High and low density development in Puerto Rico

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Map Description
This map shows the distribution of high and low density developed lands in Puerto Rico (Martínez et al. 2007). The map was created using a mosaic of Landsat ETM images that range from the years 2000 to 2003. The developed land cover was classified using the Iterative Self-Organizing Data Analysis Technique (ISODATA) unsupervised classification (1992). Developed land cover refers to urban, built-up and non-vegetated areas that result from human activity. These typically include built structures, concrete, capital, and other infrastructure. The developed cover was divided into high and low density using a factorial fit using a 30-m to 250-m window, the file evaluates the proportion of surrounding developed land cover using an image processing step. Areas are surcharged by more than 50% of developed pixels, while low-density refers to those areas that are surcharged by less than 50% of developed pixels.

From a total of 60,162 ha of urban development, 44,984 ha (75%) in high-density development, and 15,178 ha (25%) in low-density development. The high-density development is characterized by urban centers and isolated constructions. The low-density development is mainly composed of rural areas.

High density development is typically associated with the urban centers and isolated constructions. Low-density development is mainly composed of rural areas.

Development is closely tied to the topography of the island. Development decreases rapidly as slope increases. This tendency is observed on the total backup areas and high-density developments. For low-density development, this decrease is shown in the higher slopes. Development is closely tied to the topography of the island. Development decreases rapidly as slope increases. This tendency is observed on the total backup areas and high-density developments. For low-density development, this decrease is shown in the higher slopes.