Introduction

In 2015, world leaders came together and made a historic promise to the planet's future when they adopted the 20230 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). Less than a decade remains for countries to meet these ambitious goals, and the 2023 SDG progress report states that “Progress on more than 50 per cent of targets of the SDGs is weak and insufficient; on 30 per cent, it has stalled or gone into reverse.” [1] To examine the interconnectedness of population dynamics, climate change and sustainable development, existing quantitative data was compiled into maps and analyzed across the South and Southeast Asian regions. For example, the relationship between population dynamics and urbanization, food security, and water stress were explored. In addition, the links between vulnerability to climate change and readiness for climate change to population projects and unmet need for family planning were analyzed. Vulnerability and readiness indicators are drawn from the Notre Dame Global Adaptation Initiative (ND-GAIN) index, which compiles data across 45 indicators and 181 countries to characterize vulnerability to climate change and readiness to adapt based on environmental, economic and social sector factors.

The SDGs reflect an understanding that sustainable development requires simultaneous consideration of economic growth, social well-being and environmental protection. This report was developed specifically to contribute to understanding and bringing greater attention to the issues of population dynamics and voluntary family planning and reproductive health (FP/RH) in the context of climate change and achieving sustainable development in South and Southeast Asian regions.

Methodology

To examine the interconnectedness of population dynamics, climate change and sustainable development, we searched for recent quantitative measures and indicators/datasets available across all or most of the countries in South and Southeast Asian regions. Specifically, for population dynamics, we collected data on current and projected population sizes. Since fertility is a central driver of population growth, we also collected data on current total fertility rates and unmet need for FP. For climate change indicators, we selected the Notre Dame Global Adaptation Initiative (ND-GAIN) index scores and global ranking as well as the index scores for its two primary components: vulnerability to climate change and readiness to adapt to climate change. For other sustainable development indicators, we selected measures of deforestation, urbanization, urban poverty, food security and water scarcity.

We compiled identified data points into spreadsheets and examined their distributions and any missing data across South and Southeast Asian countries. For each type of indicator, we calculated or selected indicator thresholds and visualised the indicators and their relationship to one another on a series of figures and maps. We drew on recent literature to determine appropriate indicator thresholds supported by the evidence or considered by experts as constituting levels above or below, which would be considered problematic or to place populations at particular risk of the phenomenon

in question. For those indicators in which the literature does not indicate any thresholds, we divided the range of values for that indicator into terciles. We presented high, medium and low terciles to bring attention to countries in South and Southeast Asian regions with the lowest measures relative to other countries in South and Southeast Asian regions.

Our analysis and visualization of the nexus of population dynamics, and climate change and sustainable development indicators in South and Southeast Asian regions bring useful insights to policymakers, donors, and civil society as they develop and implement sustainable development policies and programs. Furthermore, our findings from the study could facilitate greater incorporation of population considerations and investments in voluntary FP/RH into efforts to address climate change and further sustainable development in countries in South and Southeast Asian regions and beyond.

Variables employed in this analysis are:

1. Population projections from the World Population Prospects 2022 (United Nations)
2. Water stress from the Food and Agriculture Organization of the United Nations (FAO)
3. Prevalence of undernourished from FAO
4. Agriculture Contribution to GDP from the FAO
5. Land Cover Projections
6. Unmet need for family planning from the DHS Program
7. Population density from the World Bank
8. World Urbanization Prospects 2018 from the United Nations
9. Vulnerability and Readiness from the ND-GAIN
10. Contraceptive prevalence rate
11. Unmet need for family planning
12. Population pyramids for Asia – dependency ratios

Findings from the study point to the need for South and Southeast Asian countries to continue pressing towards achieving balance sustainable development goals, strong plans of action are needed that both simultaneously support resilience and adaptations for climate change and include right-based policies designed to augment access to voluntary family planning and reproductive health.