

# **Building Better Science-Policy Interfaces for Poverty Eradication and Inequality Reduction**

**Daya Reddy**



**International  
Science Council**

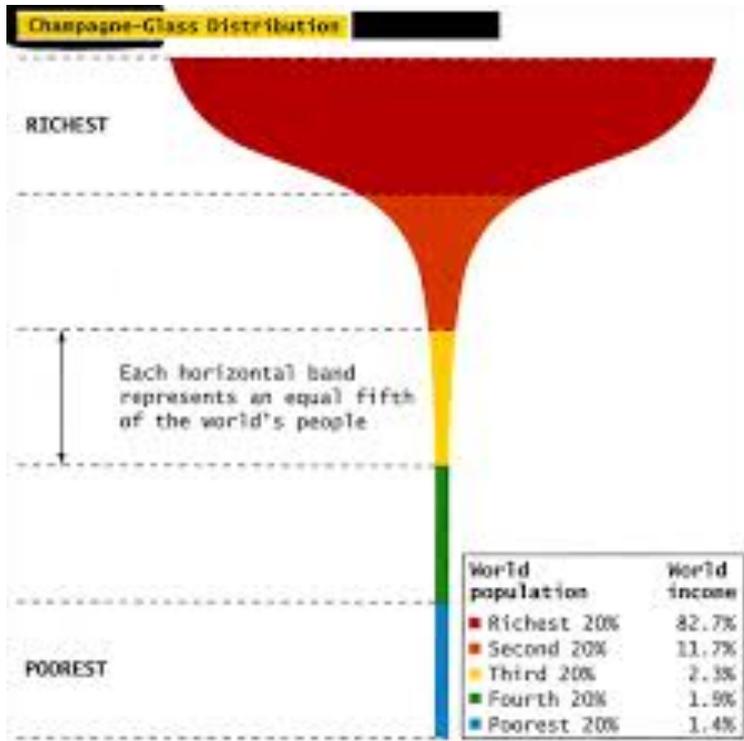
*IAP-SPEC Conference, Rio de Janeiro, 27–29 March 2019*



# SUSTAINABLE DEVELOPMENT GOALS

<p><b>1</b> NO POVERTY</p>	<p><b>2</b> ZERO HUNGER</p>	<p><b>3</b> GOOD HEALTH AND WELL-BEING</p>	<p><b>4</b> QUALITY EDUCATION</p>	<p><b>5</b> GENDER EQUALITY</p>	<p><b>6</b> CLEAN WATER AND SANITATION</p>
<p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>	<p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>	<p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p><b>10</b> REDUCED INEQUALITIES</p>	<p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>	<p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>
<p><b>13</b> CLIMATE ACTION</p>	<p><b>14</b> LIFE BELOW WATER</p>	<p><b>15</b> LIFE ON LAND</p>	<p><b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	<p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>	

# The social context: extreme inequality



Global wealth distribution

## EVEN IT UP

News

- Press releases
- Media reactions
- Media contacts

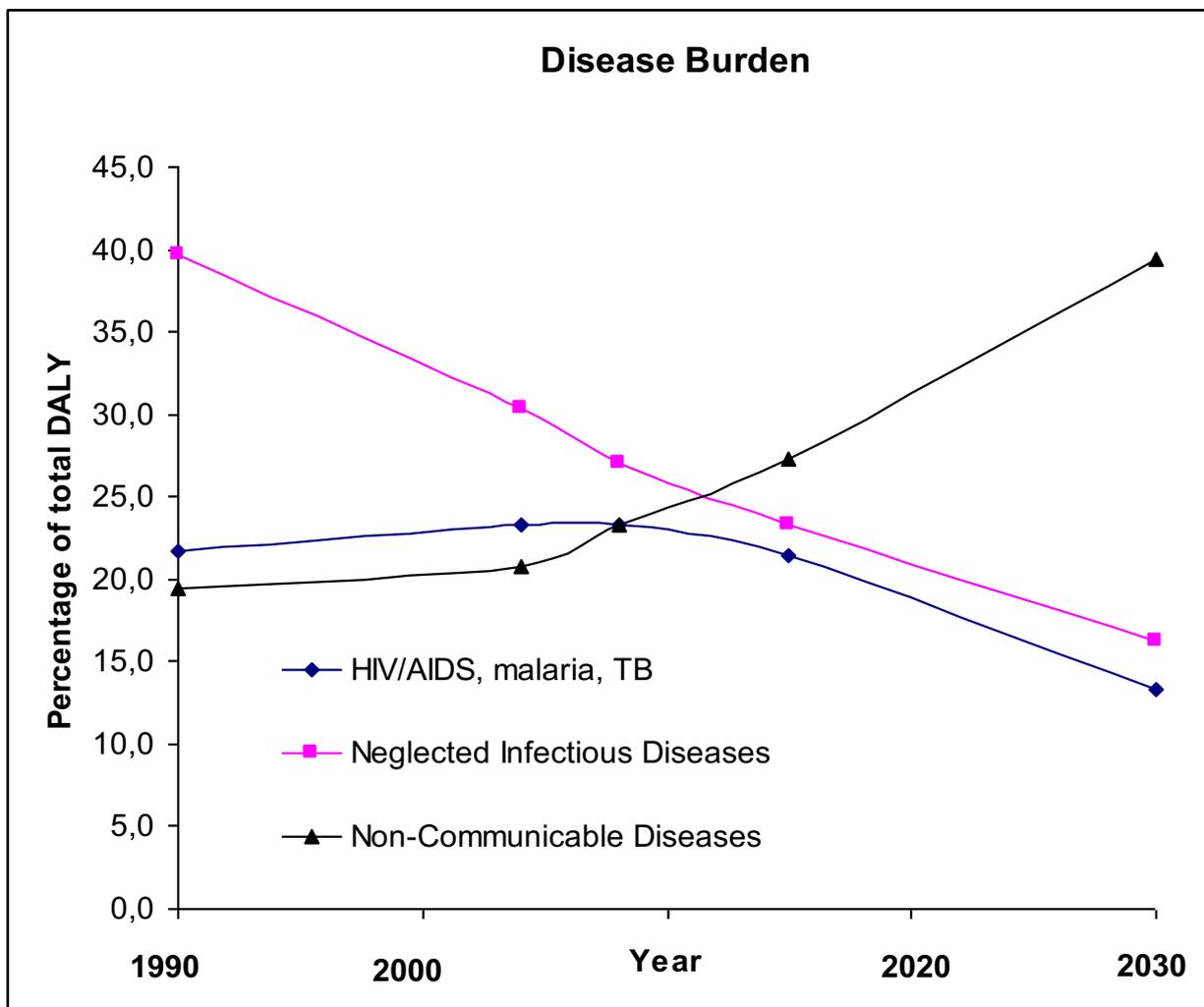
### 62 people own the same as half the world, reveals Oxfam Davos report

Published: 18 January 2016

The Oxfam report *An Economy for the 1%*, shows that the wealth of the poorest half of the world's population has fallen by a trillion dollars since 2010, a drop of 38 percent. This has occurred despite the global population increasing by around 400 million people during that period. Meanwhile, the wealth of the richest 62 has increased by more than half a trillion dollars to \$1.76tr. The report also shows how women are disproportionately affected by inequality – of the current '62', 53 are men and just nine are women.

“... the wealth of the poorest half of the world's population has fallen by ... 38% from 2010 to 2016”

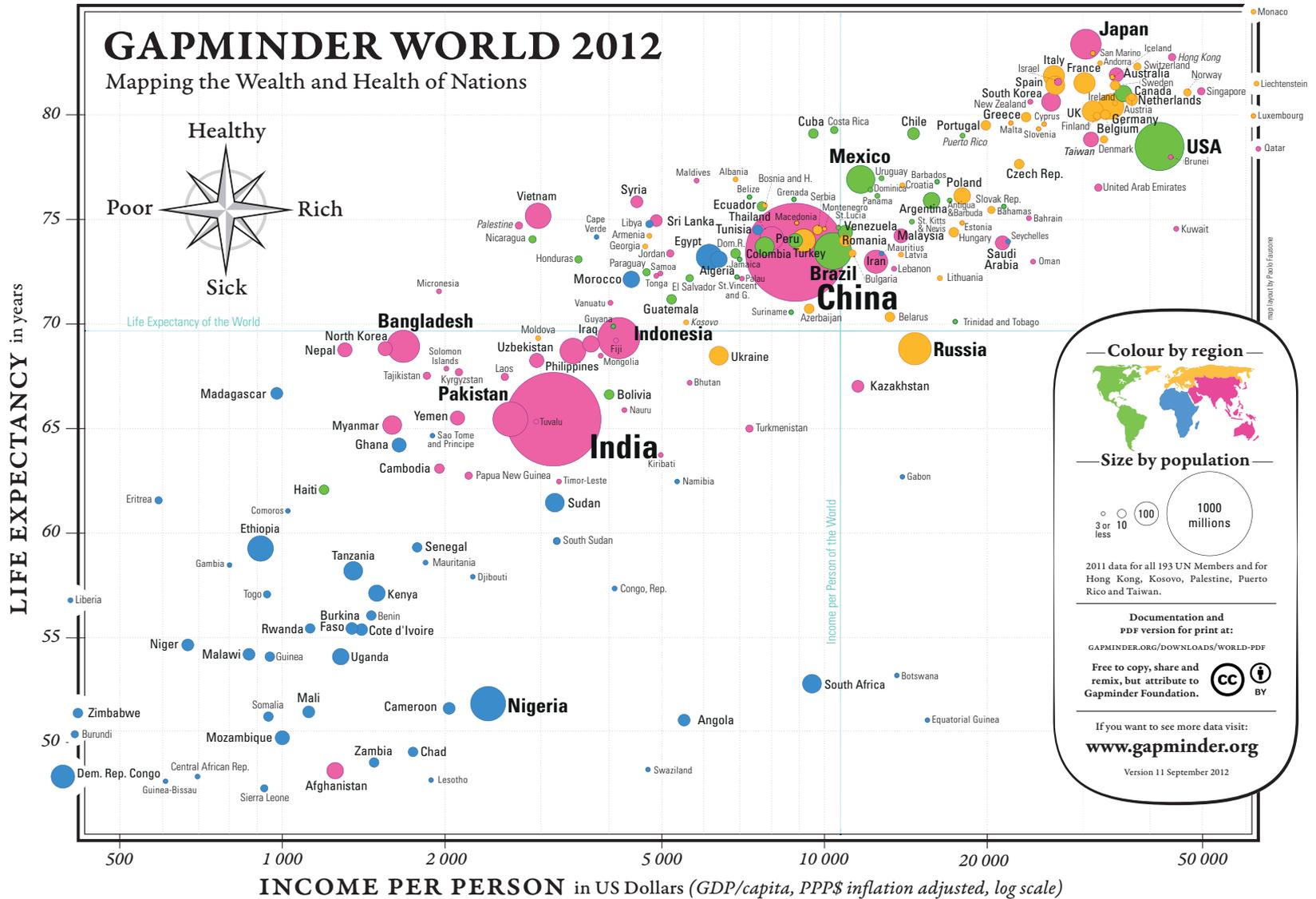
# Burden of disease in sub-Saharan Africa



Figures calculated from the WHO burden of disease study

- 25m (out of 35m globally) with **HIV**, 88% of world's child population with HIV
- **Tuberculosis**: treatable, but top infectious disease killer globally
  - But note growth in **non-communicable diseases**
- **Cancer** prevalence will increase by > 50%, diabetes deaths by 40%
- DALY of **cardiovascular** diseases will increase by 100%
- WHO spends US\$0.50 per person on chronic diseases, US\$7.50 per person on HIV/AIDS, TB, malaria

# Social gradient in life expectancy



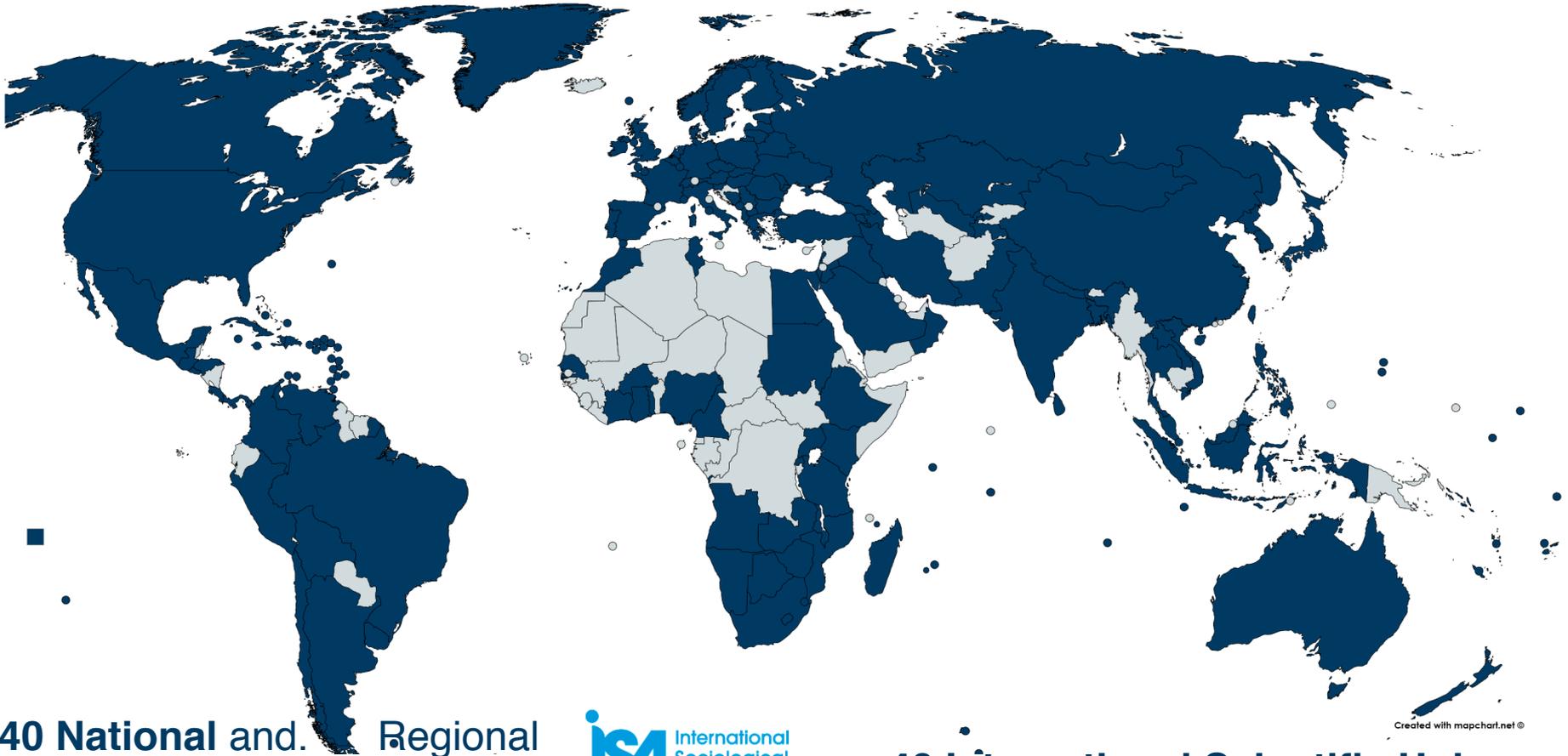
# A further social reality: urbanization



- More than half of the world's population live in urban areas (two-thirds or 6.5m by 2050)
- 2014: 28 mega-cities (> 10m people) compared to 10 in 1990
- Extreme poverty often concentrated in urban spaces
- Huge challenges: access to safe and affordable housing, creating green public spaces, improving urban planning and management, providing health care: **how to do this in a sustainable way?**
- **Strong interaction** between commonly co-occurring chronic conditions, upstream health determinants, the unplanned urban environment, and the impact on health outcomes

# The International Science Council

A global voice to articulate and demonstrate the value of science  
and to advance science as a global public good



**140 National and Regional  
Scientific Organizations**



**40 International Scientific Unions  
and Associations across the natural  
and social sciences**





**International  
Science Council**

- Mobilizing **science for policy** and **public action** on issues of global public concern
- **Policy for science:** shaping policies and practices that enable *scientific rigour, creativity and relevance* in all parts of the world
- Safeguarding the **free and responsible** practice of science



UNITED NATIONS



HIGH-LEVEL POLITICAL FORUM  
ON SUSTAINABLE DEVELOPMENT



### *STI Major Group*



**International  
Science Council**

**Represent the science & technology communities,**  
with the World Federation of Engineering  
Organizations

**Make the case for integrated science** in global policy  
frameworks

**Mobilize and coordinate scientific input** into UN  
policy processes through reports, policy-papers,  
nominations and in-person interventions



World Federation of Engineering Organizations  
Fédération Mondiale des Organisations d'ingénieurs  
Official partner of UNESCO (associate status)

# Examples of integrative activity at global level



REVIEW OF TARGETS FOR  
THE SUSTAINABLE DEVELOPMENT GOALS:  
THE SCIENCE PERSPECTIVE



First and only scientific

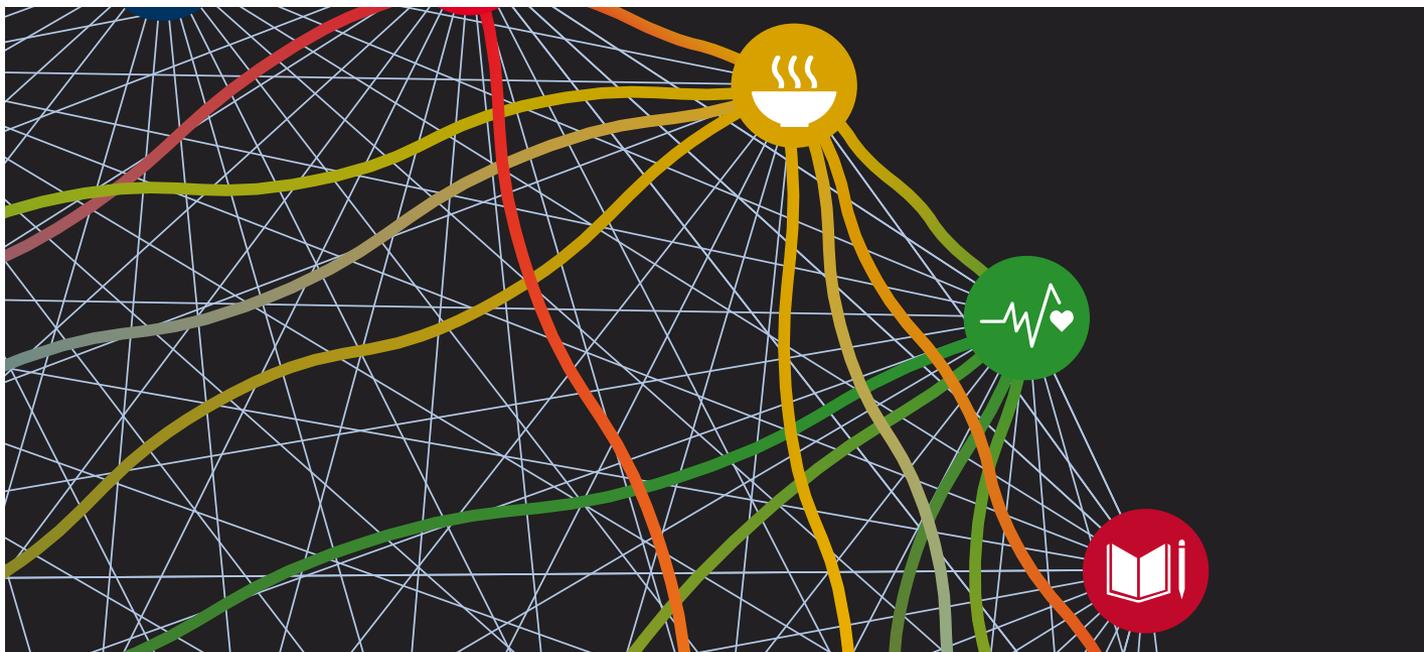
## Review of Targets under the 17 Sustainable Development Goals

Joint work by ICSU + ISSC (= ISC)

- Only 29% of the 169 targets well defined, based on latest scientific evidence
- 54% need more work, 17% are weak

# Some priorities for addressing the SDGs effectively

- Design practical **metrics** for tracking progress (improvements in energy efficiency, income inequality, population lifespans, ...)
- Establish **monitoring** mechanisms: track measures, set up systems to acquire the data, e.g. on water consumption but also behaviour, values, beliefs, ...
- **Evaluate** progress, including through peer review
- Enhance **infrastructure**: data- and information-processing capabilities. Be open to citizen science (smart phones)
- Standardise and verify **data**
- ***Cooperate closely to ensure capacity in developing countries***



## A GUIDE TO SDG INTERACTIONS: FROM SCIENCE TO IMPLEMENTATION

---

The guide aims to support more coherent and effective decision-making, setting of priorities, development of strategies, and facilitate monitoring of progress

# Current project: SDG Interactions as a National Policy Driver



International  
Science Council

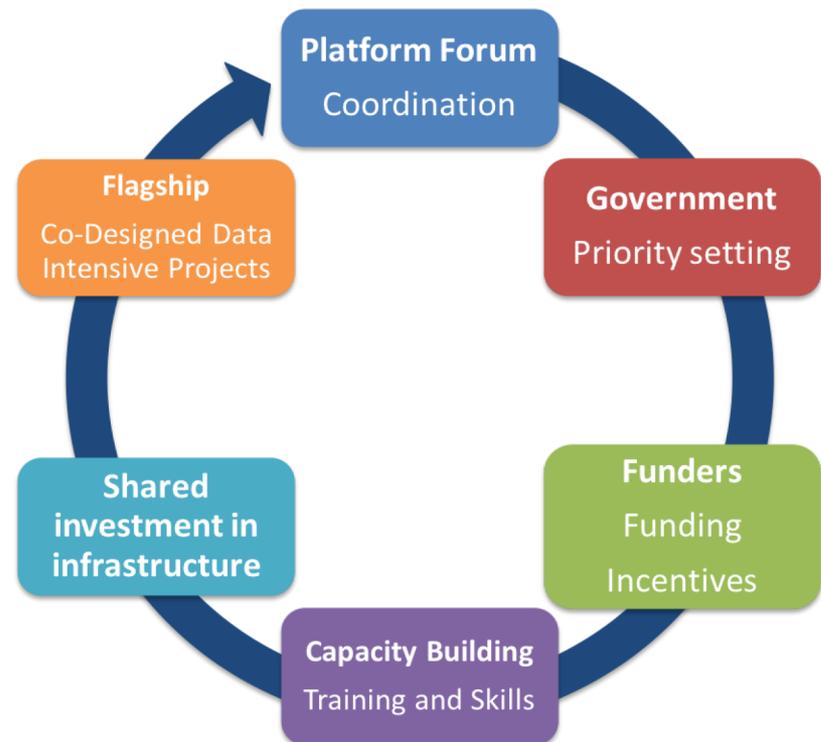


- SDGs primarily a **reporting** mechanism rather than a driver of policy
- Develop online tool to systematically analyze key interactions, synergies and conflicts across the SDGs and **connect them to national** policy processes
- Enable **mapping** of key interactions across the goals and targets
- **Dissemination** and scale-up of project outputs in coordination with UN Technology Facilitation Mechanism's Inter-Agency Task Team

**Key challenge:** ensure proper *inclusion* particularly of *developing* countries

**African Open Science Platform** - a collaboration of 11 (so far) African countries

Convene and coordinate interests, ideas, people, institutions and resources needed to advocate and to advance *open data-intensive science* as a *fundamental resource* in and for Africa





**International  
Science Council**

<https://council.science>

Twitter: @ISC