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### Contents

Hong Kong Geography Day 2010 - p.2 The 8th International Geography Olympiad 2010 - p.5 Learning and Teaching Climate Change - p.9 Hong Kong Geographer Order Form - p.13

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## Hong Kong Geography Day 2010

Hong Kong Geography Day is a biennial event which gathers the geography education and research community in Hong Kong, aiming to foster academic exchange and collaboration between geography-related faculty members and postgraduate students, and to promote geography education in secondary schools. This year, the event was held at the Esther Lee Building, Chung Chi Campus, The Chinese University of Hong Kong (CUHK), from 9am to 4:30pm on Saturday, 27 November 2010. The co-organisers are the Department of Geography and Resource Management (GRM) at the Chinese University of Hong Kong and the Hong Kong Geographical Association, with support from the Hong Kong Geographical Information Systems Association.

Themed New Greater Pearl River Delta: The Path to Sustainability, the event addressed and highlighted a variety of issues and challenges facing the Greater Pearl River Delta in an era of increasing globalization and rapid growth, with the intent of consolidating what we know and identifying gaps in education and research. The opening ceremony featured two keynote speakers - Mrs. LAM Cheng Yuet-ngor, Carrie, JP, Secretary for Development of the HKSAR Government, and Professor ZHENG Tianxiang of Sun Yat-sen University. Both speakers talked about the recent development trends in the Greater Pearl River Delta. Around 800 to 1,000 participants, including students and teachers from local secondary schools, graduate students and professors from the three geography departments of the three local universities, and guests from Guangzhou and Macau, attended the Hong Kong Geography Day 2010.



Mrs Carrie Lam and Prof. Fung Tung (CUHK)

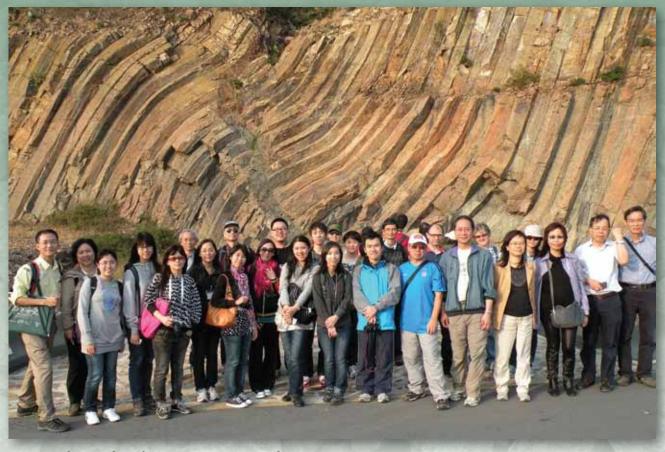


Prof. Zheng Tianxiang

Featuring the Greater Pearl River Delta as the backdrop, Hong Kong Geography Day 2010 has a rich programme, including university research seminars, research student poster competition, secondary school talks, GIS Workshop, Geopark fieldtrip, GRM open house, and board exhibitions by relevant departments of the HKSAR Government (e.g. Planning Department, Buildings Department, Lands Department, Transport Department, Civil Engineering and Development Department, Agriculture, Fisheries and Conservation Department, Water Supplies Department, and Hong Kong Observatory), NGOs and business community (e.g. ESRI China Limited and Ocean Park) to display their interrelationship with the discipline of geography. Sun Yat-sen University, Guangzhou University, Guangzhou Geography Institute, Guangzhou Normal University, and Geography and Education Research Association of Macau sent delegates to participate in the Hong Kong Geography Day 2010. In addition, secondary students and teachers visited two state-of-the-art facilities at CUHK - the Virtual Reality Lab and the Physical Geography Experimental Station.



Geographers from Hong Kong, Guangzhou and Macau



Geography teachers in Hong Kong Geopark



Prof. Donggen Wang and winners of Hong Kong Geography Olympiad 2010

A team of four students (Cheng Wai Ting, Chu Wing Sze, Chung Ying Kan, Lam Kwan Yi) from PLK Laws Foundation College winning the HK Geography Olympiad 2010 represented Hong Kong to participant in the 2010iGeo held from 29 July to 4 August in Taipei. This is the first time Hong Kong sent a team to this international competition. The Hong Kong team has won the first runner-up of poster competition with a poster of "Hong Kong National Geopark and Conservation." Congratulations!

### 鄭慧婷 ●●●●

今天是國際地理奧林匹克比賽的第二天,開始了第一個 比賽——筆試(written test)。這個考試需要運用很多 地理知識和分析能力,當中亦有不少題目是附以圖表的 ,當遇上看不明的圖表時,心裡總難免感到不安、焦慮 。但其實只要仔細留意圖表或其他輔助資料,問題也就 漸漸解決了,並非預期中的困難。例如有一條題目給了 一堆數字和算式,就算不明白算式其中的一個英文字母 代表甚麼,也可以把那條算式代入其他已有資料,那就 可以推敲出那個不明白的字母所代表的意思了。不論用 在香港考試或台灣比賽,「推敲」這種技巧可以為我們 帶來意想不到的提示和答案。

除筆試以外,今天在學習使用全球定位系統(GPS)的 課程中,我也有很深的體會。今天的是分組學習,開初 我還在擔心同組的那班男生會不會給我冷場呢?幸好, 他們十分和善主動,又讓我嘗試親手使用GPS,而且還 在尋寶遊戲的時候叫我去帶領他們。我走得比較慢,不 過他們沒有因為想拿獎品而拋下我,我想這就是團隊精 神的可貴吧!我們最後雖然不是最快的一隊,但反而贏 得最高分數!當時我覺得有這個GPS課真好,不但讓我 拿了獎品,還結識新朋友。







### Lam Kwan Yi

To be frank, I have never expected to see myself in such a grand international event like the International Geography Olympiad. It's my pleasure to be standing there, meeting lots of wonderful people. Like our Principal Mr Chan said, 'Hope for the best and prepare for the worst', we have done lots of preparation before taking part: practising the questions of the previous competitions and reading many materials. Most importantly, we tried to familiarize ourselves with the questions. We have never encountered questions like the multimedia test before. It's really a new experience.





Moreover, when preparing for our cultural performance, tying the Chinese traditional knots, I learnt more stories behind the dull and monotonous knots and the importance of teamwork. We didn't expect to see so much passionate responses from the overseas competitors. They said they were impressed by our cultural performance and hoped to learn more the Chinese culture. Of course, we are very interested in their cultures too. For example, their national dances were really energetic. And the special Australian food, vegemite, well, if you ask me, it is really 'extraordinary'. It's really difficult to imagine their culture without really experiencing it.

In addition, we learnt to have mental preparation before our presentation because it will help perform better. There are many nice foreigners and they all are willing to be friends with us. This is a precious chance for us to get connected with the world and get to know worldwide geographical issues. I have successfully applied geography theories to reality. We tried hard to understand and specialize in different parts of Geography. After all, Geography is a topic closely related to man-land relationship and our daily life. I hope we can have



this opportunity again to compete with other countries in the name of Hong Kong. This is definitely a memorable experience for me.

### 鍾瑩瑾 ●●●●

在這七日的旅程中,我獲益良多。雖然這是一個比賽, 但結果並不是最重要的,反而經驗和友誼更為重要。和 其他國家代表一樣,我們都是學習地理學生,但在這次 比賽中,我發現我正在學習的地理知識是不足夠的。我 們日常學習的地理知識都以應試為目標,反而忽略了其 他的世界地理知識。與其他國家比較,他們的眼界更廣 闊,他們注重學習的多樣性,所以他們較有優勢。這可 以提醒我要改善自己,不斷學習,並不僅僅是考試的範 圍,也要有世界性的知識。

我也明白到凡事只要做足準備,事情就能變得更為順利 。就以文化表演這個環節為例,我們事先在腦海中試著 進行一次整個環節,令所有的細節也能夠顧及,也能讓 自己感到更安心和令事情進行得更為順利。不過,除了 充足的準備外,臨場的應變能力也很重要。例如之前的 地理海報報告,我們雖然準備充足,但因為報告時間延 長了,所以打亂了我們之前的計劃。幸好我們想到用問 答環節去填補時間,最後反應不錯,可見臨場應變的重 要性。



從國際地理奧林匹克比賽中,我明白到其實這個世界真的很大。所以,我們除了要學習課本上 的「硬」知識外,生活上的「軟」知識也十分重要。這次旅程是我第一次參加的國際比賽,除 了有以上的體會外,也認識到不少朋友,成為我寶貴的回憶。



7

### Chu Wing Sze

It is a great privilege and honour to be able to represent Hong Kong to join the 8th International Geography Olympiad (iGeo). I would like to take this opportunity to thank my family, principal, teachers for their unreserved supports and contributions; and especially to team-mates, who have been so supportive, in backing me up during the competition.



I was overwhelmed once I got told that four students of our school won the Hong Kong Geography Olympiad, and were selected as the representatives of Hong Kong to participate in the iGeo. Since our triumph in competition would be a credit to our school and country, the weight of the achievement motivated us to be well prepared before the trip and fully participate during the program in order to achieve both national and international recognition. Yet we were challenging other contestants from other countries that are also known for their competitive success in geographical skill.

Although iGeo is an international competition, it is not just about announcing a winner. But it is more about the sharing of knowledge and interest in geographical and environmental studies among young people. During the competition, I have gained a better understanding of the other competitors' backgrounds and cultures. The competition was enriched with intellectual nuances as we shared passion for the subject, as well as cultural mores. The friendships we have developed with other competitors transcend lingual and ethnic barriers. Participating in international competition was an unforgettable opportunity, which reinforced my determination and motivation in setting my heart on continuing geography studies in the university.



# Learning and Teaching Climate Change Using Hong Kong's Climate Change Consultation Document

### Alice S.Y. Chow

Education of climate change is challenging as it involves vast topics of climatic and natural science, interactions between human and the natural environment, international environmental governance, adaptation measures and mitigation responsibilities across different sectors and individuals of a society. In late 2010, Environment Bureau HKSAR Government released a consultation document of Hong Kong's Climate Change Strategy and Action Agenda (Environmental Bureau HKSAR Government 2010). This article presents some examples to use this consultation document and other materials for learning and teaching climate change. Two key consultation points are selected from the consultation document to show how to integrate general climate change knowledge with contents of Hong Kong's consultation document for class activities.

### Consultation key point (1):

In the light of international and national developments, do you agree that Hong Kong should adopt a carbon intensity target to guide our future actions to control GHG emissions? (Environmental Bureau 2010, p.23)

A key idea of this consultation key point is "greenhouse gas (GHG) emissions control". A reason for controlling

emissions is that most emissions are caused by human activities (anthropogenic sources) such as agriculture, power generation, industrial processes, air-conditioning and heating, and transport. To combat climate change, a major strategy is to reduce human's GHG emissions. As a result, many countries and cities have set their emission reduction targets with reference to GHG emission amount of a particular year.

Student activities for general knowledge: Students can identify major types of greenhouse gases and types of human activities producing these greenhouse gases. For example, fossil fuel combustion for electricity and transport produces carbon dioxide emissions; agricultural activities and land filling produces methane emissions. Information of greenhouse gases and their sources is widely available on the internet (e.g. Wikipedia's entry "greenhouse gas" and Hong Kong Observatory's education package on climate change (Hong Kong Observatory 2007)).

The Annex 3 table of Hong Kong's climate change consultation document shows Hong Kong's emissions trends from 1990 to 2008 and major sources of emissions (the whole consultan document can be downloaded at Environmental Protection Department website:

*http://www.epd.gov.hk/epd/english/climate\_change/consult.html*). Based on this table, students can answers questions like "Has Hong Kong emitted more greenhouse gases in recent years? Which human activity has contributed significantly to Hong Kong's emissions? Furthermore, students and teachers can discuss reasons for these emission trends (e.g. more electricity consumption and more land filling for solid waste) and how we can reduce Hong Kong's greenhouse gas emissions.

Another climate change knowledge addressed in this consultation key point is "carbon intensity". Carbon intensity is a measure of greenhouse gas emissions linked to income level. Basically it

reflects the amount of emissions emitted from each dollar of Gross Domestic Product. Other common greenhouse gas measures are total emissions (simply reflecting the total amount) and per capita emissions (the average emissions of each person of a city / country).

Student activities for general knowledge: The table below shows three emission measures of the world top six emitters: China, USA, European Union, Russian Federation, India and Japan. Based on these statistics provided, students can rank the six countries in terms of per capita measure and intensity measure (1 as the highest and 6 as the lowest). Students can answer following questions: Which country emitted the highest total emissions? Which country produced the highest emissions per person? Which countries produced fewer emissions for generating one million dollar? Further discussions on these questions can stimulate students to think about possible explanations behind these emission rankings. For example, China is the world top emitter and produced more emissions for every million dollar made, at the same time its per capita emissions is very low – what are possible explanations? (New excerpt below provides some ideas)

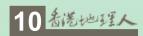
	2005 total emissions		2005 emissions per person		2007 carbon intensity	
	MtCO2e	Rank	Tonnes CO2e	Rank	Tonnes CO2e / million dollar	Rank
China	7,233	1	6		1,000	
USA	6,914	2	23		449	
European Union	5,043	3	10		289	
Russian Federation	1,955	4	14		823	
India	1,859	5	2		482	
Japan	1,346	6	10		314	

*Note: MtCO2e - Metric tonne carbon dioxide equivalent Source: World Resources Institute (2011)* 

### News Excerpt: China's Carbon Intensity

Beijing said it would aim to reduce its "carbon intensity" by 40-45% by the year 2020, compared with 2005 levels. Carbon intensity, China's preferred measurement, is the amount of carbon dioxide emitted for each unit of GDP. But our correspondent says it does not mean China's overall levels of carbon dioxide will start falling. Its economy is still growing and is mostly fuelled by polluting coal, says the BBC's Quentin Sommerville in Beijing. It will be at least a couple of decades before China's emissions peak, so it is likely to remain the largest polluter for some time to come, he adds. But greenhouse gas emissions in China have not been rising as fast as its economy has been growing.

Source: BBC News (26 November 2009) China Unveils Emissions Targets ahead of Copenhagen



Consultation key point (2):

Will you agree to the proposed strategy of reducing use of coal and increasing use of natural gas and non-fossil fuels in meeting local electricity demand? Do you think the proposed fuel mix is appropriate for Hong Kong in 2020, with regard to such considerations as better environment, availability, reliability and cost?

(Environmental Bureau 2010, p.45)

A key idea of this consultation point is to consume fewer fossil fuels for electricity generation as a means to reduce emissions. Anthropogenic emissions have been more substantial because our societies mainly rely on coal, oil and natural gases for electricity generation. Nowadays, different types of non-fossil fuels and renewable energies (e.g. nuclear power, wind and water power) are available for electricity generation. Currently in Hong Kong, 54% of electricity is generated by coal; 23% is generated by natural gas and another 23% is generated by Daya nuclear plants in the Mainland. In the Hong Kong's climate change consultation, it is proposed that about half of electricity will be supplied by imported nuclear power by 2020 (Environment Bureau 2010, p.43).

Excerpts from Civic Exchange's Expanding Hong Kong's Nuclear Power Base: What are the Real Issues to Consider? 14th Energy Forum Report

### Opinion supports more nuclear power:

Milton Caplan addressed the current role and development of nuclear power in the international arena. Nuclear power currently generates about 14% of electricity globally, and almost half of the current expansion plans will take place in China and India. Nuclear power's low carbon footprint, low and stable costs, as well as assured fuel availability, present it as a compelling and growing fuel alternative. Moreover, nuclear power plants operate in a highly regulated environment, and have the lowest fatalities/accidents track record versus other energy sectors. With global energy demand on the rise, nuclear is a proven, economically competitive technology that could help to minimize carbon footprint and meet climate goals.

### Opinion against more nuclear power:

Jan Beránek presented considerations against the usage and expansion of nuclear power. He argues that the potential costs associated with nuclear power make it a less-than-ideal option in battling climate change, while other more effective alternatives exist. There are safety and environmental repercussions in the extraction and processing of uranium. Nuclear power plants may have spills or leakages, and long-term waste management is also problematic. Economically, the costs of nuclear plant construction are on the rise and projects have repeatedly been delayed and exceeded initial price projections. Fuel availability is projected at less than 100 years, which will further diminish with the planned expansion of nuclear power. On the other hand, renewable energy presents a viable alternative through new technology that has reduced costs. In light of the risks and availability of other options, Hong Kong should strongly reconsider how it can devise a more sustainable energy policy to reach its climate goals.

Source: Civic Exchange (2010)

Student activities for general knowledge: Students can discuss the government's proposal to import more nuclear power for Hong Kong's electricity consumption. What are the pros and cons of more nuclear power? Do students agree that nuclear power is a solution to carbon emissions generated by electricity generation? Some extra information from an energy forum report is useful for discussions (See the box on previous page).

#### Glossary

Anthropogenic emissions: Emissions of greenhouse gases, greenhouse gas precursors, and aerosols associated with human activities, including the burning of fossil fuels, deforestation, land-use changes, livestock, fertilisation, etc.

Carbon intensity: The amount of emission of carbon dioxide per unit of Gross Domestic Product.

Greenhouse gases: Water vapour (H2O), carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4) and ozone (O3) are the primary greenhouse gases in the Earth's atmosphere.

Source: Glossary in the IPCC Fourth Assessment Report: Climate Change 2007 – Synthesis Report (http://www.ipcc.ch/publications\_and\_data/ar4/syr/en/annexessglossary-a-d.html)

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# Hong Kong Geographer Order Form

Contents	Price	Quantity
<ul> <li>22(1), June 2008 (12 pages)</li> <li>Field study summary (Power plants in Shenzhen Area)</li> <li>Conducting Spatial Enquiry in the New Senior Secondary Geography Curriculum: Module One Workshop Summary</li> <li>Secondary School Project Learning Competition 2007: Winning project summary and prize presentation ceremony</li> </ul>	HK\$20	
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The Hong Kong Geographer 13