



Statistics Division

# Mainstreaming gender into climate change statistics

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**Why is a gender angle  
important in Climate Change  
Statistics?**

# Why integrating gender into climate change statistics

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Climate change and environmental crises and disasters, disproportionately affect women and girls reinforcing and magnifying existing gender inequalities

## Climate change

Disrupted ecosystems, contributed to biodiversity loss and caused increasingly frequent and severe disasters

## Gender inequality

Discriminatory norms, unequal power relations, violence against women and girls and the gender division of labour underlie women's relationship to natural resources in many contexts.

Gender inequalities and unequal access of women to land and natural resources, finance, technology, knowledge, mobility and other assets constrain the ability of women to respond and cope in contexts of climate and environmental crises and disasters

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**Gender statistics and data disaggregated by sex on climate, environment and disaster risk reduction:** existing metrics are insufficient to adequately capture the gendered drivers and impacts, the gendered differences in vulnerability and adaptive capacity and the specific contributions of women to environmental conservation and climate change mitigation and adaptation.

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## Normative and policy frameworks:

- Beijing Declaration and Platform for Action
- 2030 Agenda and the Sustainable Development Goals
- Committee on the Elimination of All Forms of Discrimination against Women
- Paris Agreement under the United Nations Framework Convention on Climate Change
- Gender Action plans to the Rio Conventions
- The Sendai Framework for Disaster Risk Reduction
- Human Rights Council resolutions

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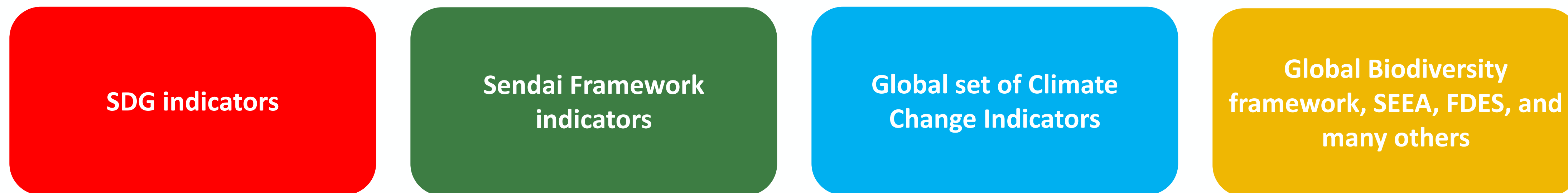
51<sup>st</sup> session United Nations Statistical Commission (2020), requested *that a gender perspective be adopted and integrated into all the agenda items of the Commission, as is, for example, the current practice in the Statistical Conference of the Americas*" ([Decision 51/115, b](#)).

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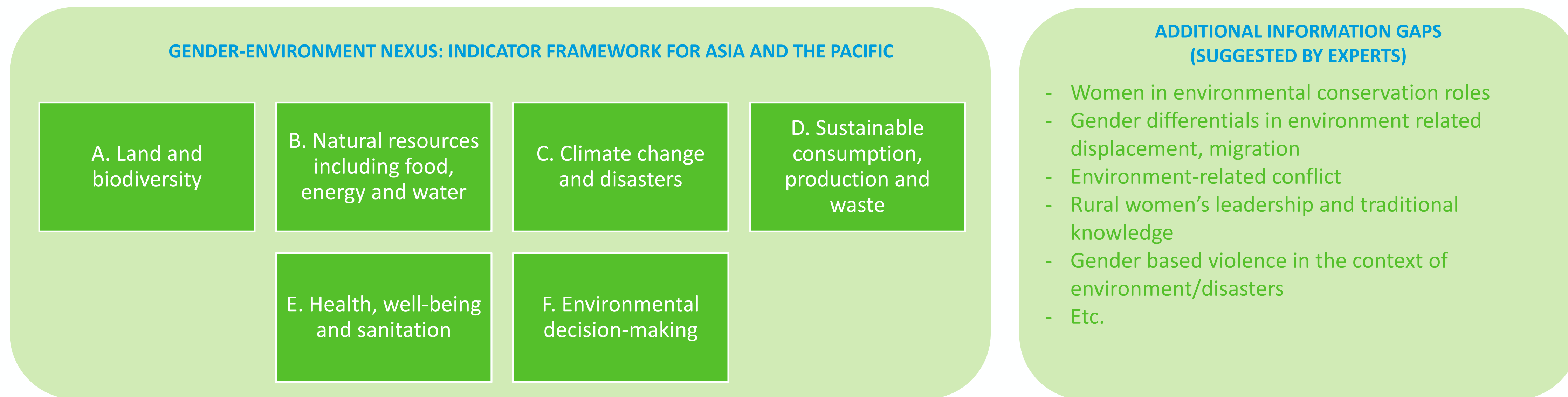
## Identifying gender & climate change indicators

# Measuring the gender-climate change nexus: indicator frameworks

## 1) Disaggregate data for indicators in international frameworks (at multiple levels)



## 2) Generate data for additional indicators to fill information gaps

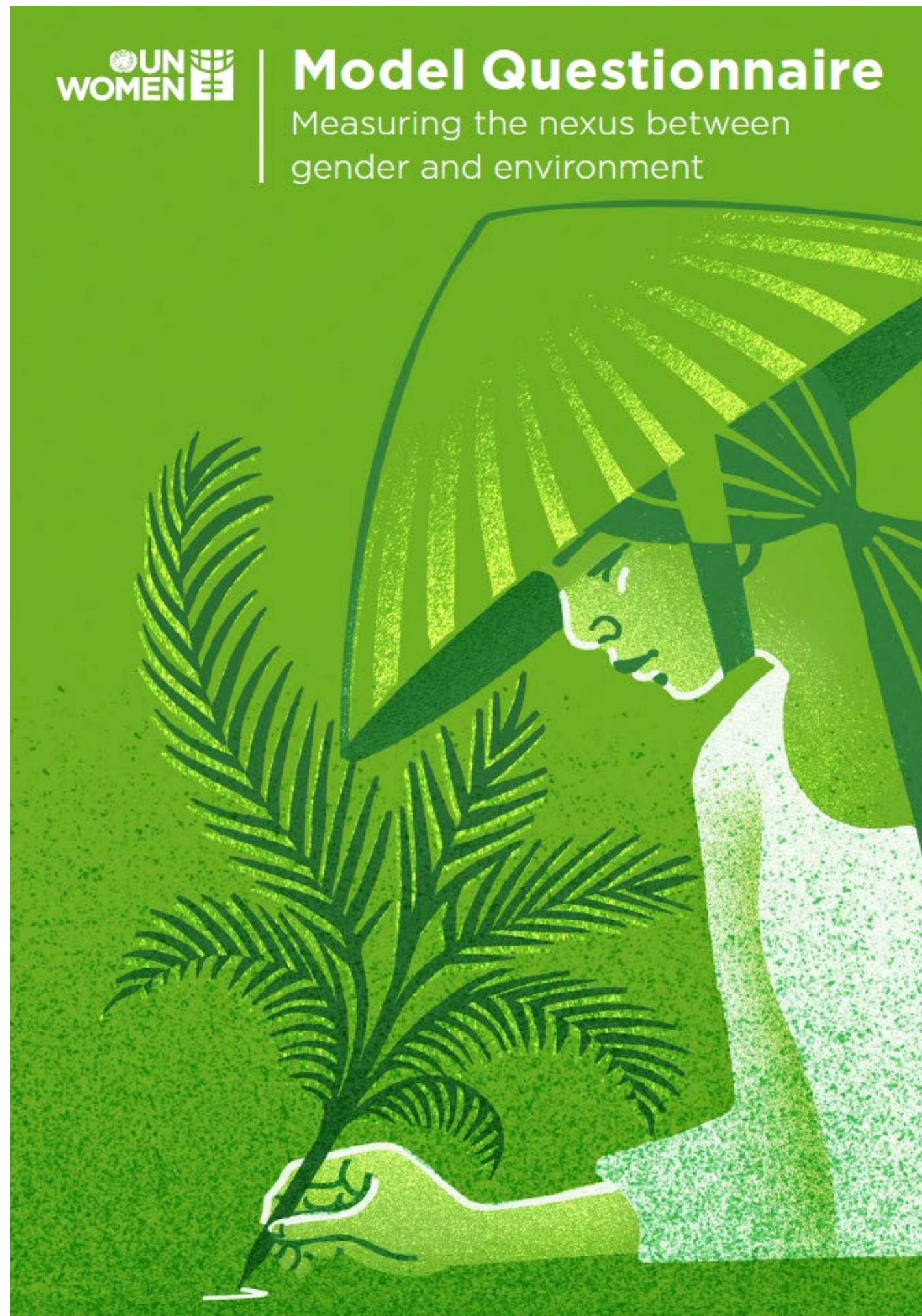


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How do we measure these issues?



# Gender-Environment Surveys



- Measure how women and men interact with the environment for pay/profit, subsistence, leisure, tradition religion or others
- Can be implemented in full or in attachment to other surveys as long as there are two adult respondents of different sex per household
- Sampling must go beyond economic engagement

Module number	Module name	Type of module
Module 1	Household roster	Household
Module 2	Housing characteristics: Location, building materials, fuel, water and sanitation	Household
Module 3	Individual characteristics	Individual
Module 4	Disaster exposure, preparedness and consequences	Individual
Module 5	Exposure to, and preparedness for, climate change related effects	Individual
Module 6	Employment in the green economy	Individual
Module 7	Agriculture and land use	Individual
Module 8	Environment-related livelihoods	Individual
Module 9	Assets ownership	Individual
Module 10	Decision making and mobility	Individual

- Direct exposure to hazards and effects of CC (UNDRR Hazard Info.)
  - Early warning/related information
  - Preparing/Coping (e.g. preserving food, seeds, eating less)
  - Effects on livelihoods: agricultural yield, livestock, fish catch, fishing/harvesting/foraging times
- Effects on unpaid work burdens: lengthen times for care, domestic work, water, fuel
  - Effects on the environment: apply pesticides/antibiotics
  - Displacement
  - Perceptions of crime and violence
- Participation in environmental decision-making

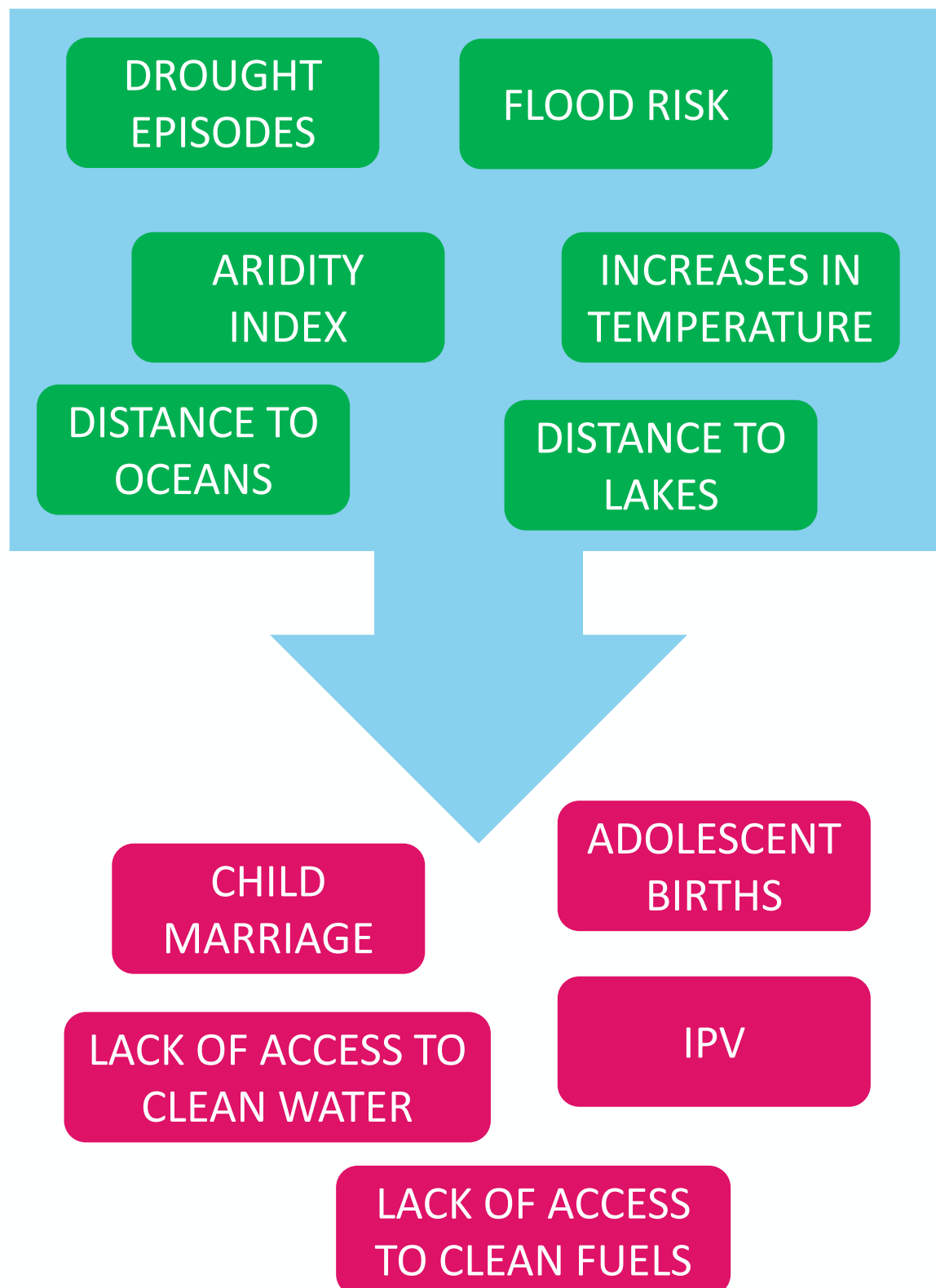
Nationally representative survey completed in Mongolia. Pilot in Bangladesh. Data collection currently on-going in Tonga. Planned for Samoa (February), Solomon Islands and Kiribati (2023). Interest expressed from other countries.

Questionnaire available at [data.unwomen.org](https://data.unwomen.org); guidelines forthcoming.

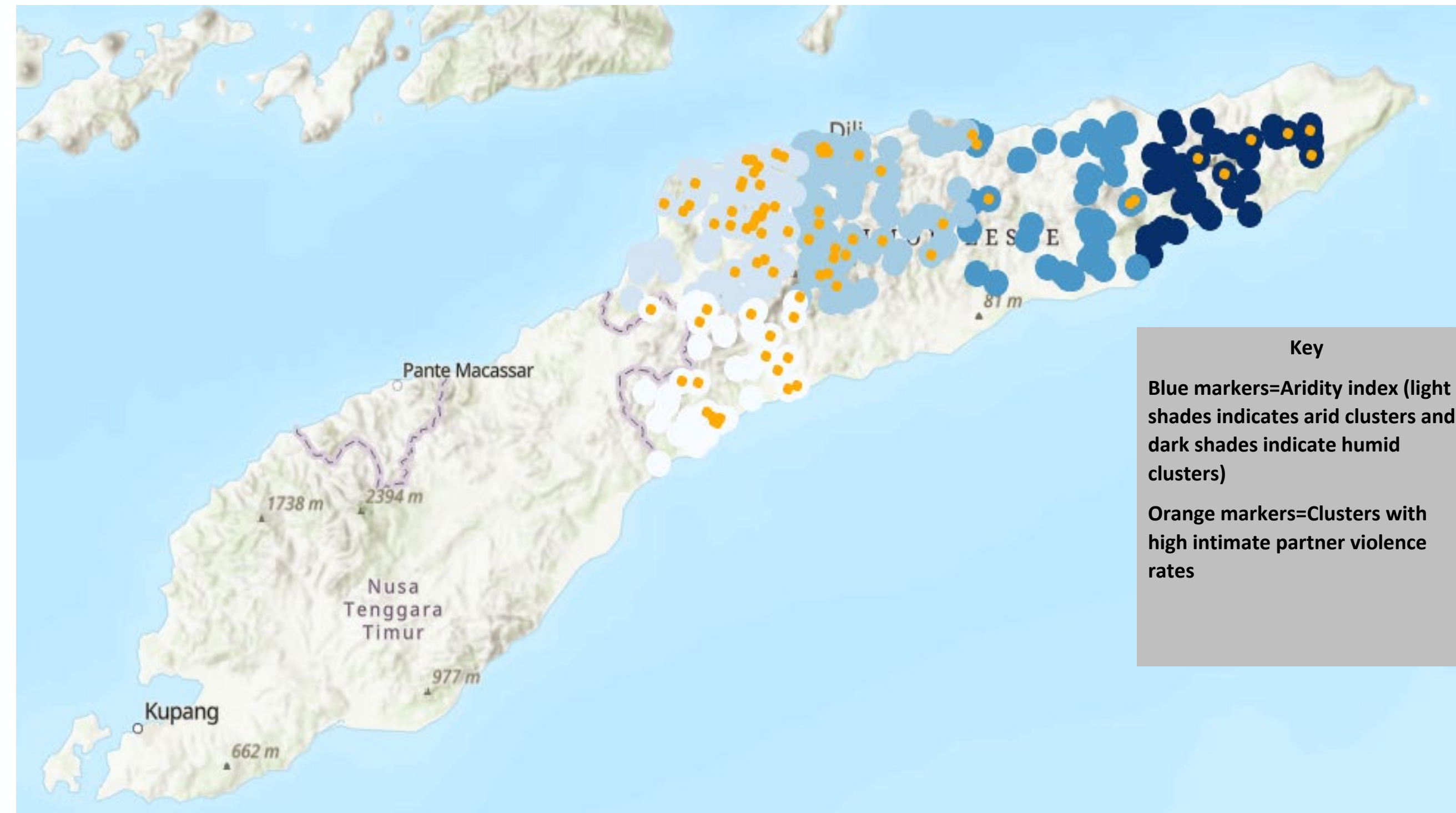


# Using existing data: Integrating various data sources

Multivariate logistic regression and Random Forest models



GEOGRAPHICAL DISTRIBUTION OF HIGH RATES OF INTIMATE PARTNER VIOLENCE IN THE PAST 12 MONTHS, BY CLUSTER ARIDITY, TIMOR-LESTE



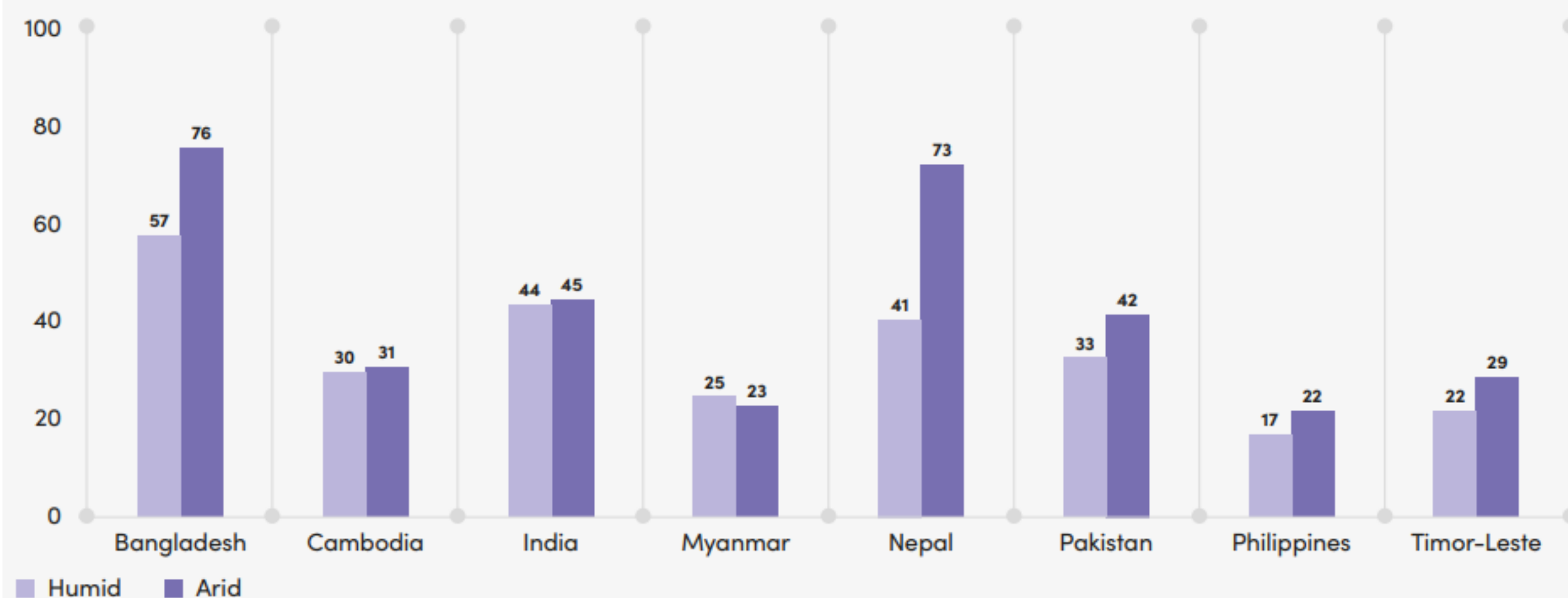
**Key for interpretation:** The gradient of blue color represents aridity index -- lighter shades of blue representing lower relative humidity (arid clusters), and darker shades indicating higher relative humidity. The orange dots represent clusters with high intimate partner violence rates (top 25% of cluster values). The map indicates that arid clusters (light blue region) are more likely to see higher intimate partner violence in the past 12 months.

Source: Duerto Valero, Kaul et al, UN Women (Forthcoming)



# Filling gender data gaps: Integrating various data sources

**Figure 10:** Proportion of women ages 18–49 who were married before age 18, by aridity index, latest available year (percentage)

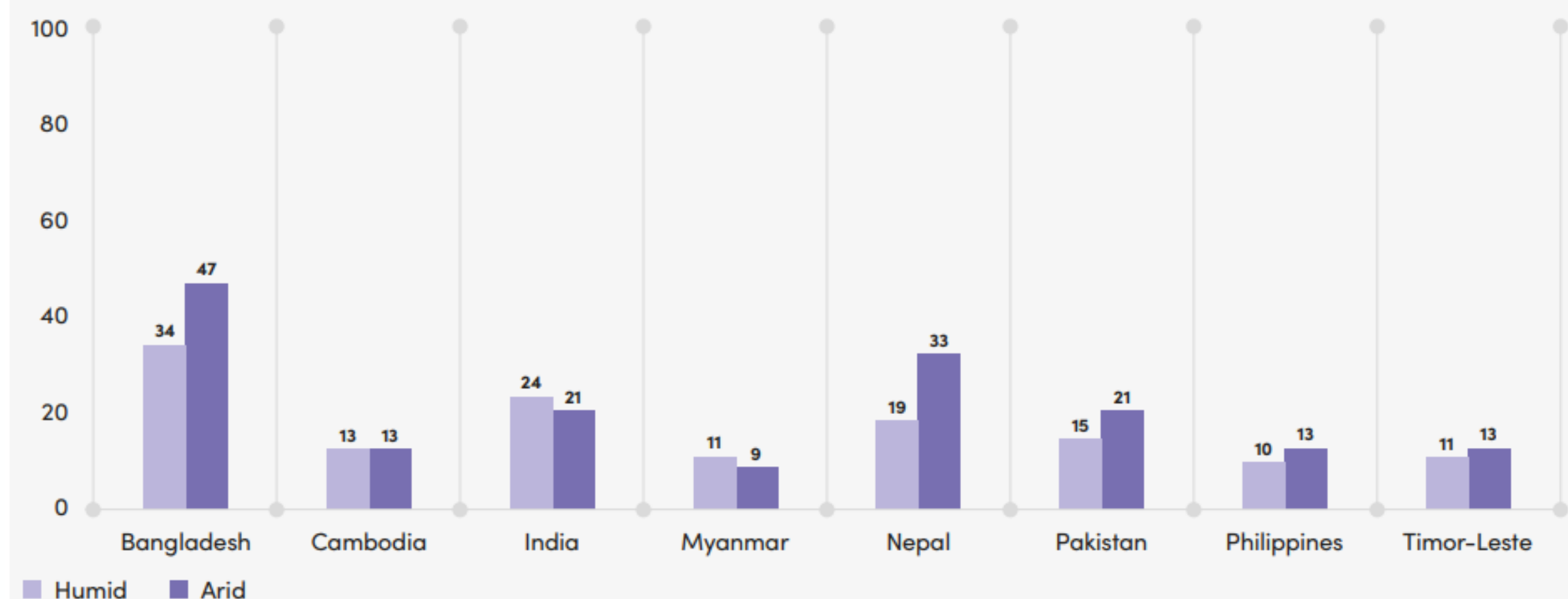


Source: UN Women calculations based on DHS data and geospatial data from DHS Geocovariates for 2015.

Note: All countries where both types of data were available are included in the analysis. The differences across arid and humid areas are significant ( $p < 0.01$ ) for all countries considered, with the exception of Myanmar ( $p = 0.49$ ) and Philippines ( $p = 0.25$ ).

The aridity index represents the average yearly precipitation divided by average yearly potential evapotranspiration – a measure of the drying power of the atmosphere to remove water from land surfaces by evaporation (e.g., from the soil and plant canopy) and via plant transpiration. Humid refers to the top 25 per cent values, and arid to the bottom 25 per cent values of cluster level aridity. For visual brevity, the central values of the aridity distribution are not shown. Although the official SDG indicator 5.3.1 on child marriage refers to women ages 20–24, this age group would yield an insufficient sample size for this analysis and thus ages 18–49 was used instead.

**Figure 11:** Proportion of women ages 18–49 who gave their first birth before age 18, by aridity index, latest available year (percentage)



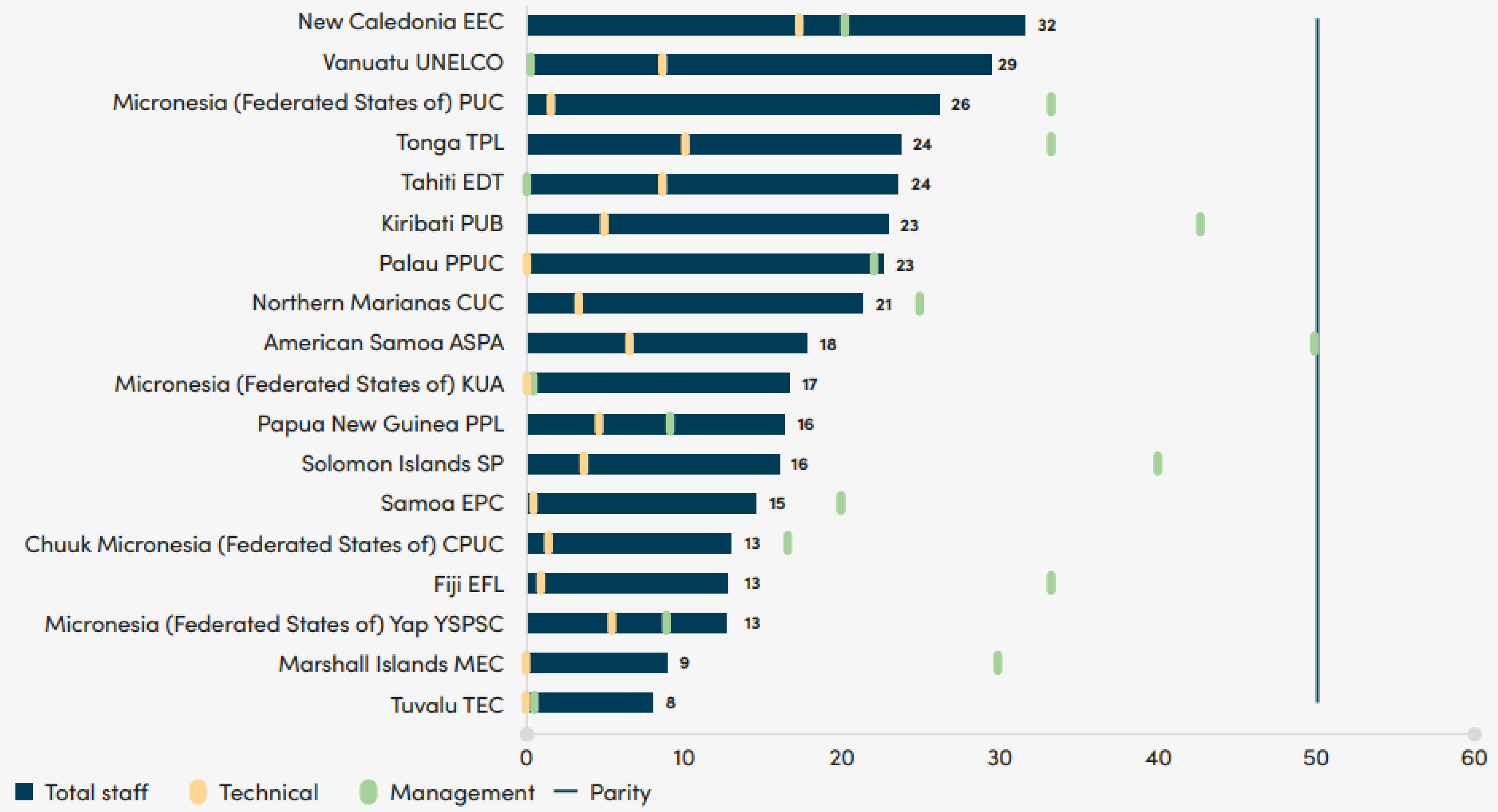
Source: UN Women calculations based on DHS and geospatial data from DHS Geocovariates from 2015.

Note: All countries where both types of data were available are included in the analysis. The differences are statistically significant ( $p < 0.01$ ) for all countries considered, except Myanmar ( $p = 0.39$ ) and Philippines ( $p = 0.25$ ).

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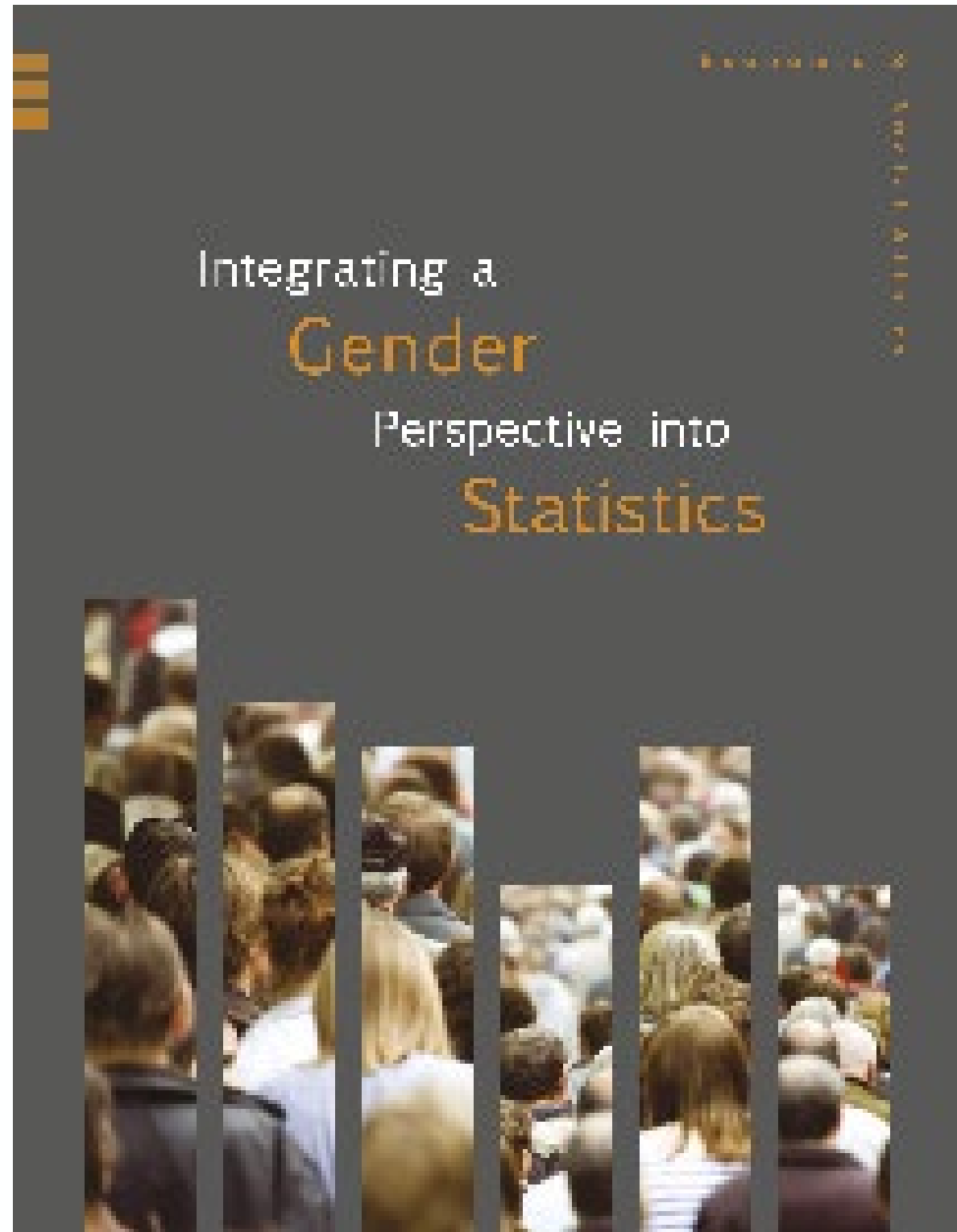
# Leveraging administrative data

Figure 12: Proportion of staff in Pacific power utilities that are women, by job category, 2018 (percentage)

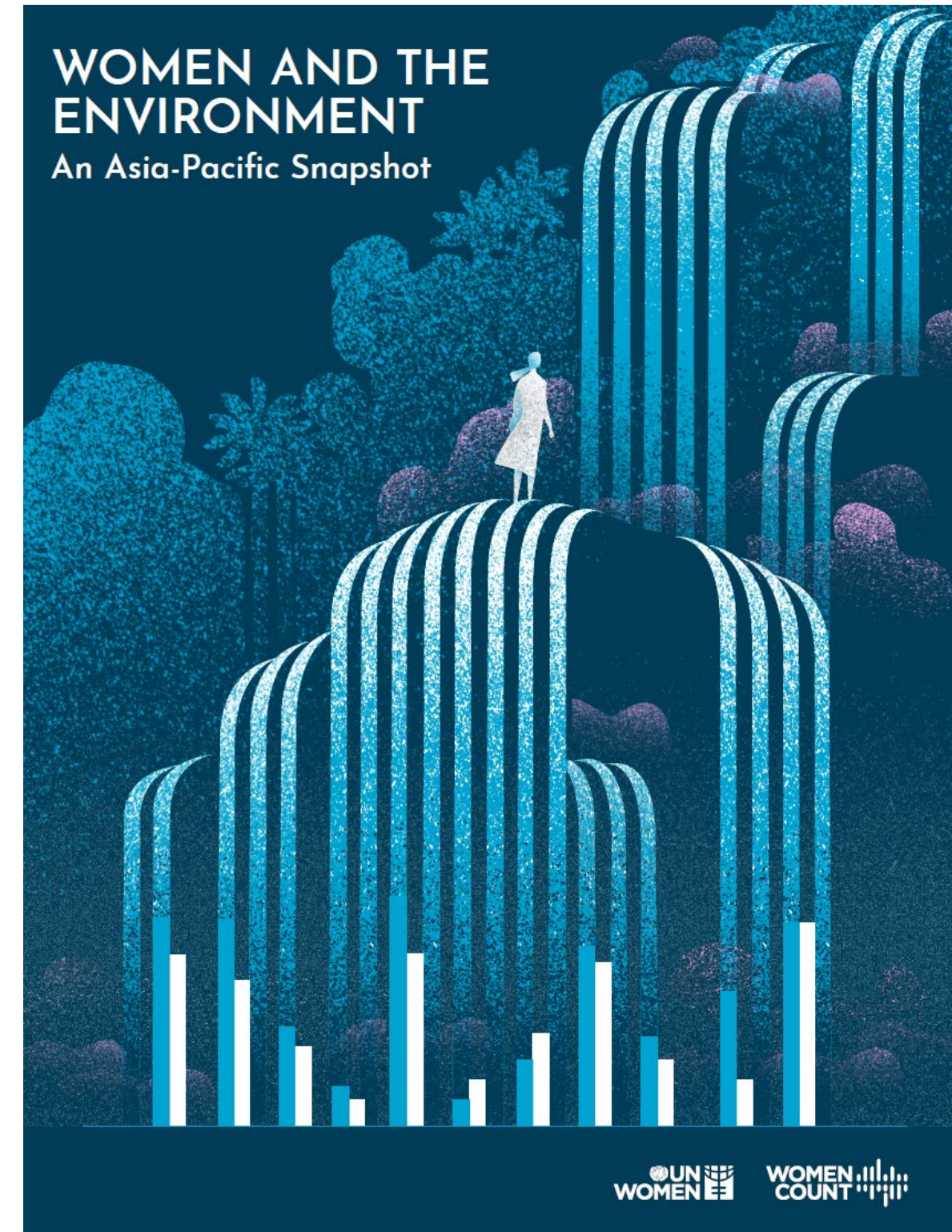
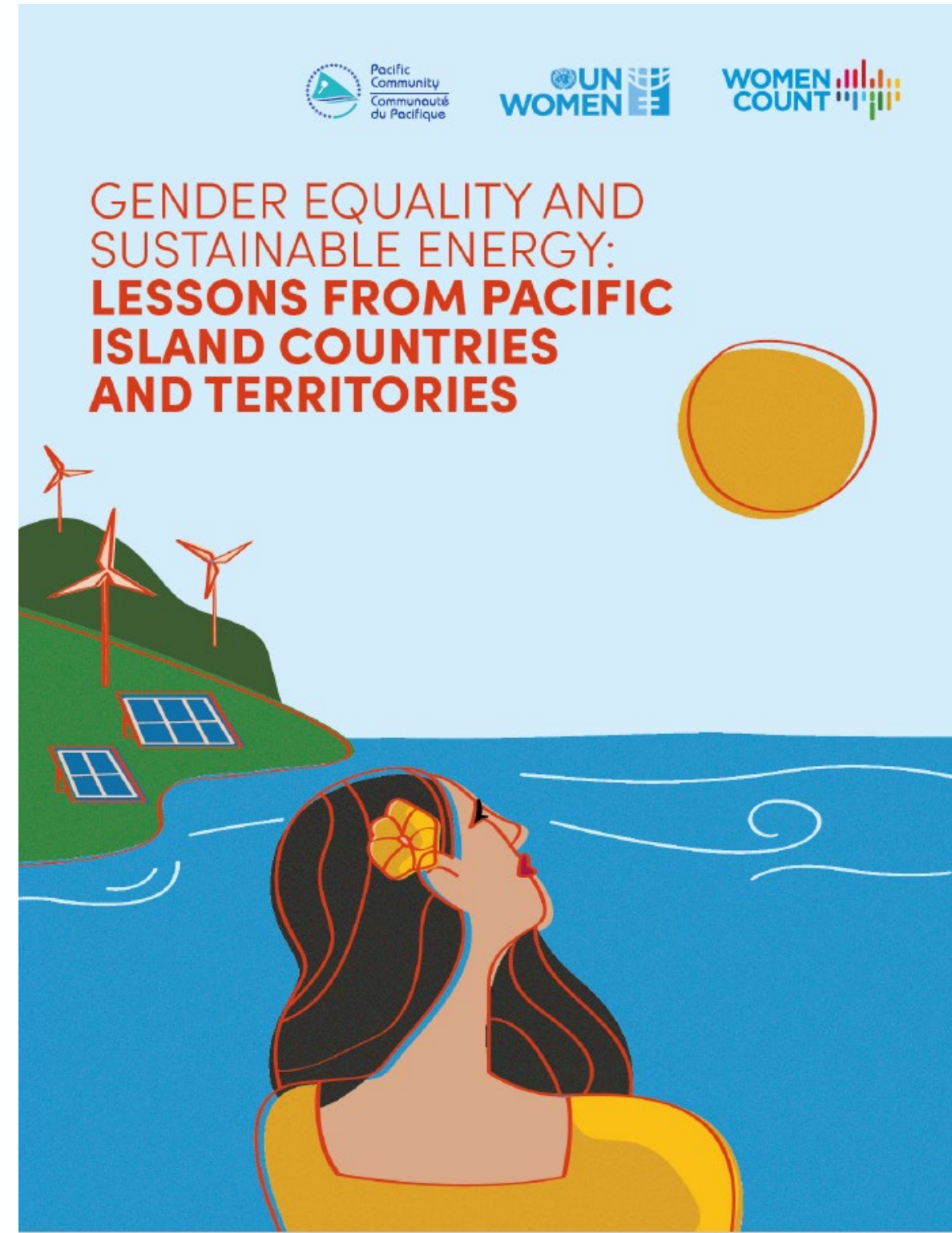




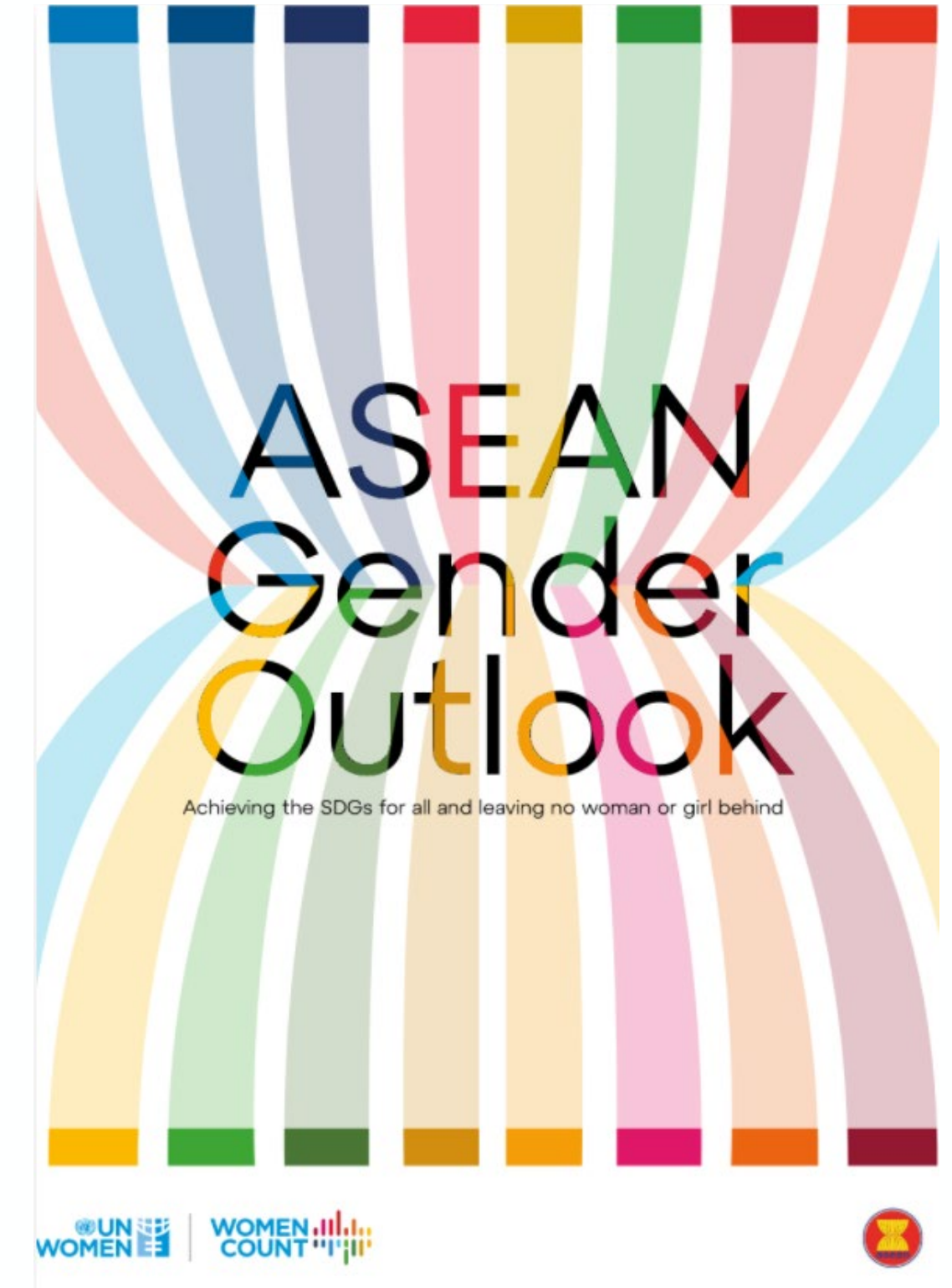
# Promoting gender data use



- [Integrating a Gender Perspective into Statistics](#)  
- [UN Statistics Wiki](#)



<https://data.unwomen.org/>





# Thank you

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