource efficiency</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note: The number of countries with available data varies significantly across different SDG areas.*
Data issues for estimating SDG investment needs

• Some SDGs do not have numerical targets.

• For SDGs without an internationally agreed numerical target, a target value relies on national consultation.

• Establishing a baseline on current spending for some SDG sectors is challenging, e.g.
  • Public spending on vocational training, biodiversity and ecosystems
  • Capital and recurrent expenditures on transport, ICT, energy, water and sanitation

• Large data gaps for small island developing States
3.2 Estimating SDG investment needs:

Results
Survey 2019 estimates an investment gap of $1.5 trillion per year or 5% of GDP for developing Asia-Pacific …
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... or ≈ $1 per person per day

It's within reach!

- **Clean Energy for All**: 37¢
- **Protection for Nature**: 12¢
- **No Poverty & Zero Hunger**: 43¢
- **Health and Education**:

**Sustainable Infrastructure for All**
Investing in **PEOPLE** to realize basic human rights and human capacities

- Universal access to quality education
- Universal health coverage
- Agricultural productivity
- Nutrition-specific interventions
- Social protection floor
- Targeted cash transfer

![Chart showing additional investment in people per year (billions of US dollars)]
Investing in **PLANET** to secure our future through clean energy and climate action and living in harmony with nature

- Biodiversity
- Energy efficiency
- Renewable energy
- Universal access to clean cooking
- Universal access to electricity

**Additional investment in the PLANET per year**

- **242 billion**, United States dollar
- **180 billion**
- **156 billion**
- **2 billion**
- **10 billion**
Investing in PROSPERITY to improve access to infrastructure

- Water and sanitation
- Information and communications technology
- Transport

Additional investment in the PROSPERITY per year

<table>
<thead>
<tr>
<th>Billion, United States dollar</th>
<th>Additional Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>126</td>
</tr>
<tr>
<td>20</td>
<td>56</td>
</tr>
<tr>
<td>180</td>
<td>14</td>
</tr>
</tbody>
</table>

UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific
Investment gap varies significantly across the region, rising to 16% of GDP in LDCs and 10% in South Asia.

Similarly, Pacific SIDS face steep challenges due to high vulnerability to climate change, but results are not shown given limited data availability.
3.3 Tracking SDG progress in Asia-Pacific
How much progress has been made in Asia-Pacific on 17 SDGs?

<table>
<thead>
<tr>
<th>SDG Number</th>
<th>SDG Title</th>
<th>2000 Progress</th>
<th>2018 Progress</th>
<th>Target 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No poverty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Zero hunger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Good health and well-being</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>Quality education</td>
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<tr>
<td>5</td>
<td>Gender equality</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>Clean water and sanitation</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Affordable and clean energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Decent work and economic growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Industry, innovation and infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Reduced inequalities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Sustainable cities and communities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Responsible consumption and production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Climate action</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Life below water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Life on land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Peace, justice and strong institutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Partnership for the goals</td>
<td></td>
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</tr>
</tbody>
</table>

Legend:
- Red: Regress since 2000
- Blue: Progress since 2000
- Gray: Progress needed to achieve target in 2030
- Green: Low number of indicators used
- Pink: Evidence strength
How far will Asia-Pacific be from SDG targets by 2030?

| Goal 1 | 1.1 International poverty | 1.2 National poverty mobilization | 1.5 Resilience of vulnerable
| Goal 2 | 2.1 Food security | 2.2 Malnutrition | 2.3 Agricultural productivity | 2.4 Sustainable food production
| Goal 3 | 3.1 Maternal mortality | 3.2 Neonatal & child mortality | 3.6 Road traffic accident | 3.8 Health coverage | 3.3 Communicable diseases
| Goal 4 | 3.4 NCD & mental health | 3.7 Sexual & reproductive health | 3.9 Health impact of pollution | 3.5 Substance abuse
| Goal 5 | 4.1 Effective learning outcome | 4.2 Early childhood development | 4.3 TVET & tertiary education | 4.5 Equal access to education
| Goal 6 | 4.6 Adult literacy & numeracy | 4.5 Qualiﬁed teachers |
| Goal 7 | 6.2 Sanitation & hygiene | 6.1 Safe drinking water | 6.4 Water-use efficiency | 6.6 Water-related ecosystems
| Goal 8 | 7.1 Access to energy services | 7.2 Renewable energy |
| Goal 9 | 8.1 Per capita economic growth | 8.2 Economic diversiﬁcation &
| Goal 10 | 8.8 Labour rights | 8.5 Employment & decent work |
| Goal 11 | 8.10 Capacity of ﬁnancial institutions | 8.4 Global resource efﬁciency |
| Goal 12 | 9.1 Infrastructure development | 9.2 Industrialization |
| Goal 13 | 9.4 Upgrade infrastructure | 9.5 Research & tech capabilities |
| Goal 14 | 9.9 Access to ICT | 9.6 Domestic technology |
| Goal 15 | 11.1 Housing & basic services | 11.2 Transport systems |
| Goal 16 | 11.6 Air quality & waste management | 11.5 Resilience to natural disasters |
| Goal 17 | 11.7 Sustainable use of natural resources | 11.8 Managing chemicals & wastes |
| Goal 18 | 12.4 Managing chemicals & wastes | 12.5 Environmental management |
| Goal 19 | 13.1 Resilience & adaptive capacity | 13.3 Climate change policies (national) |
| Goal 21 | 14.4 Marine & coastal ecosystem | 14.5 Conservation of coastal areas |
| Goal 22 | 15.2 Forests management | 15.4 Mountain ecosystems |
| Goal 23 | 15.5 Loss of biodiversity | 15.1 Terrestrial & inland freshwater |
| Goal 24 | 16.1 Reduction violence | 16.2 Non-discriminatory laws |
| Goal 25 | 16.3 Additional ﬁnancial resources | 16.4 Tax & other revenue |
| Goal 26 | 17.19 Statistical capacity | 17.8 Technological capacity-building |
| Goal 27 | 17.4 Debt sustainability | 17.11 Exports of developing countries |
| Goal 28 | 17.10 Multilateral trading | 17.9 Capacity building for SDGs |
SDG data availability in Asia-Pacific by development dimension

**Economy:** SDGs 8, 9, 29 indicators

**Social:** SDGs 1-5; 10-11; 16, 128 indicators

**Environment:** SDGs 6,7; 12-15, 62 indicators

**Not classified:** SDG 17, 25 indicators
Data issues for tracking SDG progress

- Insufficient data
  - Data gaps remain for two thirds of the SDG indicators.
  - Availability of social and environmental data is more limited than economic domains.
- Surveys are key source of country-level SDG data, although administrative data can be produced at a lower cost and more rapidly.
- Scope to make greater use of alternative data sources, e.g. satellite images and remote sensing.
- Need more disaggregated data by age, sex and location for many SDG indicators.
3.4 Prioritizing SDGs

Required investments vs progress made
Prioritizing Goals: considering both progress and investment gaps
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Prioritizing Goals: considering both progress and investment gaps
Takeaway messages

• New economics of sustainable development will need to go beyond GDP and internalize the implications of global mega trends

• Findings from ESCAP studies on implementing SDG Framework:
  • Achieving SDGS is largely affordable: at an additional $1.5 trillion per year or $1/person/day
  • To achieve SDGs by 2030, Asia-Pacific needs to step up efforts in all Goals
  • Large data gaps for social and environmental data, and for small Pacific islands

• Good statistics can allow policymakers to operationalize SDG framework, e.g. identify needed interventions, and prioritize SDG investment areas.
Thank you!

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