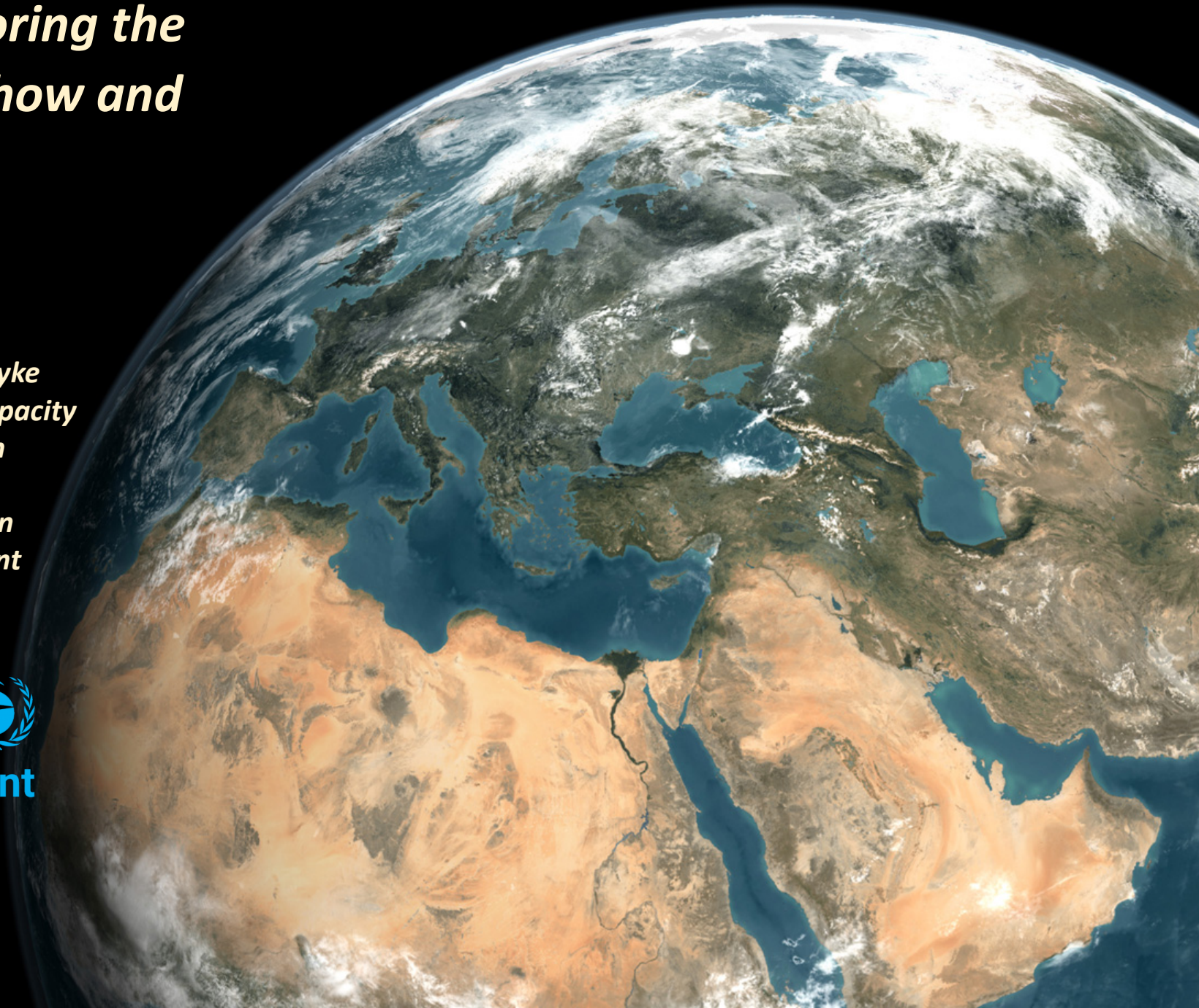


# *Monitoring the SDGs: how and why*

*Brennan VanDyke  
Chief of the Capacity  
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Branch  
Science Division  
UN Environment*





# The challenge



How can we provide food, water, energy for 9,4 billion people, avoid dangerous climate change, and protect our planet's biodiversity?



# MDGs to SDGs

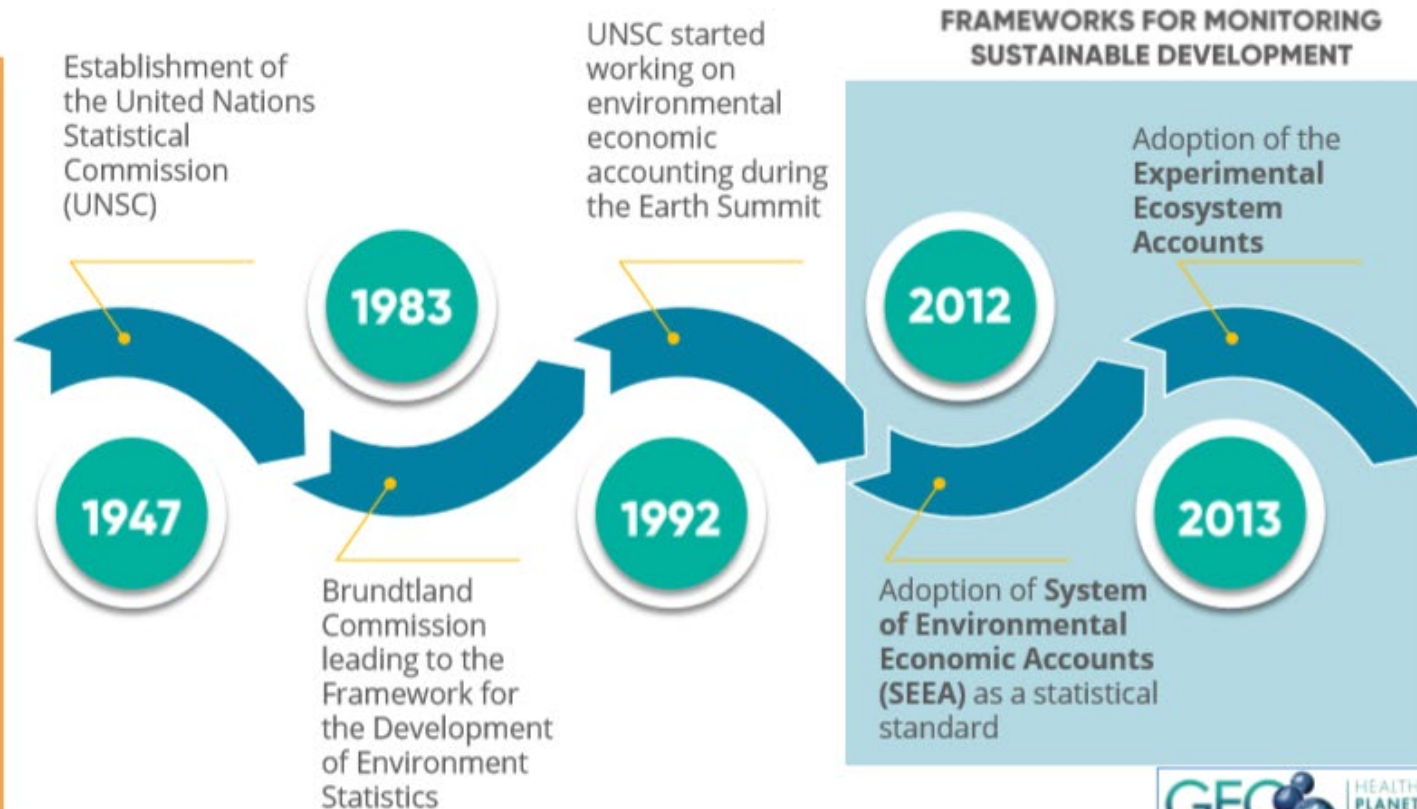
## MDGs

Resulted to increased capacity of countries to use **statistics on social development** – poverty, education, health, gender, environment and governance

vs.

## SDGs

Focused on **environmental statistical disaggregation** by location, age, gender, age, poverty and other factors



# Knowledge Products: measuring the SDGs



# Environment-related indicators in the SDGs



## SUSTAINABLE DEVELOPMENT GOALS

169 TARGETS

93 INDICATORS  
ENVIRONMENT-RELATED

NATIONAL SUSTAINABLE DEVELOPMENT INDICATORS

SDG METRICS



Satellite Imagery  
Water/Ocean  
Observations  
In Situ Monitoring  
Air/Pollution  
Ecosystems  
Forest/Agriculture  
Climate  
Land Use and  
Cover  
Cadaver/Parcels



Citizen Science  
Community  
Programs  
Crowd Sourcing  
Research Data  
Indigenous Local  
Knowledge  
Ground Truthing



Population  
Demographics  
Poverty  
Trade/Business  
Environment  
Labour/Economics  
Agriculture  
Disability/Gender  
CRVS



Mobile Phones  
Social Media  
Automated  
Devices  
VGI  
Web Analytics  
Transactional  
Data

EXISTING AND EMERGING TOOLS FOR ENVIRONMENTAL ASSESSMENT

DATA AND KNOWLEDGE



# Environment-related indicators in the SDGs: what we need to know

## GENDER

- Environmental relationships, including drivers and impacts, are based on **the social construction of gender roles** - men and women.
- UNEP produced the Global Gender and Environmental Outlook (GGEO), but there **is less information on gender-disaggregated environmental assessment**.
- Knowledge base should be able to **reflect the human-environment interactions** – Who pays, Who is serve, and Whose knowledge counts?
- Significantly **less investment** on environment- and resource-related social science and equity-related research.
- **Disaggregated data** are **vital to address issues of equity**, as well as information on the politics of data and knowledge.
- Researchers mostly come from “developed countries”, with 87% from the G20 countries (UNESCO 2015). More should be obtained from developing countries.

## EQUITY

## ECONOMY

- SDGs and **environmental economics accounting** provide insight into the value of **‘nature’s contributions to people’** and **cost of residuals**, helping policy makers plan and decide on resource allocation.
- **Need for a diverse methodology** involving insights from ecology, economics, social and cultural studies, and recognizing their dynamic evolution.
- **Social environment** has a **strong influence on health and well-being**.
- **Health-environment nexus** entails the measurement of **‘exposure’** to environmental factors and the **‘outcome’** of health and/or well-being.

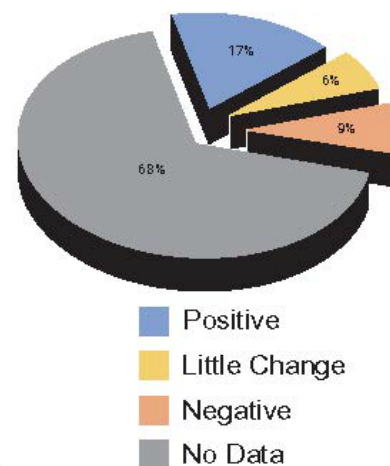
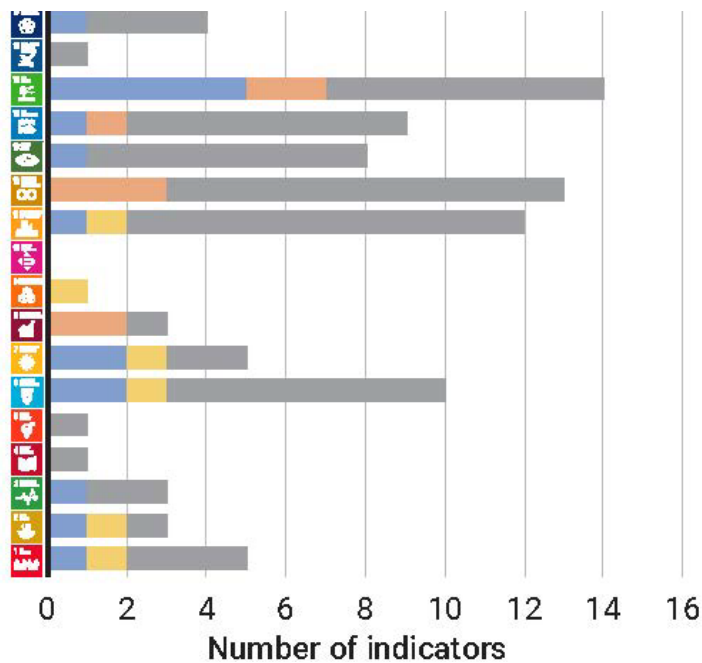
## HEALTH



**ENVIRONMENT**  
and its social nexus  
and intersectionality

# Data underpins good decisions


- 68% of environment-related SDG indicators do not have enough data to assess global progress.
- There is even less data availability that is disaggregated by vulnerable population or geospatially.



# Where do we want to go?

## Healthy People, Healthy Planet


### Future Data Needs




**Big data** is one of the world's emerging valuable resources **changing environmental assessment processes**




More **inclusive and open access** to data will assist in achieving equity, transparency and best use of data for sustainability and development




**Traditional knowledge** can complement science-based knowledge



**Citizen Science** is engaging the public in collecting and analysing big amounts of environmental data



As **women and men** have different rights over the environment, measuring the **gender-environment nexus** is a high priority



More **environmental data** are needed, focused mostly on the **interlinkages** between **environment, society and economy**



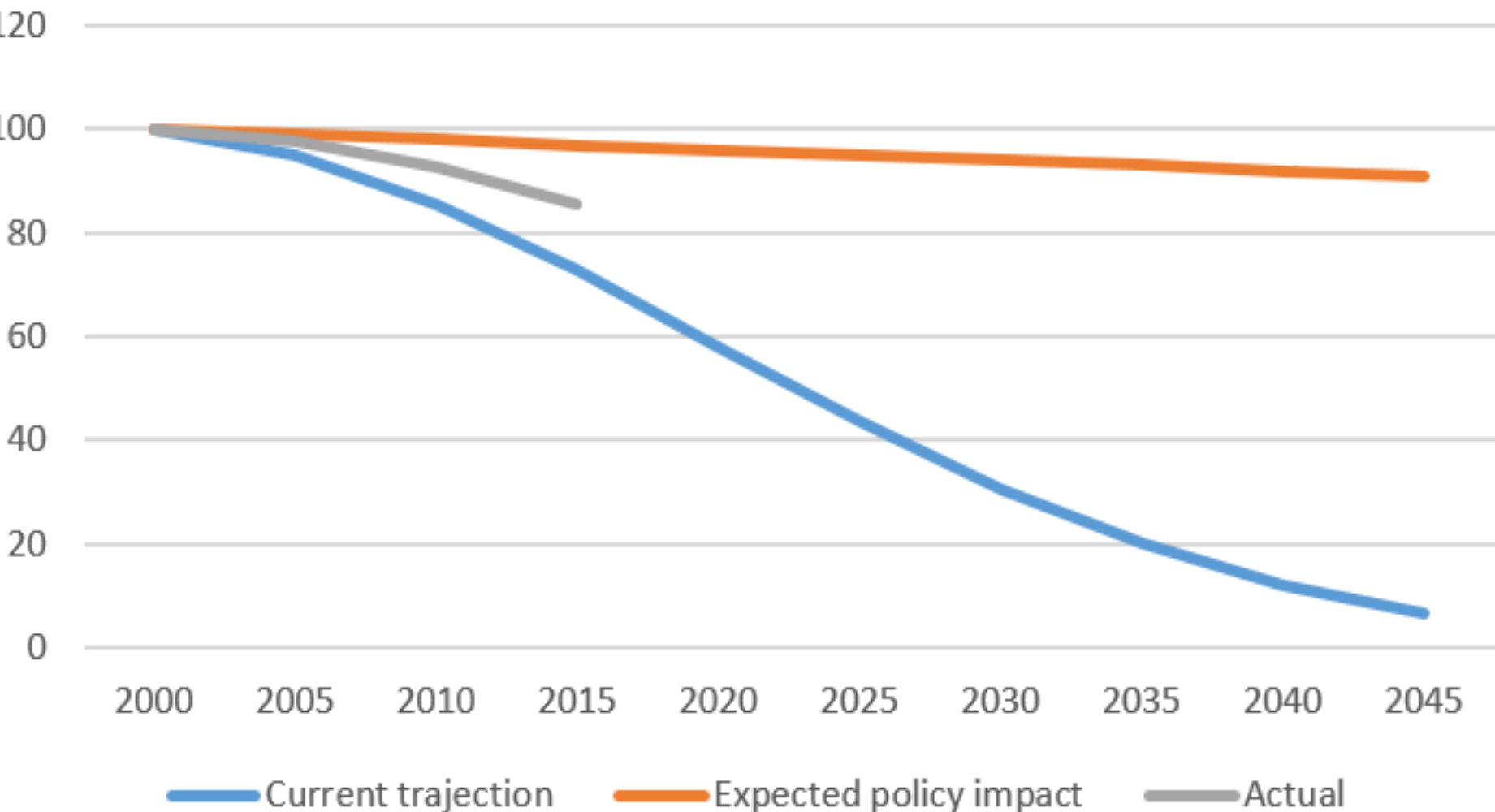
**Innovative methods of data collection** are required to transform the provisioning of environmental data and statistics

### Current State of Data and Knowledge



# Course correction

Example of policy tracking



# Biodiversity Loss

Between 1970 and 2010, the planet has lost 52% of its biodiversity. Currently, 1 million species face extinction.





*“The global environmental governance framework is simply not keeping pace with the rate of change that is driving environmental degradation, biodiversity loss and climate change”*

– Dr. Jian Liu, UN Environment Chief Scientist

**We need better data and science in order to better manage natural resources, target investments and technologies and develop policy.**



# Moving forward

- We need better, faster data so that we can identify problems as they happen.
- We need data to be used
  - Capacity development on data and data use
  - Systems for sharing and finding data
- We need to find ways to not only create information but action
  - Integrated analysis
  - Citizen engagement



@Isha  
2015



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