Project title: Analysis of factors affecting CO2 emission fluctuation in the process of economic growth in Vietnam (KT.07.04)

Code: KT.07.04

Duration: 2007 - 2008

Implementing institution: University of Economics and Business - VNU

Manager: Dr. Nguyen Thi Kim Anh

Main contents:

Although, great progress in human development and economic growth has been witnessed in Vietnam since “Doimoi”, it is forecasted that Vietnam will be one of the five most seriously-damaged countries in the world because of global warming.

Based on the sustainable development theory, structural decomposition analysis (particularly Kaya identity), and time series data analysis, the research investigated the main factors affecting CO2 emissions in nine Asian-Pacific countries in 1971-2005 and Vietnam in 1988-2005, and highlighted the following conclusions:

First, economic growth (Y/P) and growth of CO2 intensity of energy (C/E) are the two main factors having influence on CO2 emissions growth in Vietnam and China, while those are economic growth (Y/P) and population growth (P) being the most significant elements in other eight relevant Asian and Pacific countries.

Second, industry, construction and transport are two important sources causing CO2 emissions in Vietnam, but public electricity & heat generation and transport or public electricity & heat generation and industry & construction are two largest CO2 emission sources in the remaining countries.

Third, albeit change of energy mix meaning the increase in renewable share, and change of economic structure in terms of labour shift from Industry sector to

service sector are the two crucial factors inducing the sharp decrease of CO2 emissions during 1989-1992, this trend would not give the way to the sustainable economic growth as the service sector just absorbed low-skilled labour with moderate productivity at the time.

Finally, the research draws out lessons from experiences of some Asian-Pacific countries such as Japan, Korea, and China… as the policy implications for Vietnam to reduce CO2 emissions growth in the year ahead.