

Assessing the UAE's Efforts to Combat Climate Change using Ecological Footprint Accounting

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Growing concern about climate change created the need for a globally applied system of accounting to track demand on the earth's resources and their supply. An ecological footprint analysis provides an objective metric for the ecological impact a nation has on the environment, measured in global hectares/capita. Using data provided by the Global footprint Network, we calculate that the UAE has an ecological deficit of 9.2 global hectares/person but has only 9% of the area required to offset the cost of its environmental impact. The UAE is working to reduce this deficit and can approach this by 1) increasing its biocapacity and 2) reducing its ecological footprint. A Pearson Correlation Coefficient was computed to assess the linear relationship between each of the 6 land use metrics described by Wackernagel (1990) and the total ecological footprint of the UAE. Loss of fisheries was found to significantly impact the biocapacity, $r(37) = [.998]$, $p = [1.3347E-53]$, while carbon emissions have contributed the most to the ecological footprint $r(37) = [.986]$, $p = [6.7143E-36]$. These data can inform options for the targeted support one of earth's most vulnerable ecosystems and encourage increased use of renewable energy sources. This project is supported by the U.S. Dept. of State Diplomacy Lab (#2209921) and Bluefield State University International Initiatives.