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Global CLEWs model - A novel application of OSeMOSYS

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Over the past years, studies that analyse Nexus issues from a holistic point of view and not energy, land or water separately have been gaining momentum. This project aims at giving insights into global issues through the application and the analysis of a global scale OSeMOSYS model. The latter –which is based on a fully open and amendable code- has been used successfully in the latest years as it has been the producing fully accessible energy models suitable for capacity building and policy making suggestions. This study develops a CLEWs (climate, land, energy and water) model with the objective of interrogating global challenges (e.g. increasing food demand) and international trade features, with policy priorities on food security, resource efficiency, low-carbon energy and climate change mitigation, water availability and vulnerability to water stress and floods, water quality, biodiversity and ecosystem services. It will for instance assess (i) the impact of water constraints on food security and human development (clean water for human use; industrial and energy water demands), as well as (ii) the impact of climate change on aggravating or relieving water problems.