Teaching notes

Using this issue

Simon Oakes

These notes are intended for use with GEOGRAPHY REVIEW Vol. 27, No. 3. They suggest ways in which you might develop further some of the articles in the magazine with your A-level and diploma students.

The High Line: regeneration in New York City (pp. 2–5)

This article profiles the development of the ‘High Line’ in New York, a brilliantly successful plan to renovate a derelict railway line. The case study can be widely applied across different geography courses, as it provides us with a contemporary example of a sustainable development venture (with intertwined environmental, socioeconomic and social goals).

Possible follow-up activities

1. Ask students to look for evidence that this is a sustainable scheme, in the fullest sense of the word. The evidence could be presented using a tabular or visual/poster format. As ever, the ‘sustainability stool’ model can be used as a visual prompt for this. The article contains plenty of information about the environmental benefits of the scheme (not just the green landscape itself, but also the construction materials used). It also makes references to range of lasting employment opportunities and various social ‘goods’ including new housing and the aesthetic enjoyment of the landscape by city dwellers.

   The sustainability stool model

2. The High Line has become the inspiration for other, similar schemes. Most recently, we have heard of London’s proposed Garden Bridge — a planned footbridge across the Thames, from Temple to the South Bank, designed by Thomas Heatherwick. You can research more about the Garden Bridge project at:
http://www.theguardian.com/uk-news/2013/nov/01/uk-garden-bridge-150m-thames-south-bank-soho

3. To help develop higher-order thinking skills, students could carry out further research to find out if the High Line has been an unqualified success, or whether there are other viewpoints that find fault with it. The article hints at this when it poses the discussion question: Have all New York residents benefited from the High Line project? Gentrification schemes across the world have usually failed to eradicate poverty; often they simply displace it. Moreover, successful regeneration can stimulate a housing ‘price bubble’ which benefits existing wealthy people (who can invest in additional homes to rent) but robs poorer groups of any chance of ever owning (or even renting) a property in the neighbourhood that used to be their
home. You can read a particularly scathing attack on the High Line here: [http://www.nytimes.com/2012/08/22/opinion/in-the-shadows-of-the-high-line.html?_r=0]

4 As a follow-on from the previous suggestion, use the GEOGRAPHY REVIEW article and the New York Times opinion as the basis for the following essay assignment:

(1) **Evaluate the success of an urban redevelopment scheme you have studied.** [10 marks]

**Tip**
There are many criteria by which success can be judged, such as social, environmental and economic targets. Also, while the High Line may have brought new visitors and employment, some people argue that it has damaged communities too.

**After the shaking: the secondary hazards of earthquakes (pp. 10–13)**

This article provides A2 students with a first-class example of synoptic geography in practice. The article synthesises a wide range of geographical impacts resulting from tectonic activity.

- The impacts link with different physical geography topic areas, such as slopes, rivers and soils
- The impacts range from short term to much longer term

**Possible follow-up activities**

1 Students can draw a mind-map showing the different types of ‘impact’ covered by the article, adding in other impacts using their own knowledge. Alternatively, they could draw a time-line arranging the impacts in sequential order. For instance, we learn that the initial earthquake lasts for only a couple of minutes, yet landslides may still be occurring years later (often due to some secondary trigger). A mind-map using information from the article might take the following form:
2 As a follow-on from the previous suggestion, use the GEOGRAPHY REVIEW article as the basis for the following essay assignment:

(2) Examine the physical and human impacts of one tectonic hazard event you have studied. [10 marks]

*Tip*
Use the 2008 Wenchuan (Sichuan) earthquake as the example: it is widely referred to in the article. A high-scoring essay will ‘unpack’ the word ‘impact’ carefully, showing that there are different categories of physical and human impact. The physical impacts can also be inter-related with one another (thus, earthquake triggers landslides which lead to river flooding). Also, they are occurring over different timescales.

**Development update** Do big media campaigns work? (pp. 14–16)
This thought-provoking cross-curricular piece gets to grips with the way NGOs engage with the very communities that their efforts are directed towards helping.

**Possible follow-up activities**
Get students to read the article back-to-back with the ‘White Revolution’ case study by Bruce Scholten from the previous issue of GEOGRAPHY REVIEW and look for common themes. A steer for them might be to think about the importance of partnerships, and the blurring of the line between ‘top-down’ and ‘bottom-up’ governance approaches.

**IB geography examination tip**
This is an excellent article for Higher Level students to support their P1/P3 studies:

- The article offers examples of attempts to reduce global disparities: both the IF campaign and Make Poverty History are good examples to use.
- The global interactions between INGOs and other players — including local communities, national governments and the World Bank — are a focus of both articles. This provides students with a perfect example of global interactions being beneficial for poor communities. However, in the context of a P3 discussion essay, students might do well to consider the extent to which the problems that need tackling are themselves a product of global interactions (such as indebtedness).

**Solar farms: why do we need them?** (pp. 17–19)
Will humanity be able to unlock the potential of solar power? If the future brings cheap, mass consumption of solar power then it will be a global ‘game-changer’ in all kinds of ways. This article offers a good starting point for thinking through some of the key issues that pertain to the use of solar power as part of different countries’ energy mix.

**Possible follow-up activities**
1 As a topic, solar power provides several interesting opportunities for practising synoptic geography:
• Find out about the way the solar industry has become embroiled in a global trade war, potentially damaging prospects to improve the technology further. The European Commission recently launched an anti-dumping and anti-subsidy investigation against Chinese solar manufacturers, after European solar manufacturers lodged a series of complaints alleging that Chinese rivals were benefitting from unfair state subsidies. Read more at: http://www.theguardian.com/environment/2013/apr/09/firms-demand-end-eu-china-solar-trade-war

• Research the physical geography that helps determine which parts of the world have the greatest potential for solar power generation. As part of this, students need to consider the curvature of the Earth and the effect this has on insolation and solar energy potential. They should also be broadly familiar with the global atmospheric circulation and the distribution of regions with little cloud cover in the Tropics (see illustration below).

The three-cell model of atmospheric circulation

2 Investigate Moore’s Law and the extent to which it may be applicable to solar technology. Does this affect your view on how important solar power is likely to become in the next few years? http://www.forbes.com/sites/michaelkanellos/2011/11/09/is-there-a-moores-law-for-solar/
**News watch** ‘Unequivocal’ global warming (pp. 20–21)

The latest IPCC report summary (on which this feature is based) should be required reading for all students whose course has a climate-change component.

**Possible follow-up activities**

1. Spend some time really thinking through what we mean by ‘certainty’ in science and the humanities. The ‘facts’ about climate change are contestable; but then so too are the facts as we know them about many aspects of life. Some additional understanding of concepts like probability, or recurrence, is often required in order to make data meaningful and to provide clarity. Of particular interest in the latest IPCC report is the way that phrases such as ‘very likely’ and ‘extremely likely’ are used. Students can find out more about this at [http://www.theguardian.com/environment/climate-consensus-97-per-cent/2013/sep/27/global-warming-ipcc-report-humans](http://www.theguardian.com/environment/climate-consensus-97-per-cent/2013/sep/27/global-warming-ipcc-report-humans).

2. Practice exam questions can be built around the illustrations included with the feature, as shown below.

![IPCC projections for temperature and sea level under two different scenarios](image)

**IPCC projections for temperature and sea level under two different scenarios**

(3) Study the graphs.

(a) Suggest what the data tell us about projected environmental change. [4 marks]

(b) Suggest reasons why there is so much uncertainty shown about the rate of future global warming and environmental change. [15 marks]

**Tip**

For part (a), you should highlight the ‘big picture’ of positive change in both cases, though estimates vary as to the scale and rate of possible change. This is a good question to practise in order to hone the geographical skill of data analysis. Students will need to choose their vocabulary carefully.
For part (b), reasons may relate either to human geography (uncertainty around the success of mitigation technologies or the pace of development in emerging markets) or physical geography (uncertainty around the response of the oceans, or the operation of feedback mechanisms).

**Paying to keep whales alive? A case study of biodiversity protection (pp. 22–26)**

This article details the progress made towards greater protection of the world’s whales, and considers the merit of ‘environmental economics’ as a management approach.

**Possible follow-up activities**

1. Students can undertake their own research into the IWC:
   - Which countries are members and how many countries are not?
   - What penalties if any exist for a member who breaks the rules?
   - Why are some countries IWC members even though they are also whaling nations?

Students can look for answers to these questions at: [http://www.greenpeace.org/usa/en/campaigns/oceans/whale-defenders/iwc/](http://www.greenpeace.org/usa/en/campaigns/oceans/whale-defenders/iwc/)

2. To help develop higher-order thinking skills, students could debate whether whaling is a ‘question of culture’ or whether they think there is a moral imperative for it to be banned altogether. The Faroe Islands, where pilot whales are massacred annually, provides a good case study to illustrate the cultural importance of whaling in a local context: [http://www.dailymail.co.uk/news/article-1189161/Pictured-The-brutal-slaughter-pilot-whales-annual-Faroe-Island-tradition.html](http://www.dailymail.co.uk/news/article-1189161/Pictured-The-brutal-slaughter-pilot-whales-annual-Faroe-Island-tradition.html)

To help frame any argument, they might inquire into the meaning of the term ‘cultural relativism’. They might ask: what, if any, limits should there be to our acceptance of other cultures’ traditions?

3. Practice exam questions can be built around the data tables included in the article, as shown below.

(4) Study Table 1. Using the data and your own knowledge, to what extent do you agree that the worldwide ban on commercial whaling (introduced 1983) has been a failure?

**Table 1 Comparison of whale catches, 1983 and 2009**

<table>
<thead>
<tr>
<th>Whale species</th>
<th>Bowhead</th>
<th>Bryde’s</th>
<th>Fin</th>
<th>Grey</th>
<th>Humpback</th>
<th>Minke</th>
<th>Sei</th>
<th>Sperm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1983 total catch</strong></td>
<td>9</td>
<td>697</td>
<td>278</td>
<td>170</td>
<td>16</td>
<td>7,072</td>
<td>100</td>
<td>414</td>
<td>8,756</td>
</tr>
<tr>
<td><strong>2009 total catch</strong></td>
<td>41</td>
<td>50</td>
<td>136</td>
<td>116</td>
<td>1</td>
<td>1,594</td>
<td>101</td>
<td>1</td>
<td>2,040</td>
</tr>
</tbody>
</table>
Environment today The impacts of mining (pp. 27–29)

This Environment Today provides an interesting look at mining that can support the study of a number of different topic areas. Mining is an important activity in many different environments that students study, including extreme (arid and cold) environments and wilderness areas. The article can help students develop understanding of the environmental impacts of mining through considering the scale of activity (industrialised/mechanised or artisanal), the local geological context (which may or may not lead to subsidence problems) and the techniques used (e.g. opencast).

Possible follow-up activities
1 Students can undertake their own research into problems experienced in the UK in recent years. The newspaper story ‘Minefield for council as town asks what lies beneath’ details how the legacy of eighteenth-century mining is still felt in modern-day Reading. Mining of chalk for brick-making left a labyrinth of tunnels beneath the site where the town now lies. The article explains what happened when mysterious holes started appearing in Reading, and parts of houses started to disappear. [http://www.guardian.co.uk/britain/article/0,,2025704,00.html](http://www.guardian.co.uk/britain/article/0,,2025704,00.html)

2 There are associated human geography issues related to the regulation of mining industries in different countries and the poor working conditions suffered by miners in some of the world’s poorer countries. A recent collapse in Afghanistan killed 24 people. Some mines in the country employ children as young as ten despite government regulations forbidding child labour: [http://www.aljazeera.com/news/asia/2013/09/201391563752759330.html](http://www.aljazeera.com/news/asia/2013/09/201391563752759330.html)

3 For AQA centres, there are links to investigate between mining and conflict studies, notably the use of forced labour in countries such as DR Congo. The Dodd-Frank Act (USA) requires US mining companies to audit their supply chains for evidence of forced labour: [http://www.theguardian.com/sustainable-business/conflict-free-minerals-drc-companies-stay](http://www.theguardian.com/sustainable-business/conflict-free-minerals-drc-companies-stay)

4 Many of the tens of millions people working in the artisanal and small-scale mining (ASM) informal sector risk disease, serious injury and death. ASM miners may be taken advantage of by unscrupulous middle men, according to the Fairtrade Foundation and the Alliance for Responsible Mining (ARM): [http://www.fairtrade.org.uk/gold/](http://www.fairtrade.org.uk/gold/)

The geography of cyberspace: ICT, development and conflict (pp. 32–36)

This article provides students with an in-depth look at how ICT needs to be factored into the study of many different areas of geography, from studies of conflict (AQA) to superpower geographies (Edexcel). There is ‘stretch and challenge’ here too, due to the focus on (1) cyberspace governance issues and (2) the ethical and moral geographies of cyberspace. Both may be of interest to students progressing towards university geography.

Possible follow-up activities
1 Since the article was written, there have been various significant developments in this field that students can research in order to update their knowledge:
• Greater effort is now being made in the UK to try to ensure that Twitter users are bound by similar conventions to those that apply to traditional media:  
http://www.theregister.co.uk/2012/11/22/law_commission_public_consultation_on_internet_and_contempt/

• The ‘big data’ debate continues:  

• Relations between Germany and the USA have been rocked by revelations that Angela Merkel’s phone was tapped:  

2 Practice exam questions (related to development, globalisation or superpower geographies) can be built around the illustrations included with the feature, as shown below.

### The number of domestic patent applications registered in the USA and China, 1997–2011

(5) Study the graph.

(a) Compare the trends shown for the USA and China. [4 marks]

(b) Suggest reasons for the changes shown in Chinese patent applications. [10 marks]

**Tip**

For part (b), reasons may relate to globalisation and the emergence of global TNCs based in China that need to innovate in order to increase their share of global trade. Or the reasons may relate to China’s military power and the role of the state in stimulating research. From an economic development perspective, China has passed the ‘take-off’ stage in Rostow’s model and is approaching the stage of mass consumption. Domestic growth involves multiplier effects which generate sufficient capital for companies to increase their R&D budget.

**IB Geography examination tip**

This is a useful article for Higher Level students to support their P3 studies, by offering data and exemplars that relate to:

- Changing space (describe the role of information and communications technology (ICT) in civil society and the transmission and flow of images, ideas, information and finance).
• Political outcomes (anti-globalisation movements).
• Alternatives (describe the role of civil societies in raising awareness of local and global environmental, social and cultural issues).