

General Certificate of Secondary Education

B561

Geography B

Unit B561: Sustainable Decision Making

Resource Booklet

Candidate
Forename

Candidate
Surname

Centre Number

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Candidate
Number

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INSTRUCTIONS TO CANDIDATES

- This Resource Booklet must be handed in to your teacher at the end of each lesson. **You must not write on the booklet**, apart from **writing your name, Centre Number and Candidate Number** at the top of this page.

INFORMATION FOR CANDIDATES

- The following abbreviations may be used:
- MEDC – More Economically Developed Country
- LEDC – Less Economically Developed Country
- EU – European Union which includes the United Kingdom

CONTENTS OF THE RESOURCE BOOKLET

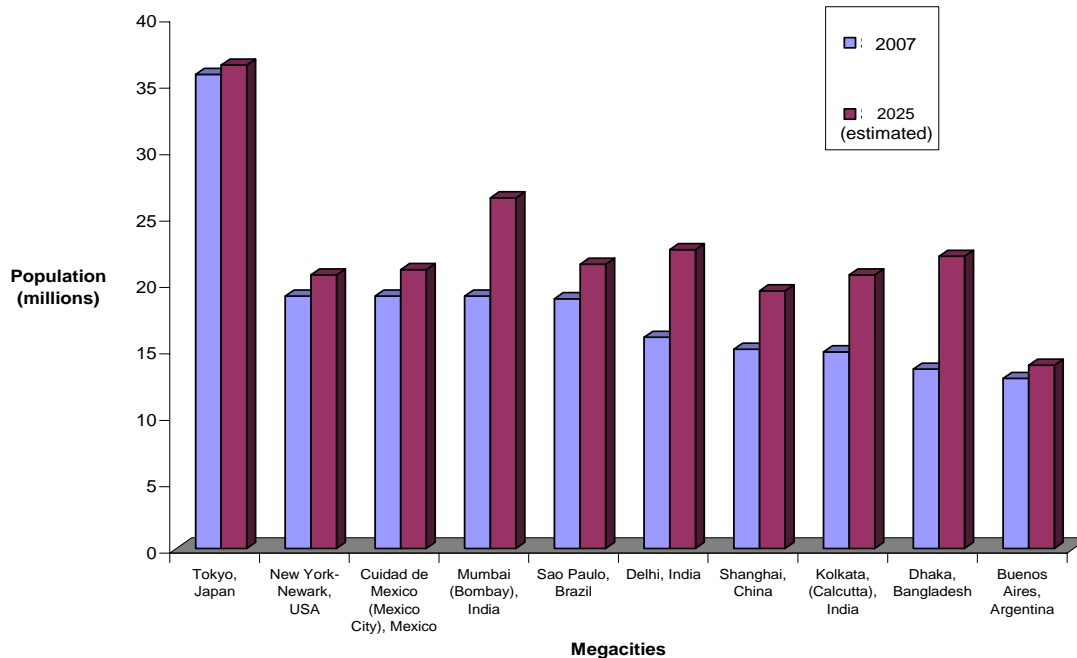
- Resource 1 Population and quality of life data for selected world mega-cities.
- Resource 2 Cities for cars or cities for people?
- Resource 3 Sustainable Issues: Greenwich Millennium Village.
- Resource 4 Rio de Janeiro, Brazil: map, images and fact-file.
- Resource 5 Rio de Janeiro: Stakeholders and housing strategies

This document consists of **8** printed pages.

Resource1 Population and quality of life data for selected world megacities.

Millionaire cities, which have a population greater than 1 million, have become commonplace, but the megacity is a phenomenon of the late twentieth century. A megacity is generally defined as an urban agglomeration with a population of at least 10 million. In 1985, there were 11 megacities. By 2000 there were more than 20 of these urban giants.

POPULATION, SOCIO-ECONOMIC AND ENVIRONMENTAL DATA FOR SELECTED MEGACITIES



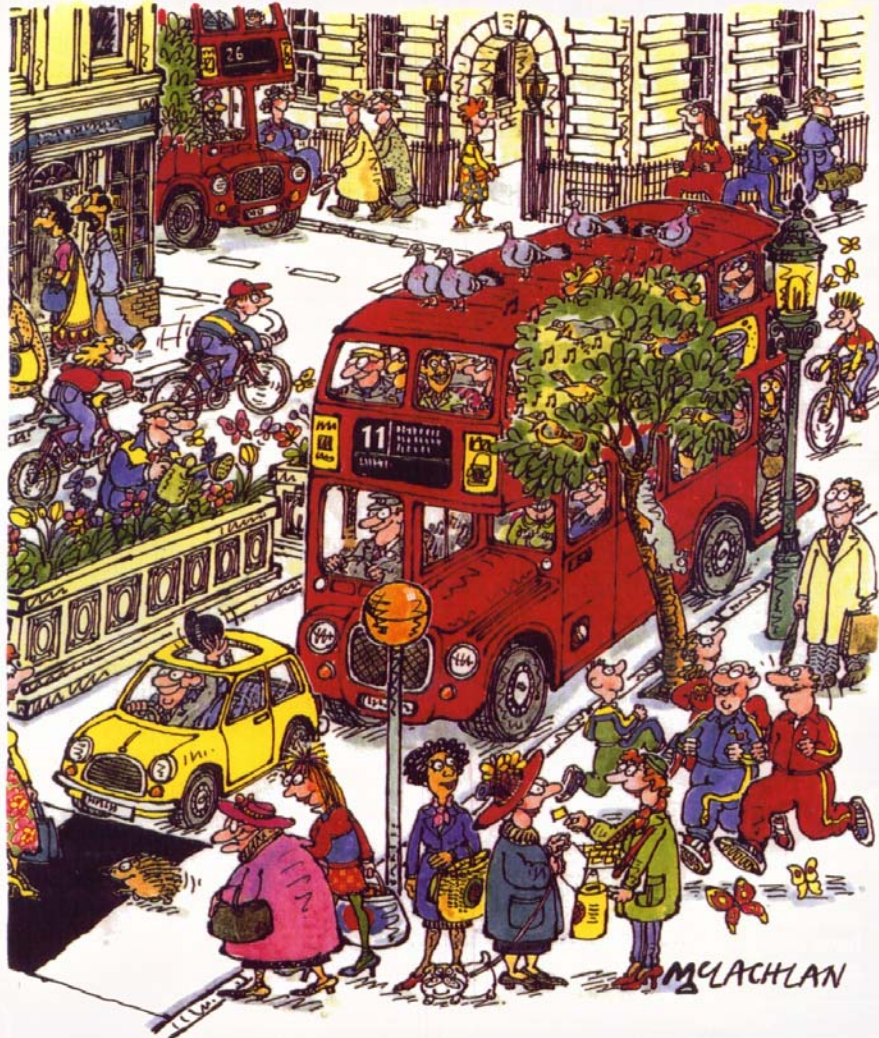
Source: UN
World Urbanisation Prospects 2007 Revision

MEGACITY	Socio economic indicators			Environmental indicators		
	Person per room	% homes with water & electricity	Murder per 100,000	Levels of measured noise (1–10)	Mean traffic speed (km/h in rush hour)	Levels of measured air pollution (1–10)
Tokyo	0.9	100	1.4	4	44.8	4
Mexico City	1.9	94	27.6	6	12.8	9
Sao Paulo	0.8	93	26.0	6	24.0	4
New York	0.5	99	12.8	8	13.9	5
Shanghai	2.0	95	2.5	5	24.5	4
Los Angeles	0.4	100	12.4	6	30.4	7
Kolkata	3.0	60	1.1	4	21.3	10
Mumbai	4.2	83	1.1	5	16.6	7
Beijing	1.6	89	2.5	4	41.1	10

Note: 1 is low, 10 is high.

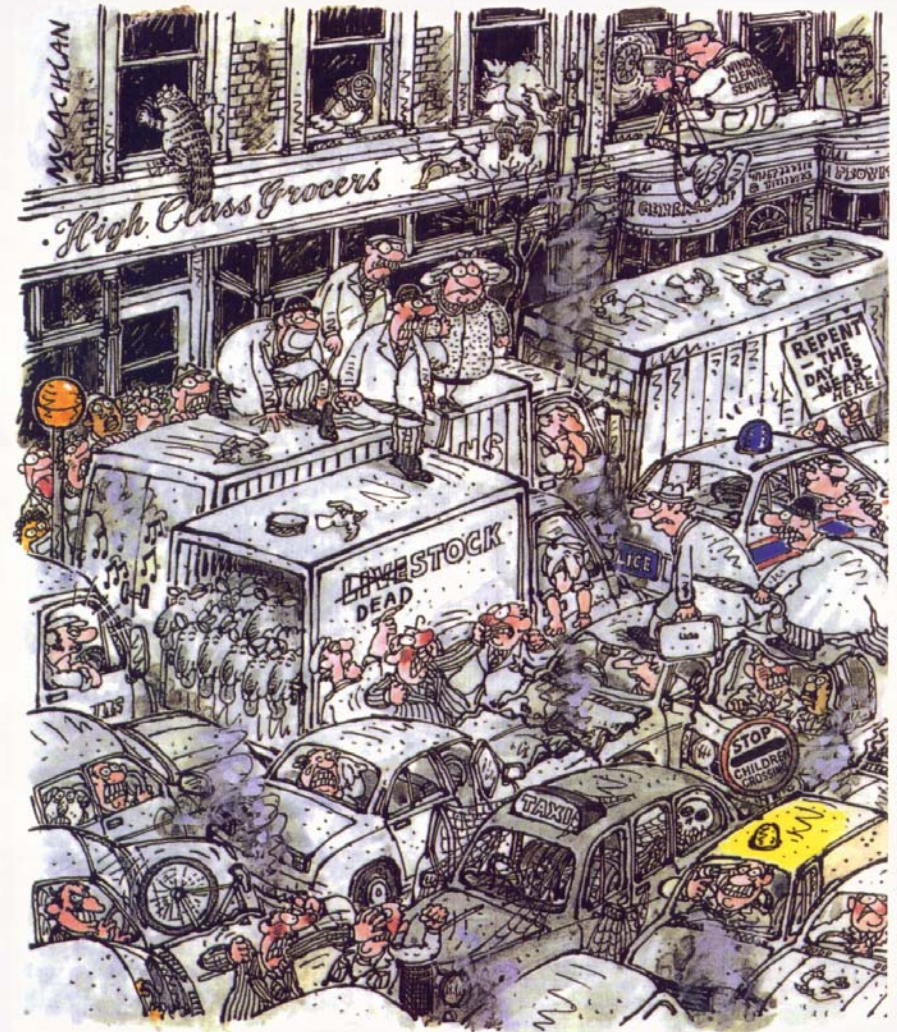
Source: GAIA, date 1990 figures

Resource 2 Cities for cars or cities for people?



...CITIES FOR PEOPLE?

CITIES FOR CARS, OR ...



© Ed McLachlan

Resource 3 Sustainable Issues: Greenwich Millennium Village.

SUSTAINABLE ISSUES:

GREENWICH MILLENNIUM VILLAGE

Greenwich Peninsula is meant to be a model for the future, to show how we can live **sustainably**. That means without wasting things or harming the environment.

Saving water

- 1 The rain falling on the Dome roof is used for the toilets.
- 2 The rain falling on the supermarket roof is used to water plants.
- 3 Waste water from baths, showers and wash basins in Village homes is filtered and used to flush toilets and water plants.

Saving energy

- 4 Supermarkets use electricity for light and heat and fridges. This one aims to save electricity. It:
 - ◆ makes some of its own, using **wind power** and **solar power** (sunlight)
 - ◆ has banks of earth on each side to keep it warm in winter and cool in summer
 - ◆ has a glass roof to let light in.

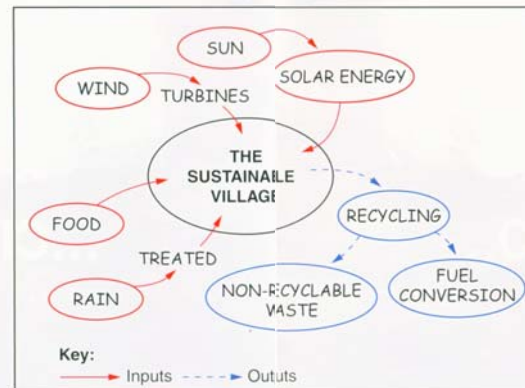
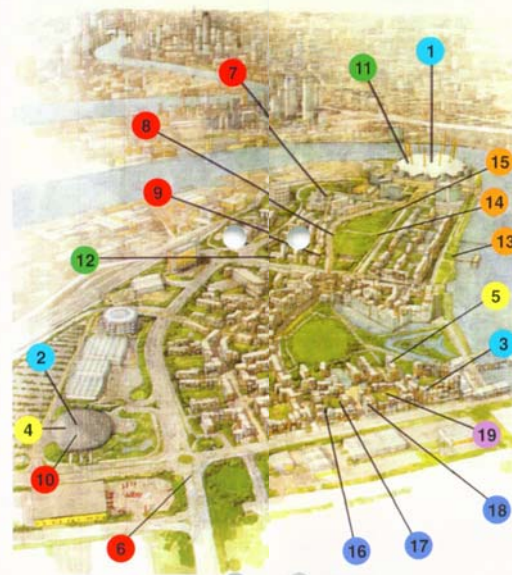
5 The Village houses:

- ◆ are well **insulated** to keep heat in
- ◆ are sheltered from cold winds
- ◆ have south-facing glass walls to trap the sun's heat
- ◆ have energy-saving fridges, washing machines and dishwashers.



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Is this the future?



Cutting traffic

Cars cause pollution, and clog up the streets. So people living here are encouraged not to drive!

- 6 There is a very good bus service.
- 7 There is a tube station right beside the Dome.
- 8 There are lots of cycle tracks.
- 9 There are not many parking spaces.
- 10 You can order from the supermarket over the internet. Your shopping is delivered to your home.

Recycling material

- 11 The building materials can all be **recycled**, or used again in the future.
- 12 Used bottles, cans, plastic and paper are collected for recycling.

Attracting wildlife

- 13 Reed beds and salt marshes are being created along the river, to attract ducks and other birds.
- 14 There are large stretches of park, with lakes and ponds.
- 15 Over 12,000 trees are being planted.



Building a community

- 16 You can choose to rent or buy a house. Some are council houses.
- 17 You share lawns and gardens with your neighbours – so you get to know them!
- 18 It's not far to the shops... or the primary school ... or the health centre ... or the office.

Using technology

- 19 The Village houses are really hi-tech!
 - ◆ They all have computers.
 - ◆ These link them to the Village website, and the school and health centre.
 - ◆ Their fire alarms are linked to a local fire station.
 - ◆ Their burglar alarms are linked to a security centre.

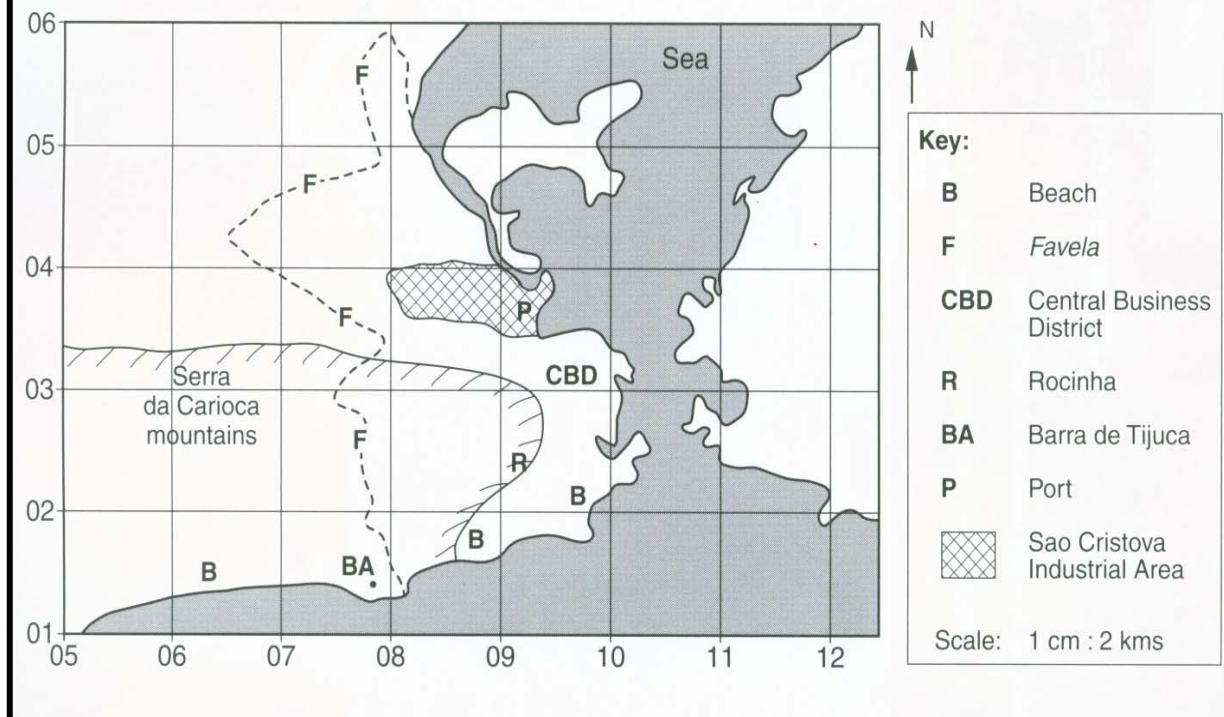
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Resource 4 Rio de Janeiro, Brazil: map, images and fact-file.

- Brazil's capital city until 1960
- Population: 13 million
- Ipanema and Copacabana beaches to east
- Steep slopes and forest to west
- Little flat land
- Famous carnival & sugar loaf mountain
- Over 25% of population live in favelas (slums)
- CBD – HQs of many Transnational Companies
- High crime rate, drugs & violence
- Shortage of basic services for all population

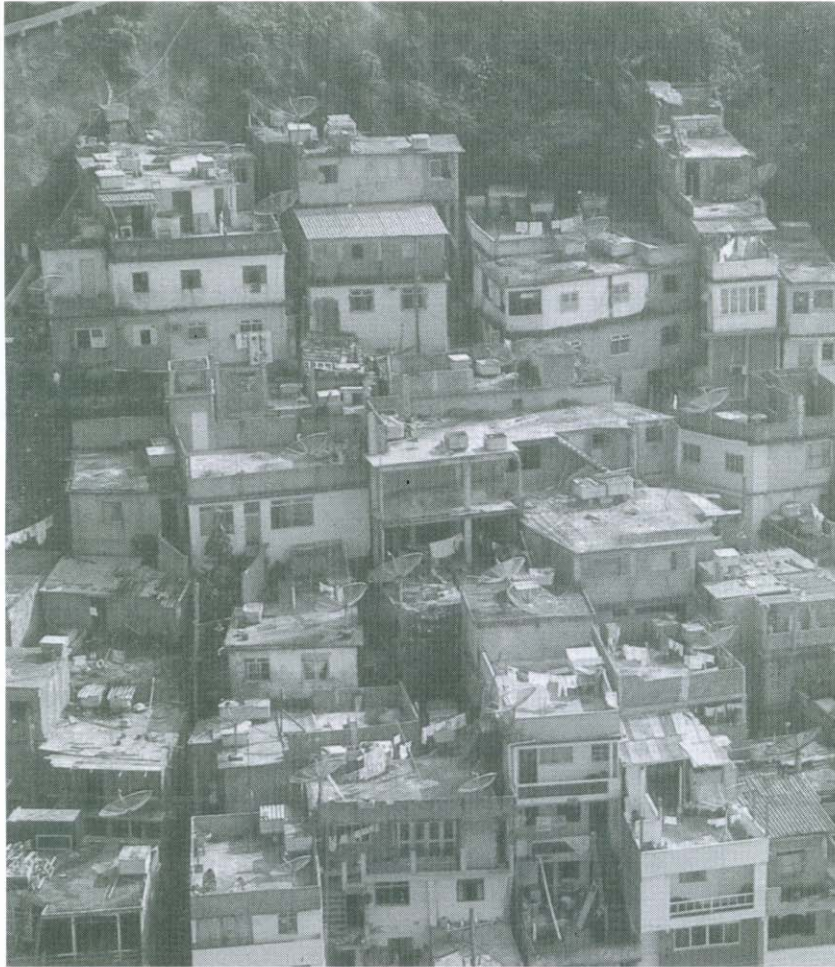
Adapted from Geography Matters Resource Pack

MAP OF RIO DE JANEIRO



Geography Matters®

Rocinha – Favela



Barra da Tijuca – Edge City



Resource 5 Rio de Janeiro: Stakeholders and housing strategies



Different Housing Strategies for Rio

- 1. New Favelas on the outskirts**
Massive rural to urban migration increases the population in these slums. They are built from materials such as wood and cardboard on steep hillsides, areas liable to flooding and on any unoccupied land. They have no basic services. Overcrowding is high with little employment and a high crime rate.
- 2. Rocinha is an unplanned favela on steep slopes overlooking Copacabana.** Many of its population of 100,000 have been there for over 40 years. They have low paid jobs in the city and have improved their houses themselves or by helping each other. The houses are now brick built with electricity, running water and sewage disposal. They still have no proper road system.
- 3. Barra da Tijuca 'edge city'.** This lies 30 kms to the west of Rio on the coast. It has a population of 150,000 mainly living in high rise high security apartments. There is plenty of flat building land here. Professionals can easily commute into Rio by motorway.
- 4. Slum Clearance.** The government could replace the slums by providing 'site and services' and basic building materials for the people to build their own better equipped homes or provide homes at low rents.

Copyright Acknowledgements:

Sources

Resource 1: Population, Socio Economic and Environmental Data for Selected Megacities; UN World Urbanisation Prospects 2007 Revision

GAIA date 1990 figures

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