

# Chapter 17

## Climate Change, Trade Competitiveness, and Opportunity for Climate Friendly Goods in SAARC and Asia Pacific Regions

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### ABSTRACT

*This paper examines trade performance of climate friendly goods using some trade indices for South Asia and Asia Pacific countries during 2002 - 2008. Climate friendly goods (CFG) are those goods which are less harmful to environment. Paper identifies performance of Asia Pacific region in CFG trade with other nations. Most of the countries in Asia are importers of climate friendly goods and technologies. The Comparative advantage analyses indicate that Hong Kong, China, and Japan have comparative advantage in the production of CFG goods. Pakistan, Sri-Lanka, and India prefer to trade in CFG regionally and have shown interest in production and trade of clean coal technologies (CCT). East and South East Asia regions have comparative advantage in Solar Photovoltaic Systems (SPVS) and Energy Efficient Lighting (EEL). Japan, China, Malaysia and Macao show good in 2008 for SPVS.*

### INTRODUCTION

Recently, both year 2011 and 2012 produced a record number of extreme climate events including floods, heat waves, droughts, fires and snowstorms. Climate change is a threat to the modern human civilization, and also a challenge to the developmental activities in this

century. *Climate Change* refers to a significant shift of climate lasting for an extended period of time. The Intergovernmental Panel on Climate Change (IPCC) reaffirms the climate change and the average global temperature increased by 0.74°C during 1906–2005, and it is expected to increase more in future (see IPCC Report 2007). In this context, even there is lot of limitations

DOI: 10.4018/978-1-4666-9814-7.ch017

or obstacles for developmental activity; climate change provides certain opportunity to grow with newly climate friendly products. Climate friendly goods (CFG) are those goods which are less harmful to the environment, later we discuss on it in details. Now, question arises as follow: Is there any trade competitiveness in Climate friendly goods? How much competition are nations facing in climate friendly goods (CFG) in South Asia and Asia Pacific region? Has any country comparative advantage in any subcategory of climate goods? How much is the volume of trade opportunity for India, South Asia and Asia Pacific in CFG? Who are the potential trade partners within Asia Pacific and in the rest of the world? This paper attempts to answer these with quantifying trade opportunities of CFG in India, South Asia, and Asia Pacific.

This paper examines the trade performance of climate friendly goods (CFG) for South Asia and Asia Pacific nations and their trade partners using WITS data<sup>1</sup> for the period 2002 - 2008. Trade performance is judged using some trade indices and indicators. Trade indices like Export and Import shares, Revealed Comparative Advantage index (RCA), and Competitiveness index for trade of CFG and its sub categories are calculated to form a policy opinion on selected Asian countries' competitiveness, trade patterns, changing comparative advantage over time.

This chapter is organised as follows: Next section reviews relevant literature with define climate friendly goods, trade analysis and its importance. Section 2 describes data and analyses climate trade performance, Section 3 evaluates competitiveness, and also provides trade performance of sub categories of CFG. Section 4 analyse potential trade opportunity of CFG in South Asia and Asia Pacific region; and finally concluding remarks.

## LITERATURE REVIEW

*Climate friendly goods (CFG)* are defined as components, products and technologies which tend to have relatively less adverse impact on the environment. The climate friendly goods (CFG) forms part of the broader group of environmental goods and services (EGS), which prevent, minimise or recover environmental damage, as well as problems related to waste, noise and ecological systems. It includes clean technologies, products that reduce environmental risk and minimise negative externalities and resource use. EGS can be classified as environmental goods comprising of pollution controlling equipments, environmentally preferable and resource management products. EGS has also environmental services that comprises of sewage services, reuse services, sanitation and similar services. CFG constitutes low carbon technologies such as solar photovoltaic systems, wind power generation, clean coal technologies and energy-efficient lighting. Some of the climate friendly goods/technologies are assisting in mitigation efforts by reducing GHG emissions and also improving adaptive capacity such as water conservation or improving access to energy.

Trade and Investment in CFGs and climate services have received attention as a triple win scenario where trade, climate and environment, and development all benefit (APTIR 2011). Countries prefer to concentrate on low energy consumption. Countries need to design sustainable and smart growth that entails sharply reduced GHG emissions which limits the global temperature. Various efforts (Rio meet in 1992, Kyoto protocol of 1997, Bali Action Plan of 2007, Copenhagen accord in 2009, Durban meeting in 2011, etc) have been made by international community to tackle the climate change.

The debate on trade, growth and environmental sustainability has arisen as trade and environment

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