Grand Cayman Recreation and Tourism Analysis (June 2016)

Summary
These data layers were created by The Nature Conservancy's Caribbean Program for the Mapping Ocean Wealth project in October 2015. The goal of this project is to use science, communications, and policy work to visualize and quantify the ocean's ecosystem, so that we can make smarter investments and decisions for the ocean of tomorrow. In the Caribbean, we used the InVEST tool to model the number of visitors within the Caribbean to estimate high and low areas of recreation/tourism. Find out more at http://oceanwealth.org.

Description
This data represents the number of Photo User Days (PUDs) to estimate the amount of recreation and tourism occurring around the Cayman Islands. Since fine-scale data on numbers of visitors is often only collected at a few specific locations in any study region, we assume that current visitation can be approximated by the total number of annual person-days of photographs uploaded to the photo-sharing website flickr. Many of the photographs in flickr have been assigned to a specific latitude/longitude. Using this location, along with the photographer's user name and date that the image was taken, the InVEST tool computes the total annual days that a user took at least one photograph within each cell, then returns to users the average annual number of photo-user-days from 2005-2012. We have observed that the number of recreators who visit a location annually is related to the number of photographs taken in the same area and uploaded to the flickr database at 836 visitor attractions worldwide (Wood et al. 2013). The density of photographs varies spatially, and this has ramifications for the cell-size that can be chosen for analysis. For this specific analysis, we used a cell size of 250m and calculated the PUDs for an area of interest that covers the entire Cayman Island land and ocean shelf area (200m 2014 GEBCO). All the cells that resulted as "0" were removed.

Credits
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For more information on this model, please refer to http://data.naturalcapitalproject.org/nightly-build/invest-users-guide/html/recreation.html