

Chapter 18

Transition Model: A Methodology for Adapting the Cities to Ecological and Economical Challenges

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ABSTRACT

Peak oil and climate change are two of greatest challenges facing humanity at the beginning of 21st century. They are urging humanity to re-think and consider changing on many personal, social, ecological, and economic fronts. Transition and resilience are key concepts initiating this change to prepare communities to forthcoming challenging times. Transition Movement and the claimed model behind it, Transition Model, have been established to overcome these challenges by transforming communities and settlements. Transition Movement is a community-driven initiative aiming to build ecology friendly resilient community and settlements. Its fast spread has sparked the attention of policy makers, academicians, and practitioners. Relatively little research has been done, however, to understand the dynamics of Transition Movement. Here, I focus on transition and resilience concepts in relation to socio-ecological and socio-technical systems, investigate Transition Movement and Transition Model, and analyze their characteristics and fundamental processes. I classify Transition Movement both as a socio-ecological and a socio-technical system. I claim that Transition Model is not a model but rather a methodology. I question its validity and sufficiency as a methodology and point the improvement areas from systems point of view. I introduce two, non-existent but necessary systems to adapt: a feedback mechanism, and an improvement cycle based on projects and resilient indicators. Finally, I comment on the future of Transition Model and suggest areas for further research. The chapter is concluded with the question how Transition Model can be adapted by the cities, transforming them into resilient communities, ready for the ecological and economical challenges.

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INTRODUCTION

Transition phenomenon has been emerged from the work of Rob Hopkins at the Kinsale Further Education College in Ireland in 2005. He was concerned about Climate Change, oil dependent economy and living, and implications of “Peak Oil”. Peak Oil is the point at which the oil production rate starts to decline. Oil production has been raised exponentially since 19th century. M. King Hubbert was the first person that brought to the attention of scientific world that no finite source can keep up exponential growth infinitely. In 1956, he predicted that oil production rates would reach its maximum limit and then start to decline in early 2000s (Hubbert, 1956). Later his theory has been proved by descending world oil production figures and ascending oil prices. Peak Oil is now a known and accepted fact by the oil industry. A quotation from Lord Ron Oxburgh, a former chairman of Shell, in the first report of Oil Industry Taskforce on Peak Oil and Energy Security is very remarkable. He wrote in the report that “It is pretty clear that there is not much chance of finding any significant quantity of new cheap oil. Any new or unconventional oil is going to be expensive.” (Wheatcroft, 2010, pg: 1; Owen, Inderwildi, & King, 2010). There won’t be abundant and cheap oil in near future.

As global oil consumption in relation with production level is exponentially rising, carbon dioxide emissions and consequently carbon dioxide concentration in the atmosphere is increasing. Carbon dioxide is a major air pollutant that gives rise to green house effects, leads to global temperature rise and Climate Change. The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) defines Climate Change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (UNFCCC, 1994). Recent UN Climate Change Conference was held

in Cancun in December 2010. All countries and particularly industrialized nations were urged to implement their actions to reduce their carbon emissions in Cancun Conference. UN estimates show all these measures could deliver only 60 percent of the emission reductions and this does not guarantee the survival of the most vulnerable peoples (UNFCCC, 2010).

These challenges are urging humanity to re-think and consider changing on many personal, social, ecological and economical fronts. As a permaculture designer and teacher, Rob Hopkins gave an assignment to his students to develop a road map for a town to prepare for the future beyond fossil fuels and energy independence. His students developed “Energy Descent Action Plan” and when presented, Kinsale Town Council decided to adopt it. After this historic moment, the student project inspired the initiation of a grass-root movement and evolved as Transition Movement. This movement is one of the fastest-growing community scale initiatives in the world and currently more than 655 communities in about 25 different countries worldwide are the members.

A Transition Initiative which could be a town, village, forest, valley island or a university is with their words “a community-led response to the pressures of Climate Change, fossil fuel depletion and increasingly, economic contraction” (Transition Network, 2010). They try to find answers to the following crucial question: “For all those aspects of life that this community needs in order to sustain itself and thrive, how do I significantly rebuild resilience (to mitigate the effects of Peak Oil and economic contraction) and drastically reduce carbon emissions (to mitigate the effects of Climate Change)?” (Transition Network, 2010). Another aim of the Transition Initiatives is for each community to explore its own local answers to these challenges by focusing the collective mind. Therefore in each settlement, practice can be different in primary living issues such as energy, transport, food and farming, education, economy and housing.

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