#### **Environmental Problems Disrupting Natural Cycles by Humans**

- 1. radioactive contamination
- 2. pollution of the ocean
- 3. depletion of fish stocks
- 4. use of fossil fuels
- 5. draining of underground aquifers
- 6. clearing of forests
- 7. use of fertilizers and pesticides
- \* we will look further into #1 since we in NB rely on nuclear energy from...

Point Lepreau in Saint John

## 1) Radioactive Contamination...



#### When Nuclear Energy Goes Wrong...

1) Fukushima, Japan (March 2011)



Representing the people and organisations of the global nuclear profession

Home > Information Library > Safety and Security > Safety of Plants

Nuclear Basics Information Library The WNA

Safety of Nuclear Power Reactors | Chernobyl Accident | Fukushima Accident 2011 | Three Mile Island accident | Tokaimura Ci and Earthquakes | Liability for Nuclear Damage

#### **Fukushima Accident 2011**

(updated 2 April 2013)

- Following a major earthquake, a 15-metre tsunami disabled the power supply and cooling of three Fukushima Daiichi reactors, causing a nuclear accident on 11 March 2011.
- · All three cores largely melted in the first three days.
- The accident was rated 7 on the INES scale, due to high radioactive releases in the first few days. Four reactors are written off - 2719 MWe net.
- After two weeks the three reactors (units 1-3) were stable with water addition but no proper heat sink for removal of decay heat from fuel. By July they were being cooled with recycled water from the new treatment plant. Reactor temperatures had fallen to below 80°C at the end of October, and official 'cold shutdown condition' was announced in mid December.
- Apart from cooling, the basic ongoing task was to prevent release of radioactive materials, particularly in contaminated water leaked from the three units.



There have been no deaths or cases of radiation sickness from the nuclear accident, but over 100,000 people
had to be evacuated from their homes to ensure this. Government nervousness delays their return.

#### **EXERCISE:**

Come up with 10 FACTS mentioned in this video.

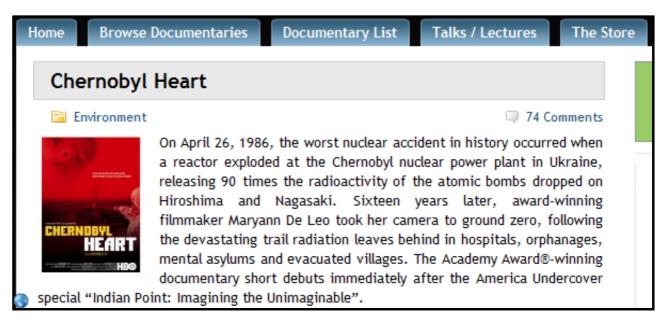


#### FACTS from the video...

- earthquake followed by tsunami caused power failure in reactors 1 - 4.

- need 1 million gallons of water to 'cool' the reactors.
- radioactive water got into Pacific Ocean.
- hydrogen explosions occurred.
- radiation lasts a long time and affects many people worldwide.
- mutations occurred amongst babies.
- cancer became more frequent.

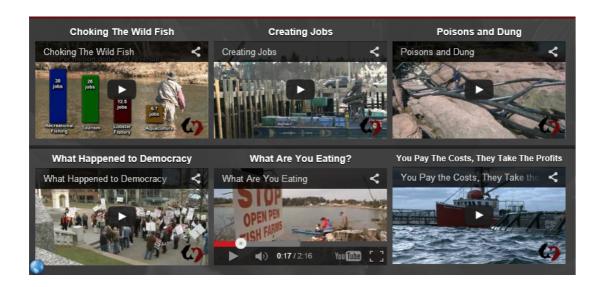
#### 2) Chernobyl, Ukraine (April 1986)



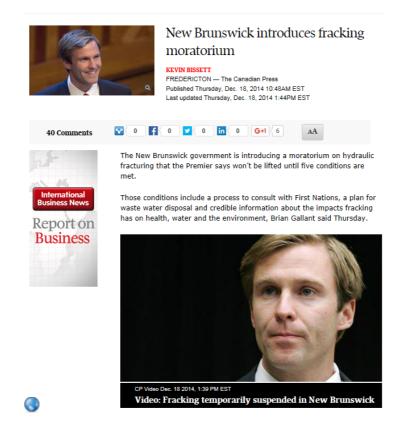
# 2) Pollution of the Ocean...



# 3) Depletion of Fish Stocks...



#### 4) Use of Fossil Fuels



9

## 5) Draining of underground aquifers...

If You Think the Water Crisis Can't Get Worse, Wait Until the Aquifers Are Drained

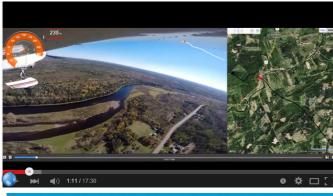
We're pumping irreplaceable groundwater to counter the drought. When it's gone, the real crisis begins





May 02, 2016 **Untitled.notebook** 

# 6) Clearing of forests...





http://safeshare.tv/v/ss563b5882b71a7



http://safeshare.tv/v/ss563b58f7152b5





7) Use of pesticides and fertilizers...

