The Role of Solar Energy in the Climate Change Mitigation and Adaptation: Perspectives for Brazil 2030

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Abstract

This article aims to analyze the possible contributions of solar energy (renewable source), associated with food, water and energy security, as part of the adaptation and mitigation agenda to minimise the negative impacts caused by Climate changes that are part of Brazil's determined national contribution (NDC) to the Paris agreement. The methodological procedures adopted in this work were: bibliographical and exploratory research: a) bibliography, researched books and articles dealing with the Nexus (AN) approach; b) Exploratory, analyzed Brazilian energy planning documents for 2030, in particular renewable sources (solar energy), National Energy Plan (PNE), determined national contribution (NDC) and analysis of 2 (two) cases, being: 1 (one) of energy Solar in residences (houses and apartments) of my Home program My Life (MCMV) and 1 (one) solar power case in small rural properties. The study demonstrates as a result: Case 1-MCMV and MRV enterprises with solar energy kit and case 2-solar energy in small rural properties, presents a strong correlation with the strategies of adaptation and mitigation to the vulnerabilities to the changes Climate. As for the synergy with food security, hydro and energy, Case 1 shows that it has low synergy with water, high with energy and medium with food; Case 2 presents high synergy with water, energy and food. The study is scientifically relevant because it sought to analyze cases that combine the strategies of adaptation and mitigation to the vulnerabilities caused by climate change.

Keywords: *Climate change, renewable energy, mitigation and adaptation.*