

Taking the Natural out of Natural Disaster

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There are 2 possible ways to complete this worksheet:

OPTION A (more difficult): watch the video and make notes before you look at the following questions. Then try to answer the questions using the notes you have made.

OPTION B (easier): Read the following questions before you watch the video. Then close the question book, watch the video and make notes. Finally, re-open the question book and try to answer the questions using the notes you have made.

FOR BOTH OPTIONS, YOU SHOULD FAMILIARISE YOURSELF WITH THE VOCABULARY BELOW BEFORE YOU WATCH.

Key Vocabulary

Act of God – the operation of uncontrolled natural forces

Hazard – a danger of risk

Hurricane – a storm with violent winds

Vulnerability – the state of being susceptible to injury or attack

Catastrophic – involving or resulting in substantial and usually sudden damage

Fatalism – the belief that all events are predetermined and therefore unavoidable

Drought – the continuous absence of rain

Richter scale – the scale by which the strength of an earthquake is measured

Silt – mud

Rely on – depend on

Fertility – the ability to produce young

Section A: Comprehension questions

1. What is the title of the lecture?
2. What are the three key questions the lecturer says she will address?
3. Where does the definition of act of God come?
4. In the 1970s what did a group of geographers want to change about the term natural disaster?
5. Were these geographers ignoring the underlying processes involved in natural disasters?
6. What should natural disasters better be described as?
7. Why can there not be a natural disaster on the moon?
8. Disaster can only be understood when which two processes occur together?
9. How does the lecturer paraphrase the idea in question 8?
10. What is this approach to disaster called?
11. Why does the way we think about disaster matter?
12. What is the consequence of believing in an act of God?
13. What are the two alternative approaches to dealing with natural disasters?
14. How does the Vulnerability Approach view these alternatives?
15. How can building barriers to floodwaters to protect against flooding cause more problems?

16. Which two examples are given in the case of Bangladesh to illustrate this?
17. What does the Vulnerability Approach propose as an alternative solution to dealing with natural disasters?
18. Can disasters be understood purely as natural events?
19. What were the two key observations about disasters in the 1970s and 1980s?
20. What was significant about the number of physical processes not increasing while global human and material losses had been increasing for several decades?
21. What were the human losses suffered in the earthquakes in California and Iran, which both reached 6.5 on the Richter scale?
22. What is the relationship between the number of deaths resulting from natural disasters and development?
23. What conclusions can be drawn from this?
24. Are geographical events increasing?
25. What factor has become a new concern for those looking at natural disasters?
26. How many weather related disasters were there around the world between 1933 and 1997?
27. What was the average over the last 5 years?
28. Why does this increase in weather related disasters matter?
29. What does the lecturer conclude from questions 24 to 29?
30. Give two examples from the lecture of countries where human impact has interrupted biological processes.
31. How many buildings were damaged in the Mexico City earthquake?
32. What percentage of these were totally destroyed?
33. What did the fact that the damage to buildings was selective tell us about earthquakes?
34. What was the main factor in determining which buildings were damaged in Mexico City?
35. What effect did the clay have on houses in Mexico City?
36. How did the height of the buildings affect the level of damage the buildings experienced?
37. Which other example of human and physical interactivity was given?
38. The lecturer concludes that the vulnerability approach to natural disaster is the product of physical processes in the environment and _____.

Section A: Comprehension questions

1. What is the title of the lecture? **Natural Hazards: Acts of God?**
2. What are the three key questions the lecturer says she will address?
 - (i) **Are natural disasters acts of God?**
 - (ii) **Are natural disasters natural?**
 - (iii) **Why does it matter?**
3. Where does the definition of act of God come? **Legal Language**
4. In the 1970s what did a group of geographers want to change about the term natural disaster? **They wanted to take the ‘natural out of it’.**
5. Were these geographers ignoring the underlying processes involved in natural disasters? **NO**
6. What should natural disasters better be described as? **Natural Hazards**
7. Why can there not be a natural disaster on the moon? **It takes human people liable to suffer to make it a disaster.**
8. Disaster can only be understood when which two processes occur together?
 - (i) **natural hazards**
 - (ii) **vulnerability**
9. How does the lecturer paraphrase the idea in question 8? **Why are some people more prone to disasters than others?**
10. What is this approach to disaster called?
The Vulnerability Approach
11. Why does the way we think about disaster matter?
It influences the way in which we respond
12. What is the consequence of believing in an act of God?
You can’t do anything – this attitude is known as fatalism.
13. What are the two alternative approaches to dealing with natural disasters?
 - (i) **technological responses – e.g. Japan’s urgent earthquake detection system**
 - (ii) **prevention of main effects of physical processes – e.g. build embankments**
14. How does the Vulnerability Approach view these alternatives? **It is wrong to rely on technological solutions**
15. How can building barriers to floodwaters to protect against flooding cause more problems? **If flooding is catastrophic, once the water gets trapped behind the embankment designed to protect the area of the water cannot get back into the river, thus getting in the way of normal activity.**

16. Which two examples are given in the case of Bangladesh to illustrate this?
- (i) **The people rely on freshwater fish for food. The fish rely on flooding because they need shallow water to spawn in order to reproduce. The barriers block the shallow flooding. The fish cannot spawn and the amount of fish decreases.**
 - (ii) **Local farmers rely on silt in normal floods to keep the land fertile. The barriers block the shallow flooding and the soil loses its fertility. There is a decrease in the yield of rice crops.**
17. What does the Vulnerability Approach propose as an alternative solution to dealing with natural disasters? **Integrate disaster concerns into development**
18. Can disasters be understood purely as natural events? **NO**
19. What were the two key observations about disasters in the 1970s and 1980s?
- (i) **global human and material losses had been increasing for several decades.**
 - (ii) **similar events produce different outcomes in different places**
20. What was significant about the number of physical processes not increasing while global human and material losses had been increasing for several decades?
- It suggested that disasters were a result of something other than physical processes.**
21. What were the human losses suffered in the earthquakes in California and Iran, which both reached 6.5 on the Richter scale?
- In Iran 15,000 people died whereas only 3 people died in California.**
22. What is the relationship between the number of deaths resulting from natural disasters and development? **There is a higher number of deaths in low development countries and a lower number of deaths in highly developed countries.**
23. What conclusions can be drawn from this? **There is a relationship between nature and society.**
24. Are geographical events increasing? **NO**
25. What factor has become a new concern for those looking at natural disasters? **Global climatic change**
26. How many weather related disasters were there around the world between 1933 and 1997? **200 on average round the world per year**
27. What was the average over the last 5 years? **331**
28. Why does this increase in weather related disasters matter? **6 times as many people are killed in weather related disaster than in geographical disasters.**

29. What does the lecturer conclude from questions 24 to 29? **Human impact is increasing vulnerability by increasing hazards.**
30. Give two examples from the lecture of countries where human impact has interrupted biological processes.
(i) Land clearance in Honduras
(ii) The earthquake in Mexico City
31. How many buildings were damaged in the Mexico City earthquake? **7000-8000**
32. What percentage of these were totally destroyed? **10%**
33. What did the fact that the damage to buildings was selective tell us about earthquakes? **It was not the poorest areas that were damaged but the middle class areas. Therefore, vulnerability and poverty are not the same thing.**
34. What was the main factor in determining which buildings were damaged in Mexico City?
An interaction between human and physical causes, in particular, subsoil conditions.
35. What effect did the clay have on houses in Mexico City? **It increased the frequency of vibrations, resulting in more damage.**
36. How did the height of the buildings affect the level of damage the buildings experienced? **Buildings with between 6 and 20 stories, in particular those with between 9 and 11 stories, were more likely to be damaged.**
37. Which other example of human and physical interactivity was given?
Corruption
38. The lecturer concludes that the vulnerability approach to natural disaster is the product of physical processes in the environment and _____.
Human action.