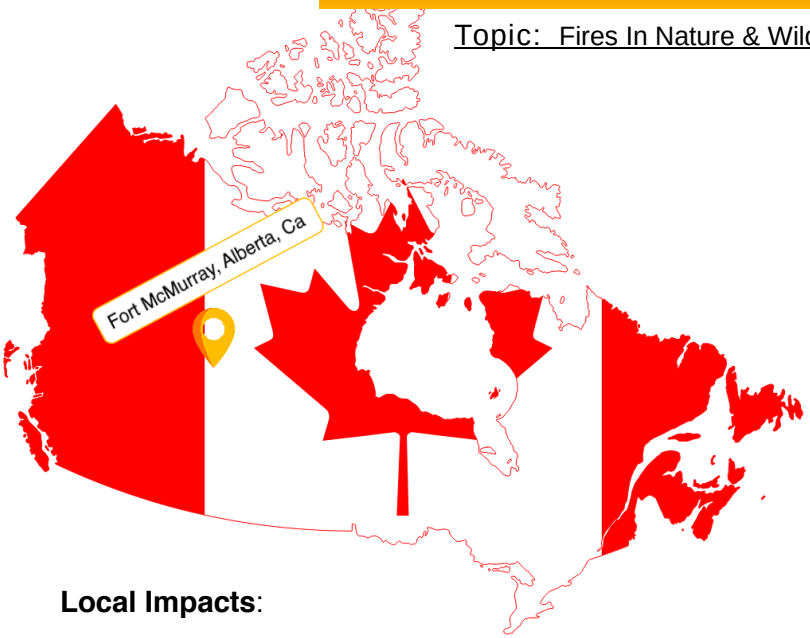
Case Study Fact File Hazards >> Wildfires

Luke Pearson |
geographyportal.co.uk
01.09.20 V1.1

2016 Alberta Wildfires, Canada [HIC]

Topic: Fires In Nature & Wildfire Reponses as evidenced through a recent event.



Background Information:

May 2016 was an unseasonably warm and dry month in Central Canada, up to 32.8°. A natural El Niño cycle also leading to a dry fall and winter season along with a warm spring, leaving a paltry snowpack, which melted quickly, leading to a dry ground level. This created a **"tinder dry, perfect storm"** of conditions leading to numerous wildfires within the province of Alberta, the largest of which earning the nickname **'The Beast'**. Between **May 4th and July 1st 2016**, during the State Of Emergency, significant damaged was induced to physical landscapes, ecosystems, and livelihoods. *Note: The challenges of predicting a wildfire are huge, and even in areas such as northern Canada where they are fairly usual, authorities are often hit by surprise due to fast-changing winds.*

Local Impacts:

- Over **580,000ha of land was burned**, severely damaging it in the short and medium term.
- **88,000 residents** of Fort McMurray and surroundings were rapidly **evacuated**.
- **2400 buildings destroyed**.
- A third of Shell's 25,000 Oil Sands **workers were evacuated** and the operation shut down, a key driver in the local economy – resulting in a **CA$1 B impact**.
- Ash washed into rivers after heavy rains, leading to more **water pollution and contamination of aquatic wildlife**.

Wider-Scale Impacts:

- An impact analysis projected the wildfire **costing CA$9 B** directly and indirectly.
- **Infrastructure** such as railways, roads and local airports, valuable to the local economy, were **destroyed**
- Several million tonnes of **CO_2 and other toxins** released into the atmosphere, measured as far as the USA.
- The incident acted as a catalyst of the climate change debate and its role in wildfires in Canada and abroad.

Short-Term Responses:

- **Mass evacuation program** and Alberta-wide **state of emergency** announced. **No direct deaths or serious injuries** is testament to this being well-organised.
- **Canadian armed forces** support with helicopters, water bombers and firefighters brought in, as well as **offers of support** from the USA, Australia, and Russia, with wildfire teams.
- Alberta govt. set up **online registry** for temporary housing.

Long-Term Responses:

- Trudeau govt. offers residents up to **CAN$1250 per adult as longer-term compensation** from the government. Critics note this is not enough for those who have lost businesses or livelihoods.
- In June, residents were gradually phased back into Fort McMurray, and an **environmental reconstruction program** has been ongoing and mostly successful.
- June 2016 'Fire Aid' **benefit concert** in Edmonton.

'SEEP' Tracker Box

Social Economic Environmental Political

Links & References:

What Case Studies Can This Be Linked To?

Although you only need to know one Wildfire case study, the following may be applicable to study:

- **A* Case Study I 'Black Saturday' 2009 Australian Wildfires** (link to be added when CSFF is produced)

QR:

Have A Go At A Practice Exam Question:

QR:

20 MARKER (AO1 & 2) QUESTION #3

Evaluate to what extent the outcome of a recent wildfire event has been influenced by the actions of predictive planning and hazard management.

Hazards >> 3.1.5.1 >> Human Responses To Hazard Events

3.1.5.6 >> Nature and Forms Of Wildfires

3.1.5.6 >> Impacts & Responses Of A Recent Wildfire Event

Struggling to get a start to answering this question? Here's some help on using the Case Study.

Think of what the question is asking. We aren't comparing it to any other case study, so need to just use the information from your notes and this document to help create a fairly balanced argument. There's also a fair bit of theory needed.

Some thoughts in brief to get you going: I'd personally (you don't need to say the same if you disagree) argue that the management of this wildfire has been to some extent successful (you could link in some of the facts here) but owing to often temperamental atmospheric conditions it is much harder to effectively predict and plan for wildfire events. They can move at constant speeds of well over 10mph 24/7 if weather and topography are preferable and are often caused by fairly random events such as lightning strikes and often unreported human activity. That being said, improvements in satellite technology have made it easier to track a juvenile wildfire, which has allowed authorities to target mass evacuation plans and firefighting efforts. (more facts) Canada also has a typical wildfire season, in which seasoned plans are readied for use, which is becoming in the future due to rising temperatures longer and less predictable, however.

If in doubt, once you've completed the question, have a look at its exemplar answer!

Useful links:

Timeline of the Wildfire: https://globalnews.ca/news/2681249/fort-mcmurray-wildfire-timeline-of-events/

Article on origins of fire & its severity: http://edmontonjournal.com/news/local-news/timeline-of-fort-mcmurray-wildfire-that-turned-on-the-northern-alberta-city-with-wind-shift

Environmental Impacts: https://www.theguardian.com/environment/2016/may/11/canada-wildfire-environmental-impacts-fort-mcmurray

Satellite Tracking of Wildfire: https://www.statcan.gc.ca/pub/11-627-m/11-627-m2017007-eng.htm

Wildfire Responses: https://www.theglobeandmail.com/news/alberta/the-fort-mcmurray-disaster-read-the-latest-weekend/article29930041/