

Lesson 3 – Student Task Sheet - Impacts of Hazards in the Gobi Desert

Aims: Last lesson we studied the fieldwork findings of Dr Troy Sternberg in the Gobi desert at three different field work locations in China and Mongolia. We learnt that all three rural farming field work locations were facing challenges in the face of hazards in this dry land environment. The sustainability of their food security seems questionable. This lesson we will focus on the likely **impacts** and **futures** of these communities. We will also practise some literacy skills we can use when writing about our case study on the Gobi Desert.

Key Ideas and terms: Food security, governance, the butterfly effect, globalisation, rural to urban migration, food independence, international markets, world food prices.

Starter – The butterfly effect: Look at the 3 data/images on the power point. Using ideas we learnt last lesson – in pairs describe how these sets of data may be linked.

IDEA 1 – Impacts of Hazards – now and in the future. Read your ASK THE EXPERT interview by Dr Troy Sternberg. This gives us a few more ideas about impacts and the future in addition to our reading of his field work findings that we learnt last lesson. Using this and our notes from last lesson, in pairs, fill in the flow chart below to consolidate our understanding of impacts in the Gobi, China, Mongolia and beyond.

Physical causes: Summarise the physical geography challenges of farming in the Gobi desert

Governance issues in China & impacts (Minquin & Xilingol):

Governance issues in Mongolia & impacts:

Migration away from farming (who? And what are the likely consequences?):

Migration away from farming (who? And what are the likely consequences?):



IDEA 2 – Literacy; Writing about Hazards and food security in The Gobi Desert.

During the last two lessons you have had a excellent opportunity to learn about an engaging and current geography case study of farming, hazards and food security in the Gobi desert based on Dr Troy Sternberg's field work in the summer of 2012. This is an area of the world that is not widely written about. Our next step is to pull our ideas together and practise some literacy skills to prepare us to write about this case study in our A2 examination.

STEP 1 – Revision notes. Before you begin your essay preparation a good first step is to retype up a summary of your lesson notes. Each time you do this at A2, you might find the following sub-headings useful to help you take revision notes:

- (i) BIG PICTURE – what region of the world is your case study in? What general geography is going on in this region? An important part of A2 writing is having excellent case study knowledge, but also knowing how to put it in context in the global picture.
- (ii) Key geography terms I will use when writing about this case study
- (iii) Key geographical understanding (good geography stories- physical or human tends to be chronological –use connectives such as ...this leads to.. consequently...)
- (iv) Key place knowledge: Note down facts/figures/unique geography that you will chose to learn for this case study for the exam
- (v) Summary of case study in one line.

STEP 2 – Report/Essay plan.

Report Title: 'To what extent is changing human geography the cause of food insecurity?' 70 marks.

For longer A2 essays, depending on your exam board, it is likely that a title like the one above is going to require you to write several case studies to show a global understanding. The work you have done on the Gobi desert will just form part of this essay. You may choose to structure your report by case study or themes. In this example we are going to structure by case study and focus maybe on just 2 of the Gobi Desert case studies. We will now practise writing a paragraph for 2 case studies:

STEP 3 – Writing your paragraphs. Good paragraphs at A2 need to answer the question, show in depth geographical understand, have excellent place knowledge of the case study and also how this fits into the bigger picture and also communicate both of these skills to the reader well. There are many ways to produce great geographical writing; you might want to try the 'PEEL' paragraph as one method:

P: Each paragraph should start with **Point** (the point & sign post sentence of the paragraph),

E: ...then **Explain** (chronologically tell the story of the geography with focus to the question)...

E: ...followed by **Evidence** (the case study detail – although may be combined with the explain in a geography essay) ...

L: ...ending your paragraph with a **Link** (your final sentence should link back to the question).

'To what extent is changing human geography the cause of food insecurity?'

Signpost sentence – links to the question and summarise the geography of the case study.

An example PEEL paragraph using the Minquin, China case study:

China's Gobi Desert is an area of arid and semi-arid land that has a challenging physical environment in which to be food secure and has increasingly become less so due to governance that has arguably contributed to worrying food security issues. The Gobi desert has low annual rainfall and suffers annual hazards including winter wind storms and summer droughts. For centuries farmers have coped with this by herding cattle and goats, relying on kinship ties and living a nomadic existence, so moving around the challenging environment to cope with aridity and winds. China's rapidly growing economy and the move away from subsistence farming has meant that areas of the Gobi such as Minquin in northern central China has seen the settling of nomads over the last 50 years. In addition there has been in-migration of Han Chinese and therefore the shift towards monoculture and farming of pigs and crops. Much of this is for export to the rest of China and beyond, so intensive farming is needed. The government in the area has invested heavily in coping with the physical geography challenges; rivers are dammed and farmers given water quotas, green houses are built to protect winter crops from the destructive winter winds. Farmers are supported financially and encouraged to take government loans to make these investments. Without these human geography changes, farming here would not be possible in such an arid land – and arguably, if successful, such heavy investment in farming infrastructure could improve local and national food security.

However there are increasing challenges. Farmers have lost their resilience and independence and are reliant on this (relatively) new monoculture and its heavy investments. When the infrastructure breaks – e.g. wind storms damaging the greenhouse, the farmers are left with nothing. Also, they are reliant on the prices of the monoculture crop they have been encouraged to grow to be profitable. This sometimes is not the case when prices of a particular crop fall and they don't make profit, which they desperately need to purchase food at the local market. The global pattern of farming failing, followed by rural to urban migration and a subsequent ageing population in the rural Gobi Desert area is becoming an increasing problem. In summary there are many changing human geographies, similar to many rapidly emerging nations. Food insecurity in China is not an immediate challenge as farmers are coping with this by moving elsewhere. However governance that encourages monoculture and intensive farming in a vulnerable dryland, is arguably contributing to unsustainable food security for China.

Summary sentence that links back to the report question.

Now have a go at repeating a similar style PEEL paragraph for the Mongolia case study.