FROM THE HUNTER-GATHERER SUBSISTENCE STRATEGIES TO THE AGRICULTURAL NON-REVOLUTION: USING ENERGY REGIMES TO REFORM THE "STACK" OF CULTURAL PHASES

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ABSTRACT

The TERRANOVA project aims to produce new knowledge to support policy makers and stakeholders cope with the transition towards low carbon societies. Improving existing knowledge of past land-use management strategies will allow TERRANOVA partners to gain a better understanding of long-term and complex landscape dynamics.

Beginning in the Last Glacial Maximum (LGM) onwards in NW Iberia, gradual softening of climate conditions allowed hunter-gatherer societies to broaden their natural resource exploitation strategies, based on a Guided Solar Energy Regime (ER1). As the mutually interconnected climate conditions and natural resources evolved with time, human subsistence strategies remained nonetheless static, only changing with the Neolithization process. The transition to a novel Devised Solar Energy Regime (ER2), largely based changes in food production approaches, would largely impact the landscapes. Human societies would soon need new sources of food and energy to sustain their coupled cultural and biological evolution processes, and more importantly, to deal with the consequences of their impact upon their own lived landscapes.

A substantial archaeological database has been constructed, and spatial and temporal analysis has been conducted in order to identify and document and characterize ER1 and its transition to ER2. Unravelling the process of this transition will help archaeologists, paleontologists, paleo-geographers and earth and environmental scientists, amongst other specialists, better understand the time-bounded continuities and discontinuities in past societies. Focusing on energy regimes allows to identify the "time-loop" that defines transitions along different subsistence strategies, resulting from continuous new demands that arise by filling previous ones, in substitution of the classic understanding of a "stack" of cultural phases.

Our current World is actually not exception to this loop. Unsustainable rates of fossil fuel consumption have solved many challenges whilst also triggering new ones. The transition towards green energies and allowing the environment to recover through more sustainable and resilient land and natural resource use strategies should thus become the next logic step in the loop.