

H2 Geography Paper 2 Suggested Answers

Section A Cluster 4 Fieldwork

- 1 A group of 12 students decided to investigate the flood risk in Bangkok, Thailand. More specifically, they were keen to understand the threat experienced by people in different flood risk zones. They visited fifteen households in each flood risk zone over three days—Monday, Wednesday, and Friday—and interviewed one member from each household using a questionnaire. The results of this questionnaire were then compared across the three flood risk zones.

Resource 1 shows the flood risk zones in Bangkok, Thailand. Resource 2 shows the questionnaire used in the investigation. Resource 3 shows the results of Question 6c in the questionnaire compared between the three flood risk zones.

- (a) Suggest a suitable hypothesis for the fieldwork investigation and state two reasons why it is at a suitable scale. [3]

Award 1 mark for suitable hypothesis for the fieldwork investigation

Award 1 mark for each reason why the investigation is at a suitable scale, to maximum of 2 marks.

- Hypothesis: *“Residents living in higher flood risk zones in Bangkok are more likely to experience severe flood-related threats.”*
- The study is conducted at a local scale within Bangkok, allowing manageable comparison of three distinct zones by a group of 12 students.
- The scope focuses on perception and impact at household level, which is appropriate for student-led data collection using questionnaires.

- (b) With reference to Resource 1, explain the benefits of collecting data at the three sites shown. [4]

Award 1 mark for each explanation of the data collecting benefits, to maximum of 4 marks.

Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- The three sites represent a gradient of flood risk—high, moderate, and low—which allows for a comparative analysis of spatial variation in flood threats.
- Coverage of different land uses (e.g., areas near levees, industrial plants, and airport zones) offers varied contexts for interpreting threat perception.
- Including the Chao Phraya River floodplain and levee-protected canal areas enables students to assess how proximity to engineered defences influences perceptions.
- Data collection across these zones allows the identification of patterns and anomalies, enhancing the analytical depth of the study.

- (c) Suggest two ethical issues students should consider when conducting this investigation. [5]

Award 1 mark for each suggestion of ethical issues when conducting the investigation, to a maximum of 5 marks.

Award a maximum of 1 additional mark for further development of each suggestion, where applicable.

- Students must explain the purpose of the study and obtain verbal or written agreement from participants before starting the questionnaire to ensure participants willingly contribute data.

- Personal information such as names and addresses should not be recorded or disclosed. Responses should be kept anonymous to protect the privacy and dignity of the individuals surveyed.

(d) Suggest how students can improve their sampling for the investigation. [6]

Award 1 mark for each suggestion on how to improve the sampling for the investigation, to a maximum of 6 marks.

Award a maximum of 1 additional mark for further development of each suggestion, where applicable.

- Divide each flood risk zone into smaller sub-areas (e.g., near levees vs further inland) and ensure proportional representation from each, improving coverage and reducing location bias.
- A larger sample size (e.g., 25–30 per zone) enhances statistical reliability and reduces the influence of outliers or unrepresentative responses.
- Ensure representation across key demographic groups (e.g., elderly, families with children, business owners) so findings better reflect differences in vulnerability and perception across population segments.
- Rather than choosing households by convenience, students could survey every nth house (e.g., every 5th house along a street), reducing bias in selection and increasing objectivity.
- Survey at different times of the day and week including weekends and evenings allows students to reach working individuals who may not be available during weekday hours.

(e) Explain the strengths and limitations of the questionnaire shown in Resource 2. [6]

Award 1 mark for each explanation of a strength or a limitation.

Award a maximum of 1 additional mark for further development of each explanation.

Award a maximum of 2 marks for explanation of either strength or weakness only.

- Questions such as 6c use a Likert scale, allowing quantifiable data for analysis and comparison across zones.
- The inclusion of open-ended Q5 provides qualitative insights into residents' comparative perceptions beyond their own zone.
- The structure includes both objective and subjective elements, covering past experiences and future expectations.
- Some questions (e.g., Q2) rely on respondent's personal understanding of flood risk, which may be inaccurate or uninformed.
- The questionnaire lacks socio-demographic data (e.g., age, income, household size), limiting the ability to identify vulnerable groups.
- Questions on impacts (e.g., 6a–6h) may produce overlapping or ambiguous interpretations without clear definitions of terms (e.g., "services").

(f) Using Resource 3, explain what the results suggest about the threat experience of the people living in each of the three zones. [6]

Award 1 mark for each explanation of the threat experience, to a maximum of 6 marks.

Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- All 5 respondents from the high-risk zone rated flood threat to internal house/property as "1 – Very unlikely", which contradicts the official classification of high flood risk and suggests a very low perceived threat despite the high hazard zoning.
- This perception may be influenced by visible or effective mitigation infrastructure, such as the levee near Khlong Prapa or engineered defences in Ayutthaya, which instils confidence in flood protection.

- All respondents in the moderate-risk zone gave no ratings at either extreme (“5 – Very likely” or “1 – Very unlikely”), which may indicate uncertainty or low awareness of flood threats in their area, reflecting a lack of direct experience or exposure to flood events.
- In the low-risk zone, one respondent rated the likelihood of internal flooding as “5 – Very likely”, while two others rated it as “1 – Very unlikely”, suggesting a wide variation in threat perception among residents despite being in the same risk zone.

(g) Evaluate the effectiveness of this investigation in understanding the threat experienced by people in different flood risk zones. [10]

Possible Approaches:

Candidates could use Resource 3 to judge how well the questionnaire reflects actual flood threat. While the Likert-scale allows quantifiable comparison, results such as all high-risk respondents selecting “very unlikely” and one low-risk respondent choosing “very likely” reveal a mismatch with official flood risk (Resource 1), limiting accuracy in capturing real experiences. Sampling weaknesses—only 15 per zone, no demographic data, and weekday-only collection—further reduce representativeness and reliability.

Nonetheless, the investigation has strengths, including clear spatial comparison across zones and structured indicators of perception. Stronger responses should note, however, that the lack of triangulation with physical evidence (e.g. past flood events, elevation, drainage) restricts validity. Improvements would require larger, more representative samples and integration of both perception and physical data.

Levels marked using Generic Level Descriptors for H2 fieldwork evaluative questions.

Levels	Marks	Generic Level Descriptors for H2 Fieldwork Evaluative Question
3	9–10	Evaluation is analytical and coherent. Response addresses the question and demonstrates good knowledge and understanding of fieldwork methods relevant to the given context.
2	5–8	Evaluation is mostly analytical and coherent. Weaker responses in this level will have evaluation that is broadly analytical and generally coherent. Response generally addresses the question and demonstrates adequate knowledge and understanding of fieldwork methods relevant to the given context.
1	1–4	Response is descriptive with limited or no analysis and evaluation. Response is fragmented and lacks clarity. Response lacks focus on the question and may be largely irrelevant to it. Response shows basic knowledge and understanding of fieldwork methods. Response has some, though limited, relevance to the given context.
0	0	No creditworthy response

Section B

2 Resource 4 shows the number of slum population in Mumbai district, India in 2020. Resource 5 shows access to basic amenities in urban and rural India in 2024. Resource 6 shows a slum housing site in Mumbai, India.

(a) Suggest two relevant indicators to monitor sustainable urban development.

[4]

Award 1 mark for each suggestion of relevant indicators to monitor SUD.

Award a maximum of 1 additional mark for further development of each suggestion, where applicable.

1. Percentage of urban households with access to piped water within dwelling. This is an indicator of social well-being and environmental integrity, showing the availability and accessibility of basic services.
2. Proportion of population with access to the internet. This indicator reflects economic vitality and social inclusion, as digital connectivity enhances access to education, employment, information, and participation in the digital economy.

(b) Describe the distribution of slum population in Mumbai District as shown in Resource 4. [4]

Award 1 mark for each description of distribution of slum population, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each description, where applicable.

- The slum population in Mumbai District in 2020 is spatially uneven, with a higher concentration in central and eastern districts and lower concentrations in peripheral areas.
- Red-shaded districts, such as Ghatkopar, Kurla, and Andheri East, show the highest slum populations, reflecting areas with dense informal settlements and proximity to key transport and industrial hubs.
- Light blue districts, such as Colaba to Metro and Byculla, located towards the southern peninsula, show lower slum populations.
- Some light green and yellow districts such as Goregaon and Mulund are interspersed between high- and low-density zones.

(c) Compare the access to basic amenities in urban India and rural India, as shown in Resource 5. [5]

Award 1 mark for each comparison of access to basic amenities in urban and rural India, to a maximum of 5 marks.

Award a maximum of 1 additional mark for further development of each comparison, where applicable. Maximum 3 marks for either similarities or differences.

- Mobile usage is widespread, with 92% in rural areas and 95% in urban areas, indicating strong telecommunication infrastructure nationwide.
- Both urban (98%) and rural (95%) populations report high access, suggesting success in sanitation outreach across regions.
- Urban households have significantly higher access (61%) compared to rural areas (24%), indicating better infrastructure provision in cities.
- Internet access is much higher in urban areas (64%) than rural areas (40%), highlighting a digital divide that limits rural access to digital services and opportunities.
- Access to clean cooking fuel: 92% of urban households use clean cooking fuel versus only 50% in rural areas, showing greater environmental health risks and energy poverty in rural settings.

(d) Citing data from Resource 5, explain why rural populations continue to move into urban areas in countries at low level of development. [5]

Award 1 mark for each explanation using data from Resource 5 on why rural populations continue to move into urban areas in less developed countries.

Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- In urban areas, **61%** of households have access to piped water into dwellings compared to only **24%** in rural areas. This access to basic services motivates rural households to migrate for improved living standards and convenience.
- **98%** of urban residents report access to improved latrines, whereas rural areas have slightly lower access at **95%**. While the gap may appear small, the quality and reliability of urban sanitation services tend to be higher, offering greater hygiene and dignity.
- **92%** of urban households use clean cooking fuel, in contrast to just **50%** in rural households. Rural populations are exposed to higher health risks due to indoor air pollution from traditional fuels, encouraging migration to cities with cleaner energy sources.

(e) With reference to Resource 6, explain how the multiple deprivations experienced by slum dwellers in Mumbai can impact sustainable urban development. [6]

Award 1 mark for each explanation on how the multiple deprivations experienced by slum dwellers can impact SUD, to a maximum of 6 marks.

Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- Resource 6 shows widespread litter and stagnant water in front of slum dwellings. This reflects poor waste disposal and drainage systems, which can cause waterborne diseases and environmental pollution, undermining environmental goals of SUD.
- The tightly packed, makeshift structures seen in the image indicate overcrowding and insecure housing. This leads to health and safety risks, weakens community resilience, and violates the principle of inclusive and safe urban living.
- Visible water containers and buckets in Resource 6 suggest unreliable or absent piped water access. This limits the ability of slum residents to maintain hygiene, contributing to disease outbreaks that strain urban healthcare systems.

(f) Explain why slums may also develop in urban areas of countries at higher level of development. [6]

Award 1 mark for each explanation on why slums may also develop in urban areas of developed countries, to a maximum of 6 marks.

Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- In cities like San Francisco (USA) and London (UK), skyrocketing real estate prices and rent increases have made housing unaffordable for many low- to middle-income residents. As a result, individuals are pushed into informal housing such as overcrowded shared flats or makeshift shelters.
- In Rome, Italy, many undocumented migrants live in abandoned buildings or informal camps due to lack of access to formal rental markets. Similarly, Los Angeles (USA) has seen the rise of informal settlements by migrant workers in marginalised urban.
- In New York City (USA), more than 60,000 people are homeless on any given night. Many others live in slum-like conditions in public housing that is severely under-maintained, indicating that economic inequality leads to informal or inadequate housing even in high-income settings.

Section C

Cluster 3: Sustainable Future and Climate Change

- 3 'Environmental factors pose the greatest challenge to liveability in urban areas.'

Evaluate this statement.

[20]

Possible Approaches:

Candidates could examine whether environmental factors such as air and noise pollution, poor waste management, and limited green space, are the greatest threats to liveability, given their direct effects on health and well-being. Examples like Delhi's severe air quality or Zurich's environmental successes may support this view. Others may argue that socio-economic issues (poverty, housing shortages, lack of services) or social inequalities (safety concerns, ageing populations) are more fundamental and persistent obstacles.

Stronger responses may stress context, showing how challenges vary by place, time, and social group: basic needs dominate in low-income cities, while inclusiveness and quality of life weigh more in high-income contexts. High-level answers will evaluate the relative importance of these factors, apply case studies, and acknowledge the subjective, dynamic, and multidimensional nature of liveability.

Levels marked using Generic Level Descriptors for 20m H2 essays

- 4 Evaluate the view that contemporary climate change is attributed more to natural factors than human activities. [20]

Possible Approaches:

Candidates could weigh natural versus human drivers of contemporary climate change. Natural processes such as solar variability, volcanic eruptions, and ocean circulation have shaped past climates but act over long timescales or cause short-term variability. By contrast, recent rapid warming aligns closely with human activities—especially fossil fuel combustion and deforestation—that have sharply increased greenhouse gas levels.

Stronger responses may cite the IPCC consensus and climate models, which replicate observed warming only when anthropogenic emissions are included. They may also apply geographical concepts of time (recent vs historical change), scale (regional vs global impacts), and system (feedback loops amplified by humans). While both factors can be acknowledged, high-level answers are likely to conclude that human activities dominate contemporary climate change.

Levels marked using Generic Level Descriptors for 20m H2 essays

Levels	Marks	Generic Level Descriptors for H2 Essays
5	18–20	Evaluation is consistently analytical and coherent. Response is well-supported by relevant material, including the effective use of examples. Response features accurate geographical knowledge and reflects good understanding of the subject content relevant to the question.
4	14–17	Evaluation is analytical and coherent. Response is mostly well-supported by relevant material, including the appropriate use of examples. Response features accurate geographical knowledge and reflects adequate understanding of the subject content relevant to the question.
3	10–13	Evaluation is broadly analytical and generally coherent. Response is moderately well-supported by relevant material, including some appropriate use of examples. Response features accurate geographical knowledge and reflects adequate understanding of the subject content relevant to the question.
2	6–9	Response is largely descriptive with limited analysis and evaluation. Response is partly coherent and may lack clarity in parts. Response is poorly supported by relevant materials, including the limited use of examples. Response features inaccurate geographical knowledge and poor understanding of the subject content relevant to the question.
1	1–5	Response is descriptive with no analysis or evaluation. Response is fragmented and lacks clarity. Response consists of unsupported assertions. Response features largely inaccurate geographical knowledge and a lack of understanding of the subject content relevant to the question.
0	0	No creditworthy response

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