# Geo Factsheet



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#### Introduction

This Factsheet will examine the 'Agendas', a topic which can lead to confusion, especially when under pressure in exams. There are four 'Agendas' and each will be explained in turn, with case studies of the three 'colour' agendas:

- Agenda 21
- The Green Agenda
- The Brown Agenda
- The Blue Agenda

#### The starting point: Agenda 21

Agenda 21, in simple terms, was designed as a plan to make the 21st Century (hence '21') more sustainable than the 20th Century. In the late 1980s a 'sustainability agenda' emerged following the publication of 'Our Common Future' in 1987. This document, often known as the 'Brundtland Report', was written by the UN World Commission on Environment and Development (WCED) chaired by Gro Harlem Brundtland. This report contained the quote, which every modern Geographer should be able to recite!

#### "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The report highlighted a number of key problems and challenges which are well-known today, but were much less so 20 years ago:

- Millions of people live with hunger and poverty, and the gap between rich and poor was widening.
- Forest and grassland ecosystems were being destroyed for farmland.
- Air pollution was a growing threat to people and the planet.

The report was quite pessimistic about the future. During its writing, between 1983 and 1987, various 'disasters' occurred (the Ethiopian famine 1984-5, the Bhopal incident 1984, Chernobyl in 1986) which seemed to confirm human's misuse of the earth and its resources.

In 1989, the report was debated by the UN General Assembly and the outcome of this was the Earth Summit in Rio de Janeiro, Brazil, in 1992.

The outcome of the Earth Summit was Agenda 21. This document recognised the need to tackle environmental, social and economic problems around the world. Crucially, it was agreed that in many cases the best way to find solutions to these problems was to do so at a local level. Agenda 21 is often referred to as Local Agenda 21 or just LA21. Most of the actions proposed by the Earth Summit were designed to by implemented by local councils, not national governments. The principle at work here is that decision making about environmental, social and economic problems should be as close to people as possible - in other words it should be implemented by locally elected officials, as they are 'closest' to the local people who elect them and therefore most accountable.

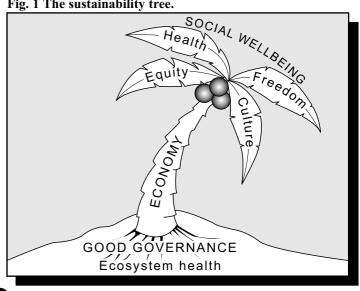
Many Local Authorities in the UK, and around the world, have LA21 policies relating to areas such as:

- FAIRTRADE: 'ethical' buying policies for councils. These try to ensure consumption of resources does not have negative social consequences.
- **RECYCLING:** boxes, bins and skips to encourage waste reduction by recycling.
- BIODIVERSITY: local nature reserves, greenbelts and wildlife corridors to maximise ecological value.
- AIR QUALITY: standards and monitoring to reduce impacts on human health.
- TRANPORT: public transport schemes, subsidised fares and protected routes to ensure transport is available for everyone, and minimises pollution; cycle routes.
- ENERGY: promoting the use of solar panels and energy efficiency as part of the planning approval system.

**Exam Hint:** Use the internet to explore your local council's response to LA21. The web address will be www. -----.gov.uk (insert your local authority name. and search for LA21. In exams, it's easier to discuss management strategies you have experienced yourself, such as local recycling schemes and local public transport initiatives.

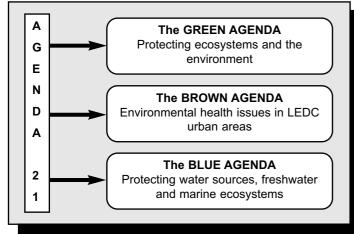
These policies aim to maintain social wellbeing within local communities by ensuring that people's needs are met, but not at the expense of the environment. This is done by good governance at a local level. Overtime, policies that degrade ecosystems, the environment and its resources would eventually degrade social wellbeing. This is illustrated by the sustainability tree below:

#### Fig. 1 The sustainability tree.



The colour agendas, brown, green and blue, can be seen as more specific interpretations of Agenda 21, which try to apply sustainability principles to particular areas of concern. This is illustrated in *Fig. 2*:

#### Figure 2: Agenda 21 and the colour agendas:



### The Green Agenda

This agenda is the most well-known. It concerns the use of resources through **consumption**, the pollution that consumption of resources generates, and the disposal of the waste products produced by consumption.

**DEFINITION:** The Green Agenda is the range of environmental issues which reduce sustainability. These include air pollution and land degradation. Many of the issues result from the waste generated from overuse of resources.

# Case Study 1: The UK's Green Agenda

The Green Agenda applies to all countries, but is a more pressing concern in MEDCs. This is because **ecological footprints** are high meaning that pollution, and environmental degradation, are concerns. MEDCs often have the capacity and technology to tackle 'green' issues. It is useful to see the Green Agenda as a series of **questions**, to which there is more than one answer.

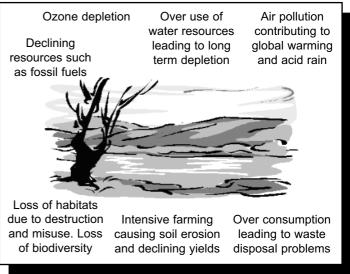
**Energy supply** is one question. Currently the UK electricity demand is 358 billion kilowatt hours of electricity every year, of which 253 billion kWh comes from fossil fuels (\*2). Demand is set to **rise** to 381 bn kWh by 2020. Fig. 3a illustrates the UK's energy choices in terms of the Green Agenda.

### Fig. 3a UK future energy options.

	Economic arguments	'Green' arguments
Fossil Fuels	Dependency on imports. Potential high cost. Old plant needs replacing.	Generates carbon dioxide and other pollutants.
Renewable	Currently expensive compared to other sources.	No greenhouse gas emissions. Large wind farms generate NIMBY issues.
Nuclear power	Costly to construct. Dependency on imports of Uranium. High waste disposal costs.	Does not emit greenhouse gases. Disposing of high-level waste not solved.

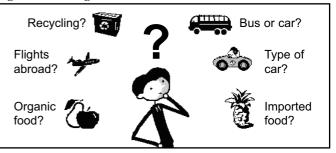
UK energy use in the future is a question of **balancing** economic arguments with 'green' arguments. Those who favour wind turbines argue that they are 'clean' and economically viable. In an LEDC context the question is likely to be more basic – 'Is there sufficient power?' rather than 'What choice of power sources are there?' The consumption process has the potential to cause huge amounts of pollution. In many cases, the pollution is simply not dealt with and becomes an **'externality'** - someone else's problem. A simple example would be throwing an empty crisp packet away in the street. Rather than dispose of it in a bin, you are expecting someone else to deal with it. Before this happens, it may have a negative impact on many other people as the street is environmentally degraded by litter. At a more complex level, if you drive a car you pollute the atmosphere with carbon dioxide, which contributes to the negative externality of **global warming** - you may expect this problem will be dealt with some time in the future. *Fig. 3* and *Case Study 1* illustrate the green agenda in more depth.

## Fig. 3 Issues of the Green Agenda.



Green Agenda issues in MEDCs often come down to **personal** choice and the question of how far an individual is prepared to prioritise their personal Green Agenda, to reduce their own **ecological footprint**.

Fig. 3b Green Agenda choices.



Where people 'fail' to make the 'correct' choices, governments may step in. The UK Government is currently trying to meet its **Kyoto Protocol** target of a reduction in greenhouse gases to 12.5% below 1990 levels by 2012. Having started well, emissions are now rising as our affluent society buys larger cars, houses and takes more flights abroad. Car tax is now linked to engine size. Other policies, such as an **eco-tax** on aircraft fuel would prove unpopular with voters. Recent government suggestions have included a '**carbon credit card**'. Everyone would carry one of these, and it would contain your personal **carbon allowance**. If you exceeded your allowance by, for instance, taking many flights abroad, you would need to buy more carbon points as well are your airline tickets. If you installed solar panels in your home, you could gain carbon points, and sell these. This would extend the **carbon trading scheme** down to a personal level.

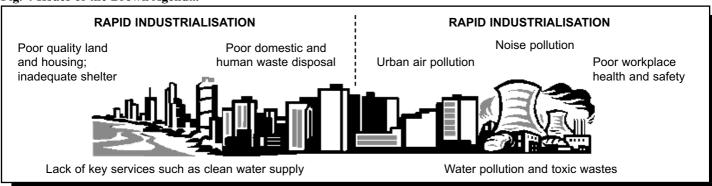
### The Brown Agenda

The problems of **rapidly growing** urban areas in the developing world are the focus of this agenda. The environmental problems of rapid, often **uncontrolled** and **unplanned**, urban growth have a direct impact on human health. The Brown Agenda recognises that these **'environmental health'** issues need to be urgently addressed in the world's growing megacities. The Brown Agenda is more **immediate** than the Green. Poor inhabitants of cities such as Mumbai, Rio and Lagos are suffering **now** - infant mortality is high, respiratory disease is on the rise and illness from low quality water supplies is common. The Green Agenda is more **delayed** - we expect global climate change and biodiversity loss due to deforestation to become issues in the **future**. There is an argument over which of the two agendas should be the main priority today - do we improve people's health now (Brown), or protect our children's future (Green)? *Fig. 4* and *Case Study 2* illustrate the Brown Agenda.

## Fig. 4 Issues of the Brown Agenda.

**DEFINITION:** The range of environmental problems in LEDC cities. These include the traditional issues of poor quality housing and poor access to services, plus the pollution and safety hazards associated with rapid industrialisation. Both lead to poor environmental health.

**Exam Hint:** in an exam situation, it is very common for students to confuse the Brown Agenda with 'brownfield sites' (derelict and contaminated land). Both are urban issues of course. Brownfield sites are an MEDC city issue, caused by deindustrialisation. The Brown Agenda is a list of environmental health problems in LEDC cities that need urgent solutions. In the exam, look for the question context, is it LEDC or MEDC?

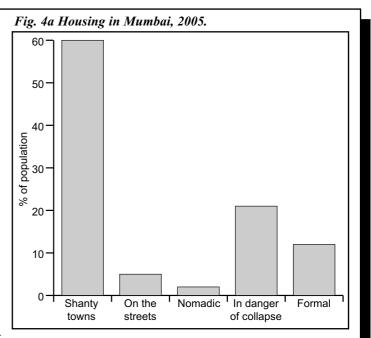


# Case Study 2: Mumbai's Brown Agenda

In contrast to the Green Agenda, the Brown Agenda is important in developing world cities, especially where they are growing rapidly. This is the case in Asia and parts of Africa and Latin America. **Mumbai** (formerly Bombay), in India's Maharashtra State has a population of 16 million people (at least 20 million if connected suburbs are taken into account), and this is expected to grow to 22-25 million by 2010. Mumbai is a classic expanding **megacity**, and its citizens have to contend with the issues of the Brown Agenda on a daily basis. Think of the **Brown Agenda** as a **list** of **environmental health problems** that need to be solved:

- Up to 60% of Mumbai's population live in informal, slum housing (called Zopadpattis). 60% of buildings are non-engineered (built by people themselves) (\*3).
- Slums housing covers about 10% of Mumbai's area, but holds 60% of its people.
- There is an average of 0.03 acres of open space per person in Mumbai (\*2).
- In August 2005, floods caused \$700 million in damage and killed 400 people; most of the city is only metres above sea level.
- Mangroves, which protect the city from floods, are being destroyed by urbanisation. 40% have been lost in the last 10 years.
- Mumbai generates 2225 million litres of sewage per day, most of which runs untreated into the sea.
- 97% of Mumbai's population is exposed to suspended particulate matter air pollution above WHO guidelines.
- Whilst Mumbai is the 4<sup>th</sup> largest urban agglomeration in the world, it ranked 124<sup>th</sup> out of 130 cities in terms of quality of life in the 2005 EIU survey (\*4).

Mumbai is built on several islands and much reclaimed land. Restrictions on new building have pushed rent levels as high as those in Tokyo. **Housing shortages** are escalating as immigrants flow in from all over India. This has led to the growth of slums such as Dharavi, Asia's biggest.



Solutions to Mumbai's problems are not easy to come by. The City demolished 67,000 slum properties in 2004-5 including Shanti Nagar on the northern edge of the city, but without adequate provision of new housing. Currently there is a debate over 600 acres of former industrial land in the centre of Mumbai - it could be used for low cost housing, but its value as commercial property is very high. New roads and flyovers are being constructed as part of the US\$1 billion Mumbai Urban Transport Project (MUTP) to ease congestion and pollution, but these are expensive and often shanty homes are in the way. Funding for the MUTP was temporarily suspended by the World Bank in 2006 over concerns that displaced residents were being ill-treated.

### The Blue Agenda

Water resources management is a key issue in many countries. Water resources are varied, but often under pressure as populations grow and industry expands. The Blue Agenda includes issues of supplying freshwater to people, but also to industry and agriculture. It also focuses on **sustainable water use**, including the use of **groundwater**. Fresh water and saltwater bodies provide a range of resources to many people, most crucially food. Maintaining the health of rivers, lakes and oceans is crucial to the continuance of these supplies.

Water supply will be one of the **critical issues** of the  $21^{st}$  Century. It's possible you are reading this Factsheet whilst drinking a cup of coffee. You certainly didn't use much water, although 20,000 litres are used to produce 1kg of coffee. In **India**, some 21 million farmers tap into groundwater supplies and extract around 250 million cubic km per year, 100 million cubic km more than rainwater puts back every year. This kind of water use feeds a booming agricultural industry now, but cannot last. In **Gujarat**, wells that struck the water table 10m down in 1950, now have to be sunk to 400m to get water. Some **200 million Indians** may be in a **water scarcity** situation in the future (\*1). The Blue Agenda is perhaps the least well known agenda, but in rural areas of many LEDCs and LDCs, it is the most critical. *Fig. 5* and *Case Study 3* explore this in more depth.

## Case Study 3: The Blue Agenda in Thailand

You would be forgiven for thinking water was no problem in Thailand. After all, it has an equatorial climate. On the face of it, too much water is more likely to be an issue. Due to rapid economic growth, water demand in Thailand is growing alarmingly, as shown in Fig. 5a. The demand for water is increasingly difficult to meet. In some farming areas, only around 35% of land receives sufficient irrigation. In Bangkok, reliance on groundwater reserves has grown alarmingly and unsustainably. So much water is extracted, without replenishment, that the city is subsiding by 20-50 mm/year. A combined crisis of flooding and water shortages looms.

Thailand's rich marine reserves are also threatened:

- Farmed shrimp production has soared from around 50 million tonnes in 1990 to over 300 million tonnes today.
- The coastal mangrove area has fallen from 350,000 hectares to 150,000 hectares today large areas of mangrove have been cleared to create shrimp farming lagoons.
- Marine fish catches have increased by almost 100% since 1984. As 40% of fish caught are juveniles, the prospects for long term fish stocks are poor.
- Coral reefs in Thailand vary in condition, around 25% are in a poor condition as a result of overfishing and tourism (\*7).
- The Gulf of Thailand suffers is polluted by land-based and seabased activities such as industrial discharge, oil spill incidents, domestic sewage, and agricultural runoff.

# Questions

- 1. Examine *Fig. 3b.* Consider your own lifestyle choices. How 'green' are you? What personal actions could you take to reduce your own environmental impact in the areas shown on *Fig 3b*?
- 2. Examine *Fig. 4*. If you've studied the problems of a large LEDC city in depth (such as Mexico City or Cairo), try to link your case study information to the Brown Agenda issues shown.
- Examine *Fig. 5*: Water supply in rural areas of LEDCs is often a problem. Use the Practical Action website (<u>www.itdg.org</u>) to explore how bottom-up strategies can help secure water supplies in such areas.

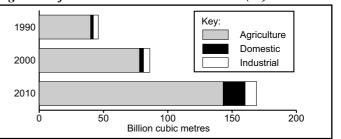
# **Further reading**

*The Atlas of Water.* R Clarke and J King, 2004. Earthscan books *State of the World's Cities 2006/7* (The Millennium Development goals and Urban Sustainability), 2006. UN-Habitat.

#### Fig. 5 Issues of the Blue Agenda. Destruction of Pollution of rivers and lakes aquatic and marine by agriculture and industry ecosystems Dwindling surface Marine resource supplies depletion; overfishing Overfishing in rivers & lakes Saltwater Overuse of incursion into groundwater supplies; coastal aquifers falling water tables

DEFINITION: The Blue Agenda refers to the declining quantity and quality of freshwater and marine resources. This includes the availability of water for people, but also the health of ecosystems which people depend on for goods and services.





The general picture in Thailand is one of degraded water resources, contributing to an urgent **Blue Agenda**. Coastal resources are most under threat, but shrimp farming contributes over US\$1.3 billion to the Thai economy per year, and tourism a further US\$10 billion. Reconciling these values, with the value of pristine water resources, is a key challenge.

It is not all bad news however. In June 2006 fishermen on the northern part of the Mekong River gave up their catfish nets in return for \$500 each from the Thai Government (\*6). The Mekong giant catfish is on the CITES 'red list' of endangered species and the fishing moratorium should help protect the fish, which can grow to 3m in length. Thailand now has 21 marine national parks, as well as a growing realisation that its resources are under threat. The Thai Department of Fisheries now has a management and conservation role, as well as a role in the development of fishing. The threat of uncontrolled groundwater extraction remains to be solved.

### \*Footnotes:

- New Scientist, 'Earth, the Parched Planet', 26th Feb 2006 by Fred Pearce.
  BBC website, June 2006.
- (3) Government of Maharashtra, 2006 official city guide.
- (4) Economist Intelligence Unit, 2005.
- (5) World Bank, Thailand Monitor, 2000
- (6) New Scientist, June 2006
- (7) Reefbase 2005 (www.reefbase.org)

#### Acknowledgements

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