



15th International Geography Olympiad

Québec City, Canada

31 July – 6 August, 2018

Written Response Test Resource Booklet

Do NOT open the Booklet before instructed to do so by a supervisor.

Do NOT write any of your answers in this Booklet.

This page is intentionally blank.

Written Response Test

Contributions from: Australia, New Zealand, Poland and Thailand

Committee Convenor: Margaret McIvor (Australia)

Deputy: Dubravka Spevec (Croatia)

Editors: Birgit Sandermann Justesen (Denmark), Ivan Sulc (Croatia), Li Ling Tan (Singapore)

Reviewers: Mark Higginbottom (UK) and Anu Printsman (Estonia)

Director of Tests: Su-Min Shen (Taiwan/China-Taipei)

Section A: Population

Figure A1: Population growth (annual %), 2015

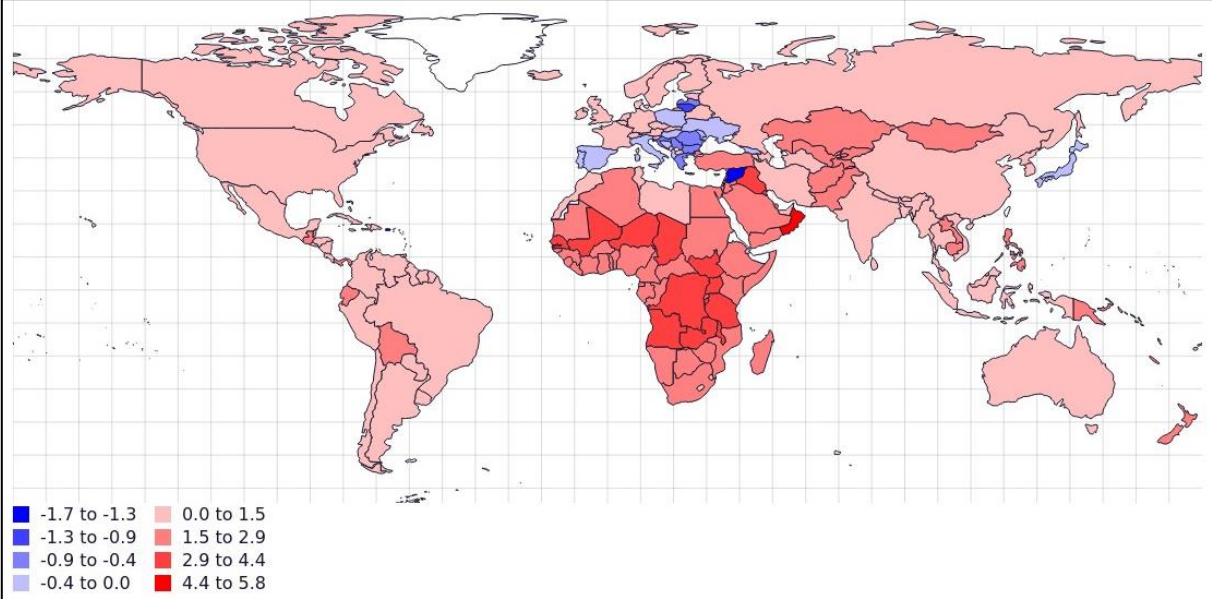


Table A1: Population data - selected years

Country	Age dependency ratio				Birth rate, crude (per 1,000 people)				Population ages 65 and above (% of total)				GDP per capita (current US\$)			
	1990	2000	2010	2015	1990	2000	2010	2015	1990	2000	2010	2015	1990	2000	2010	2015
A	52	51	49	51	17	14	13	13	13	12	13	15	23,955	36,450	48,374	56,116
B	53	54	51	55	14	12	13	12	16	16	16	18	19,096	27,770	38,709	43,876
C	43	47	57	64	10	9	9	8	12	17	23	26	25,124	38,532	44,508	34,524
D	72	64	56	52	31	26	22	20	4	4	5	6	375	452	1,346	1,598
E	45	46	52	52	11	9	8	9	15	16	21	21	22,220	23,719	41,788	41,313
F	52	46	35	37	21	14	12	12	5	7	8	10	318	959	4,561	8,028

Section B: Tourism: The Rise of Airbnb

Figure B1: Five boroughs of New York City (left) and sub-districts of Manhattan (right)

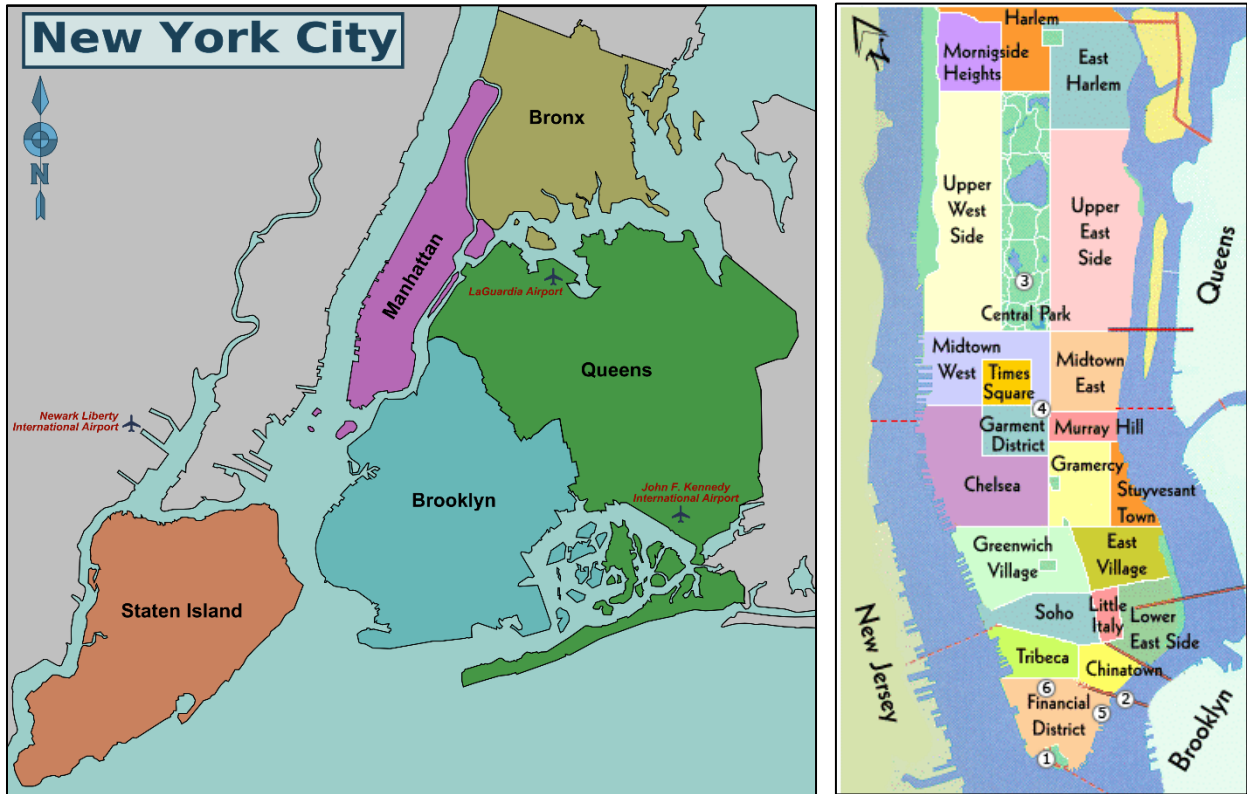
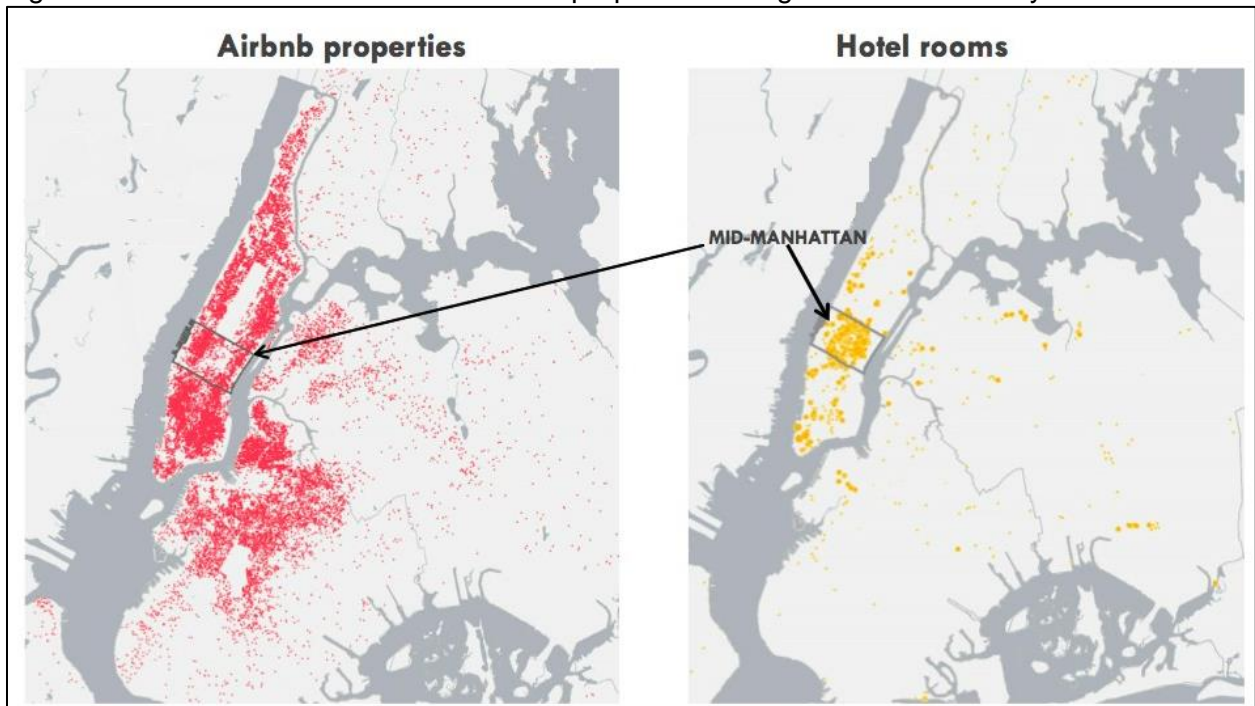


Figure B2: Distribution of hotels and Airbnb properties throughout New York City



(<https://www.airbnbcitizen.com/the-tremendous-impact-of-airbnb-in-new-york/>)

Figure B3: Airbnb protest in Barcelona in 2017



(<http://www.independent.co.uk/travel/news-and-advice/barcelona-locals-hate-tourists-why-reasons-spain-protests-arran-airbnb-locals-attacks-graffiti-a7883021.html>)

Section C: Environmental Geography: Coral reefs

Figure C1: Location of coral reefs

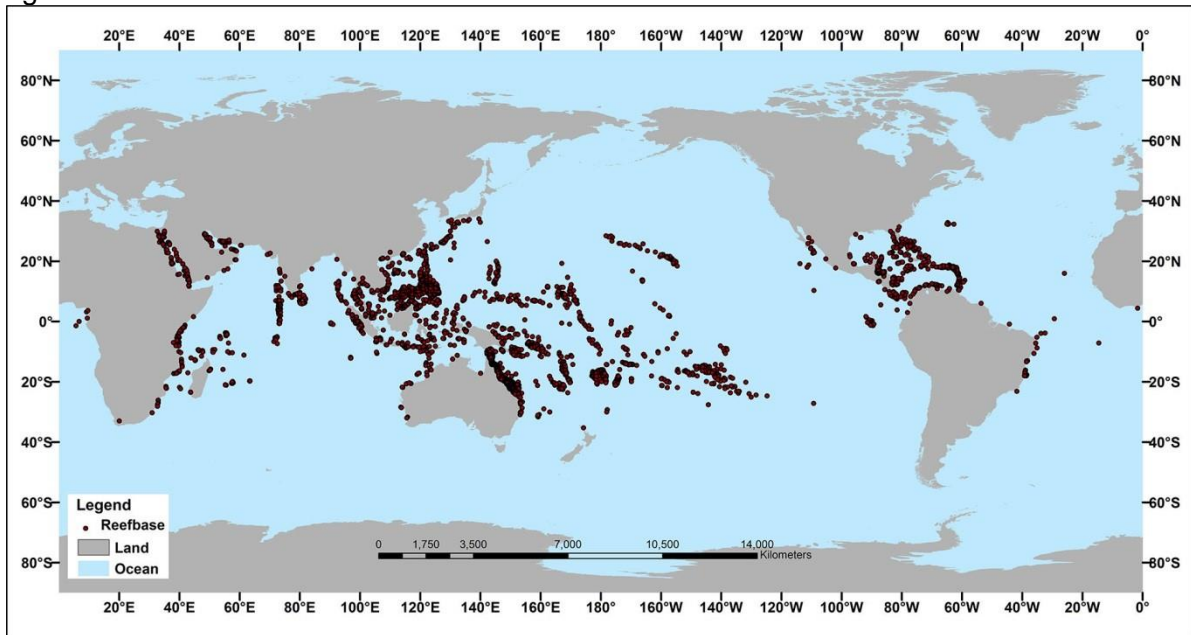
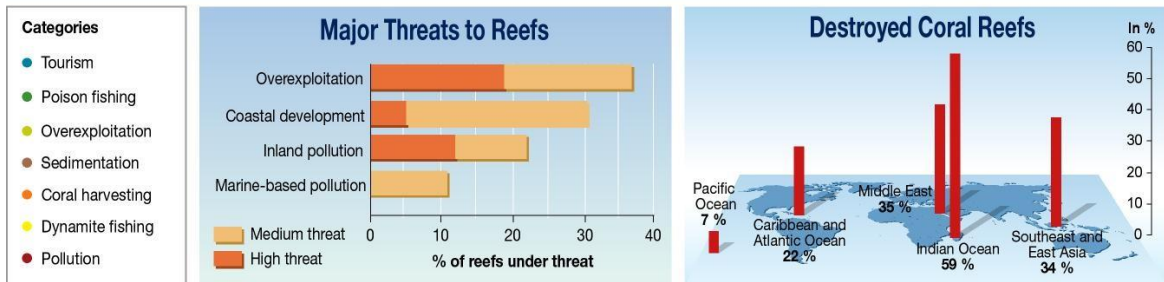
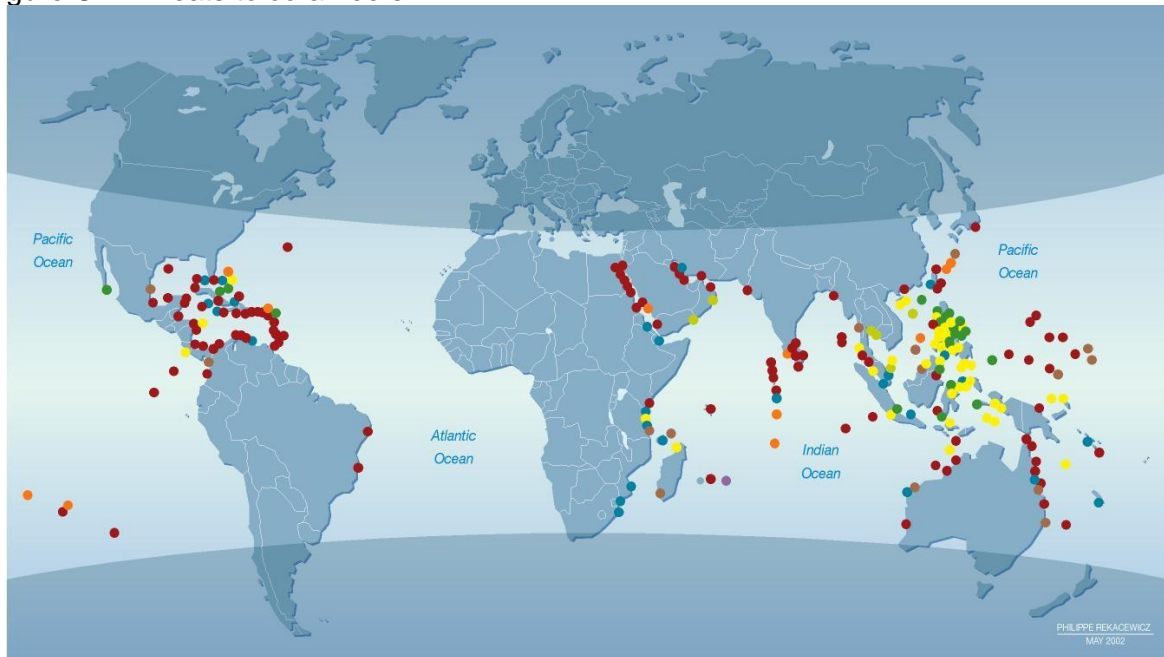


Figure C2: Threats to coral reefs



Source: Bryant et al., *Reefs at Risk; a Map-Based Indicator of Threats to the World's Coral Reefs*, World Resources Institute (WRI), Washington DC, 1998.

Figure C3: Photographs showing change in a coral reef

Photograph A



Photograph B



Figure C4: Marine Protected Areas



Section E: Ebola Outbreaks

Figure E1: Key facts on Ebola (Source: World Health Organization, WHO)

- Ebola virus disease is a severe, often fatal illness in humans.
- The virus is transmitted to people from wild animal hosts and spreads in the human population through human-to-human transmission.
- The first outbreaks, from 1976, occurred in remote villages in Central Africa, but the 2014-15 outbreak in West Africa has involved major urban as well as rural areas.
- The West African outbreak was declared over in June 2016.
- In May 2018, New cases of Ebola have been detected in the Democratic Republic of the Congo.

Figure E2: Distribution, frequency and magnitude of Ebola outbreaks to 30th November 2014 (Source: <http://www.economist.com/blogs/graphicdetail/2014/12/ebola-graphics?fsrc=nlw/newe|13-10-2014>)

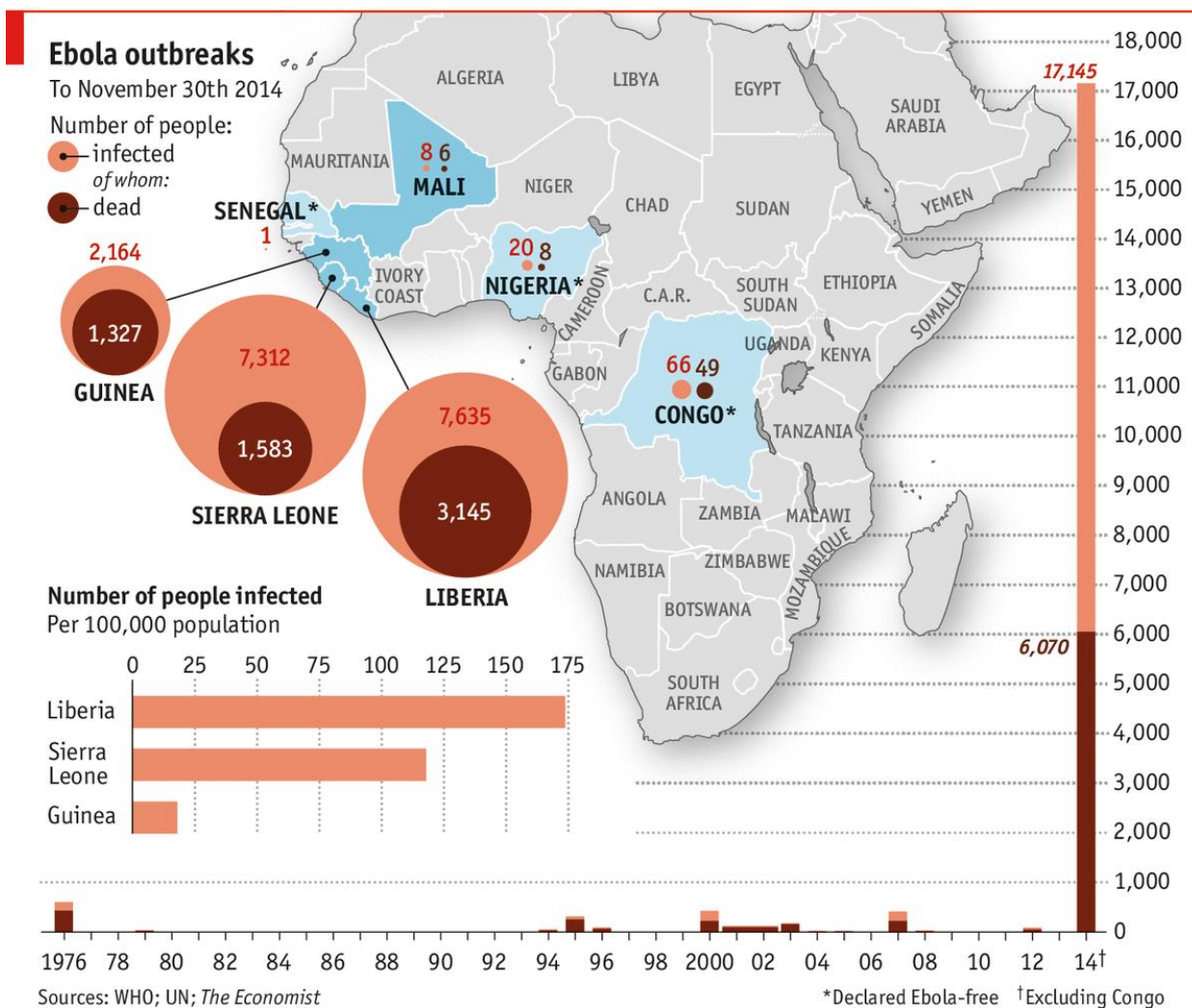


Figure E3: Cases and deaths, Ebola outbreak to 27 March 2016 (Source: WHO)

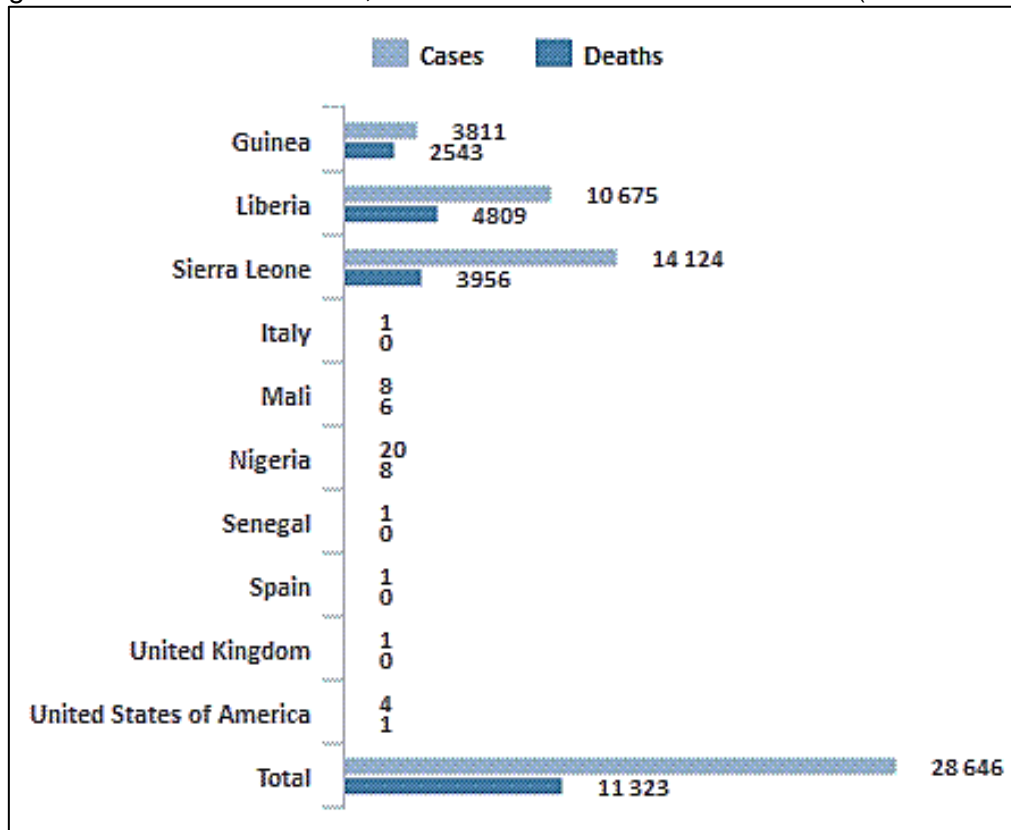
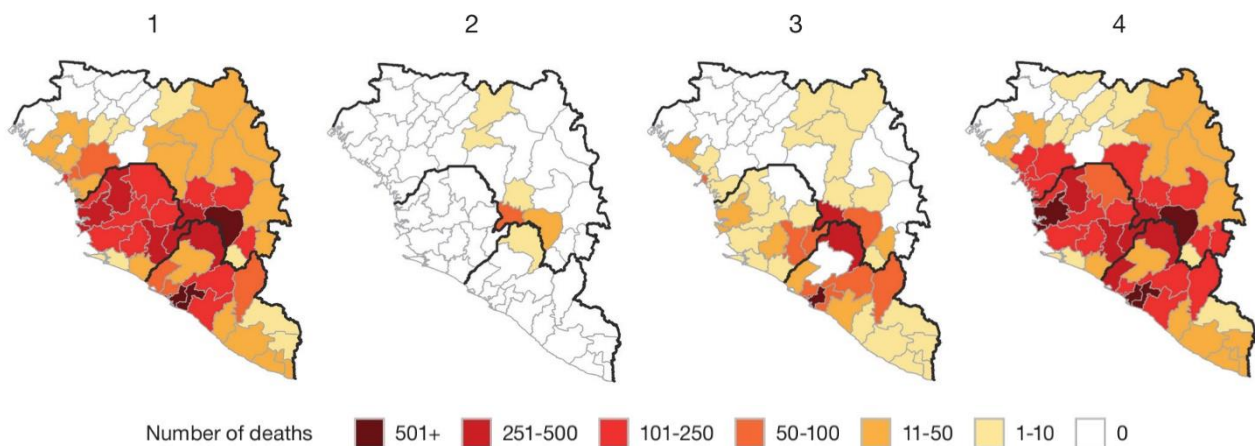


Figure E4: Time series of cumulative Ebola deaths in the districts of Guinea, Liberia, and Sierra Leone, 2014-15 (Source: WHO and Humanitarian Data Exchange)



Section F: Glaciers

Figure F1: Photographs of main types of glaciers

Selected example of a continental glacier



Selected example of a valley glacier

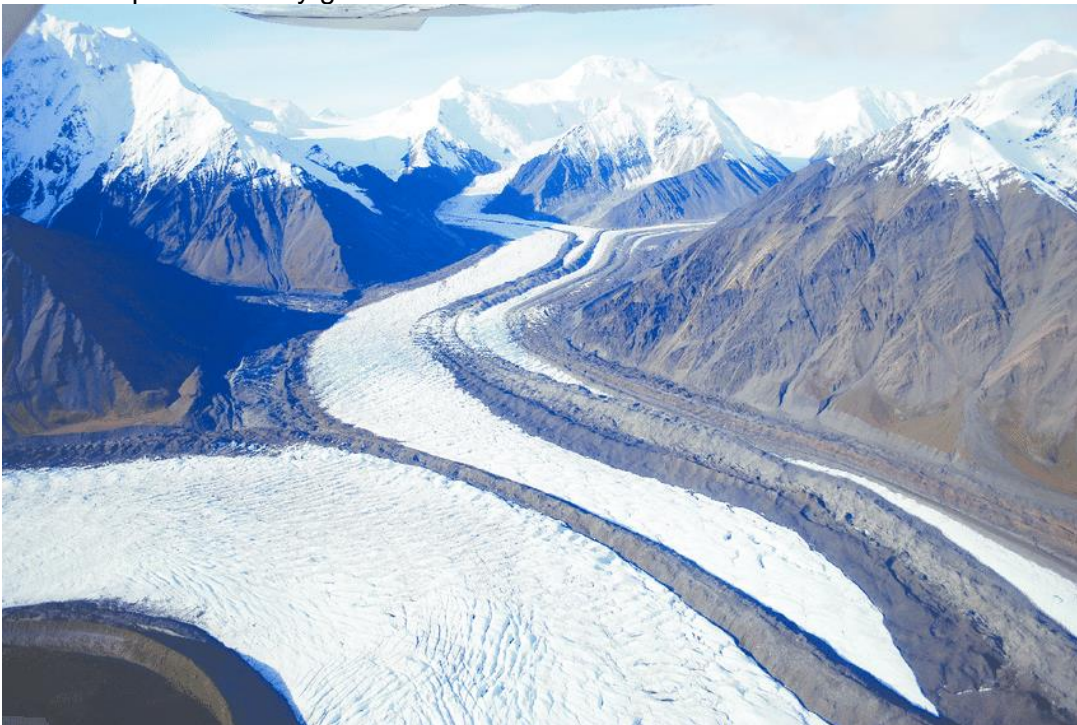


Figure F2: Global Glacier Thickness Change

(Source: M. Dyurgerov, Institute of Arctic and Alpine Research, University of Colorado, Boulder, CC BY)

It shows average annual and cumulative glacier thickness change of mountain glaciers of the world, measured in vertical metres, for the period 1961 to 2005.

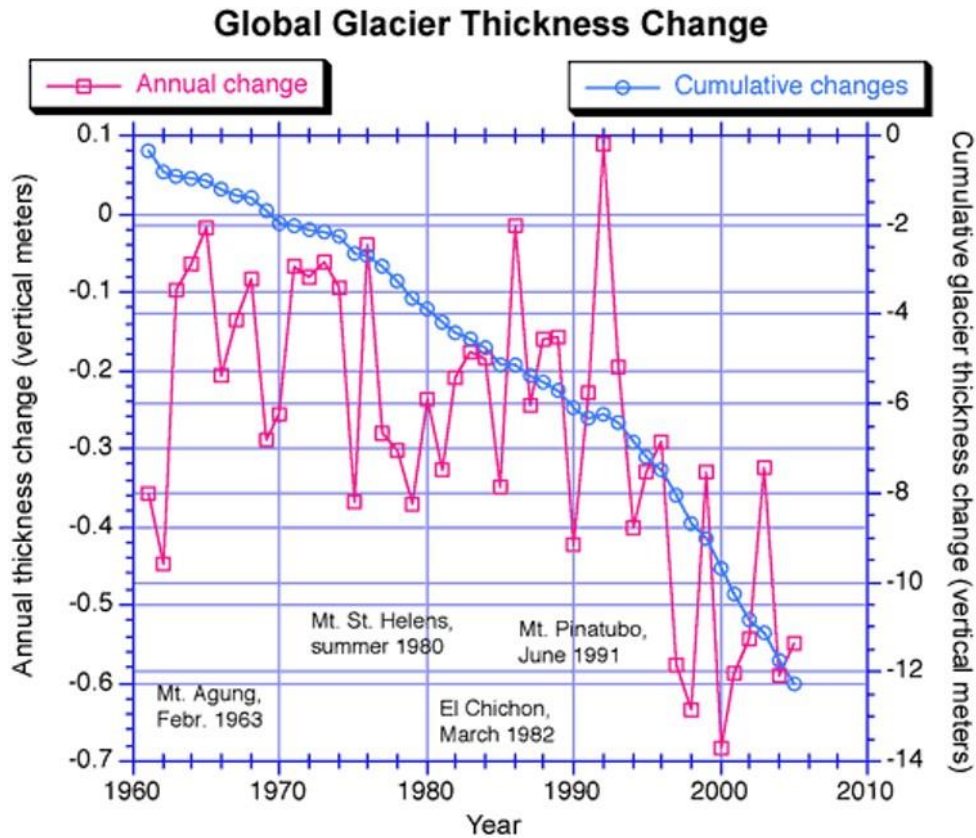


Figure F3: Climatic snow line

