Sustainable energy transitions in emerging economies: The formation of a palm oil biomass waste-to-energy niche in Malaysia 1990–2011

The economic development in emerging economies in Southeast Asia has significantly increased the use of fossil fuel based energy. This has severe implications for global climate change, and against this background, scholars within the sustainable transition tradition have taken an interest in addressing how transitions towards more sustainable development pathways in this region may be achieved. This paper contributes to the abovementioned literature by examining the conducive and limiting factors for development and proliferation of a palm oil biomass waste-to-energy niche in Malaysia during the period 1990–2011. Rising oil prices, strong pressure on the palm oil industry from environmental groups, and a persisting palm oil biomass waste disposal problem in Malaysia appear to have been conducive to niche proliferation, and on top of this national renewable energy policies and large-scale donor programmes have specifically supported the utilisation of palm oil biomass waste for energy. However, in spite of this, the niche development process has only made slow progress. The paper identifies reluctant implementation of energy policy, rise in biomass resource prices, limited network formation and negative results at the niche level, as the main factors hindering niche development.

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