عنوان مقاله:

The food-energy-water nexus: A framework for sustainable development modeling

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خلاصه مقاله:

Energy, water, and food are facing present and future challenges triggered by climate change, population growth, human behavior, and economics. Management strategies for energy, water, and food are possible through policies, technology, and related education. However, the links between resources (energy, water, and food) and impacting factors (population increase, human behavior, economics, and global warming) need to be developed. Holistic modeling is needed to supply and demand energy, water, and food. That type of modeling explores the energy-water-food nexus. The framework for such modeling is described in this study, and previous frameworks are reviewed. Recommendations for addressing energy, water, and food challenges, before and after completing the energy-water-food nexus modeling, involve the following: modifying processes, modifying products, innovative processes, and innovative products. With an energy water-food-nexus model, the impact of any changes on resources can be measured and quantified.

کلمات کلیدی:

Energy-Food-Water Nexus, FEW Nexus Modeling, Climate change, Sustainable development, Technical Innovation