1. Sector/Theme: Tourism

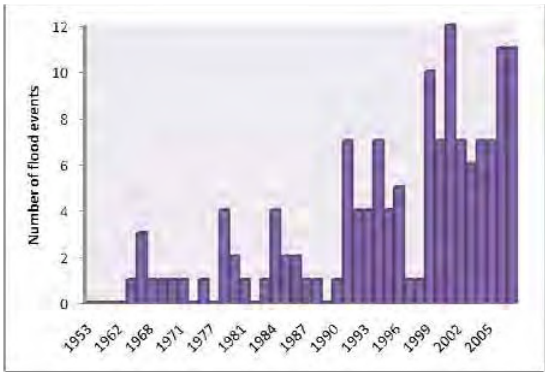
2. GMS Countries: Cambodia, Lao PDR, Thailand, Viet Nam (data on Myanmar and PRC – Yunnan and Guangxi not included)

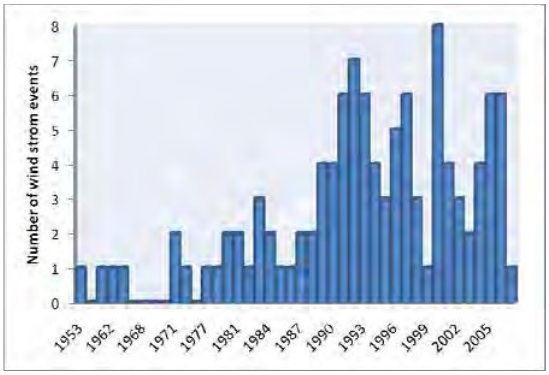
3. Context:

Tourism is highly climate sensitive as in many destinations natural environment and appropriate climatic conditions are the major tourist attractions. In GMS natural environment like its snow and glacier-capped mountains in the north, and its coastal and island environments in the south are dominant features of tourist attractions which are likely to be impacted by change in climatic conditions. In GMS countries like Thailand and Viet Nam, beach tourism constitute major portion of revenue earning sector, and any climate change puts tourism at risk that could result in significant market changes.

In addition to sea level rise, the immediate impacts of global warming, such as more severe tropical storms with higher speed winds and more intense rains resulting in floods, have already been observed around in GMS countries (Figure 1) [1] which are likely to affect tourism in the future.

Figure 1. Frequency of flood and wind storm [2]





4. Facts and Figures

	Cambodia	Lao PDR	Thailand	Viet Nam
GDP (2006) (US $ billions)[a]	7.2	3.4	206.2	60.9
GDP per capita (2005) (US$ PPP) [b]	2727	2039	8677	3071
Estimated contribution of GDP from Travel and Tourism (2008) (%)[c]	19.7	10	14.1	13.6
Estimated contribution of the Travel and Tourism Economy to employment (2008) (number of jobs) [c]	1,102,00	174,000	3,911,000	4,891,000

Source: [a] The World Bank. 2007[3], [b] UNDP. 2007[4], [c] WTTC 2008 [5]

- The subregion attracted around 16.4 million international visitors primarily from outside the GMS in 2004. This represented around 10.7 percent of total international visitor arrivals to

[1] UNWTO. 2007. *Climate Change and Tourism: Responding to Global Challenges—Summary.* London
[2] CRED. 2008. *EM-DAT: Emergency Events Database*. Centre for Research on Epidemiology of Disasters. Available: www.emdat.be
[3] The World Bank. 2007. *Key Development Data & Statistics.* Washington, DC. Available: http://web.worldbank.org
[4] UNDP. 2007. *Statistics of the Human Development Report.* Available: http://hdr.undp.org/en/statistics/
[5] WTTC. 2008. *The 2008 Travel and Tourism Economic Research, Cambodia, Laos, Thailand and Vietnam.* World Travel and Tourism Council. London Available at: http://go.worldbank.org/3JU2HA60D0.

the Asia and Pacific region and around 2.2 percent of global international visitors in 2004. In addition, more than 24 million tourists travel between border provinces of the subregion each year using border travel passes.

- In terms of its economic contribution, it is estimated that in 2004, international tourism to the subregion generated around $14.8 billion in total receipts,[6] $22.2 billion in economic output, $18.6 billion in final income, and around $2.3 billion in government revenue, and sustained 3.8 million jobs (including Myanmar and Yunnan and Guangxi of PRC).
- International tourism in the subregion has been growing at around 8 percent per annum since 1995, around twice the pace of global international tourism. The global share of total international arrivals to the Asia and Pacific region has increased significantly since 1995, reaching around 153 million out of around 760 million (20 percent) in 2004 (including Myanmar and Yunnan and Guangxi of PRC).
- Current forecasts suggest that growing connectivity, development, and awareness of the subregion as a global destination could increase total international tourism arrivals to the subregion from 14.6 million in 2004 to between 46 and 52 million by 2015–thus more than tripling total volumes over the next decade (including Myanmar and Yunnan and Guangxi of PRC).[7]

5. Anticipated Impacts of Climate Change on Tourism

Climate defines the length and quality of tourism seasons and plays a major role in destination choice and budget. Climate affects a wide range of environmental resources that are critical attractions for tourism, such as snow conditions, wildlife productivity and biodiversity, water levels and quality. Climate also has an important influence on environmental conditions that can deter tourists, including infectious disease, wildfires, insect or water-borne pests (e.g., jellyfish, algae blooms), and extreme events such as tropical cyclones.

There are four broad categories of climate change impacts that will affect tourism destination, their competitiveness and sustainability[8].

Direct climatic impacts: Countries in GMS region are likely to be affected by climate variability such as higher temperature, greater tropical storm intensity and peak winds, more intense precipitation events over many land areas, and longer and more severe droughts. Such change will affect the tourism industry through increased infrastructure damage, additional emergency preparedness requirements, higher operating expenses (e.g. insurance, backup water and power systems, and evacuations, and business interruptions).

Indirect environmental change impacts: Because environmental conditions are such a critical resource for tourism, a wide-range of climate-induced environmental changes will have profound effects on tourism at the destination and regional level. In particular island and costal destinations in GMS countries are sensitive to climate-induced environmental changes, most likely to be large and negative.

Impacts of mitigation policies on tourist mobility: National or international mitigation policies that seek to reduce GHG emission might encourage increase in transport costs and may foster environmental attitudes that lead tourist to change their travel pattern. These are likely to have an impact on tourist flows.

Indirect societal change impacts: Climate change is thought to pose a risk to further economic growth and to the national priorities of some nations. The Stern report on Economics of Climate

[6] The total receipts refers to all expenditure by international tourists (excluding border pass travelers) accruing to the GMS. The total economic output of tourism refers to the final effect of tourism expenditure on the subregional economy taking into account indirect and induced effects. The total economic income refers to total output less the import or economic leakage component.

[7] ADB.2005. *The Greater Mekong Subregion Tourism Sector Strategy.* Manila

[8] UNWTO. 2007. *Climate Change and Tourism: Responding to Global Challenges—Summary.* London

Change concluded that greater climate change will damage economic growth at global scale reducing the discretionary wealth available to consumers for tourism; however there has been no in-depth interpretation of the Stern Report for the tourism sector.

Climate variability such as higher temperature will affect major tourist attraction like natural resources and biodiversity in GMS (Map 1). Similarly, sea level rise, storm surges and flash floods are directly going to affect the tourism sector in the GMS causing damage to infrastructure and losses in revenue. For instance, in Cambodia, as shown in Map 2, a comparison of previous Mekong floods with possible scenarios of 1m to 5m sea level rise indicates dramatic effect in high value tourism destinations such as Ton Le Sap, Phnom Penh, Siem Reap, and Sihanoukville.

6. Key Dialogue Issues

Technical

- increasing effect of rising sea levels on tourism infrastructure (private and public)
- loss of earnings / revenue from a growth sector

Policy

- are policies in place to promote safeguard of tourism sites?
- are high value biodiversity and tourism attractions that are in less risk or risk free areas receiving sufficient attention of policy and decision-makers to galvanize investments to protect and maintain these for the future?

Institutional and financial (valid for all sectors)

- are institutions capable or their capacity being strengthened to start advance planning for responding to anticipated climate change risks?
- is a plan and investment in place for public campaigns, awareness raising, and disaster preparedness by local authorities / interest groups / associations / schools etc?
- is the educational curriculum in schools being amended / adapted to inculcate information about anticipated risks and raise awareness among younger generations, preparing them for possible future challenges?
- are ministries of development planning and finance in GMS countries and development partners, multilateral banks, private sector financial institutions planning for large scale investments in adaptation measures to reduce high risk and damage from anticipated climate change impacts?

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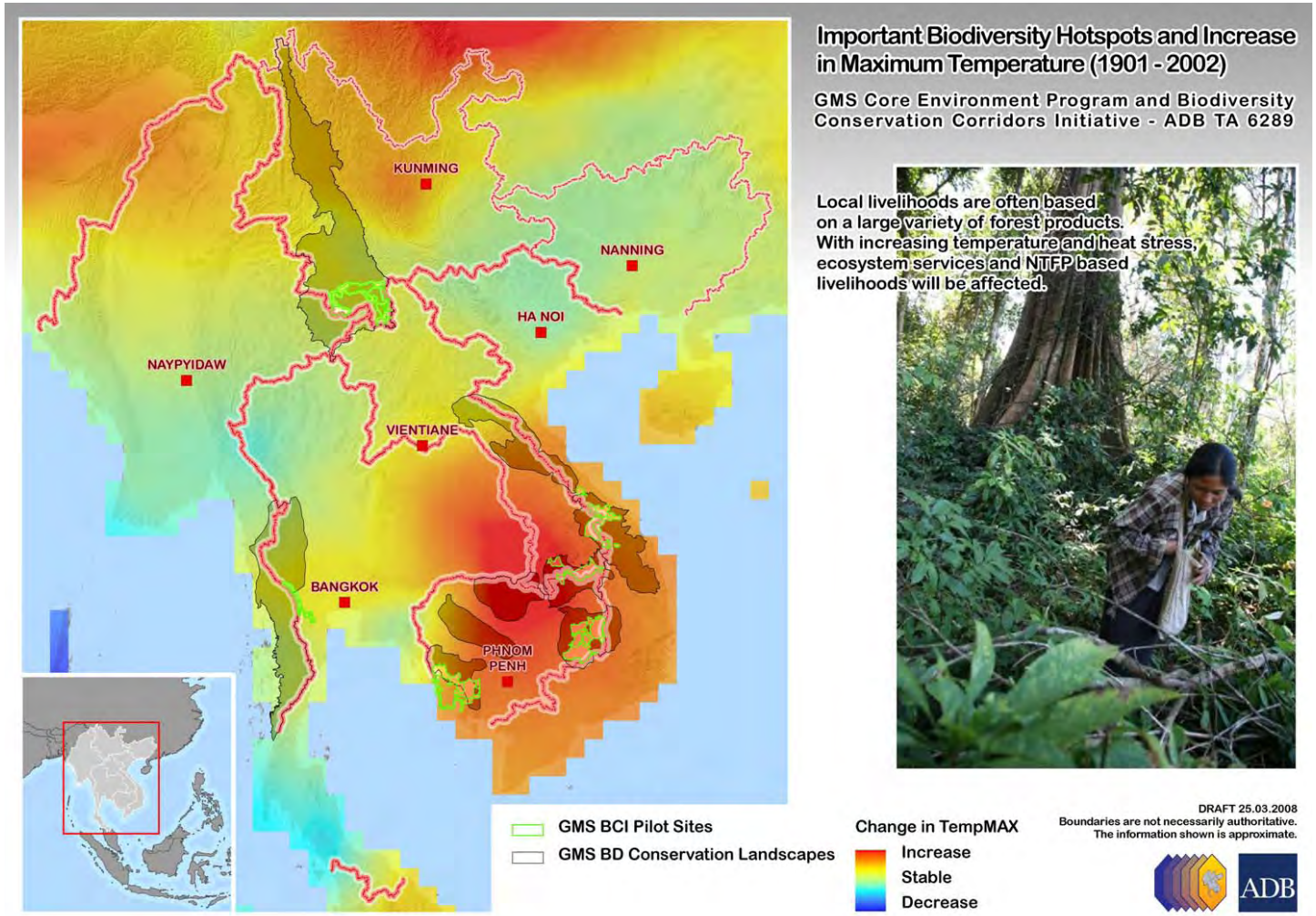
Map 1: Increase in temperature—impact on tourist attractions (biodiversity rich areas)



Map 2: Cambodia—Tourism Assets and potential vulnerability to sea level rise, storm surge and flash floods