Disaggregating the HDI at a very fine level of geographic resolution

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The human development approach has been successful in shifting the focus of human progress from income to a wider multidimensional set of capabilities. A key element of the strategy of alternatives to GDP has been the construction of globally comparable indicators. Among them, the Human Development Index (HDI) has set the standard since 1990. One of the challenges of global human development indicators in their limited disaggregation. The Human Development Report Office is working with leading partners on new methods to produce disaggregated estimates of human development. We leverage recent advances in machine learning and satellite imagery to develop the first global estimates of the HDI at a local level (ADM2). Specifically, we employ a generalizable downscaling technique using Multi-task Observation using Satellite Imagery and Kitchen Sinks (MOSAIKS) to learn the relationship between satellite imagery and HDI using province (ADM1) level labels and then make predictions at the municipality (ADM2) level. These new techniques have the potential of expanding the ability to collect data from alternative sources, widening the space for measuring inequality in human development and supporting policy making.