Sources

7th International Geography Olympiad

Carthage, Tunisia

August 2008

Contents

Sources part 1: International tourism

Source 1

According to the World Tourism Organization (UNWTO), "tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes". Approximately 80% of international tourism is intra-regional.

International Tourist Arrivals 1950-2020 (millions) *Source: UNWTO*

Year	World	Africa	Americas	Asia/Pacific	Europe	Middle East
1950	25.3	0.5	7.5	0.2	16.8	0.2
1960	69.3	0.8	16.7	0.9	50.4	0.6
1970	165.8	2.4	42.3	6.2	113.0	1.9
1980	278.1	7.2	62.3	23.0	178.5	7.1
1990	439.5	15.2	92.8	56.2	265.6	9.6
2000	687.0	28.3	128.1	110.5	395.9	24.2
2010*	1006.0	47.0	190.0	206.0	527.0	36.0
2020*	1561.0	77.0	282.0	416.0	717.0	69.0

* Forecasts

Source 2

Top 10 Tourism Destinations by Arrivals, 2006 *Source: UNWTO*

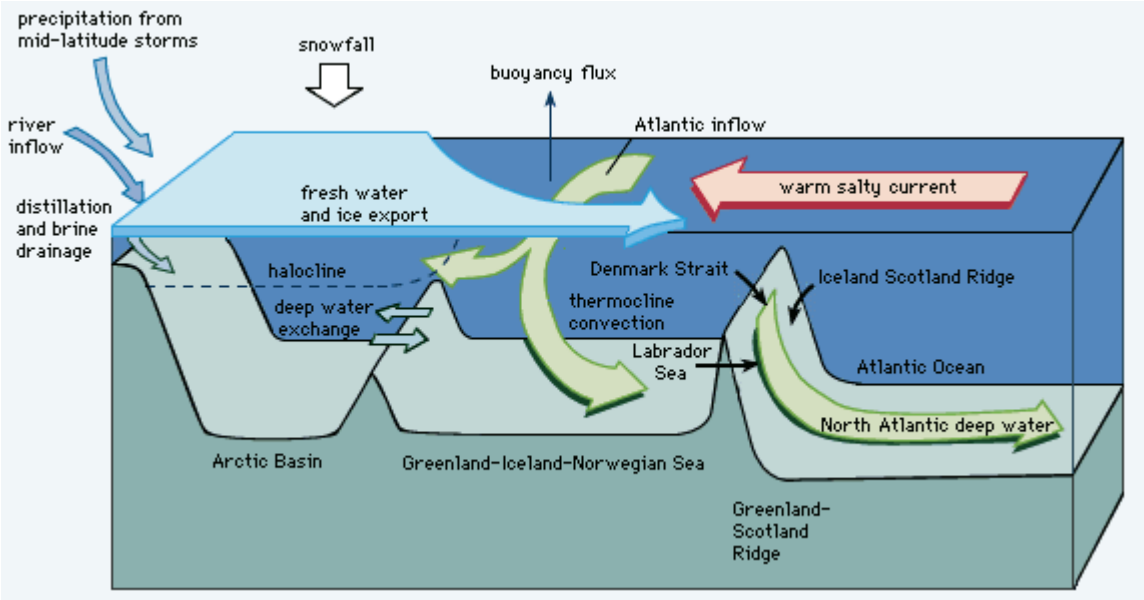
Rank	Country	**2006** (millions of visitors)	**2003** (millions of visitors)
1	France	79.1	75.0
2	Spain	58.5	50.9
3	United States	51.1	41.2
4	China	49.6	33.0
5	Italy	41.1	39.6
6	United Kingdom	30.7	24.7
7	Germany	23.6	18.4
8	Mexico	21.4	18.7
9	Austria	20.3	19.1
10	Russia	20.2	20.4

Sources part 2: Climate & climate change (global warming)

Source 1

Map of Arctic

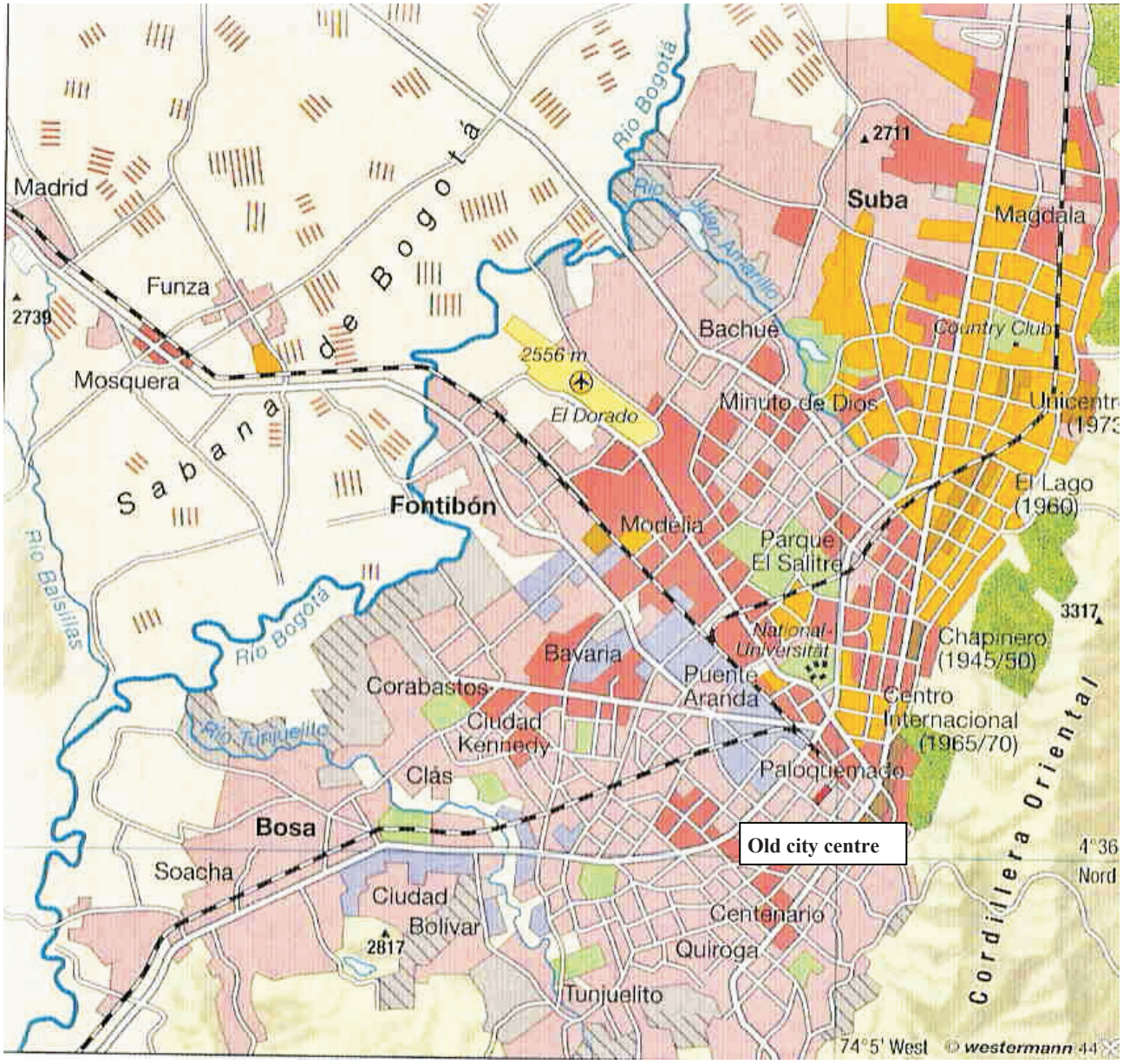
Source 2



The possible damping influence of freshwater and ice export from the Arctic Ocean on convection in the Greenland/Iceland/Norwegian Sea.
From: Untersteiner, N. and E.C. Carmack, World Climate Research Programme, Sea-Ice and Climate: Report of the Fourth Session of the Working Group on Sea-Ice and Climate (July 1990).

Sources Part 3 – Bogotá (Colombia)

Source 1



Legend map of source 1

Bogotá – Land use Scale 1 : 250.000

	residential – high socio-economic status
	residential – mid socio-economic status
	residential – low socio-economic status
	residential – very low socio-economic status
	dangerous (No-Go-Areas)
	former Central Business District
	new Central Business District
	industry
	recreational areas, sports and leisure parks
	forest
	agriculture
	export-oriented cultivation of flowers (partly abandoned due to contamination by pesticides)
	international airport
	railway (station)

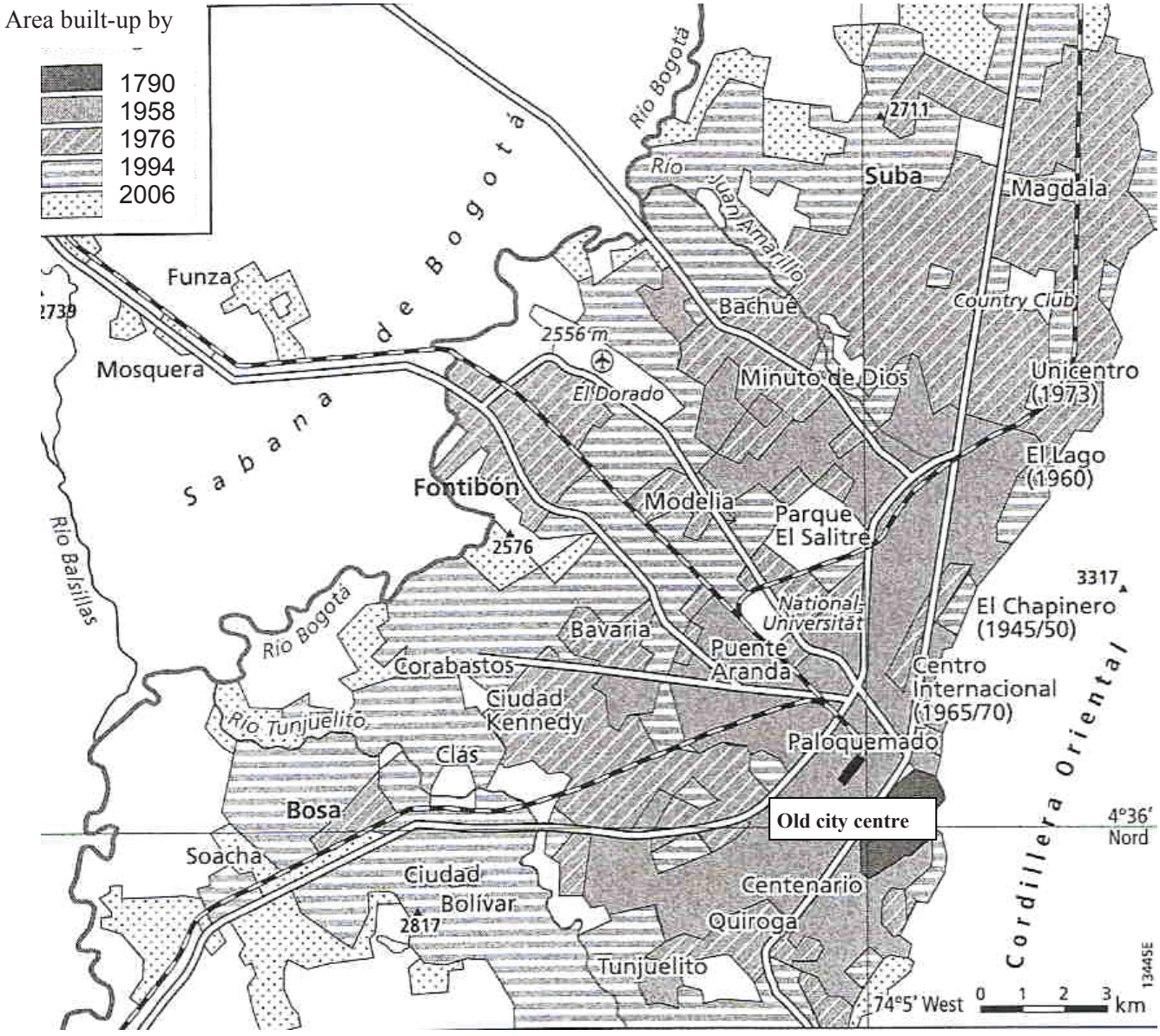
Source 2

Population characteristics of Bogotá 1938 - 2005

year	inhabitants	share in national population (%)	population density (inhabitants / km^2)
1938	330.312	4,0	224
1951	715.250	6,0	451
1964	1.697.311	9,7	1.070
1973	2.868.123	12,4	1.885
1985	4.273.461	15,0	2.614
1997	6.004.782	15,0	3.385
2000	6.422.198	15,1	3.616
2005	6.776.009	15,1	3.815

Source 3

Built-up area of Bogotá

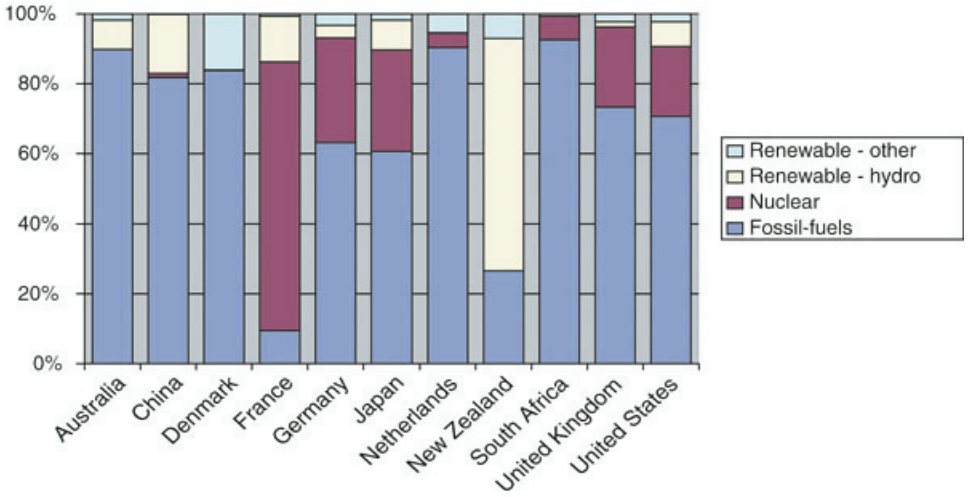


Sources
Map 1: Diercke Weltatlas, 2008 edition
Table 1 and Map 2: Handbook Diercke Weltatlas

*With kind permission of **Westermann Verlag** Braunschweig (Germany) these three resource materials may be used for free for the Written Response Test of the 2008 iGeo only but for no other purposes.*

Sources Part 4 – Energy futures and sustainability

Source 1 National geographies of energy generation, 2006



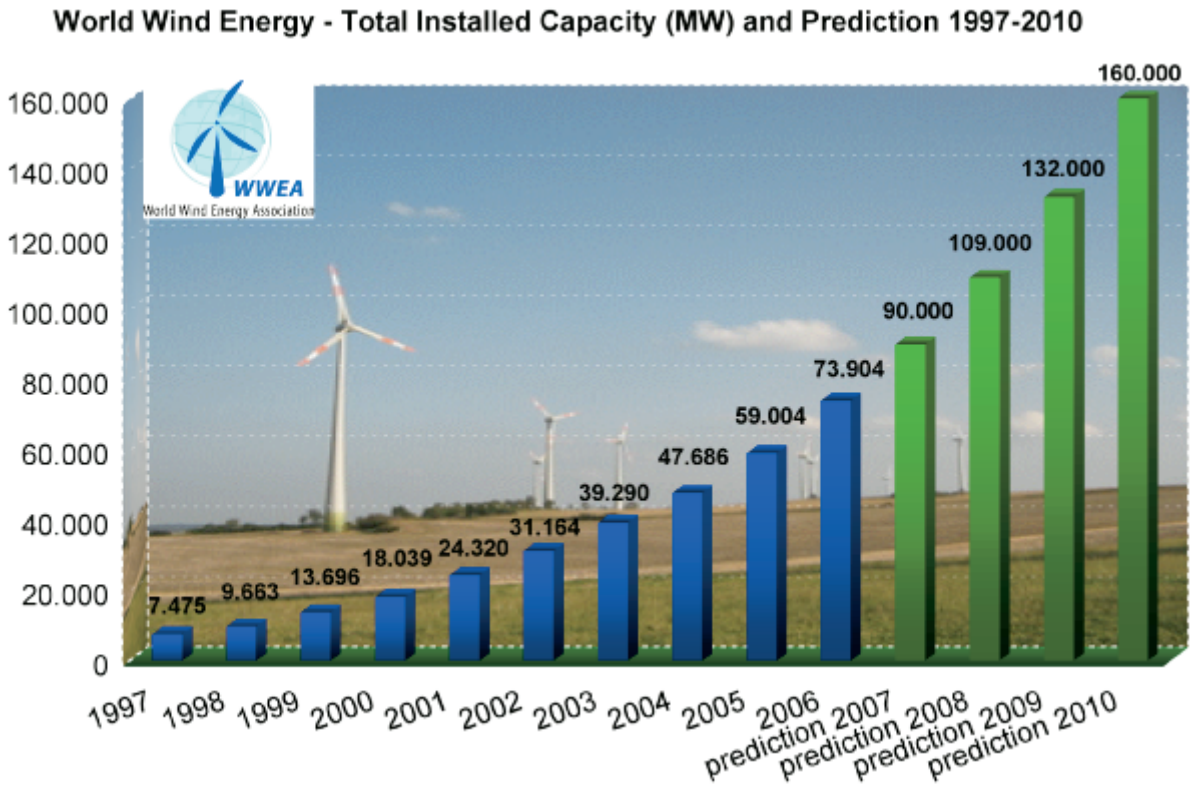
source: Wikipedia

Source 2 Sources of renewable energy

In summary, there are five broad types of renewable sources of energy: the sun, the wind, flowing water, biomass and heat from within the earth.

- **The Sun**. Solar energy is energy directly from the Sun. The sun is a constant natural source of heat and light, and its radiation can be converted to electricity. Domestic applications include solar water heating.
- **Wind Energy**. Natural conditions of climate and geography produce wind. Historically, windmills were used to supply mechanical energy, for example to pump water or grind grain. Modern day wind turbines produce electricity provided to national power grids.
- **Water power**. Flowing water is also a product of the Earth's climate and geography. Runoff from precipitation at higher elevations flows toward sea level in rivers. Historically, water wheels used the power of flowing water to turn grinding stones and to run mechanical equipment. Modern hydro-turbines use water power to generate hydroelectricity.
- **Biomass**. "Biomass" includes plants, trees and organic matter. Biomass is a renewable source of energy because photosynthesis constantly produces new organic matter in the growth of plants. Photosynthesis stores the Sun´s energy in organic matter. Biomass is used to make heat, electricity and (increasingly) liquid fuels.
- **Earth or "geothermal energy".** In some locations, geothermal energy is close enough to the surface that, by drilling a well to reach the heat source, the energy can be extracted and used to generate electricity.

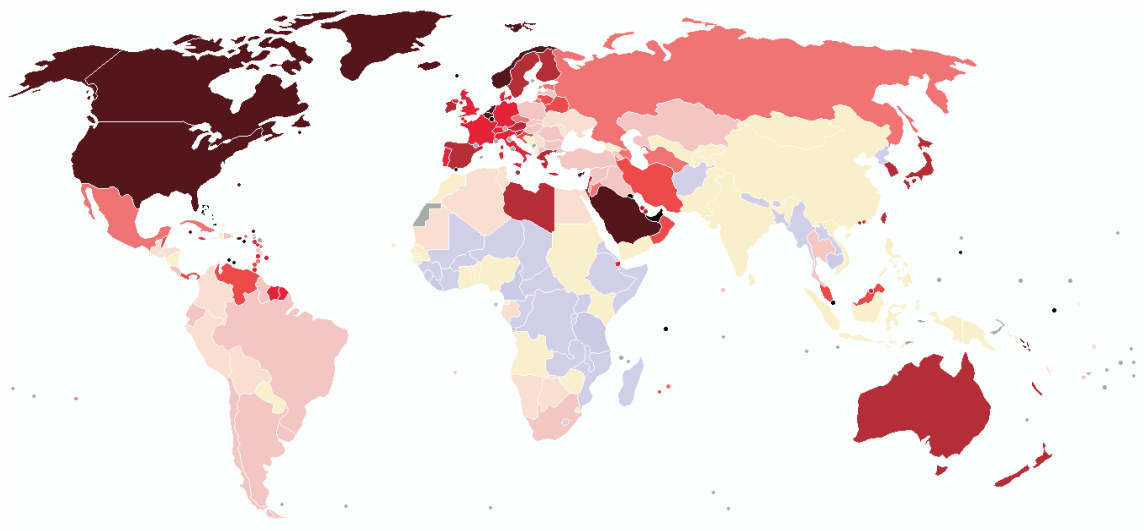
Source 3 Example of renewable energy production potential



At the end of 2007, worldwide capacity of wind-powered generators was over 90 gigawatts. Wind currently produces just over 1% of world-wide electricity use, but its predicted growth in installed capacity is greater than any other generation source in the short term.

http://upload.wikimedia.org/wikipedia/commons/8/84/Wind_2006andprediction_en.png

Source 4 Oil consumption per capita
Consumption of crude oil barrels per capita per day by country:



Oil barrels per person each day

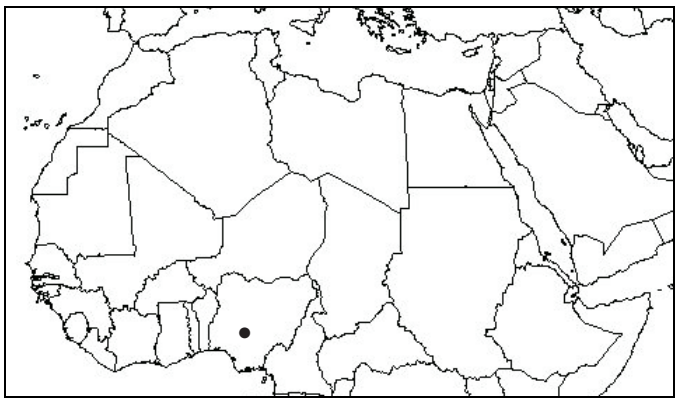
>.07
.07-.05
.05-.035
.035-.025
.025-.02
.02-.015
.015-.01
.01-.005
.005-.0015
<.0015

http://en.wikipedia.org/wiki/Image:OilConsumptionpercapita.png

Sources Part 5 – Pot-in-pot system

The introductory paragraphs

Nigeria

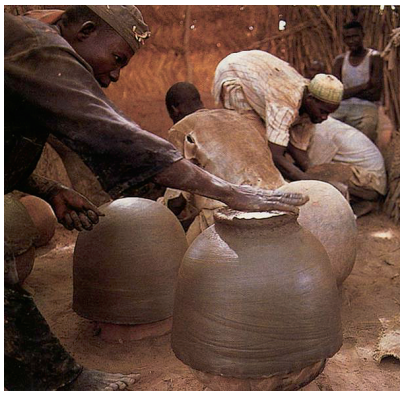


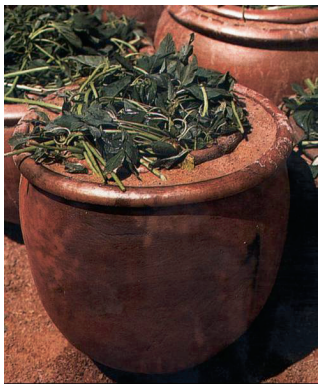
NB: Location of Nigeria (noted with dot)

Nigeria

Northern Nigeria is an impoverished region inhabited by a large, mostly agriculture-based population living from subsistence farming. (note: GDP in Nigeria in mid-1990s was around US$ 260 per person per year.)
Preservation is a key issue for food security here. Owing to the lack of electricity and, in turn no refrigeration, in most of the northern rural communities, perishable foods spoil within days. Such spoilage causes disease and loss of income for needy farmers, who are forced to sell their produce daily.
Polygamy is a dominant feature of the family structure, and women are confined to their homes and are seriously disadvantaged in terms of health care, education and employment opportunities. Young girls are particularly disadvantaged because they are forced to go out each day to sell food before it perishes, in order to add to the meagre family income.
Around the mid-1990s, Mohammed Bah Abba from Northern Nigeria, motivated by his concern for the rural poor, developed an earthenware "pot-in-pot" device for the neighbouring area. The project has been a great success and Mohammed Bah Abba has won several awards for setting out to try to help improve the ailing economy in the context of an economically drained nation facing severe communication, transport and utility problems.

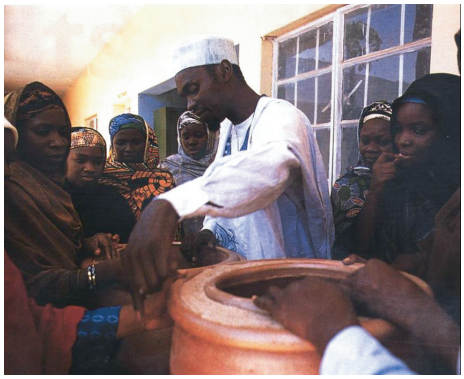
Source 1





The art of pottery is deeply rooted in African culture. The pot-in-pot consists of two earthenware pots of different diameters, one placed inside the other. The space between the two pots is filled with wet sand that is kept constantly moist. Fruit, vegetables and other items such as soft drinks are put in the smaller inner pot, which is covered with a damp cloth.

Source 2

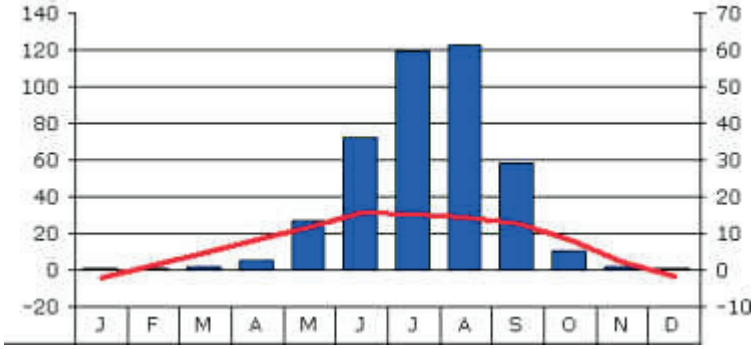


From 1995 to 1997, Mohammed Bah Abba tapped into the large unemployed local workforce and hired skilled pot makers to mass produce the first batch of 5,000 pot-in-pots. Manufacturing these devices at his own expense, he began distributing them for free to five villages in Jigawa.
In 1999, Abba supplied another dozen local villages with 7,000 pots, with each pot-in-pot selling for US$2 - 4 for different versions. By early 2005, Abba had distributed a total of 91,795 pot-in-pots. The project has been praised thus: "*This pot-in-pot project is the first to use simple cultural solutions to address the primary needs of the rural northern Nigerian population, for whom the basic necessities of life are nearly non-existent*."

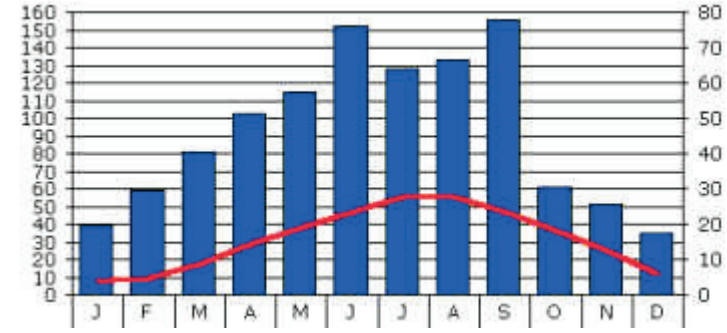
Sources Part 6 – Climates of China and the Olympic Games

Source 1

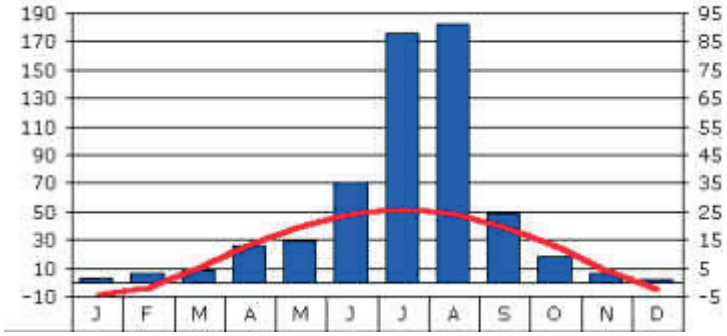
Climate A



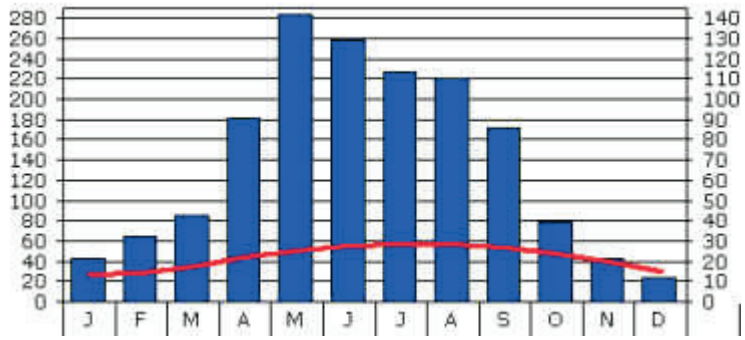
Climate B



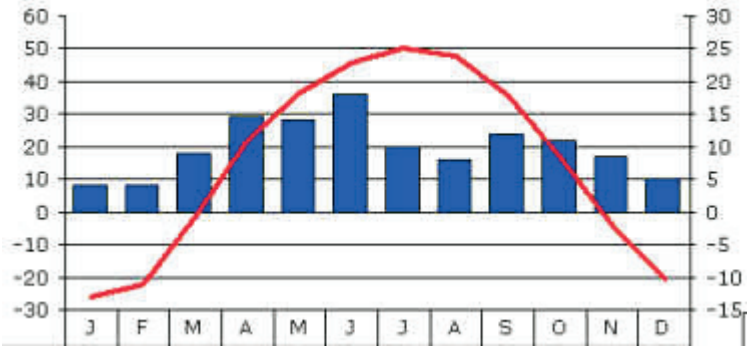
Climate C (Beijing)



Climate D



Climate E



Source 2

Clothing Recommendations for Travel in China

Winter

- North, Northeast, Northwest, and Southwest: heavy, warm clothing, coat, hat, gloves, boots
- South, Yungui, and Sichuan: mediumweight, warm clothing, light coat, rainwear in Sichuan
- Southeast: lightweight, warm clothing, sweater

Summer

- Northeast, Northwest, and Southwest: summer clothing, light coat or sweater in the evenings, rainwear in the Northeast for occasional rains
- North, South, Yungui, Sichuan, and Southeast: light, loose tropical clothing, sunglasses, rainwear

Spring/Autumn

- North, Northeast, Northwest, and Southwest: mediumweight clothing, light coat, hat
- South, Yungui, Sichuan, and Southeast: lightweight clothing, sweater, light coat, rainwear

Source 3 photograph 1

Source 3 photograph 2

Source 4

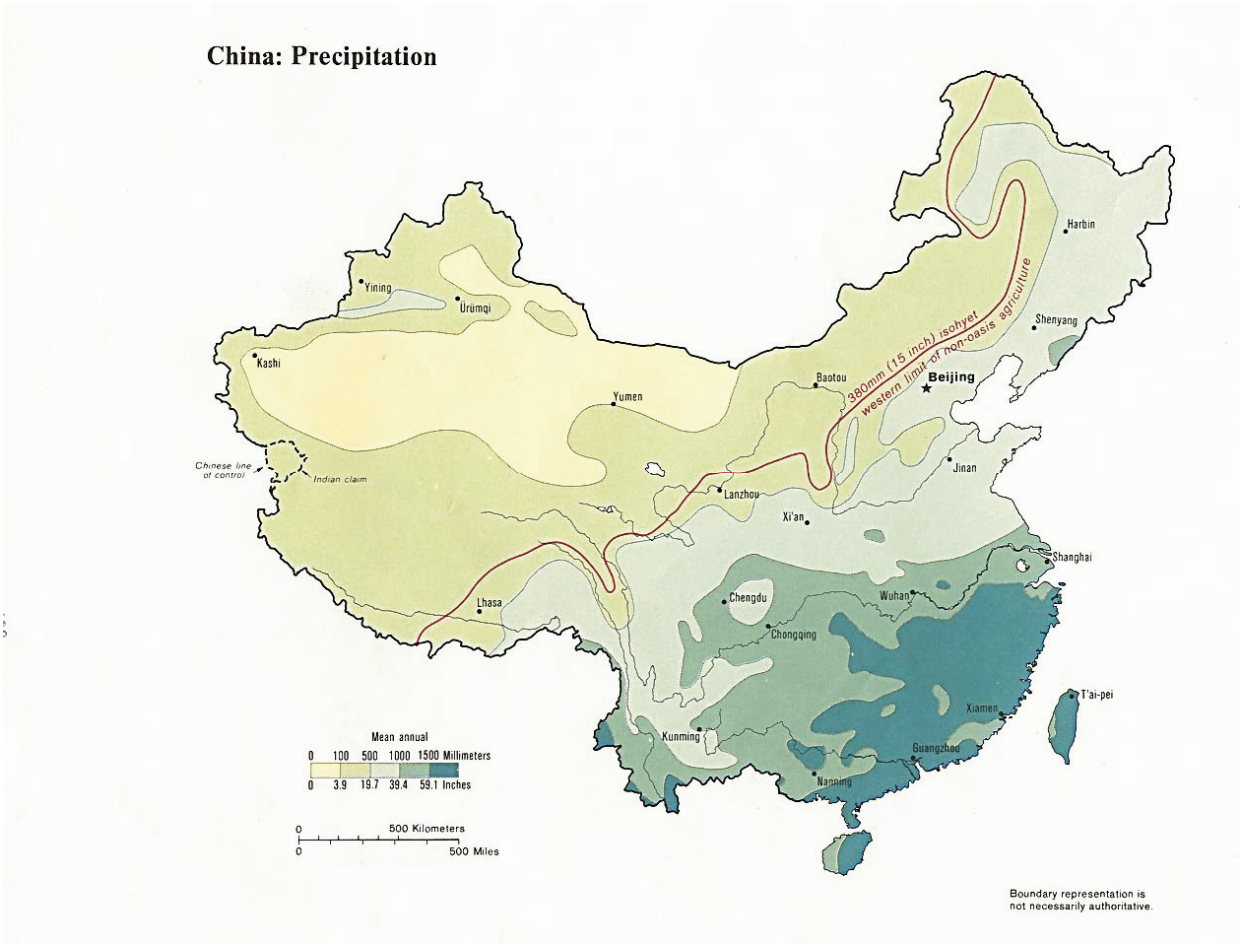
From: Reuters
Published June 8, 2006 12:00 AM

Prototype Toilets Aim to Flush away Beijing Drought

BEIJING — Beijing residents can do their bit to ease the city's severe water shortage problem from the comfort of their toilet seat, according to an exhibition which opened on Wednesday.

The Saving Water Toilet Exhibition for Beijing Olympics Gymnasium showcased a range of prototype urinals, bowls, and traditional Asian crouching platforms aimed at having a more positive impact on the environment.
Beijing is the driest major city in the world and a report last month said it would face severe water shortages during the 2008 Olympics if current levels of consumption were maintained.
"This toilet saves water," said Zheng Qing Zhan, manager of Kuge bathroom ware. "Most modern toilets use six litres of water per flush, while this uses a maximum of 3.8 litres and as little as 2.6 litres."
Beijing Olympic organisers have made "Green Olympics" one of their core themes and Zheng's colleague Zhan Chun Guo expected environmentally friendly toilets to play their part.

Source 5



Source 6

From: Times Online
March 10, 2008

Haile Gebrselassie pulls out of Beijing marathon

Haile Gebrselassie says he will not run in the marathon at the 2008 Beijing Olympics over fears about the high pollution levels in the city. The Ethiopian marathon world record holder, who suffers from asthma and missed the 2007 London Marathon because of the problem, will now run at the shorter distance of 10,000m in Beijing.

The Ethiopian Haile Gebrselassie, 34, is a favourite for a gold medal this summer but is likely to focus instead on the 10,000 metres because he suffers from asthma.

“The pollution in China is a threat to my health and it would be difficult for me to run 42km in my current condition,” he said. “But I am not pulling out of the Olympics altogether.”

Gebrselassie’s withdrawal would heighten concerns that Beijing’s notorious smog will not be cleared in time for the Games in August, when the weather in the city is at its most hot and humid.

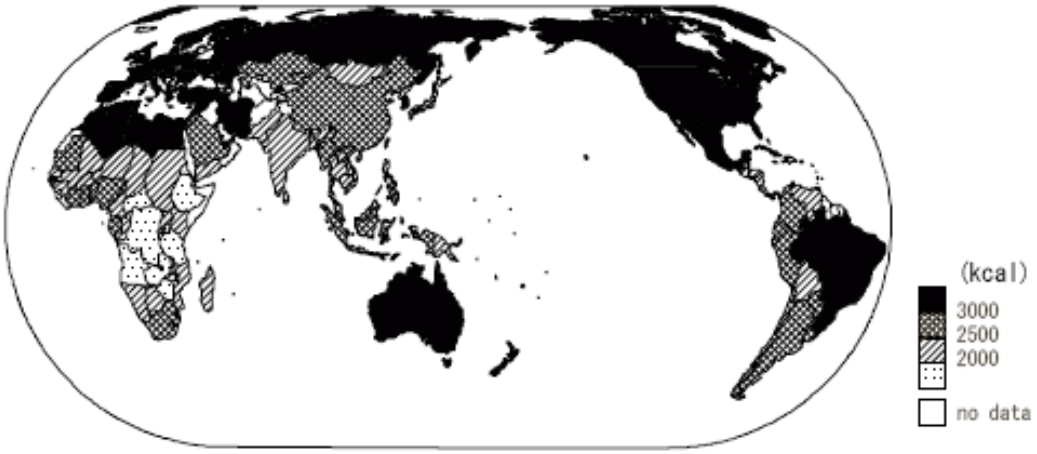
The International Olympic Committee has said that it will reschedule or postpone endurance events if conditions pose a danger to athletes’ health.

Gebrselassie, whose marathon record is 2hr 4min 26sec, called on China to deal with the pollution problem, which he feels will be “a hazard to athletes, seriously affecting their performances”.

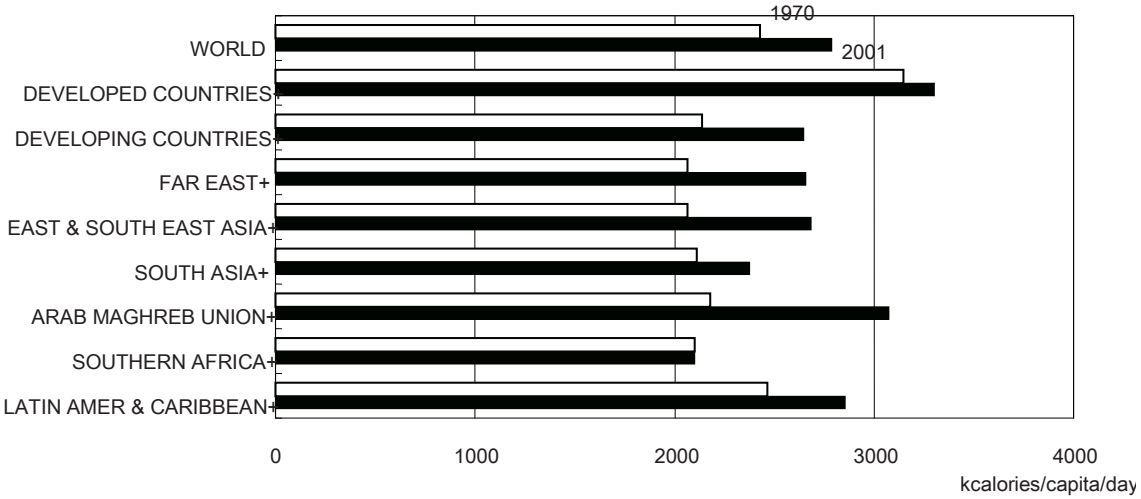
Up to and during the Games, the IOC has promised to monitor Beijing’s air quality closely. On Sunday, Jacques Rogge, the IOC president, said that China had made “major progress” in tackling pollution. This included switching from coal to gas energy, closing 10 per cent of its power stations and planting millions of trees to improve its air quality.

Sources Part 7 – Food problems

Source 1 Supply of nourishment per person per day



Source 2 Changes in supply of nutrition



Source 3 Changes in food production and population