

Packing your bags

Before any international travel, there are always questions to be asked. The answers to these questions will help in deciding what/what not to take along with you. Some examples are; how long is the trip, how would I get around, what is the weather like over there, what to do in case of an emergency, how would I communicate with home base, do I plan to do lots of shopping, what is their culture like and how does it affect the supply of the thing I will basically need etc. Some of these questions were answered in class before we left (student research and through question and answer sessions); however you can never be truly prepared for what you yet to experience. It will be wise to have all your basic essentials (tooth brush, deodorant, medication and cash-from ATM etc). I packed for a warm weather, lots of walking, minimal communication, little or no laundry and within one baggage limit on the flight.

China – the people, its development & its environment

After all the class lectures and presentations, I was curious to see China and observe all that I have heard and researched. China is a whole new world out there. It is a place where hot tea is served in place of cold water, the sun is out and yet not there, tissue paper is coarse, lots of particle in the air (not just PM2.5), lots of colorful things to buy and food to eat for a very cheap amount (compared to the dollar equivalent), walking is a norm – although the number of over pass and pedestrian unfriendly intersection would be a challenge to any visitor, getting on/off a bus or train requires mental alertness and physical preparedness. These are part of the benefits of experiencing China first hand. Other benefits of travelling to China are visiting some tourist attractions, learning the Chinese culture (not in a text book way) and interacting with the students of Beijing University of Technology (BJUT) and Shandong University (SDU). Based on my observation from getting around, the student's presentation, their views and outlook on life generally, the cultural difference and difference in expectations were obvious. It is the difference that makes them unique in their own way. From the classroom to the streets, the courtyards, tourist attractions, their mode of operation I can say (with just 2 weeks experience in China) that they are a people who are proud of their culture and what it means to them. They know how far they have come, are focused on where they are going and they are determined to get there. This determination borders more on the outcome and not the quality of both development and the environment. The government is well aware of the fact that there is power in numbers and so it will go to any length to provide for the masses so that there is 'peace' and stability. Caring for the environment is one of the issues that cannot be ignored by the masses and China is making some honest effort. The response to the environmental issues arising from rural to urban migration, high energy demand and low water supply etc is rather slow compared to its pace of development. It felt strange to hear that an architectural plan for

a building is yet to be completed while the date for commissioning has been fixed and it most likely would not be changed. Once a goal has been set and the basic requirements for mobilization are met, the project is considered done (what is next build). Unfortunately, with this type of approach, it is the environment and the poor masses that suffer the most. The well-to-do citizens are 'far away' from the problems and so it is not a major concern. In January 2013, the air that knows no boundary proved otherwise. With the elevated and persistent level of smog, it was obvious that the environment cannot be ignored in a quest for economic development.

Development and the environment

Development can be said to be a state of growth or advancement. It is an improvement in human welfare and the quality of life. Development is also a direct result of the economic growth of a country which is measured by its Gross Domestic Product (GDP-total value of goods and services produced), GNP, per capita income etc. China has one of the top five GDP alongside USA, Germany, Japan and France. Economic growth can drive the development of a region beyond the sustainable limit for the environment. Sustainable development is the type of development that addresses the populations' present need without jeopardizing the ability of the future generations to meet its own need. A sustainable environment is measured by its environmental quality such as air and water quality, waste generated/management. Developing a sustainable environment requires that adverse impact on the environment be lessened, non renewable resources be conserved/renewable resources be maximized and the amount of carbon released into the environment from various process be reduced.

The Benefits of Urbanization are Growth in industrial productions, Trade and Commerce, Tourism, Technology etc. One of the major physical evidence of economic development is Urbanization. Urbanization is evident in urban infrastructure, urban density, urban production, need for transportation and mobility and subsequently an increase in energy demand, scarcity of resources and various other issues due to poor planning/policy administration. Some effects of urbanization are:

1. Economic: Rural to urban migration
2. Social: structural inequality
3. Environmental: Sustainable Urban growth
4. Governance: effective management of emerging cities and towns.

Environmental effects of urbanization are:

- Urban heat island effect: the atmospheric temperatures in the developed urban areas are higher compared to the rural areas. An increase in temperature results in inversion layers-air pollution.

- Increased runoff: development of an area alters the natural environment and decreases the amount of water that infiltrates into the soil. There by increasing the runoff volume/peak flow while reducing the time to reach peak flow. Water pollution occurs from the runoff of excess foreign substances into the waterway e.g CSO in the US. The likelihood of a flood occurrence is increased especially when there is poor infrastructural planning and layout of an urban city.
- Other effect of urbanization is due to the risk a large population are exposed to in a single environmental catastrophe e.g Earthquakes, cyclones, flooding etc

Some of the above mentioned effects are already been felt in Chinese cities. Examples of environmental effects of Urbanization across the world are not limited to the following:

- London Smog: Single largest coal fired induced smog in 1952
- Los Angeles Smog: Photochemical smog from car exhaust in 1955
- Japan Industrial Pollution-Minamata: Improper disposal of toxic chemicals in 1956
- Philippines Flooding: poor planning submerged 50% of Manila after 12 days of rainfall in 2012
- **Beijing Flood:** due to poor planning and drainage infrastructures in summer 2012
- **China smog:** due to the excess burning of coal for energy production in January 2013

So far some countries have carried out measures to ensure that the effects if urbanization are minimized in any locality. Examples are

- Clear Water Infrastructure Sustainability Policy (US)
 - Clean Air Act (UK)
- Energy-saving technology
- Development of new energy sources
- Circular Economy Promotion Law
- Cap & Trade
 - Carbon/ Emissions tax

Beijing and Jinan cities have some infrastructures in place to address some of its urbanization and environmental issues although little priorities are given to them. Some are being researched by the professors in the universities we visited-waste water treatment, water quality during emergencies, sustainable maintenance in built up areas, reduction of particulate matter and Sox/NOx in the flue gas of the coal power plant. Others are been implemented and observed-management of the bus transit and the Bus Rapid Transport (BRT), Sanitary landfill incorporated with waste-to-energy features, Beijing planning and the Coal fired power plant at Zoucheng.

Conclusion

Looking back at my two weeks spent in China, I can say that China has plans on incorporating the environment into its development plans. If the same zeal and passion for economic development is applied to the 'managing' the environment (sustainably) while learning from the mistakes of other nations, China will be the "center of the earth" for years to come. I say 'managing' because major parts of the cities have been built without consideration for the environment. However, for cities and extension to cities yet to be developed, proper planning and implementation of environmentally sustainable measures will lead to China's sustainable development.

The trip in itself was a success. UC international did a great job getting the visas. Areas that would need improvement are in the clear communication of expectations by the professors and proper coordination of assignments. Some thorough session on Chinese language and culture would have been very helpful. Also the scheduling of events in China should be somewhat balanced so the students are not getting bored sitting all day in a seminar or tired from walking outdoor all day. I learnt a lot from this trip about the Chinese people, their culture and the environmental issues they are facing due to rapid urban development.