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National Meeting on Modernizing Statistical Legislation: Strengthening Governance, Stakeholders' Engagement, and Innovation
Republic of Tunisia | April 2025

Use of innovative approaches for production and use of official statistics to inform decision-making

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Why innovative approaches?



Utilizes existing sources of data to produce and disseminate better, more timely and disaggregated data

Allows integration of non-traditional and traditional data from various entities

Capitalizes on resources from various entities and new partnerships

Unlock new data opportunities, uncovering new insights and perspectives

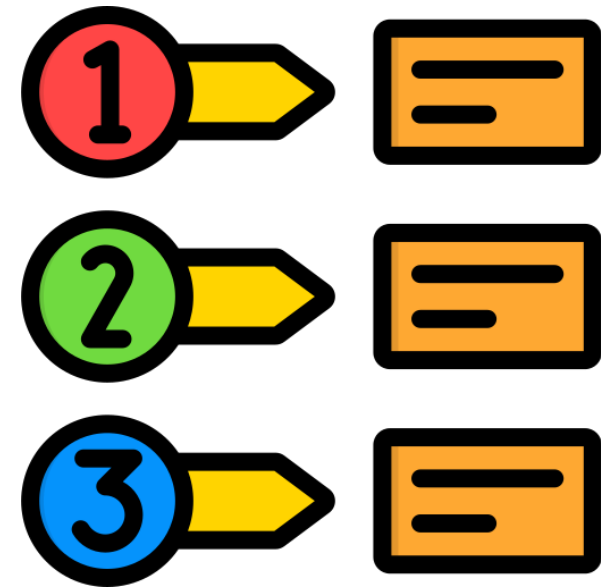


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Innovation to address policy priorities

- More granular data to plan targeted programs and policies
- Enables measurement of hard-to-count populations (such as those missed out in traditional data collection methods)
- Provides data with less time lag for timely decision-making (it may be costly to conduct more frequent traditional surveys)



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Do innovative approaches replace traditional approaches?

- Innovative approaches **don't replace** traditional approaches, but support and **complement** official statistics
- They add value by filling gaps, improving coverage, timeliness, availability and disaggregation
- Traditional approaches provide a **good source** for validating and cross-checking data



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Innovative Approaches

Partnerships

- CSOs
- Academia
- Development partners
- Private sector...

Data Sources

- Social media data
- Geospatial data
- Mobile phone data
- Citizen generated data
- Admin data...

Methods

- Probabilistic Record Linkage
- Small Area Estimation
- De-Identification, Privacy Enhancing Technologies/Privacy preserving techniques
- Machine Learning/ Natural Language Processing

Tools

- Data Integration: ETL, R, Python, Batch/Stream Processing...
- Preparation: Data warehouse, data-lake, ETL, Apache Parquet, R, Python...
- Analysis: Google Earth, QGIS, ArcGIS, R & Python libraries (NumPy, Pandas, BeautifulSoup...)...
- Presentation: Dashboards, DataMarts, DataAPI, ...
- Dataflow Automation....



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Link with official statistics

- Implementation to be in line with the **UN Fundamental Principles of Official Statistics**, following key data **quality, privacy and confidentiality standards**

Principle 1: Relevance, Impartiality, and Equal Access

Principle 2: Professional Standards, Scientific Principles, and

Principle 3: Accountability and Transparency

Principle 4: Prevention of Misuse

Principle 5: Sources of Official Statistics

Principle 6: Confidentiality

Principle 7: Legislation

Principle 8: National Coordination

Principle 9: Use of International Standards

Principle 10: International Cooperation



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The Data ecosystem and national statistical system



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Addressing data gaps through innovation: Examples



Small Area Estimation using nighttime lights for poverty estimation (Philippines)

Small Area Estimation for disaggregates estimates of child poverty (Viet Nam)

Satellite imagery used to produce estimates of livestock population (South Sudan)

Small Area Estimation used for food insecurity experience scale (Chile)



Census and satellite imagery used for accessibility of roads for rural population (Japan, Colombia, Canada, China)



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Addressing data gaps through innovation: Examples



Use of geospatial information for education-related indicators on home-to-school distance and drop-out (Colombia)

Geolocation data from cell phones used to track COVID-19 outbreaks (Bangladesh)

Early warning of norovirus outbreaks through predictive modelling from social media data (UK)



Marine litter monitored through citizen science data (Ghana)

Mobile positioning data used to increase coverage & timeliness of tourism data (Indonesia)



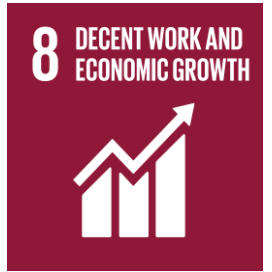
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Addressing data gaps through innovation: Examples

Web-scraping of prices used to improve inflation data (Norway)

Natural language processing used of online job adverts used to provide weekly estimates of job vacancies (UK)



Producing experimental estimates of SDG 16 perception indicators through social media data (Colombia)

Use of geospatial and statistical information to produce SDG 11.3.1 and 11.7.1 on land use and access to open spaces (Palestine)



Earth observation data used to develop land and ecosystem extent accounts (Philippines)

Data For Now initiative

- Launched by UN Deputy-Secretary General Amina Mohammed on the sidelines of the UN General Assembly, in September 2019
- Supports countries in the **use of innovative sources, technologies and methods for the streamlined production and dissemination of better, more timely and disaggregated data** for sustainable development
- Develops countries' capacities to **deliver the information needed by local and national policy and decision makers** to design effective development strategies and policy programmes
- Is co-led by the United Nations Statistics Division (UNSD), United Nations Development Program (UNDP), the World Bank, the Global Partnership for Sustainable Development Data (GPSDD), and the Sustainable Development Solutions Network (SDSN)



Guiding principles



Countries supported (as core)



Colombia



Ethiopia



Senegal



Jordan



Jamaica (DATAS)



Fiji (DATAS)



Morocco



State of Palestine



Sierra Leone



Tunisia



Viet Nam



Comoros (DATAS)

Countries supported (in collaboration with other UNSD initiatives)



Bangladesh



Kyrgyzstan



Chile



Namibia



India



Seychelles



Indonesia



Maldives



Kenya



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THANK YOU!

For resources, visit:

<https://unstats.un.org/UNSD/Website/capacity-development/data-for-now/>

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Moving beyond traditional censuses: Chile's collaborative approach to administrative data

21 January 2025 - Chile



Unlocking Access to Mobile Network Data for Public Good – Lessons Learned

26 November 2024 - Tunisia



Building a smarter future: How Jordan is using data innovation for sustainable cities and beyond

29 October 2024 - Jordan



Enhancing Quality of Life in Cities: Palestine's Data-Driven Approach

17 October 2024 - Palestine



Addressing Homicide: How Cameroon is Closing the Data Gap

3 September 2024 - Cameroon



Modernizing Sierra Leone's IT Infrastructure for Data-Driven SDG Progress

3 September 2024 - Sierra Leone

Read our stories to learn more about how countries are leveraging innovative methods, tools, and approaches through support from the Data For Now initiative