



Data for evidence-informed policymaking

Module 8
Day 4: 13:30-17:00



Agenda of the Module

13:30-13:45	Intro	Introduction, existing understandings, objectives
13:45-13:55	Video	What is data for in government?
13:55-14:20	Tandem Activity	Tandem discussion
14:20-14:50	Presentation & Discussion	Key concepts: Evidence-informed policy-making, data, digital technology (see also Module 4) and policy coherence, data governance
14:50-15:10	Activity	Plenary Round Table on UN DESA Institutional Readiness Assessment Building Block 6
15:10-15:30	Presentation	Tools: CLEWS
15:30-15:40	<i>Break</i>	
15:40-16:20	Group Work	CLEWS
16:20-16:45	Presentation	Cases
16:45-17:00	Wrap-up	Key take-aways for Action Plan

Flashlight to check participants' existing understandings & experiences

Do you agree with the following statement?

Policies are usually formulated based on the best available evidence.

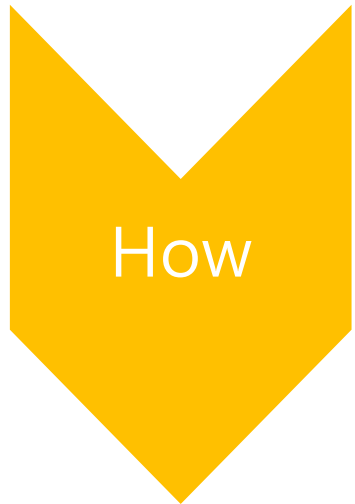
Key objectives of Module 8



Concepts



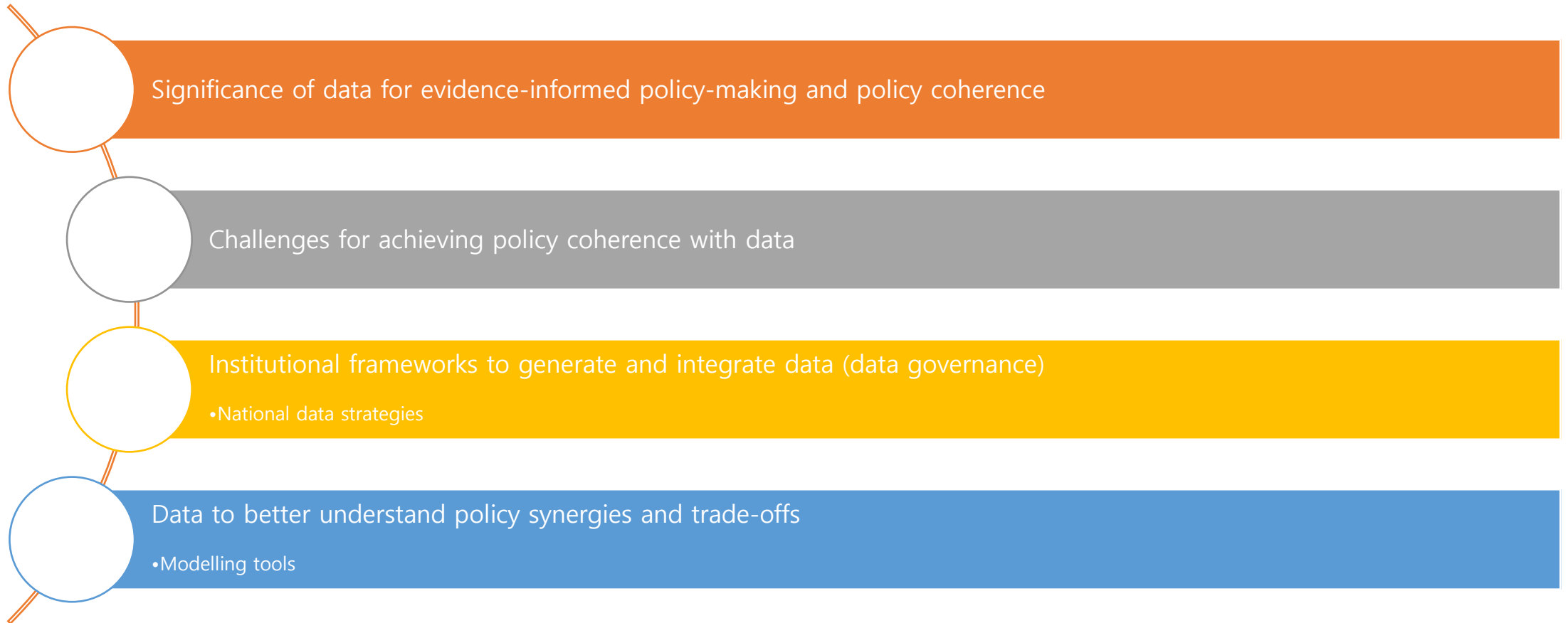
Strategy



Organization

- Understand how **data and digital technology can inform policy-making** and which challenges are related to data governance for policy coherence

What is module 8 about?



What will be achieved through module 8?



To understand the relevance of data for evidence-informed policy making and policy coherence



To be familiar with elements of data governance frameworks



To discuss tools for moving towards data governance in support of policy coherence



To learn about experiences of evidence for policy-making and data governance

Evidence-informed policy-making and data

- Evidence to improve policy through better use of research and data
- Getting the evidence for policy makers to inform their choices
- Data as the key resource
 - Collect and apply data to problem
 - High capacity to collect data
 - Complemented by qualitative assessments



What is data for in government: Video



You also could please watch the video via the link: <https://www.youtube.com/watch?v=XlCQfkbYac>

Tandem Activity on Evidence-informed policy-making

“There is nothing a government hates more than to be well-informed; for it makes the process of arriving at decisions much more complicated and difficult.” (Keynes, 1937)



Why is evidence often not used to inform policy-making?

- Policy-making is genuinely political
 - Evidence vs interests, values, power
- Evidence is often (and increasingly) contested
- Policy-makers use evidence selectively to legitimize policy choices
- Evidence is poorly prepared for political audience
- Lack of capacity to understand evidence
- Political logic vs evidence logic
 - Contestation vs truth
 - Legitimization vs rationalization
 - Short-term vs long-term
 - Catering interests of constituency vs objectively 'best solution'

Challenges for use of evidence, data and data governance

In general

- Data protection
- Lack of trust of citizens regarding the storage and access to personal data
- Data and cyber security

Within government

- Non-use of data
- Lack of capacity to use data
- Data interoperability
- Lack of data leadership
- Lack of data infrastructure and resources
- Lack of data or poor data quality

Data for evidence-informed policy making: The case for policy coherence



Data to understand policy linkages, synergies and trade-offs - preconditions

Need to have high-quality data

- Indicator validity: Do the indicators assess what's needed? (see module 7)
- Data availability: Is the data available that's needed?
- Data integrity: Are standards for collection, sharing and analysis in place?

Capacity to interpret data

- Does the public service have data-science or statistical capacity to interpret the data?

Institutional framework

- Are mechanisms in place to assure data quality?

Concepts: What is data governance?

“government-wide governance structure for setting the policy and strategy for data collection/gathering, data classification, naming conventions data processing, access control, usage and analysis, data release and data security throughout the information life cycle and consistent across government agencies”
(UN DESA 2018, w/o pages)



Table 6.2 The principles of effective governance for sustainable development endorsed by the Economic and Social Council: operationalization strategies and their relevance to data governance

Essential elements and related principles	Commonly used strategies to operationalize the principles	
	Direct relation to data governance, strategies or policies	Indirect relation to data governance, strategies or policies
Effectiveness: competence, sound policymaking, collaboration	<ul style="list-style-type: none"> • Data sharing • Investment in e-government • Strengthening national statistical systems • Monitoring and evaluation systems 	<ul style="list-style-type: none"> • Strategic planning and foresight • Results-based management • Performance management • Financial management and control • Risk management frameworks • Science-policy interface • Network-based governance
Accountability: integrity, transparency, independent oversight	<ul style="list-style-type: none"> • Proactive disclosure of information • Open government data • Registries of beneficial ownership • Lobby registries 	<ul style="list-style-type: none"> • Budget transparency • Independent audit
Inclusiveness: leaving no one behind, non-discrimination, participation, subsidiarity, intergenerational equity	<ul style="list-style-type: none"> • Data disaggregation • Universal birth registration 	<ul style="list-style-type: none"> • Accessibility standards • Participatory budgeting • Multilevel governance • Strengthening urban governance • Long-term territorial planning and spatial development

Data governance contributes to effective governance

- effective implementation of cross-sector data collection, sharing and/or accessing initiatives.

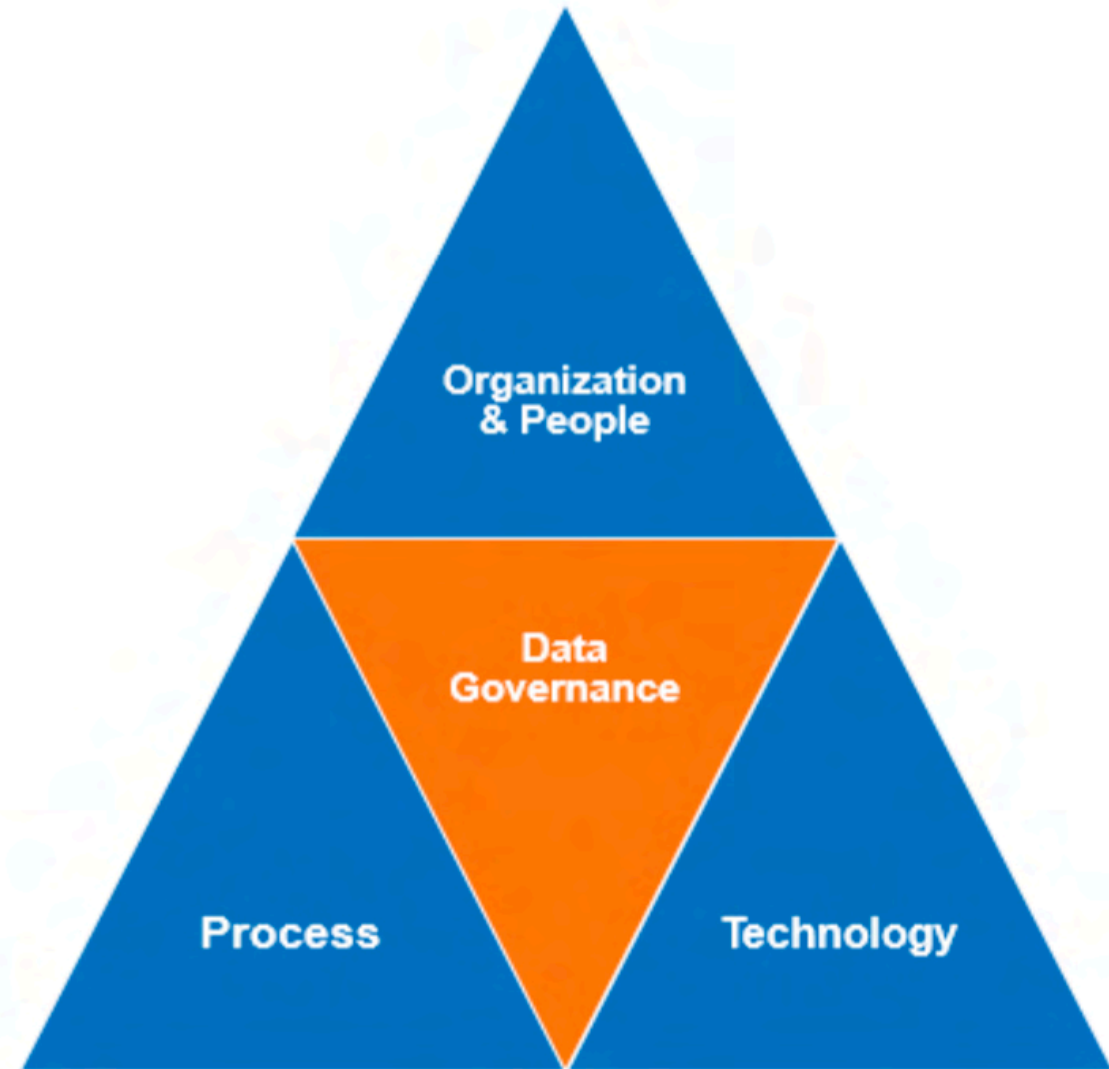
“A holistic data governance can help to join up government as a whole.”
 (OECD 2019a, p. 25)

Source: United Nations, Economic and Social Council, “Relating the principles of effective governance for sustainable development to practices and results: note by the Secretariat”, E/C.16/2019/4 (23 January 2019), annex, available at <https://undocs.org/en/E/C.16/2019/4>.

Source: UN-DESA (2020, p. 149)

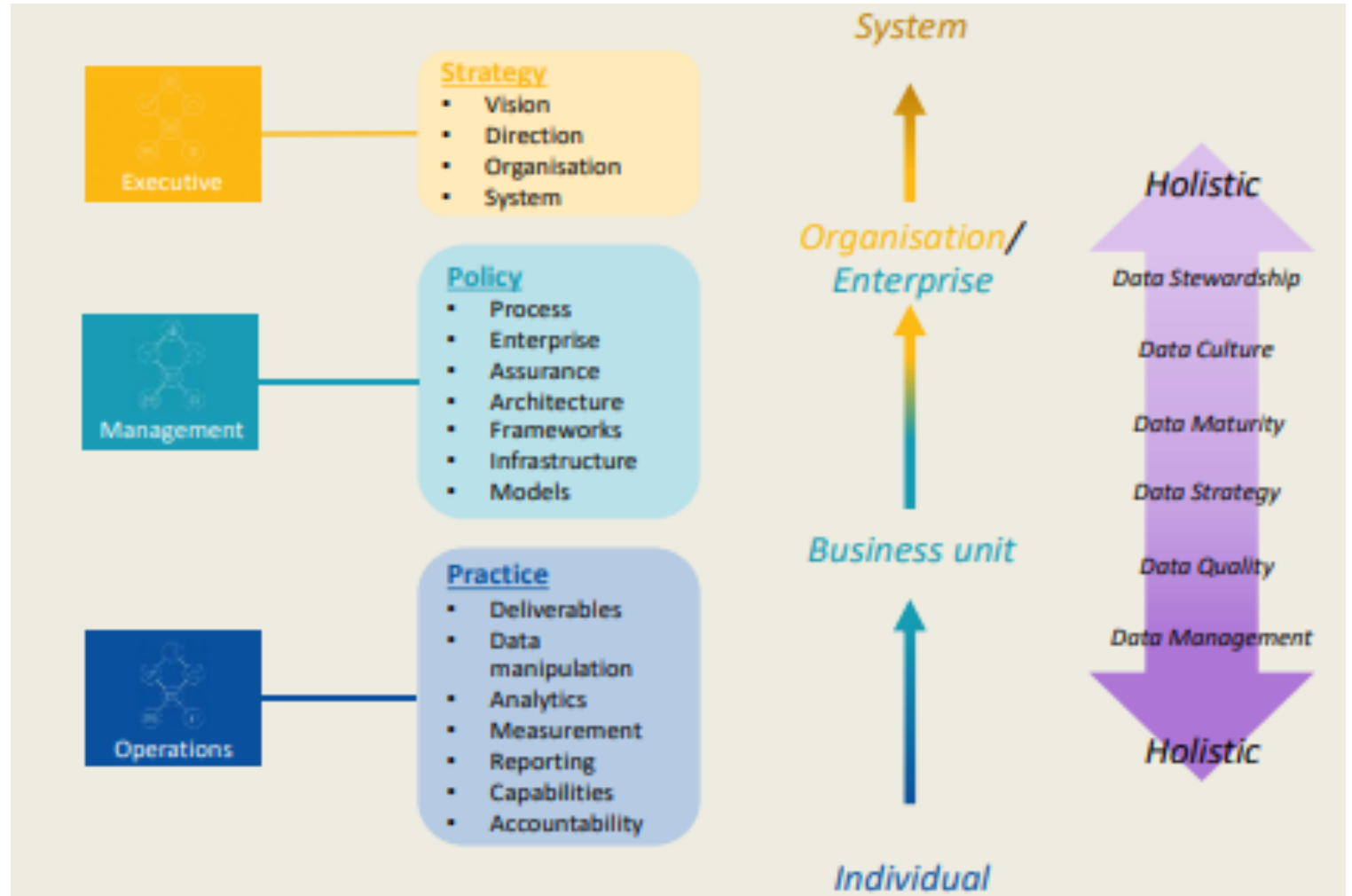
Three Dimensions of Data Governance

- Organization and people at three levels,
 - Strategy-building: the strategic committee or board for designing the strategy,
 - Implementation: setting the approach to implementing the strategy,
 - Operation: data stewards for managing the data governance
- Process
 - to define and enforce data standard and policies, and audit, monitor and control of data governance activities
- Technology
 - to secure infrastructure, identity and access control, information protection, auditing and reporting.



Source: UN-DESA (2018, w/o pages)

Key concepts: Data Governance Framework – Example New Zealand



Source: OECD (2019 a, p. 30)

Institutional framework for data governance: Strategy and organization

Strategy

- Governments increasingly develop national data strategies in a whole-of-government framework
 - Rather recent development
 - Frontrunner countries (Canada, US, UK)

Organization

- Governments increasingly establish organizational structures for data management
 - Chief data officers
 - Data offices
 - Data scientists

Data governance: Roles in government

Roles (non-exclusive)	Description	Required skill sets
Data leadership, data stewards	<p>Various titles and functions:</p> <ul style="list-style-type: none">• Chief data officer (national and/or subnational)• Chief digital strategy officer• Chief information officer• Chief government technology officer• Chief evaluation officer• Chief innovation officer• Data ambassador	<p>Leadership skills (in technical and policy areas) to provide data oversight, policy and technical frameworks for data reuse, sharing, scalability (such as master data management), data quality, security and privacy; set cross-government data standards and manage inventory of data assets; manage OGD</p> <p>(Examples: The Government of New Zealand gave statisticians the title of chief data officer; in the United States, the first chief data officer was appointed in 2015.)</p>

Source: UN-DESA (2020, p. 169)

Table 6.3 Data as a key resource for Governments: varied approaches among countries

Approach	Description
ICT-driven	Where Governments are highly influenced by the use of new and existing information and communications technology (ICT).
Data-informed	Where Governments are guided by data; data play an inferential role in policymaking, with the understanding that data will inform rather than drive decision-making because there are rational, political and moral elements of decision-making and data are just one important aspect of the process. ^a
Data-driven	Where Governments use analytics and algorithms in decision-making (elaborated in a recent OECD working paper on a data-driven public sector). ^b
Evidence-based	Where policy approaches reflect the practical application of the findings of the best and most current research available (the Foundations of Evidence-Based Policymaking Act in the United States is highlighted in box 6.2).
Data-centric	Where Governments place data and data science at the core of public administration; data are seen as a key asset and central to government functions and are leveraged for the provision, evaluation and modification of people-centric services. ^c

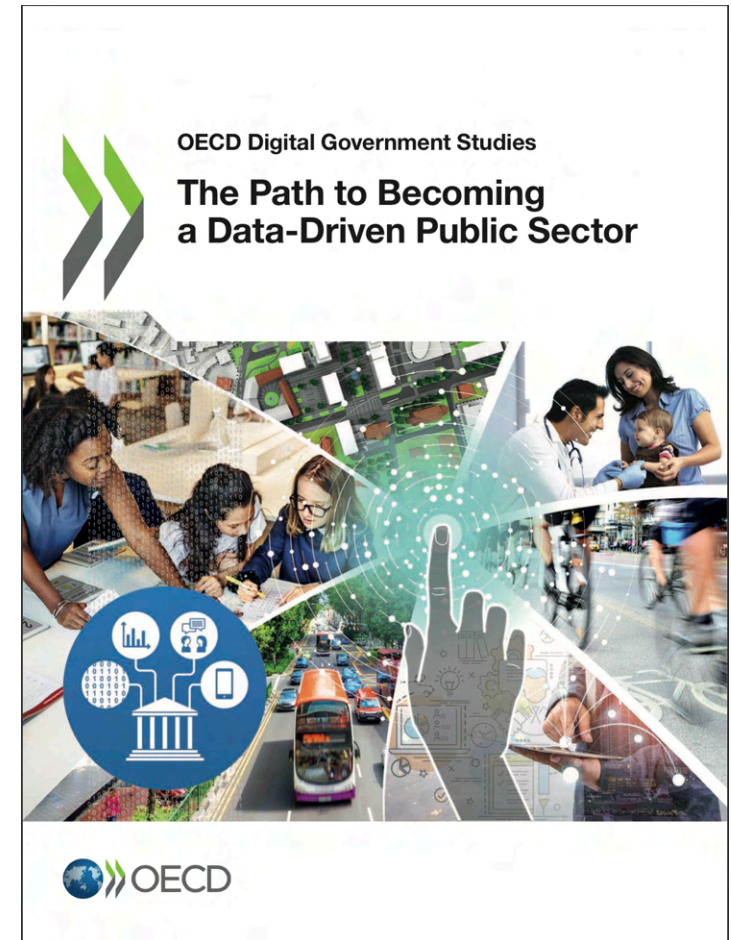
Data can be used in various ways in government – Different Approaches

Source: UN-DESA (2020, p. 150)

Towards a data-driven public sector (OECD 2019)

"A truly data-driven public sector:

- recognises data as a key strategic asset, defines its value and measures its impact
- reflects active efforts to remove barriers to managing, sharing and reusing data
- applies data to transform the design, delivery and monitoring of public policies and services
- values efforts to publish data openly and the use of data between and within public sector organisations
- understands the data rights of citizens in terms of ethical behaviours, transparency of usage, protection of privacy and security of data" (OECD 2019, p. 17)



Towards a data-driven public sector (OECD 2019) for coherence?

- OECD report emphasizes the relevance of data governance to be embedded in the wider institutional framework of a country and to be linked to policy and policy-making.



“This particularly relevant in the context of cross-cutting public policies that require the sharing of, and access to, data from multiple public sector organisations for policy monitoring, compliance and evaluation purposes (e.g. public sector integrity, public budgeting, regulatory policy), or in the context of cross-sectoral data-sharing practices and governance arrangements (e.g. business-to-government data sharing)” (OECD 2019, p. 27)

Implementation challenges: Evidence from Danish local government

Theme	Challenges
Data value and overview	Short-term perspective on data usage
	Value from data initiatives are difficult to understand
	Lack of overview of existing data
Data practices and collaboration	Autonomy within the different departments
	Distrust toward data in social fields
	Lack of cross-organizational collaboration
Data capabilities and politics	Varying levels of data maturity across different departments
	Lack of top-level support for data initiatives
	Lack of political focus on data usage in municipal context

- Interview-based study on data governance in Danish local governments reveals nine challenges
- Highlighted in red: Challenges that relate to the policy coherence and the use thereof

Source: Benfeldt et al. (2018, p.20), highlights added

Activity: Plenary Round Table on Readiness Assessment

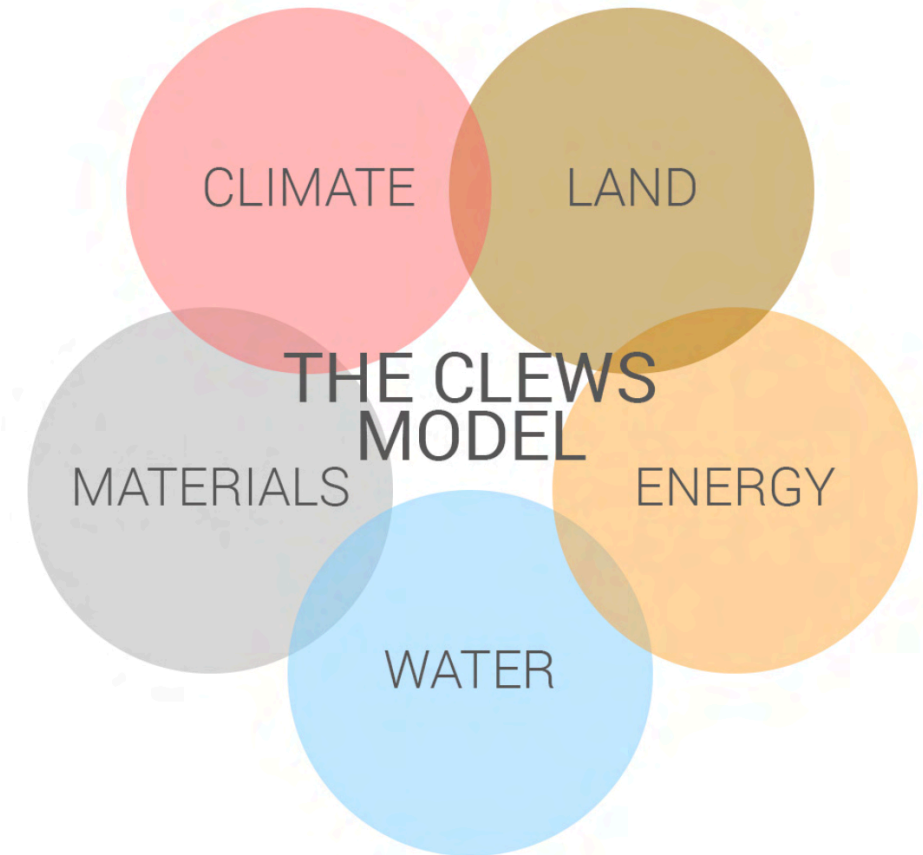


Plenary round table

- Return to the UN DESA Institutional Readiness Assessment Building Block 6, Digital Technology and Data!
- Discuss the findings from Building Block 6 with a focus on the parts on data governance!

Tools: CLEWS: Climate, land-use, energy and water systems (CLEWS) models

- One of five quantitative modelling tools used by UNDESA and UNDP to help countries assess and inform sustainable development policy options
 - tools for simultaneous consideration of food, energy and water security
 - to assess how production and use of these resources may contribute to climate change, and how climate change may affect resource systems
 - to identify pressure points, and indicate synergies and trade-offs
 - to analyze policy decisions on related issues





You also could please watch the video via the link: <https://youtu.be/3JEGKNGxCBM>

MAURITIUS CLEWS



Mauritius receives plentiful rainfall, however the high population density of the island puts pressure on water resources. The threat of reduced precipitation as a result of climate change is therefore a major concern. The Mauritius government has demonstrated strong leadership in the promotion of a broad range of renewable energy sources, including ethanol. Increasing bio-fuels, however, carries potentially important impacts on the use of water and land.

CLEWS – Case of Mauritius



- Starting point: to explore how renewable sources of energy can impact water and land use
- A key concern are the prospects for the sugar industry, which to a large extent will determine the future of land and water use.
- Results suggest that boosting production of bio-fuels in pursuit of more sustainable energy supply and national energy security may compromise water security. The risk of water scarcity worsens if climate change brings less rainfall and higher temperatures to the country.

CLEWS – Case of Mauritius



- Variables on climate change, land use, energy, and water are modelled in 48 scenarios around
 - Four renewable policy targets for ethanol and gasoline blends;
 - Four targets setting minimum proportions of renewable sources in the generation of electricity; and
 - Three climate scenarios.
- Open on github:
<https://un-modelling.github.io/clews-mauritius-presentation/>
- Users can select and compare scenarios

MODELLING TOOLS

FOR SUSTAINABLE DEVELOPMENT



ABOUT

MODELLING TOOLS

COUNTRY PROJECTS

OUTREACH TRAINING

NEWS AND EVENTS

Graphs

Reference
Alternative

Renewable Ethanol

Base
Base

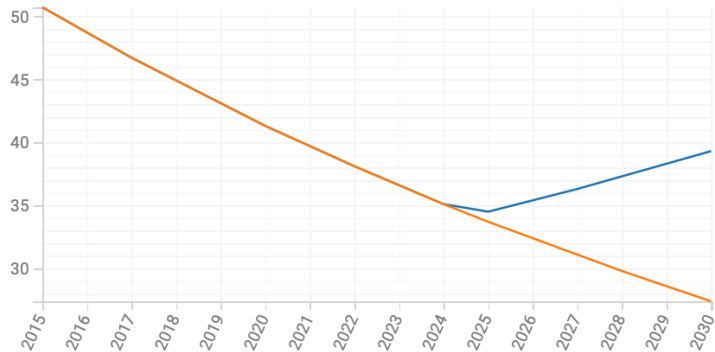
Renewable Electricity

35%
Base

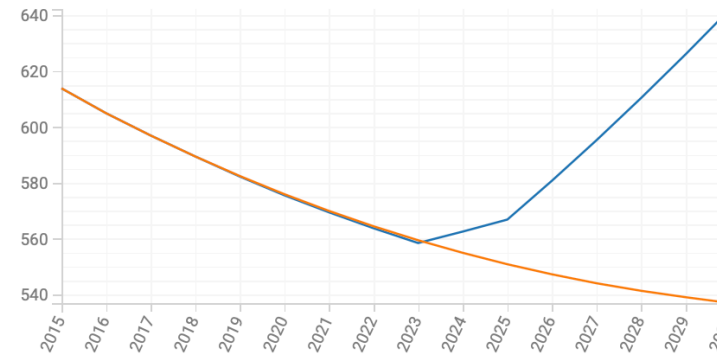
Rainfall

Historical Average
Historical Average

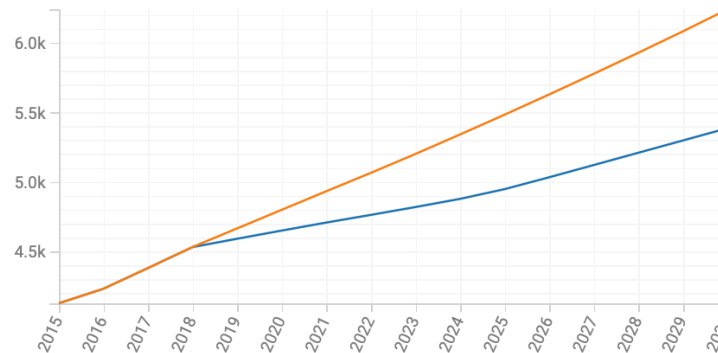
LAND USE FOR SUGARCANE PRODUCTION [THOUSAND HECTARES]



WATER USE [MILLION CUBIC METERS]



CO2 EMISSIONS [THOUSAND TONNES]



Query

Group Activity: CLEWS – Case of Mauritius

- Read the case background on the handout and discuss in your group
- 1. Which would be the key variables of interests in your country for a CLEWS model regarding
 - Energy policy
 - Climate change
 - Land use
 - Water use
 - Food
- Which SDGs would be touched by the model and related policies?
 1. Imagine, the model is built for your country alongside these variables
 - Which reactions from the responsible ministers do you expect?
 - With which arguments would you seek to convince hesitant ministers?



Cases from the VNRs: Ghana

The Ghana Statistical Service (GSS) supports the Ministries, departments, and agencies through the production of data and SDG indicators. An assessment in 2016 found that the statistical system produced for 62 of the SDG indicators.¹⁹⁹ In 2017, Ghana hosted a National Data Roadmap Forum in partnership with the Global Partnership for Sustainable Development Data. The outcome was a Roadmap which focuses on filling data gaps, encouraging data use, and strengthening the data ecosystem. The impact of SDG actions will be assessed every four years with mid-term evaluation to be conducted in 2024.

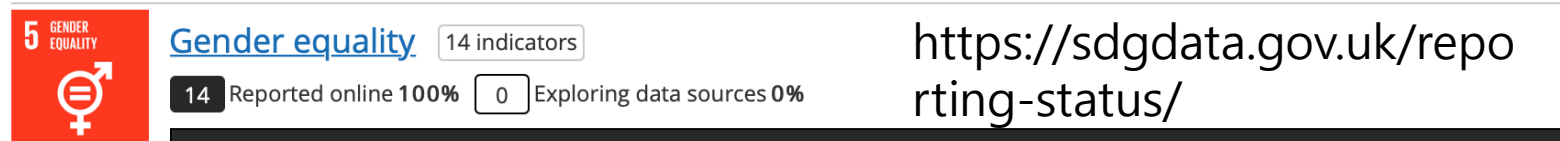
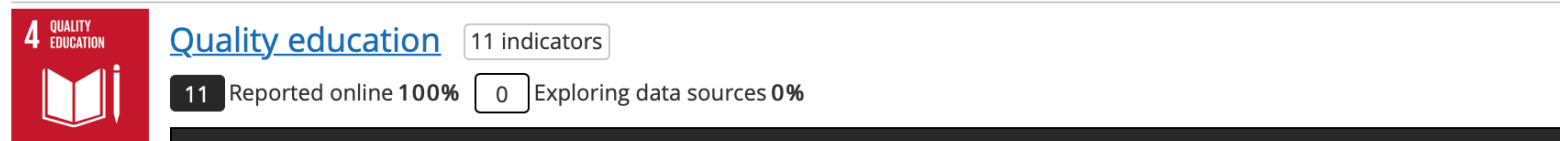
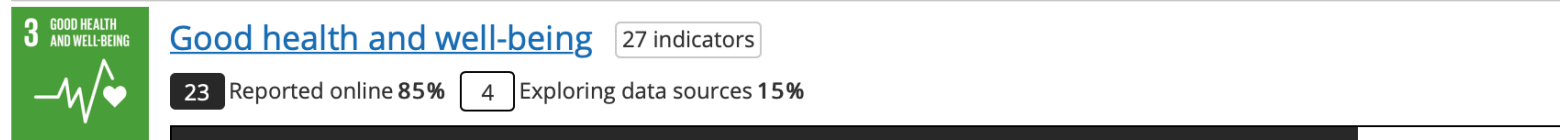
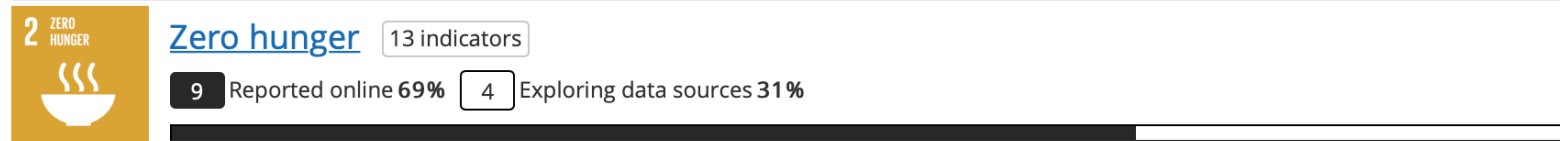
Reporting Status

An overview of how much data the UK reports for Sustainable Development Goal global indicators.

Overall Reporting Status 244 indicators

191 Reported online **78%** **53** Exploring data sources **22%**

Status by goal



<https://sdgdata.gov.uk/reporting-status/>

Cases from the VNRs: UK

Case study: Designing a free, reusable and customisable national reporting platform for the Sustainable Development Goals (SDGs)

“Open SDG” is a reporting platform developed for managing and publishing data and statistics related to the Goals. Built exclusively with open-source libraries and tools, it is freely available for any country or organisation to reuse and can be hosted and maintained using free services.

The Open SDG platform is the result of collaboration between the US Government, the UK Office for National Statistics, and the non-profit Center for Open Data Enterprise. It merges early versions of the US and UK platforms, including new options for data visualisations and multilingual functionality. It is free, can be modified to fit a variety of user needs, and comes with many customisable tools and features. Several other countries around the world have adopted the Open SDG platform, including Ghana, Poland, Armenia and Rwanda.

<http://www.gov.uk/sustainabledevelopmentgoals>

Initiative: ICT Integration into Teaching and Learning

Institution: Ministry of Basic Education

Problem: The northeast region of Botswana was faced with the challenges of implementing the government ICT policy in its education system. The Policy aims to enhance connectivity, promote a culture of lifelong learning and accelerate innovation to develop knowledge-based systems while delivering government services electronically. However, the education and school system in the northeast was lagging, with data being processed and stored manually and a low uptake of schools and teachers using ICT for learning and administrative purposes.

Solution: The region introduced ICT Integration into teaching and learning by developing a web-based interactive platform (e-Thuto) consisting of e-learning and data management modules. The e-learning module targets teachers and learners with parental participation. The data management module manages the regional data of staff and student information. The initiative resulted in the creation of one virtual office where all regional data is managed and stored and where information, including individual learning performance can be accessed. The system also gives access to all school data to the school principal/head and similarly the Regional Director can access all school information for the region.

Impact: The project has provided a platform for both learners and teachers to use and enhance ICT skills, while also offering enhanced data management of student and school performance. It has provided an effective learning environment that ensures inclusive and equitable quality education and promotes lifelong learning opportunities for all.

https://publicadministration.un.org/unpsa/database/Winners/2020-winners/ICT_integration

Case:
Botswana,
Winner of
the UNPSA
2020

Initiative: PetaBencana.id

Institution: Badan Nasional Penanggulangan Bencana

Problem: As weather patterns intensify and become increasingly unpredictable, cities in Indonesia are regularly faced with the challenges of extreme weather events. A lack of access to verified, real-time data compromises the ability to make informed decisions for planning and response, resulting in ineffective resource management, confusion, and conflict.

Solution: Flood management is approached from a holistic view that includes (i) Information and Communication Technologies (ICT) and public utilities for flood reporting; (ii) platform which implements strategies for climate change mitigation and adaptation, and (iii) disaster risk management. By providing free real-time disaster information, and making it possible to safely and easily share it, the platform leverages capacities for all residents to equally participate in decision-making. The platform is designed to operate smoothly with the other existing platforms such as instant messaging, social media, and SMS-based communications. The project is intended for underfunded communities, agencies with limited technical means, and individuals with modest means for data usage.

Impact: Since the launch of PetaBencana.id website in December 2015, the platform has been accessed 737,102 times by 361,478 unique users, with new users making up approximately 80 per cent of these visits. While the number of website visits for the monsoon season is typically less than 500 per day, during peak events such as those experienced in February 2015, 2017, and 2018, the number of views has scaled up to 21,000 per cent. PetaBencana.id is a good example of community-led data collection, sharing, and visualization to reduce flood risk and assist in relief efforts.

<https://publicadministration.un.org/unpsa/database/Winners/2019-Winners/PetaBencanaid>

Case:
Indonesia,
Winner of
the UNPSA
2019

Indonesia – Integration of social media and API-sourced data



Building Block 6: Digital Technology and Data

By approaching flood management from a holistic view that includes ICT and public utilities for flood reporting, the platform implements integrated strategies for climate change mitigation and adaptation. Information sharing through open data and open APIs allows all users to inspect the software, review the system, and develop complementary tools and technologies that further enhance the information ecosystem's resilience.

The platform is the first of its kind to prove the value of integrated social media and API-sourced data for the civic co-management of disasters resulting from extreme weather events in a major Southeast Asian megacity. Following a successful implementation of the project in Indonesia since 2014, the open-source software developed by the team has now been adopted by various other communities across the world to build a similar flood and disaster map. The software has already been used by other teams to build local flood maps in Vietnam, India, & the United States.

UNDESA(2021) Institutional Arrangements and Governance Capacities for Policy Coherence FACT SHEET

Evidence-informed policy-making: US

- The Foundations for Evidence-Based Policymaking Act (the Evidence Act) (approved by Congress 2017/8, President 2019)
 - National strategy or framework for evidence-informed policy is rare among countries
 - Implementing recommendations of the United States Commission on Evidence-Based Policymaking such as expanding access to data, ensuring privacy, and strengthening the capacity of the Government to generate and utilize evidence to evaluate budgetary spending on programmes affecting health, education and economic well-being.
- Federal Data Strategy, issued by the White House Office of Management and Budget (OMB) is the second implementation
 - provisions for designating evaluation officers
 - appointing chief data officers
 - identifying statistical experts,
 - developing “learning agendas”,
 - incorporating new actions into annual budget and performance plans
- For more details see: UN DESA (2020, p. 159)

Wrap Up

What are the three key insights into policy coherence of Module 8 to retain for the Action Plan of the country?

Comments and Reflections



Sources, Reading Material, References

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- UN DESA(March 2021), Indonesia, Institutional Arrangements and Governance Capacities for Policy Coherence FACT SHEET